INTERNET-BASED DISTANCE TRAINING
FOR ADULT ESL LEARNERS:
A FRAMEWORK FOR DYNAMIC LANGUAGE LEARNING

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy, Department of Curriculum, Teaching and Learning, Ontario Institute for Studies in Education, University of Toronto.

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ABSTRACT

This research study investigated the potential of Internet technology to provide a dynamic and autonomous language-learning environment for adult distance language learners. The study focused on six essential characteristics of dynamic language learning and observed the online study activity of the students in relation to these. Each learner was presented with various study resources and tools from which they could freely self-select as required. The lessons were constructed through a process of open dialogue and negotiation between students and teachers, integrating preset content with individualized assignments and language use. The activity data were analyzed in reference to a dynamic learning matrix in order to identify which of the dynamic learning characteristics was demonstrated by each learner and to what extent. The overall goal was to observe if the students could achieve a high level of autonomy within the learning environment.

Interestingly, while students demonstrated a keen energy to explore and use the resources and tools, teachers found the environment to be overwhelming. The result of this was that a crucial characteristic of autonomous learning, teacher intervention, was not effectively realized. Nevertheless, the study clearly identifies the potential of an online learning environment to provide a self-directed, dynamic and autonomous learning environment for distance language learners.
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CHAPTER 1
INTRODUCTION AND RATIONALE

General Introduction

This study is an exploration of the potential of Internet technology to enhance the teaching and learning experiences for teachers and adult students involved in a distance learning English as a Second Language (ESL) programme. The study came about when additional money was secured from a funding agency for an ESL correspondence programme of which I was coordinator. I had worked with the funding agency for approximately twelve months to secure funding for development work on the existing correspondence programme materials and to ensure transition of the programme to an Internet-based delivery mode as a response to increasing student demands for access outside regular telephone support hours. As with many funded projects, time lines were short and the project was to be completed within a three-month period before the end of the funding year. I had many questions about effective transitioning of content, adequate testing of the environment, and teacher preparation. I also had questions about the differences the Internet mode would present in pedagogy and content organization and presentation. After further negotiation with the funder, it was agreed that a three-month development period and a two-month test period would be acceptable. Even with this additional time, I was not able to adequately prepare the teachers for the transition although I assumed that, as the teachers were already active in a correspondence course and would, therefore, be working with familiar content and students in the transitional study, the new delivery mode would not be too challenging. I also assumed that the students would have a clear understanding of the content, given that the changes were only in presentation and organization from one environment to the other.

This dissertation explains the journey of my project from the theoretical framework that helped shape the site design to the development of the environment itself and the results of the 10-week test period. This dissertation also discusses the implications of the results of the project and recommends further work that would provide a more thorough study of the effectiveness of a self-selecting, resource-rich approach to the teaching and learning of second languages at a distance via the Internet.
Project Rationale

The applied use of technology in the teaching and learning process is not a new idea. In fact, the use of technology as a learning mediator or communication connector in distance learning is quite familiar in current educational and training programmes. What is new, however, is the rate at which technology and technological possibilities are changing. Educators at all levels are being challenged as never before to make use of the vast array of technologies to enhance and support learning. In turn, learners are increasingly aware of the capabilities of technology, both to deliver information and to provide a level of creative interactivity never before possible. As a result, the expectations of learners are changing to keep pace with the huge advances made in the field of instructional technology. Learners are not content to leave communication to face-to-face encounters, nor are they complacent about content and course choices or the applied use of technology in the process. Educators are, therefore, being challenged to accommodate changing learner expectations without diminishing credibility and authenticity of credible standards and quantifiable learning outcomes.

In an editorial in the *American Journal of Distance Education* (Vol. 14 No. 1, 2000; M.G. Moore), statistics reported by the US Department of Education, National Center for Education Statistics [NCES] 1999, suggest that nearly 80% of public (US) post-secondary four-year educational institutions and more than 60% of public two-year educational institutions offered distance education courses in 1998-1999. According to the author, the most frequently used delivery technologies were asynchronous Internet instruction (58%), two-way interactive video (54%), and one-way prerecorded video (47%). Institutions, however, reported greater interest in Internet technologies and two-way interactive video over other technologies in the future. The rapid movement towards the Internet as a delivery technology is influencing how distance education courses are being structured and how instructors teach.

However, a recent study of Internet distance education sites suggests that most educational web sites do not implement effective pedagogical approaches or provide valuable learning environments (Mioduser, Nachmias & Lahav, 2000). The main reason for this lack of implementation of effective pedagogical approaches is that most distance sites maximize the delivery of the Internet to distribute content and network groups of
learners with little attention to the capabilities of Internet technology to function as an instructional "scaffold" for the actual learning experience. Scaffolding in this context refers to the possibility of hypertext (active embedded text links) technology to support learning by providing the learner with the ability to change course direction, and outcome and to embed and integrate information and additional self-directed resources through search and study tools. The instructional potential of the Internet is increasingly being realized. Internet course designs that accommodate learner-initiated instructional choices, as well as provide a context in which learner and instructor can dialogue for the purposes of negotiation and feedback on an ongoing basis maximize the potential of the technology. It is no longer necessary for an instructor to remain the sole designer or the sole source of information and direction for the learner. The instructor can become co-author, co-learner, and co-producer of the course.

In the field of language learning, the same capabilities can be applied. The acquisition and use of a language is an interactive rather than a passive process. In an Internet language-learning environment, learners can take control of content selection, employ their own learning strategies, and negotiate their own customized learning outcomes without interfering with anyone else's work online. According to Dhanarajan (2000), president of the Commonwealth of Learning, there is a real and global change in the profile of learners requiring education and training. That is, there are more people demanding access to education and training, and fewer are content with allowing that access to only a privileged few. Certainly, newer technologies have promoted new and innovative ways to deliver courses and training opportunities; therefore, Dhanarajan suggests that the role of technology is crucial if any transformation in educational systems is to be achieved. This need for access, according to Dhanarajan, is for several reasons:

- The demand to share resources of knowledge and talent;
- The unmet demand for education and training;
- The changing patterns of learning;
- The demand for 'just-in-time' (specific and not time-consuming) training; and
- The reality of information explosion (p.11-13).
It must also be emphasized that attention should be paid to the resulting new ways of thinking and learning, not only "about information, knowledge, and learning," but also in how that new knowledge is to be applied and how technology can facilitate that application. Issues of why individuals learn are thus becoming more and more important.

The need, then, to educate and train people to higher levels of thinking and professionalism is very real if the challenges of a knowledge society are to be addressed. This need is strongly reminiscent of Dewey’s (1964) notion that instructors should include life experience in learning and teach from life for life. That is, the limited resources and expanding needs of this century move us beyond the information age to the age of knowledge sharing. It is no longer efficient to train people to perform rote tasks without developing the ability to think about why the task is performed in the first place and if, in fact, it is required at all. In other words, the challenge in education and training today is to achieve maximum benefit using minimum resources while training individuals for specific and relevant purposes.

This challenge also has critical implications for language learning, in the sense of global connectedness and the need for multilingual abilities, as well as in the area of what is usually referred to as English as a Second Language [ESL] for the North American continent and other native English-speaking countries. Many Internet users on this continent and worldwide want to learn English as a language of wider communication (LWC). This desire, in turn, promotes the need for second language and bi- or multilingual learning and/or at least language support for unilingual courses or programmes. Although much is written about the dynamic or interactive nature of language and the importance of a learner-centred approach to language learning (Ellis, 1996; Krashen, 1982; Skehan, 1989; Stern, 1983), many language-training courses remain instructor-centred and static. That is, much of the structured language training follows traditional, instructor-centred methodology and monolingual and mono-cultural transmission of content. A monolingual approach in turn presents a mono-cultural, non-global perspective on the learning that is taking place (Friere, 1970; Pennycook, 1998). In many ESL training contexts, the instructor often remains the source for course structure, learning outcomes, content selection, and evaluation, largely due to the notion that the instructor represents the target goals in terms of language and culture. Therefore, the
specific learning goals of the learner are often ignored. Additionally, the rigorous systems of language assessment and standardized placement levels, can promote a preset, static learning process that targets standardized, rather than learner-centred goals. These goals, in turn, can influence course development and delivery. Also, much is often misunderstood about the language acquisition process itself, language fluency, communicative competence, and language proficiency. This kind of misunderstanding means that, while proficiency standards appear to have been achieved, actual fluency and authentic application of language remain unattained. That is, the differences in communication and academic language acquisition processes and the importance of access to mother tongue support and individualized learning and application are often not included in language assessment and programming (Cummins, 1985, 2000). For example, in school environments, when students are able to verbally communicate with their peers and teachers, it is often assumed that they can now function ‘fluently’ in the target language, without specific attention paid to accuracy of use in the language and, in particular, academic ability in the language (Cummins, 1985, 1996). In a school context an assumption of fluency usually means that language support is removed.

With new technology, however, the potential exists for the learner to become more involved in individual goal setting and the development of needs-specific content and application (Saba, 1999; Alexander, 1999). Additionally, learners can study independently and pursue personal learning goals outside traditional class meetings. Putting the learner, rather than standardized content first, means that standardized assessment and evaluation are also challenged (Cummins, 2000). Therefore, while evaluation is necessary in a holistic sense, standards of use and application are ever changing; while learner progress must be measured, preset levels (levels that are organized around demonstrated language samples) can often slow down the language acquisition process and exclude the specific learning style, ability, prior knowledge, and the cultural identity of the learner. Rather than developing rigid courses within preset standards, then, language trainers are being challenged to think of the authentic use or application of language and the design and delivery of language training environments where instructional tools are provided for the learner to negotiate an individual language-learning path, based on individual needs and specific requirements. This kind of learner-
initiated approach can also ensure that the learner is given effective and authentic practice opportunities for language use as an active participant in the learning process. In this study I examined an online learning environment where individual language learning needs could be identified in negotiation with a teacher and used as a basis for a customized learning experience. Therefore, rather than an inflexible course, learners and teachers could work together to develop individualized learning paths using the site resources and tools on a self-directed basis.

Individual learner-initiation and choice can present very real challenges within a non-virtual classroom, given the usual time and scheduling constraints. Within an electronic or virtual learning environment, however, a high degree of customization and self-directed learning can take place more easily and without changes to class structure, time, and various learning goals of the other students in a class. An electronic learning environment can also mean that not only is an individual learning “path” possible, in terms of content selection and progress but also an individual learning “space”, in terms of learning styles and strategies. Further, the immediacy and hypertext capabilities of the Internet can support a “multi-dimensional” learning space that facilitates the negotiation of the individuality of the learner within a community of learners and the world at large (Cummins & Sayers, 1995; Haughey & Anderson, 1998). By “multi-dimensional” I am referring to the capability of Internet technology to facilitate various learning styles by providing media support, links to other information and interaction within the immediate context of application. The main challenge for language course designers, then, is not to try to control input (information reception) but to provide searchable databases and self-selected learning resources, as well as self-editing and output management, application, and communication tools (dynamic reception) for the student’s use. The main challenge for instructors is to help the learner identify and navigate a carefully constructed and relevant learning space within such an environment. The technology scaffolds the learning, teachers facilitate the process, and learners can apply their learning in real life simulations and authentic contexts.

While all learning contexts are relevant to this kind of approach, the implications for distance learning are central to this study. As the distance learner must accept more responsibility for learning in terms of content, time and progress in a course (Moore,
the distance learner's need for self-directed options and an individual learning space can become even more significant.

Research Objectives

My research study, then, brought together several fields of interest. The study used Internet technology to provide a flexible distance learning opportunity, for adult ESL learners, that could be accessed anytime and any place with Internet connection. The site was designed to allow students to pace their own learning and suit their individual learning needs. The site provided the possibility of direct contact with an online ESL instructor and presented the students with various learning resources and practice opportunities that they could self-select as required. The site was designed to offer an electronic learning environment to remote learners. The study investigated the level of autonomy reached by each learner and the likelihood that distance language learners would self-select content and learning resources and make instructional choices to facilitate their own learning without relying solely on the instructor. The environment was designed to provide a dynamic or interactive learning experience for each learner by maximizing the multidimensional capabilities of Internet technology. The main question of this project, then, was

Can an Internet-based, interactive, language-learning site provide an effective, dynamic, and autonomous learning experience for adult ESL distance learners?

The "dynamic" descriptor became fairly central to the study as a result of several assumptions I made early in the design phase. The assumptions I made evolved from characteristics of second language and distance learning that I drew from the literature of the field (discussed in chapter 2) and I applied the term "dynamic" rather than "interactive" in an attempt to link the distance and language learning characteristics together in an integrated framework of process (interaction with the content and teacher) and application (effective use of the language in a meaningful context). Therefore, I assumed that language should be used authentically and appropriately if both teachers and learners were to evaluate results (Cummins, 2000). Additionally, I assumed that a high level of interactivity with content, teachers and peers would be helpful to the
learners (Wedemeyer, 1971, 1977). I also assumed that when given the choice, learners would prefer to work in their own time frame and at their own pace and that they would enjoy selecting their own resources and study tools to aid their own learning (Holmberg, 1995; Saba, 1999). At least, I was interested in observing if any of these assumptions would in fact be important to the learners and to the teachers. Early on, then, the term “dynamic” necessarily included self-directed learning choices as well as the interactive and communicative production of the language itself. Lastly, the term “dynamic” referred to an active choice made by each learner. Learners could choose whether to study either in a dynamic or a linear mode before accessing the lesson content. The dynamic mode offered all of the features already described together with free access to any area of content desired by the learner. The linear mode, if selected, provided only one lesson content at a time. I was interested in observing which mode students chose most frequently and if having free choice to all content would make a difference to the learning experience for each learner.

As I have already stated, the site was developed as a transitional pilot from a mail correspondence programme to an Internet alternative. In order to address this larger question, the following sub-questions were identified:

1. What would be essential in an online ESL learning environment to make the experience dynamic for the learner?
2. What kind of learner would benefit most from this environment?
3. What would change in the role of the instructor from a correspondence mode to an online mode?
4. How autonomously would each learner function within the environment?
5. How would learning outcomes and progress be measured?

The study participants (the participants will be fully described in Chapter 3) were already involved in a LINC (Language Instruction for Newcomers to Canada) Home Study Correspondence Programme, offered through a language-training centre in a large urban centre in Ontario. As participants in an existing programme, the learners and instructors were interested in being involved in this study as part of their transition experience from correspondence to online. The content was taken from the existing correspondence course, modified and transferred to the Internet site. The study
framework was designed around five main functional features: self-selected resources, interactive content, instructor support, communication, and dialogue (the conceptual framework is described in Chapter 2). The following areas influenced the design of the database:

1. The most frequent choices of learning activities and resources chosen by learners when provided with self-selecting options;
2. The preferred choice of learners, when presented with linear and dynamic learning mode options;
3. The level of autonomy reached by distance language learners in a self-directed, online language learning environment and the effect on the role of the instructor;
4. The time spent online by each learner and the time spent on each task or activity.

Once data were gathered, the process of analysis was guided by each of the following questions:

- Do the activities and resources chosen by each learner provide any noticeable patterns of use and how do those relate to the five characteristics of dynamic learning as described in this study?
- Do learners demonstrate a preference between linear and dynamic mode when given the choice?
- Does the role of the instructor change throughout the study, and does the learner become more autonomous by self-selecting instructional supports and initiating teacher and technical support when needed?

Personal Interest

My own language learning experiences in German and French, both positive and negative, have to a large extent influenced the design and purpose of this research project. Having been exposed to a traditional classroom, grammar-based, instructor-driven language-learning experience as a high school learner and an adult learner, I have been interested in exploring alternative methods for teaching and learning languages. For the most part, I enjoy “experiencing” a language first-hand and interacting with the language at the level I am accustomed to in my mother tongue. The frustration I feel with not being able to do that has little to do with “bad teaching” or the lack of stimulating
content. Rather, it has to do with my own awareness that I cannot perform in the way that I want to perform in the target language. That frustration is, in my opinion, a huge motivator in my language learning process, as I aim to represent myself as authentically in the target language as I do in my mother tongue. In other words, what I perceive as a "frustration" can actually positively affect my personal learning goals. I can use my own language ability and/or inability to help me progress in language learning by identifying clear learning goals and by approaching the learning in a way that is familiar to me.

When an instructor interrupts my own process of learning to impose his or her own ideas of what and how I should be learning, I feel silenced in the process, and I begin to function in an unfamiliar context with minimum points of reference. The unfamiliar context, in turn, imposes another struggle—a struggle to learn another, unfamiliar process, before I can actually begin to learn the language.

Therefore, my instinctive desire as I learn a foreign language is to control my own learning choices so that I can support my individual learning process and goals. I remember attending an introductory German class in Switzerland. Despite being beginners, we students had no opportunity to explain why we were in the class and why we wanted to learn the language. The instructor led the class from a grammar-based approach, which, although interesting, did not allow me to involve my own learning process, which has always been from an experiential, rather than a text-based approach. In addition, because I had a good accent and could mimic native speakers well, it was assumed by the teacher that I should not attend that class, that I should attend the higher level, which would have been even more grammar at a complex level. That, in addition to the fact that I was a mother of three young children, meant that I was unable to continue taking language courses. At that point in my life, had I been able to access a flexible, self-directed, teacher-supported Internet course, I would have been able to study within my own schedule and from my own perspective. These realities and challenges are becoming more a way of life than an exception for most people. Few people can afford the luxury of setting aside a separate time and space in their lives, away from the reality of everyday living, in order to learn. "Learn as you go" is becoming more and more the reality for adult learners (Cranton, 1992; Slaughter, 1996). Additionally, because adult learners are usually multitasking their schedules, the learning that does take
place needs to not only be flexible and innovative in terms of delivery, but extremely effective and relevant in terms of outcome (Cross, 1981). Most learners today need to learn efficiently as well as effectively. Although educational theory has, since Dewey, been attempting to advance learner-centred, and experiential learning, the reality of life for the average adult learner in North America necessitates this focus more than ever.

In addition to my language learning experiences, I was hired by an adult learning group to research and write a final report for a correspondence home study course for adult language learners. During this experience, I contacted various learners who seemed to really enjoy the flexible option of learning at home while continuing to work or care for families. The final report clearly demonstrated a real need for continuing and expanding the programme (Reynard, 1997). The outcome of the report was to secure additional federal funding to continue the project and to expand it to other regions in Ontario. As coordinator of the programme, I continued to survey students as to their specific needs, and monitored student progress through the programme. The inadequacy of the materials was clearly identified and I began rewriting new materials using audiotapes and workbooks. Students were actively involved in the field-testing of these materials and made many suggestions for their improvement. I began to notice, however, that more and more students were registering for the programme and asking ahead of time for email connection with a teacher. In addition, more and more students were requesting help with learning about computer technology and were using the Internet more in assignments. The teachers were also involved in training for new technology in the programme.

A challenge that remained, however, was the unusual times that students were requesting connection with their teachers. Additionally, teachers were frustrated in trying to manage the level of customization needed for each student, as well as maintaining a regular contact and feedback schedule. In other words, teachers were trying to manage increasingly dynamic expectations and demands in a traditional linear format. Also, students began requesting more and more time with the teacher, requests which meant that teachers were providing intense tutorial support for each student, while still trying to work with their students collectively. This load proved to be impossible. I began thinking about the Internet and talked with an Internet developer about designing a site
that would take most of the pressure from the teachers and provide enough resources and support for each learner to work intensely on his/her own language problems while still remaining part of a larger learning group. The role then of the teachers would be to guide and facilitate the learning process, rather than to be the sole provider for the learners.

I applied for and received additional federal funding to develop such a site, and I began planning and implementing the development. I was aware that a pilot would be more helpful, and I also felt that working with already familiar content and instructional tools would benefit the students as project participants. The pilot ran for ten weeks during the summer break and involved 26 students and seven teachers. As programme coordinator and researcher, I was able to keep close contact with the developers and participants.

Thesis Overview

The following is a brief overview of this thesis:

CHAPTER 1—INTRODUCTION
This chapter provides the context and rationale for the study and includes a personal interest section that describes my own journey to this point.

CHAPTER 2—LITERATURE REVIEW
As this project brings together various fields of study, this chapter identifies key literature from each field that has influenced the design and implementation of this research project. Six characteristics of dynamic language learning emerge from the literature and form the conceptual framework for this project. The characteristics are presented in this chapter.

CHAPTER 3—METHODOLOGY
The approaches and methods used to organize, implement, and analyze the project data are presented in this chapter. Chapter 3 describes the design and development of the Internet site used in the study and includes the specifics of participants, content, resources, and tools available to the learners.

CHAPTER 4—FINDINGS
All sources of data collection, including the electronic database and email inboxes, feedback sessions, interviews, and email dialogue are presented and analyzed in this
chapter. Various tables help to organize the data in a more readable format. Chapter 4 also presents the qualitative data from teacher feedback sessions and email interviews with teachers and students. The final section of the chapter presents two case studies (one student and one teacher) that help to highlight the main features of dynamic language learning online within the framework of this study.

CHAPTER 5–DISCUSSION
This chapter presents a general discussion of the project data and how the data relate to the distance-learning framework examined in this study. The discussion includes an overview of the strengths and weaknesses of the study. Reference is made to a dynamic learning matrix and the patterns of use of each learner are analyzed in order to observe how each learner demonstrated various characteristics of dynamic use of the site and to what degree.

CHAPTER 6–CONCLUSION AND FUTURE WORK
The final chapter provides a concluding discussion of the findings of this study and how they relate to the conceptual framework presented in Chapter 2 and to the general field of Internet-based second language learning. This chapter also presents personal observations of the project and ideas for future work.
CHAPTER 2
LITERATURE REVIEW

This study selected from current literature on computer-assisted learning (CAL) and computer-mediated learning (CML) and distance education several key characteristics that are widely thought to be useful as a means of enhancing certain aspects of second language learning (SLL) in a distance mode. These characteristics influenced the design of the Internet site and materials used in the study lessons and constitute a working embodiment of some theoretical principles drawn from the literature presented in this chapter. For the study, I identified characteristics that I believed were worthy of trial and incorporated them into an Internet site and programme materials, and carried out a case study to examine how these characteristics would work in a distance education, second language teaching and learning context. One set of design characteristics were oriented towards learners, the other towards teachers and the problems raised in the pilot study provide tentative hypotheses for future study. This chapter presents an overview of literature from significant fields of study including distance education, second language teaching and instructional design. Each of these theoretical areas is addressed separately in three sections.

Section 1-A Discussion of Distance

Distance education theories of learning have consistently promoted the notion that the more autonomous the experience for the learner, the more effective the experience is for the learner. Autonomy, however, is not to be defined as isolation, but independence, not separated from, but integrated with, instructor support and connectivity with peers. That is, although “distance” itself implies separation, it should not refer to the learning experience, only to physical, spatial, or scheduling distances. Keegan (1996) emphasizes that the term “distance education” necessarily involves both teaching and learning as a complete process, regardless of whether the term refers to physical or pedagogical distance. Many distance theorists have emphasized the importance of supporting the teaching and learning process with an instructional system (Wedemeyer, 1971, 1977). Interestingly, Wedemeyer promotes a distance learning system that promotes the
individual learner's needs as paramount to the process, but includes placing more responsibility for learning with the learner and accommodating individual preferences as key characteristics of an effective delivery system (Wedemeyer, 1977). Keegan presents Wedemeyer's diagrams of the relationship of the participants in a traditional classroom situation (A) and compares that to a situation that accommodates distance (B) as follows:

![Diagram A](image)

(Wedemeyer, 1977, adapted by Keegan, 1996, p. 63)

![Diagram B](image)

(Wedemeyer 1977, Adapted by Keegan, 1996, p. 64)

According to Keegan, Wedemeyer's representation of, 'any time, any place, single or multiple learners' requirements,' depends on the organization of instruction in order to
accommodate this level of flexibility. Wedemeyer proposes three conceptualizations of flexibility for learners in distance programs in the following ways:

- Learning should be self-pacing: learners should be able to pace their studies in accordance with his circumstances and needs;
- Learning should be individualized and the learners should be free to follow any of several courses of learning;
- The learner should have freedom in selection of goals and activities.

Holmberg (1978, 1981, 1986, 1995) promotes the notion that the learner is central and motivational to the entire distance learning process, in the sense that it is the learner’s learning needs and goals that should influence the instructional design of a course of study. According to Holmberg (1995), two-way communication is vital to the teaching and learning process. Holmberg (1995) designates several levels of communication from guided didactic (for example, from the delivering institution) to real (direct between the instructor and the student using technology and mail) and simulated (the interaction between the students and the content). With the instructional application of Internet technology, however, the communication patterns move from two-way to multidirectional. Therefore, the levels move from static or didactic to multidimensional. While linear communication patterns may involve individual response and interaction, Internet technology provides opportunity for individual response to be more easily integrated and applied in the immediate context of the learning that is taking place. As such, it could be argued, that Wedemeyer’s linear communications mode could be altered to reflect the influence and capabilities of an Internet-based environment as illustrated in Figure 1a.
In Figure 1a, the communications lines are continuous and circular, as are the connection lines between teacher and student. The diagram illustrates the non-linear capabilities of the Internet, as well as the interdependence of learning participants. Both circles are intersected by straight, but broken lines, which meet at the centre. This meeting point illustrates that, while participants meet and interact at some point, there is no clear end to these lines and, as such, no real end to interaction with participants and/or content. That is, the interaction is motivated by the individuals involved and either's response or choices is not determined by the other. The content here could be equally owned and accessed by either participant and exists in relevance to the choices of those participants.

In such an environment, linear structures are obsolete, although they could exist if desired. What is apparent, however, are the continuous and flexible possibilities for teaching and learning. Therefore, content does not drive the teaching and learning process but supports the learning as each student interacts with and applies the content of the course according to the individual learning needs and goals. In the site created for
my research study, the content was presented to the student in a self-selecting mode, in order to facilitate an open-ended process of content construction.

Transactional Distance

The notion that distance learning can be observed as a behaviour is also not new. In 1973 Moore first articulated a theory of distance education that later was referred to as "transactional distance". In that first theory, it was stated that

Distance education is not simply a geographic separation or learners and teachers, but, more importantly, is a pedagogical concept. It is a concept describing the universe of teacher-learner relationships that exist when learners and instructors are separated by space and/or by time. (Moore, 1993, as cited in Keegan, p.22)

Moore states that the theory "connotes the interplay among the environment, the individuals and the patterns of behaviours in a situation" (Moore, 1993). Moore promotes the notion that the separation between learner and instructor leads to various patterns of learner and instructor behaviours (Moore, 1993). Moore also states clearly that transactional distance is relative rather than an absolute variable - a variable influenced by other variables existing in the environment, the individuals and the patterns of behaviours besides teaching and learning (Moore, 1993). Nevertheless, distance is a variable that must be negotiated on a continuous basis, and Moore categorizes these variables into two instructor areas, dialogue and structure, and one learner area, learner autonomy. Moore discusses the differences between the terms interaction and dialogue; while both are somewhat similar, the latter usually refers to a more meaningful exchange that is purposeful and equally valued by both participants (Moore, 1993). In addition, Moore points out that the delivery medium used will necessarily affect the amount and success of the dialogue between instructor and learner and, therefore, the transactional distance between the two. The capabilities of electronic communication through computers maximizes the potential for two-way communication, thus promoting dialogue throughout the learning experience. Moore suggests that in situations where students are not provided the opportunity to respond actively, they will, nevertheless, respond internally or passively (Moore, 1993). In conventional mail correspondence, two-way dialogue can take place, but, according to Moore, the medium slows down the
interaction, while electronic communication intensifies the interaction. Moore does note that there are certain constraints beyond the technical capabilities that may affect the level of dialogue achieved, such as the number of students assigned to a teacher, the frequency of opportunity for communication (usually associated with administration and finances), the physical environment of teachers and learners, the emotional environment of teachers regarding peer appreciation and acceptance of the profession and the emotional environment of learners regarding how their learning achievements are recognized within significant groups (Moore, 1993). An additional point is made by Moore regarding the reality that, even in the most potentially dialogic environments, the level of dialogue achieved between learning participants also relates directly to the personalities and styles of the teachers and learners involved as well as content differences between basic informational type courses and higher level graduate course where dialogue and discussion among peers is encouraged (Moore, 1993).

Moore also points to the significance of structure to transactional distance. By “structure,” Moore refers to the rigidity or flexibility of the programme's educational objectives, teaching strategies, and evaluation methods and states, “...the extent to which an education programme can accommodate or be responsive to each learner's individual needs”(Moore, 1993). Moore emphasizes the importance of distance structures as being flexible and highly collaborative, although this kind of structure that reduces transactional distance and increases dialogue is highly demanding:

- It requires the engagement of many different skills and it requires that these skills are systematically organized and deployed. It requires changes in the traditional role of teachers and provides the basis for selecting media for instruction (Moore, 1993, p. 28).

Therefore, open dialogue between learner and instructor should be supported by the structure if distance is to be transacted. A high degree of collaboration is possible through various means of communication at different stages throughout the process and if the delivery structure supports the flexibility needed to make modifications to procedures and content according to specific learner needs. In my research site, distance was transacted through initial teacher contact with each student in order that a learning plan
could be established that would take into account the needs of the learner in relation to the resources provided in the site. As such, each student could pursue an individualized course that depended upon ongoing contact with the teacher with self-directed selection and use of the resources provided.

Intentional Instructional Design

According to Moore, the structuring of an instructional process should be intentional and must

- Present information, demonstrations of skills, or models of attitudes and values,
- Support the learner’s motivation, in the sense that once the programme of content has been presented, designers and instructors must continue to stimulate the learner’s interest and motivation through the use of multimedia input, immediate and effective feedback from instructors, and learner-instructor dialogue,
- Stimulate analysis and criticism, or higher order thinking skills through listening to experts, and organizing discussion groups,
- Give advice and counsel, through providing guidance on the use of learning materials, dealing with problems and tutoring study techniques etc.,
- Arrange practice, application, testing and evaluation, giving the students the opportunity to apply what they have learned in a meaningful way and encouraging dialogue with the instructor to set up helpful evaluative tasks,
- Arrange for student creation of knowledge, giving students sufficient opportunity to dialogue with teachers in the process of creating knowledge (Moore, 1993, pp. 29-30).

The structure of the environment, whether electronic, actual or virtual, is usually informed by the methodology of the designer. That is, whatever educational approach the designer adheres to will influence layout, navigation, instructional tools, media choice and content flow. As instructors work with the design, they too will be influenced by the methodological approaches supported by the design (Duffy & Jonassen, 1992). The design of my study site presented language skill demonstrations and practice
opportunities while providing contexts for initiating dialogue, discussion and creative language use. Studies in intentional learning environments (Scardamalia, Bereiter, McLean, Swallow & Woodruff, 1989; Scardamalia, Bereiter, Brett, Burtis, Calhoun & Smith Lea, 1992; Scardamalia, Bereiter, 1995) demonstrate the importance of using technology to not only drill and practice but to support learning strategies through rehearsal of content and comprehension. Barnett (1993) cautions that often technology can be used to simply replicate classroom procedures and strategies and can foster teacher control rather than encourage learner control. A recent study (Ulitsky, 2000) demonstrates the usefulness of technology in encouraging learner’s to develop learning strategies but only if that is the goal of the environment itself.

**Objectivist–Constructivist Continuum**

“Instructional design, and indeed instruction in general in the United States, emerged from an objectivist tradition” (Duffy & Jonassen, 1992, p. 2). The objectivist tradition holds that experience and existence are not interdependent or interrelated. Objectivist thought acknowledges that everyone is an individual and, as such, has individual experiences, understanding and learning styles; however, these individual realities will lead to a biased or partial view, rather than a complete and correct view or understanding (Duffy & Jonassen, 1992). Therefore, in this approach, it is important to identify what the learner needs to know, how the learner learns, and to engage the learner in the learning process in order to master the knowledge pre-identified as correct (Duffy & Jonassen, 1992). The objectivist approach spans behaviourist theory to cognitive psychology. Throughout, the existence and acquisition of information are independent of each other (Duffy & Jonassen, 1992).

Constructivism, on the other hand, promotes the notion that the individual’s experience of the real world is crucial to understanding. Experience, then, must be examined in the pursuit of understanding, and, as such, constructivist approaches tend towards authentic experiential learning. Instructional plans, then, become plans for action towards process. Outcomes, then, are not preset, but evolve through the learning process (Duffy & Jonassen, 1992). In the chapter “Theory into Practice: How Do We Link?” (Duffy & Jonassen, 1992), the authors discuss the differences in practice between more traditional, behaviourist or objectivist approaches to practice and the more current
approaches demonstrated in the practice of constructivist instructional design. Table 1 attempts to summarize the main points of that discussion, organizing the discussion by headings reflecting critical connections between theory and practice [i.e. given that a learning environment would involve each of the following aspects]. Table 1 is taken from Bednar, Cunningham, Duffy, Perry and Bruner in Duffy and Jonassen, (1992, pp.17-25, with my own parentheses).

Table 1-Objectivist and constructivist instructional design

<table>
<thead>
<tr>
<th>ANALYSIS OF CONTENT</th>
<th>Constructivist Goals</th>
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</thead>
<tbody>
<tr>
<td>1. To simplify and systemize specific content components</td>
<td>1. To identify core knowledge domain</td>
</tr>
<tr>
<td>2. To translate learning goals into process or method</td>
<td>2. To encourage the learner to pursue other knowledge domains that are relevant to the context</td>
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<tr>
<th>ANALYSIS OF LEARNER</th>
<th>Constructivist Goals</th>
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<tbody>
<tr>
<td>To establish average conditions of the pool of learners [In other words, to be concerned with an average of all learners, rather than the specific development of individual learners]</td>
<td>To identify the skills of the learner, rather than only the ability to remember information</td>
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<tr>
<th>SPECIFICATION OF OBJECTIVES (Analysis Stage)</th>
<th>Constructivist Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>To identify the characteristics of content and learner and to specify these so as to translate to instructional method</td>
<td>To characterize a variety of ways of knowing</td>
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<tr>
<th>SYNTHESIS STAGE</th>
<th>Constructivist Goals</th>
</tr>
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<tbody>
<tr>
<td>To involve the application of general instructional principles that can be developed into an instructional sequence</td>
<td>To develop a learning environment and to encourage construction of understanding from a variety of perspectives</td>
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<tr>
<th>EVALUATION</th>
<th>Constructivist Goals</th>
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<tbody>
<tr>
<td>To develop a final exam that is designed towards the universal goals established</td>
<td>To examine the thinking process, not dependent on content [in other words, to be more concerned with the process of learning than a measurable product.]</td>
</tr>
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</table>

Further in the chapter, the authors (Bednar et al. 1992) identify three main aspects, which are characteristic of a constructivist learning environment:

- Situated Cognition – The learning experience is situated in real-world contexts or simulations (see Brown, Collins & Duguid, 1989a, 1989b; Resnick, 1987; Rogoff
& Lave, 1984). Here, situating the learning is not isolated but part of a larger context, and projects and whole learning environments are created to capture the larger context (see Bransford, Sherwood, Hasselbring, Kinzer & Williams, 1990);

- Cognitive Apprenticeship – The instructor models the concepts and coaches the learner through the learning process. (see Collins, Brown, Newman, 1988);

- Multiple Perspectives – The learner is able to see an issue from a variety of viewpoints and where the main method employed is collaboration.

Perkins (1992) suggests that there are two main constructivist approaches to consider in any teaching and learning context: BIG (beyond the information given) and WIG (without the information given); the latter promotes the notion that “... concepts are not truly and meaningfully learned in ways that empower learners unless those concepts are in good part rediscovered by the learners,” and the former urges that “... one can generally quite straightforwardly teach concepts, providing the overall instructional experience includes ample occasion for students to function generatively in testing and extending their evolving conceptions” (Duffy & Jonassen, 1992, p. 50). Perkins continues by arguing that the organization, structure of content, and the use of information technology applications and components will, necessarily, depend on which aspect of constructivism the designer chooses–either having the learner work through various tasks to construct individual meaning (WIG) or using specific tasks to engage the learner with the information in a meaningful way (BIG) (Duffy & Jonassen, 1992).

Section 2-Second Language Learning (SLL)

The major theories of second language learning focus on various aspects of the learning process. Krashen (1981) distinguishes between what he sees as the process of acquisition and the more complex processes of learning, where the learner not only becomes familiar with language parts and structures, but also becomes proficient in authentic use and application of the language learned. Krashen (1985) promotes the notion of comprehensible input to suggest that when input is comprehensible to the learner acquisition of the language will be maximized. The notion of communicative competence was promoted by Canale and Swain (1979) and later, Swain’s (1985) notion of comprehensible output suggests that competence in a language cannot be demonstrated
without meaningful performance in that language. In the regular correspondence course, students are sent materials according to their language level but these materials were not flexible or modifiable although teachers could freely augment the materials with additional resources. In the research site for my study, the intention was to provide an environment where language competency could be demonstrated through interaction with set content and customized production of the language within authentic contexts.

Theorists have identified the complexities of attaining and evaluating communicative competence (Hymes, 1971; Canale & Swain, 1979, 1980; Canale, 1983) as it is seen in terms of ability to perform in a language, while Widdowson (1978) distinguishes between use and usage, emphasizing the difference between using language within set and familiar parameters and using the language authentically and creatively. In the LINC (Language Instruction for Newcomers to Canada) programme, from which this research study evolved, language performance is measured through a standardized language assessment tool that measures various competencies through examples of appropriate language use. These examples are usually demonstrated by a teacher and practiced in a classroom setting that is not always reflective of actual use in day-to-day situations. The assessment tool used was the Canadian Language Benchmarks Assessment measure (CLBA). Each student in the Home Study Programme had received the standard language assessment and was subsequently placed in the program according to the level reached in this assessment. To augment the process, each teacher in the Home Study Programme was required to conduct a needs assessment interview with each student that would attempt to provide some real life conversation and question and answer opportunities to assess the language level of the student and, therefore, establish where in the programme the student should actually begin their course work.

Cummins (1983) promoted the notion that a further distinction should be made between communicative and academic uses of a language, as each involved different processes of learning. These distinctions, Cummins described as basic interpersonal communication skills (BICS) and cognitive academic language proficiency (CALP) (Cummins, 1983). In the Internet site for my study, the intention was to provide opportunity for students to develop both basic communicative and cognitive language skills by the integration of multimedia and text and the communication technology used
(i.e. chat, email, notice board and telephone). Students would have the opportunity to reinforce both skills through the level and application of the content used and through the individualized demonstration of the language acquired. In addition, teachers could customize assignments based on the students' learning and thus encourage both communication and thinking skills in English.

Canale and Swain (1979) and Canale (1983) promote various aspects of communicative competence as ability areas that relate to language knowledge. That is, the ability to learn a language accurately through an understanding of the mechanisms of the language, such as grammar and syntax, as well as an authentic use of the language within sociolinguistic conventions is crucial to the language acquisition process. In addition, Canale and Swain (1979) emphasize a distinction between language discourse and the strategic use of the language, or the communicative complexities of conversation and other intentional uses of the language to persuade, influence and inform. In my research site, while English was demonstrated in real life contexts that included sociolinguistic, discourse and strategic competencies (e.g. examples of general conversations, opinion sharing, question and answer, agreement and disagreement), the language used was also presented within pronunciation and grammar workshop settings in which specific elements and structures were demonstrated and explained. This meant that the student was able to experience the language in action as well as study the language in its essential sound and form components.

In my study site, measurement of the language learned was based on a two-way model of pre- and post-lesson quizzes. The quizzes had two parts; vocabulary testing and use in a written submission. This model was based on lexical processing and task-based instruction. Researchers examining the relationship between reading and vocabulary acquisition (Brown 1993; Coady, 1992, 1997; Harley, 1995) have emphasized the complex mix of unfamiliar words, surrounding text and extralinguistic features that all interact with learner characteristics to support incidental vocabulary learning (Wesche & Paribakht, 1998). Research has also focused on the type of activities that are more effective for vocabulary development in terms of pedagogical goals (Hulstijn, Hollander & Greidanus, 1996; Paribakht & Wesche, 1997). According to Wesche and Paribakht (1998) both kinds of studies suggest that all linguistic elements are important-word
features, the wider context of use, the text in which they are embedded, and the capabilities of individual learners. To facilitate needs assessment as well as outcome evaluation, the pre- and post-lesson quizzes were designed to target vocabulary words within sentences (as a cloze exercise) and to offer the student an opportunity to demonstrate individual use of the vocabulary words within a written submission as a response to a question. Swain (1985) suggests that use of the target language can help to demonstrate gaps in knowledge through internal (student) and external (teacher/peers) feedback. Each pre- and post-lesson quiz was electronically submitted to the teacher before the lesson began so that teachers could provide feedback and help to establish which aspects of the lesson content the student(s) might find most helpful.

Krashen's (1985) comprehensible input theory suggests that as a result of comprehending input learners acquire morphological language features in a natural order. In other words, if the input is comprehensible to the learner, and just beyond their current level, the acquisition of the target language becomes a natural learning process. In my site design, the intention was to provide as many supports to the learner as possible in order to access meaning. Each lesson had content presented in audio and text and each section was designed to be accessed separately so that the same section could be read, or read and heard as often as required by the student. In addition, an electronic dictionary was available in every section of every lesson. Swain (1985) promotes the notion that comprehensible output, or 'pushed output' is necessary for effective language acquisition. According to this theory, learners require opportunities for demanding output in order to learn appropriate language use. In my research site, output was not dictated but designed to be initiated by each student and in keeping with each student's learning.

Regardless of different interpretations of the research, however, underlying each significant study is the awareness that language learners demonstrate individual learning differences in the process of language acquisition. Ellis (1996, p. 27) says, "Whereas the bulk of SLA (second language acquisition) research has addressed the universal characteristics of L2 (second language) acquisition, there is also a growing body of research on individual learner differences" (see Skehan, 1989). This is important in my research study as in a self-directed, learner-initiated environment, learner differences in response and use are key. In other words, learner individuality of response and
interaction is as crucial to a successful learning process as the way in which the content is presented and taught. Stern (1983) suggested that the movement in the research of SLA towards learning strategies, rather than teaching methodology alone, is an important one. He acknowledged that studies are somewhat elusive, given their subjective nature; nevertheless, he emphasized the importance of learner individuality in the language learning process. In this regard Ellis (1996) states, 

Learners differ in a number of ways, which affect L2 acquisition, in particular their rate of development and their ultimate level of achievement. The ways in which learners differ are potentially infinite as they reflect the whole range of variables relating to the cognitive, affective, and social aspects of a human being. The factors can be divided into those that are fixed [e.g. age, gender] and immutable and those that are variable, influenced by social setting and by actual course of L2 development. This distinction is, perhaps, best viewed as a continuum with specific factors treated as more or less immutable/mutable. (p. 27) 

Learning behaviour or patterns are important in any discussion about learner differences. While learning behaviour can be related to some fixed differences, the relation between learning behaviour and such variables as motivation, perception of the learning process, learning habits, and relational and solitary learning experiences must be analyzed. In other words, how learners learn involves a complex process of interaction between set expectations and individual preferences. These preferences are difficult to quantify yet seem to have something to do with the kinds of learning strategies and/or study habits employed by individual learners. Learner strategies are conscious or potentially conscious, as “... they represent the learner’s deliberate attempts to learn (Ellis, 1996, p. 37). Ellis also cites Oxford’s (1990) definition of learner strategies as, “behaviours or actions which learners use to make language learning more successful, self-directed and enjoyable” (Ellis, 1996, p.37). Whether learners are working in a classroom or a distance mode, their strategies for learning should be supported. In a distance mode, however, the learning strategies of the learner should be supported not only in relation to the content of the course, but also in negotiating challenge of distance
itself through dialogue between learner and instructor, direct communication between course participants and self-directed choice throughout.

Individual learner differences should be considered in relation to strategies used. It is interesting to examine how much learners rely on their own strategies and how, if those strategies are not supported, the learning experience will be diminished. The work of O'Malley and Chamot (1987, 1990) has provided a helpful framework with which to analyze learning strategies within three main areas: metacognitive, cognitive and social/affective. Wenden (1983, 1991) clarifies the term “learning strategy” as falling into four main areas:

- What learners do to learn a language;
- How learners manage or self-direct their efforts;
- What learners know about their own language learning process;
- How the learning skills of the learner can be developed.

Wenden focuses on the specific use of the term “strategies” to mean specific actions or techniques used by the learner (observable and non-observable actions) and problem-solving techniques, all of which may be consciously deployed and which may also change or modified with training (Wenden, 1983). Rubin (1987), however, broadens the term to include more general learning behaviours that, both directly and indirectly, affect the learning process. These include notions of learning ability, explicit and implicit knowledge, consciousness-raising, as well as the importance of self-direction, and the transference or learning ability. Rubin sees these behaviours as crucial to the learning process and acknowledges that these can be identified consciously and encouraged by deliberate training (Wenden, 1983).

Regardless of specific definitions of terms, most learning strategy research emphasizes the importance of self-directed or autonomous learning strategies in the learning process. Wenden (1991) looks at the use of self-directed strategies by foreign language learners and identifies three main categories of self-directed strategies:

1) Knowing about language (relating to what language and language learning involves);
2) Planning (relating to the what and how of language learning);
3) Self-evaluation (relating to progress in learning and the learner's response to the learning experience).

More specifically, Holec (1981) promotes the notion that the total self-directed action of the learner is concerned with

- Fixing objectives;
- Defining the contents and progression;
- Selecting the methods and techniques to be used;
- Monitoring the acquisition procedure;
- Evaluating what has been acquired.

The importance of self-directed techniques emerged from the work of Knowles (1975) in the area of adult education and the identification of the need for ongoing learning to prepare adults for the social and technical changes in contemporary society. Knowles identifies the ability to go on learning as central to the adult learning experience and quantifies the success of the adult educator as one who has left students with the ability to pursue their own learning (1975). The ability to "go on" individually with the learning process necessarily implies a different role for the learner. In the chapter "The Learner as Manager" (1975, p. 145-156), Holec discusses the role of the learner in the learning process. He suggests that there should be a choice given to the learner as to that role. That is, the learner should be provided the opportunity of submitting to the direction of the teachers, or to be actively involved in the process. Holec emphasizes that this choice is only possible if, in fact, there is actually a valid choice presented. Once that choice is removed, the process becomes preset and not as effective for the learner (Holec, 1981). The term "manager" is used deliberately by Holec to illustrate the notion of process or system, and this process includes, for Holec, the entire scope from the choice of objectives to evaluating outcomes. In this context, he states, "... good learners are learners who are capable of assuming the role of manager of their learning. They know how to make all the decisions involved. In other words, they know how to learn" (Holec, 1981, p.147). More and more research has been done on learner autonomy and independence (Holec, 1981; Benson, 2000) and its importance to a successful learning process. Wenden (1998) has particularly promoted the notion of autonomy in relation to language learning. It should be emphasized that autonomy requires, rather than
eliminates, teacher intervention. Little (1995, 1997) also promotes the notion that both teacher and learner have important roles to play in the process of autonomy and that the effective development of language awareness and learner autonomy are co-dependent. The theory of learner autonomy necessitates the teacher as central to the learning process (Yang, 1998; Thanasoulas, 2000) and the importance of learner understanding of autonomy (Cotterall, 1995) and the negotiation of learner and teacher role through dialogue and curriculum development (Little, 1995; Cotterall, 2000). That is, a successful autonomous learning experience depends on negotiation between teacher and learner and a mutual understanding and motivation towards learner independence. Studies in autonomy for the language learner have promoted the notion of a resource centre in which learners can actively interact and learn (Esch, 1994; McCall, 1992; Sheerin, 1989,1997; Sturtridge, 1997; Benson, 2000). These research studies emphasize learner autonomy as crucial to an effective language learning experience, but autonomy itself requires intense support and the opportunity to take control of learning choices within an interactive environment. Autonomous language learning does not mean that the student is working with static content on his/her own. Rather, autonomy has been successfully achieved when the learner is actively responding to and interacting with content in order to acquire the language relevantly and efficiently and applying it in a meaningful way. This reflects back to Perkin’s (1992) notion of “beyond the information given” (BIG) and moves the learner from a position of passivity to activity in response and application. This also supports the notion that self-access to instructional content and supports is important if autonomy is to be achieved (Dickinson, 1987).

Additionally, in all of these studies, the role of the teacher is also presented as an intensely active guide, not a passive observer or an occasional source of feedback. Therefore, learning autonomy is an active, multidimensional process in which learner and instructor are equally active. This would suggest then, that the content itself becomes less important than the participants and should, therefore, be modifiable and customizable according to each individual learning context. Wenden (1991) and Dickinson (1992) suggest that learners should train to acquire the skills necessary to successfully learn autonomously, while Voller (1997) emphasizes that both the ability to learn and the ability to teach are crucial to the success of the autonomous learning process. Autonomy,
then, can only be achieved when teacher intervention is relevant to and based on the specific learning needs of the student. Learner autonomy that includes teacher intervention is critical to my study as the goal of the study is to create individual learning environments for the students that would maximize learner initiative and learner choice and provide effective and immediate intervention by the teacher when needed.

Section 3-Designing Learning Frameworks

Computer-mediated distance education (CMDE) demonstrates, just as in conventional educational environments, the potential for the interconnectedness of all aspects of the teaching and learning field. It is interesting to note, however, that often in CMDE research and professional discourse, as in conventional educational research, the interconnectedness of the process is lost in an attempt to more closely analyze the effectiveness of specific areas. Current CMDE research tends to divide itself into two areas—technical (programming, software and hardware) and pedagogical (how the teaching and learning will happen— instructional design). What is most often missing, however, is an examination of the intent and application of the learning taking place: that is, a critical look at the main purpose and the wider significance of the learning to personal and societal growth. Intention or the purpose in learning should not only refer to learning objectives in the conventional sense, but should also address issues of individual intention and the wider significance of societal or global intentions in terms of application of what has been learned. The key to intention or purpose, then, is active, equal, and dynamic participation of both learner and teacher. My research study attempted to address this "missing piece" by providing an environment where the intent or the purpose of the learning taking place actually influenced the learning process directly and the instructional choices made by the teacher and learner.

There is, therefore, great significance in an integrative approach to CMDE (computer-mediated distance education) development because emphasis on any one aspect to the exclusion of the other is limited and, therefore, more likely to produce passive, rather than active, learning. In addition, active or dynamic learning can only take place if there is a commitment to open negotiation between learning participants (teacher and student), rather than a static confined and inflexible framework for learning.
That is, language should be used or performed if it is to be learned and that use, in order to be acquired, should be internalized through a process of learner engagement with content, learner-teacher negotiation through dialogue, and authentic use through customized application or language learned. For the purposes of my study, this process is referred to as dynamic language learning. The teacher-student negotiation is not only an open dialogue (as discussed by Moore, 1973), but also a process by which the learner can identify an individual learning plan and process. The reality of this, however, is that there can be the negotiation of a learning space within an existing learning environment and that essentially challenges traditional roles, responsibilities and expectations of all participants. The result of this is that there is a risk for everyone involved.

Learning Systems

In the field of CMDE, the term "learning system" usually refers to a deliberately designed learning environment in which the details of the specific and general content (the ‘what’), pedagogy (the ‘how’), access (interface design), course movement (navigation), and outcomes progress (evaluation) are clearly and deliberately organized and structured within a computer-mediated, technical environment (Dick & Carey, 1990). Therefore, the goal of most CMDE developers should be to design and implement an effective learning system (Saba, 1999). In recent issues of the Distance Education Report (1999-2000), there have been many discussions about how to develop learning systems that accommodate and maximize this kind of dynamic collaboration now possible through computer technology. In an editorial, Saba (1999) identified the effective learning system as promoting various methods of assessing prior knowledge, customizing learning options, and tracking the progress and development of the learner, and the assessment of learning progress responding to the changing needs of the learner throughout. In addition, however, Saba identifies the most effective learning system as one that has been designed from the assumption that the learner's knowledge and learning objectives will change and will support a dynamic, rather than a static learning experience. It is interesting, however, that Saba discusses this notion of negotiation with the implication that there can exist an issue of ‘control’ in the process. He states,
Distance in personalized instructional systems is determined by how much structure the student needs and requires in the process of teaching and learning, and how much the instructor is willing to allow the student to have dialog in the process of learning and teaching and participating in setting the educational agenda. (Saba, 1999, Distance Education Report, Vol. 3, No. 8 p. 5)

Therefore, the instructional design becomes central to the entire development process, and the design is essentially what draws the teaching and learning together. What can often be at issue are not the actual capabilities of the technology but the flexibility of teachers and learners to negotiate and support an individual learning space.

**New Roles for Instructors and Learners**

In a conventional sense, course structure is set and organized into logical and manageable stages, based on the behaviourist theories of Thorndike (1898) and Skinner (1953). That is, instructors and instructional designers determine the amount of content and the organization of content presented to learners. However, in a rigid instructional structure, the scope and creative application of the content is confined to the parameters already set by the course developers. Instead, if the design of the learning environment facilitates individual learner choice in intention and application, the learning outcomes can be more global in relevance. Global relevance is not an issue of content only, as content may differ from course to course, but it is an issue of the methodology supporting the instructional design. For example, content can be presented in a two-dimensional level of interactivity that provides no negotiation between teacher and learner. An instructional design that facilitates negotiation, however, will present content in a dynamic framework of multi-layered interactivity, which provides opportunity for individual response, intentional challenge, creative manipulation, and relevant application. Davie (1999) refers to these designs within the “second domain of application programs”. It could be argued that a dynamic, integrated process of collaboration means a more intense role for the instructor as a more individual and direct communication with each learner is made possible through electronic communication technology than previously possible within conventional classroom environments (where classroom environments can leave the individual learner in a situation of compromise to
the needs of the group without individualized attention to their own needs). Also, the
sheer capabilities of technology and the growing expectations of interaction, on the part
of the learner, together with the immediate communication of learner needs and learning
goals, usually require more creative and multi-dimensional instructional approaches with,
often, a variety of approaches within one context (Bates, 1996). Bates recognizes that
multi-dimensional approaches are essentially, but not completely, technology related, in
the sense that new capacities translate into new functions within the instructional process.
For example, the capabilities of tele-conferencing are different from those of video-
conferencing, and the stand-alone and interactive capabilities of CD-ROM are different
from text-based and still-graphic interfaces. Internet technology also provides an
additional instructional context from which to teach and learn. New technology
functions, however, should also develop new applications, resulting in new instructional
methodology. Therefore, teaching itself becomes redefined.

With new instructional frameworks come new roles and, as a result, CMDE is
often scorned as "sub standard" or less credible than the conventional approaches to
learning as the perception is one of "loose ends" or unquantifiable outcomes. In response
to these changing roles, Alexander (1999) speaks to the important role of the instructor
and calls these environments both "learner-centred" and "teacher-intensive." The reality,
then, is a redefined, rather than a reduced role. As a result, Alexander (1999) draws
attention to the need for specific and relevant professional training for educators working
in these new environments. Increasingly, researchers are finding that teacher change is
central to any technology innovation in teaching and learning. Teacher as learner is an
important concept in the area of teacher change (Bransford, Brown, & Cocking, 1999).

Theorists have identified various ways in which teachers learn, for example, through
practice (Dewey, 1963; Schon, 1983), through interactions with other teachers (Lave and
Wenger, 1991; Feiman-Nemser & Parker, 1993) and through in-service education and
training (Bransford et al., 1999). It would in all probability be fair to suggest that there
are as many ways in which teachers can learn as there are instructional contexts in which
to practice. As such, teacher change is a major consideration in any implementation of
instructional innovation. Bransford, Brown and Cocking (1999) state that however many
learning opportunities that may be available to teachers,
One fact is clear, however: there are relatively few opportunities available if measured in financial terms. Overall, there is minimal public investment in formal opportunities for professional development for professional teachers (p.180).

The authors discuss the more difficult challenges facing teachers as those which involve changes to method, content, and approach and most often are not provided with adequate training to accommodate these kinds of challenges (Bransford et al., 1999). Additionally, it is suggested by the authors that the most effective training occurs over time, not in de-contextualized workshops (p.192). Other theorists (McCarthy & Makosch, 2000; Ivanic, 2000) discuss the challenges of teacher learning in relation to process curriculum and in particular the challenges that a process-based approach to language learning can offer for teachers. McCarthy and Makosch (2000) make an interesting point in stating that in attempting to prepare teachers for a process-based approach often results in an over-emphasis on methodology that actually isolates teachers from current practice artificially rather than building on what is done to achieve the necessary change (p.224). These discussions proved particularly relevant to my study as the design of the site depended on teachers and students engaging in dialogue in order to process course content. It is interesting to me that a finding from my study in fact demonstrated that because the focus of the training provided was essentially innovation and change and, as such, methods and approaches, that teachers seemed to function in isolation from their current correspondence practice rather than building upon it (see chapter 4, p. 93).

If challenges to teachers are great in instructional contexts of technology innovation and applied methodology, so too are the challenges to learners. Piaget's (1955) notion of the construction of knowledge, rather than the transmission of knowledge, is effectively demonstrated through the use of new technology in education. Building on this notion, Bates concludes that it is precisely this "potential for developing higher order skills relevant to a knowledge-based society" (Bates, 1996) that is the main motivator and key concern in the development of computer-based distance education courses. The "potential" does not, however, determine the reality. Merely accessing information is not necessarily acquiring, building or creating knowledge, and it is precisely these aspects of knowledge growth that could project learning to a different
level. Alexander (1999) cautions that information is not automatic knowledge, and that we are in danger of increasing information while decreasing knowledge. He suggests that the greatest challenges to education through technology have little to do with the technology itself, but instead more to do with "... values and the ability to make choices" (Alexander 1999). Technology connects learners with information and supports individual searches in line with needs and learning styles; however, it is the deliberate design and construction of the learning system itself that has the potential to assist the student in reaching the higher level learning goals of knowledge building and application. Dede (1990) contends that it is the hypermedia system that allows the user to go beyond the preset confines of the designer and has the potential of facilitating these higher learning goals. (See also, Haugsjaa, 1996; Santos, Diaz & Bibbo, 1998.)

Resnick (1991) contends that parallel systems of thinking and processing should be incorporated within any learning system in order not only to transform the "how" [technology], but also the "what" [purpose] of the learning taking place. In other words, the role of content becomes useful only as a guide or a frame of reference for the learner and teacher but cannot be used as a confine for the learning process itself. As a result, curriculum itself becomes redefined. A body of theory referred to as "constructionism" is interesting in this regard. This combination of experiential and constructive learning promotes the notion that learners actively construct and reconstruct knowledge out of their own experiences and in relation to actual constructions of form or practice. In essence, constructionism brings together the theory and practice of teaching and learning and as such, fits comfortably into the constructive possibilities of CMDE. Also, constructionism speaks directly to the intentional aspects of learning; the end construction is the purpose of the entire experience. This theory has implications for dynamic and collaborative learning in the process of construction, and it could also provide an opportunity for negotiation of a learning space if the learner participates in the design and outcomes of the construction.

Furthermore, as well as the micro-environment of the curriculum being modified to suit specific learning needs, the macro-environment of the curriculum can be enlarged. Cummins and Sayers (1995) state, "Traditional approaches to curriculum and instruction aim, to a greater, or lesser extent at controlling the knowledge and skills transmitted to
the next generation” (p. 147). Multi-dimensional connectivity (learner-to-learner, learner-to-content, and learner-to-teacher connections) and Haughey’s and Anderson’s (1998) concept of “networked learning” suggest that the conventional boundaries of classrooms and content development are no longer the only option. Technology connects learners and, conceivably, learners of all ages, cultures, languages and socio-economic status could learn together. In addition, the capabilities of electronic learning environments mean that content could be inclusive and equitably accessible. If the learner’s individual context is excluded from the process, then, constructive learning is limited. Therefore, content and content selection involves the active participation of the learner and involves the learner and instructor cooperatively in constructing meaning and producing a relevant application of the learning that has taken place. Cooperation of all participants can be a truly collaborative, constructionist process of integration. Collaboration between learner and instructor in second language learning is a way to provide students with more authenticity in their assigned tasks. Collaboration between learner and teacher can also promote a more global context about other cultures, and help to maximize learning styles and other learning differences (Braunstein, Meloni & Zolotareva, 2000; Bada & Okan, 2000).

The process of teaching and learning involves building on what is known and forming what has yet to be formed, which is a process of integrating experience, information and knowledge building in a learning process of dynamic transformation for the learner. Friere (1970) talked of the importance of engaging the experiential reality of the individual learner in the process in order to achieve a transformative learning experience for the individual and society as a whole. If individuals are excluded from their own learning, such transformation cannot take place (see also Cummins, 1996). Cummins (2000) in his chapter called “Transformative Pedagogy: Who needs it?” discusses the implications of technology in the negotiation of cultural and linguistic difference in the teaching and learning process. Often in traditional classroom delivery, individual culture and language can be ignored, and, the student can be left at a disadvantage. Mainstream cultures and languages tend to dominate learning communities unless intentionality informs the course design and delivery to accommodate diversity and integrate all learners equally into the process. Among a long list of characteristics of
transformative pedagogy, Cummins suggests that opportunities for self-directed learning, and the use of instructional strategies to enhance understanding (Cummins, 2000) are important to effective language learning. That is, unless the language learner is able to involve individual cultural interpretations and to apply what is learned in a way that is individually meaningful, then it could be argued that what is learned is outside or unfamiliar to the life context of that learner. The involvement of the learner also has implications for distance learning, especially in regards to the self-directed nature of the environment itself. Understanding and misunderstanding are fundamental issues of the learning process. In fact, misunderstanding of concepts can leave large gaps in the learning process, and these gaps are often left undetected and unaddressed, particularly in a task-based evaluation system. Cummins cites the New London Group’s (1999) theoretical framework for the designs of meaning, which they advance as including the following:

- Situated practice—immersion in meaningful practice and experience within a community of learners;
- Overt instruction—intentional instructional strategies to demystify skills and content and scaffold learner progress throughout; (Its goal is systematic, analytic and conscious understanding);
- Critical framing—a focus on the historical, cultural, sociopolitical, and ideological roots of systems of knowledge and social practice;
- Transformed practice—application of transformed meaning gained from previous practice, instruction, and critical reflection to work in other contexts or cultural sites.

Building on these main points, Cummins (2001) advances a framework of instruction for language learning and academic achievement that has three main aspects:

1. Focus on Meaning—making input comprehensible [both for mother tongue speakers and second language speakers] and developing critical literacy;
2. Focus on Language—awareness of language forms and uses and the critical analysis of language forms and uses;
3. Focus on Use—using language to generate new knowledge, create literature and art and acting on social realities.
My research study provided a distance-learning framework for language learners that integrated meaning, language and use within a larger framework that included communication and negotiation. That is, without open communication and ongoing negotiation between learner and teacher in the areas of content selection and customization, the focus on meaning, language and use in a distance-learning environment could lose the dynamic qualities of individualism that should characterize effective learning. In other words, without student initiation and direction within a distance environment, it is much more difficult to encourage the creation and application of new knowledge that is both meaningful to the learner and authentic to the context.

Within his framework, Cummins (2001, pp.258-259) identifies five phases of learning that he regards as necessary to move education beyond merely the transmission of information to knowledge generation or transformative pedagogy:

- **Experiential Phase**—where the prior knowledge of the student is accessed and is essential given that “Our prior experience provides the foundation for interpreting new information”;
- **Literal Phase**—where basic content questions can be asked and answered from a superficial readings of texts;
- **Personal Phase**—where students are encouraged to relate the basic information to their own experiences and feelings;
- **Critical Phase**—where students engage in more abstract processes of critically analyzing the issues or problems raised in the text;
- **Creative Phase**—where students translate the results of the previous phases into concrete action.

Therefore, whether a learner is a first or second language speaker, the language development should accommodate critical inquiry and transformative pedagogy.

Instructional technology has the potential of helping the learning process by providing necessary scaffolds to the learning, presenting critical context to meaning, encouraging clearer understanding of texts, and creating learning spaces where learners can build on the learning of each other to increases their own understanding of the text. In a very real sense, then, learners can negotiate an individual learning space within the larger framework of a course and, as a result, maximize their own learning experience. In my
study site, the intention of the design was to provide enough learning resources and instructional supports that could be easily accessed by teachers and learners so that each phase of the learning process could be accommodated. Students and teachers could dialogue and negotiate the inclusion of past experience and knowledge, interact with content with communication tools for questions and answers. Additionally, learner individuality, creativity and critical awareness could be supported and integrated through learner-to-learner dialogue, learner-to-teacher dialogue and negotiation and learner-to-site interactions and language demonstration.

Conceptual Framework

Over the several years I have worked with this distance ESL programme, evidence of the importance of open negotiation of study goals and purpose emerge as vital to the success of the process for the learners (Reynard, 1997). I would suggest, then, the importance of an additional “Practice Phase” in Cummins’ conceptual framework. This phase would include processes of interaction with and specific uses of the language demonstrated in the lessons. In my site design, each learner has the opportunity to participate in ongoing dialogue with the teacher, as well as negotiate assignments work and submission. In addition, critical response is required for many of the sample topics and dialogues presented, thus allowing the learners to respond within their own frame of reference. The last phase of creative production, or construction should include the actual assignment production and the construction of various learner-specific contexts for work production. Therefore, the conceptual framework for my study encased the Cummins’ framework of phases within a flexible framework of process—the process of open and equal communication and negotiation between learner and teacher. The process framework influenced the development of various tools to support communication, including an e-dictionary, audio-search, chat, discussion centre, and various learning resources such as grammar workshops, pronunciation tutorials and conversation practice toolboxes. The actual design of the site was based on a synthesis of the conceptual framework into four main focus areas as they relate to the Cummins’ (2000) Phase distinctions:

- Presentation (based on Cummins’ Phase 2);
- Interaction/Practice (bringing together Cummins’ Phases 1,3,4);
Dialogue (based on Cummins' Phase 5);
Production (based on Cummins' Phase 6).

Electronic Learning Environments
Recent studies in the application of Internet technology in language teaching and learning have focused on the delivery potential of the medium (Harrell, 1998) and its potential challenges to existing roles of teachers and learners and the changing expectations of the same in new electronic learning environments (Conacher & Royall, 1998; White, 1999). Several new studies have looked at the potential of the technology itself for the teaching and learning of language (Yang & Akahori, 1999; Kataoka, 2000), mainly in reference to Japanese language learning and its potential for maximizing interaction and communication between first-and second-language learners (Kitade, 2000) and learners worldwide such as the Global Lab experiment conducted by Philip Hindley in 1998. In that experiment English was the language of communication, but the application involved the specific use of the language in a science and information technology project between schools. In designing my own Internet learning environment I attempted to maximize both the delivery and the instructional potential of the technology. That is, while specific content was delivered to students via the Internet, teachers and students could 'meet' within the environment itself and make use of the instructional supports provided, as well as instruction and communication tools.

Pinna (2000) conducted a recent study with language students at the University of Sassari, Italy, and found that by providing didactic material in a self-directed and self-monitoring mode meant that students could access the material to suit either deductive or inductive (or both) learning styles, and this accessibility supported their language learning in specific areas, even though the students did not work for long periods of time online. White (1999) reported that students in a recent study of expectations and beliefs of self-instructed language learners indicated a certain ambiguity to the process. That is, while some learners demonstrated an effective response to the self-directed mode balancing a combination of affective control, engagement, or outside support (instructor), others found the experience to be frustrating with a keen sense of loss of control. As a result, White supports the notion that learner characteristics, as well as the environment itself, plays a crucial role in success for the learner. Both of these studies highlight the
importance of accommodating diversity of learning styles and individuality within a learning environment and I, therefore, attempted through my site design to provide all instructional tools and resources in a self-directed format so that learners could negotiate an individual learning path through the course.

While these studies do not explicitly discuss the role of the teacher and/or changing teacher expectations and perceptions in working with students in any of the above described contexts, Kennedy and Kennedy (1996) (although focused on the classroom), emphasize the importance of "... teacher attitude and the interconnections with beliefs and teaching behaviour..." (p. 351) in the context of technical innovative and change. The authors emphasize that the teachers' beliefs about innovation are crucial in determining behaviour and attitude, although attitudinal measure alone should not be used as indicators of future behaviour (p. 359).

With the support of instructional technology properly integrated into specific course design and delivery models, the process of teaching and learning can become more accessible, equitable, and dynamic (Saba, 1999). Students can take more control of their own learning and the application of the new knowledge acquired. Learning institutions can be involved in meaningful educational pursuits: training students to meet the demands of the changes that globalization and diminishing world resources bring. A 1997 study by Meskill and Mossop on the use of technologies with ESL learners reported that "The computer is now more widely used as a tool through and around which socio-collaborative language learning can take place" (p.22). In addition, Messkill and Mossop found that technology had moved the theory and practice of language learning away from a "... static set of automated processes towards one that accounts for the multiple, complex aspects of language as a central feature of human identity" (p. 22). Another recent study (Kramsch, A'Ness & Lam, 2000) suggests that use of an electronic medium, such as the computer, to teach language has developed a greater need and expectation of authenticity and authoring on the part of the learner. The study goes on to emphasize that interest in authenticity and authorship is evolving into a desire, on the part of learners, to operate as agents in their own learning and to clearly identity and present a sense of individual self (Kramsch et al, 2000). The study also makes a clear observation that the
application of computers and multimedia environments is actually transforming the very
representation of self through language (Kramsch et al., 2000).

The research study of this thesis attempted to bring various aspects of the learning
process together in one online environment: student learning style and study preferences,
communication and dialogue between teacher and within an interactive, self-directed
study environment. The activity of the participants and the interaction with each other
and with the instructional resources on the site were tracked in order to observe the
effectiveness and use of the environment. Internal (on site) and external (off site)
interactions were also tracked to observe the level of dialogue reached between teachers
and students. Each lesson was constructed through a process of open negotiation
between teacher and learner, while still meeting the preset goals of the language
programme itself (i.e., LINC). Therefore, this study attempted to test the potential of the
Internet technology to support dynamic language learning as initiated by the learners and
supported by the teachers, both active participants in the process. My study looked at
both the successes and failures experienced within the learning environment—an
environment that required equal input from both teachers and students. Most
significantly, my study brought together the principles of distance education and second
language learning in a distance education framework for language learners. The learners
were physically remote from the teachers and support personnel and were required to
manage their own learning within the instructional framework delivered to them via the
Internet. The study observed the activities of both learners and teachers within the
environment and attempted to analyze the experience from both viewpoints.

Summary

The essential characteristics of dynamic and autonomous language learning for
distance learners that emerge from this literature review are the following:

1. The design of a learning environment that provides self-directed resources to
   the learner in order to accommodate content construction;

2. An interactive, media-supported resource centre to engage and stimulate the
   learners’ attention;
3. Intense instructor intervention through all methods of communication, providing feedback, guidance and learning suggestions to the learner;
4. Open communication using all aspects of the technology available;
5. Ongoing dialogue between teacher and student negotiating learning needs, content construction and lesson navigation.
6. Authentic and individual application of the language learned in a new way (i.e., language use beyond the preset parameters and scope of the preset content of the site).

Therefore, Figure 1a (as presented in Section 1 of this chapter) is further modified to include the “dynamic” characteristics of a framework for distance language learners as follows:

Figure 1b-Dynamic environment for distance language learners.

Now there are more lines indicating the multi-dimensional communication connections and interactions with content, teachers, resources, other students and the global potential.
of the Internet itself. The lines show two-directional arrows to illustrate the process of input and output and the student is at the centre alone as an autonomous yet connected participant. Setting the learning "outside" the existing confines and preset boundaries of a course of study means that the negotiation of a new type of learning space is crucial. This learning space facilitates learning in a new way that promotes active collaboration between teacher and student and motivates experiential learning throughout. Historically, the development of instructional design technology has not been concerned with areas discussed in this chapter. Instructional technology has traditionally reflected the logic of machined programming. The wider application of technology in education, however, necessitates the development of designs that reflect the experiential qualities of people. Technology presents some very real possibilities in education and training. CMDE provides new and flexible learning systems and course delivery. Understanding why persons learn and why they need to learn are as crucial to an effective learning experience for the instructor as for the learner. In addition, without understanding the purpose of learning, educators lose the relevance of application.

Chapter 3 will provide an overview of the methodology of this research study, including site design and details of participants, content sections, and data collection.
CHAPTER 3

METHODOLOGY

This chapter is divided into four sections. First, a project overview is presented with a review of the research questions posed. Second, the content and structure of the study module are presented and third, a description of the site design, including instructional content, data collection, analysis and learner progress evaluation is provided.

Section 1 - Project Overview

Project Participants

All 120 students in the correspondence programme were contacted by letter and asked for their volunteer participation in the online project (see Appendix B). No specific participation criteria were presented, except technical requirements of hardware and software needed to access the Internet site. Students were assured that their participation was voluntary and that they could resume the correspondence programme at the end of the study without any interference. Teachers were also sent an information and consent letter (see Appendix C) and were assured that participation in the project would have no direct relevance to their professional practice in the correspondence programme. Participants were asked if they would agree to their online activity and progress being electronically logged and monitored. Participants were then asked to sign a participation form giving permission for the tracking process.

The 40 project participants included 26 volunteer learners, seven teachers, three project technicians and one assistant, one project coordinator/researcher, and two administrative assistants, each with different but significant roles. The researcher and technicians worked together to design the site and provide the orientation for the teachers and learners. One technician was a web developer who designed and developed the interface and navigational plan. The other technician was a database developer who designed and developed the supporting database for the site according to the project questions. I, as coordinator, ensured that students who did not want to participate did not
experience any interruption to their regular programme, and that all project participants received sufficient explanation, orientation, and support throughout.

Each teacher was assigned several project students, and it was his/her responsibility to contact the student, explain the participation procedures, and receive student submissions, provide feedback, assign customized work based on need, and to report regularly to the coordinator using an online electronic report form. This form recorded each contact with students and described the nature of the request, as well as the work assigned. The students were asked to participate for ten weeks and to progress at their own pace and freely choose the mode and lesson in which they wanted to work, as well as the supporting instructional resources and tools.

Teachers

There were seven teachers in all; each teacher was also working with approximately fifteen correspondence students during the project and at least three online students. Two of the teachers were new to both the online and correspondence programmes. One of the new teachers only sent one initial email to one student and dropped out of the project immediately afterwards due to other professional responsibilities. The other new teacher remained active throughout the project and became one of the case studies of this project. The remaining five teachers had all been active as correspondence teachers for at least one year and three had been with the programme for over two years. Two of these teachers were actively involved in content development for both the online and correspondence modules. One of these five teachers also dropped out early in the study due to lack of response from the students. Five teachers, then, remained active in the study, and participated in the post-study interview. The full report of the teachers' involvement will be presented and discussed in chapters 4 and 5. Each of the teachers was a trained ESL instructor, and five teachers had already been involved in training for distance methodology during their time with the correspondence programme. These teachers also had a transitional preparation from the coordinator on working with student groups and using teleconferencing to network students, and they had already set up collaborative newsletter and cookbook projects using email technology with the correspondence students in preparation for the Internet project.
**Students** (all data here were retrieved from the LINC database)

Twenty six students in all participated in this study and these students represented a cross-section of the correspondence programme students. All the correspondence students were free to participate in the online project and self-selected themselves for involvement. The students came from the following countries of origin: Nigeria, Hungary, Algeria, Bosnia, India, Palestine, Pakistan, Uruguay, Croatia, Slovakia, Bulgaria, Hong-Kong and Egypt. The following mother-tongue languages were represented: Twi/Ewe, Hungarian, Arabic, Croatian, Punjabi, Arabic, Spanish, Urdu, Ukrainian, Russian, Slovak, Bulgarian, Cantonese. Each of the students had been assessed at LINC levels 3-6 with over half at level 3. All of the participating students had high school equivalency from their countries of origin; three had graduate level education in the fields of medicine, engineering and management; two had undergraduate degrees in education and mathematics; and one student had a trade certificate in sales. Twelve of the students expressed clear employment and career goals for learning English while the remainder of the students expressed more general purposes for learning English to improve self-confidence, helping children with school and integrating into Canadian society. While the students were free to volunteer as participants in the study, each student needed a computer with a 56k modem, and accessibility to the Internet as well as Microsoft Internet Explorer 5.0 or above (which is available as a freeware downloadable file from the Microsoft site).

Before the project began, teacher and students met with the coordinator/researcher, the technicians, and the administrative assistant to have an orientation to the site and the project. A hands-on tutorial was provided and teachers and students were asked to work together to navigate the first section of each lesson. The teachers were not assigned actual project students until after the initial orientation session. Throughout the project, teachers and students had free access to the technical assistants and the coordinator/researcher, if there were any problems. In addition, a project room was assigned at a local language centre with computers and technicians available for teachers and students to work through any sections of the project site they found challenging.
The students and teachers were already active in a federally funded correspondence programme for new immigrants to Canada. The teachers were all trained ESL professionals, and all the students had already participated in a correspondence programme for several months.

**Study Purpose**

As indicated in Chapter 1, the purpose of this study was to investigate the effectiveness of an interactive, self-directed, resource-rich online learning environment for ESL distance learning. The main areas of observation were

- Learner use of the site,
- Learner autonomy achieved,
- The role of the teacher,
- The learning progress made.

The main research questions posed addressed each of the following areas:

1. What would be essential in an online ESL learning environment to make the experience dynamic for the learner?
2. What kind of learner would benefit the most from this environment?
3. What would change in the role of the instructor from the correspondence mode to an online mode?
4. How autonomously will each learner function within the environment?
5. How will learning outcomes and progress be measured?

In order to answer each of these questions, the project was designed to investigate the following:

- The most frequent choices of learning activities and resources chosen by learners when provided with self-selecting options;
- The preferred choice of learners, when presented with linear and dynamic learning mode options;
- The level of autonomy reached by distance language learners in a self-directed online language learning environment and the effect on the role of the instructor;
- The time spent online by each learner and the time spent on each task or activity
- The patterns of use by the participants in an attempt to identify what characteristics of the site supported a dynamic learning experience for the learner.
As a distance learning project, each student's learning activity and progress were monitored and compared, not with each other but with the five characteristics of dynamic learning identified in this thesis. These characteristics emerged from the body of literature as presented in Chapter 2, and were as follows:

1. Self-selected resources for content construction (learner autonomy)
2. Interactive, media-supported resources (intentional and motivational instruction),
3. Instructor intervention and feedback (distance education pedagogical approaches),
4. Communication through the site and externally through email and telephone (active participation and connectivity),
5. Dialogue, initially for needs assessment lesson planning, and later for evaluation (process content construction).

These characteristics provided a framework for comparative analysis and were used to answer the following questions:

- Do the activities and resources chosen by each learner provide any noticeable patterns of use and how do those relate to the five characteristics of dynamic learning, as described in this study?
- Do learners demonstrate a preference between linear and dynamic mode, when given the choice?
- Does the role of the instructor change throughout the study and does the learner become more autonomous by self-selecting instructional supports and initiating teacher and technical support when needed?

The individual "experience" of each participant was crucial to the analysis and, therefore, as well as logging the onsite activity of the learners in a database, it was necessary to interview and dialogue with the participants before and after the project. Two specific participants (one teacher and one student) demonstrated more of the characteristics identified in this study than the others and, therefore, their experiences are presented as case studies in Chapter 4 in order to provide a glimpse of what effective teaching and learning might look like in an electronic second language learning environment.
Section 2-Module Content

The existing correspondence programme consists of five content modules, each one involving audio lesson tapes, complete with language and pronunciation practice exercises and tutorials. The accompanying workbooks include grammar- and vocabulary-building exercises and conversation assignments. In the correspondence programme, students and teachers communicate through regular telephone calls and email, and each student has access to a 1(800) call centre number for additional support. For the purposes of the study, the content for Module 1 from the correspondence course was transferred into the online site and modified to suit the Internet hyperlink technology and interactive capabilities. The modifications included adding interactive exercises following lesson readings so that students could answer comprehension and grammar questions based on the reading, submit their answers and receive immediate feedback from the database itself. Also, pronunciation exercises were adapted to include text, graphics and audio demonstrations of the sounds. In the audio correspondence series, students listen to an instructor demonstrating the sounds in a linear format while in the Internet environment. Students could self-select only the sounds they needed to practice and listen as many times as they desired to the particular sound. All dialogues used in the site were the same dialogues that are used in the correspondence course with the modification of text and sound presented in self-selecting sections. This again supported individualized use of the supports. In addition, an audio-based search feature was added, so that students could search and select any sound, sentence of phrase in the database on an as-needs basis. Reading and writing language skills could be practiced through the readings, quizzes, grammar workshops and assignment postings as well as text for all dialogues and discussions. Listening and speaking skills could be practiced using all of the audio supports, pronunciation tutorials, dialogues, and discussions. Comprehension was needed to complete the interactive exercises to the readings and discussion resources. The self-selecting availability of the resources and tools provided the possibility for an integrated language skill approach rather than isolating individual skills for rote practice. In the correspondence course, students are encouraged to speak with their teacher on the telephone for one hour each week to practice conversation and to spend approximately four hours each week completing writing assignments and exercises. It was hoped that
the site would present students with an opportunity to spend as much time as they needed on any or all language skills and one integrated learning environment. Printable materials were not provided through the site although teachers and students had external email accounts through which material could be exchanged and printed. Additionally, it was assumed that teachers and students would make use of external Internet resources although direct links were not prescribed within the site.

Each student had already entered the correspondence course by participating in a language assessment using the Canadian Language Assessment tool (CLBA) and had already worked through several lessons in the correspondence mode. Each participating student had already been assessed in language level before beginning the correspondence programme, as part of the requirements of that course of study. The language level of each student was, therefore, known; however, one of the interests of the study was to investigate how students with various language levels would navigate and use the site; therefore, no specific language level was targeted for the study. At the time of the study, the learners currently in the course had been assessed with 2-6 proficiency benchmarks. In general terms, those with benchmarks of between 2 and 4, begin in Modules 1 or 2. Those with scores of between 4 and 6 begin in Modules 3 or 4, and those with scores of 6 or higher, begin in Module 5. For the purposes of this study, however, students from a variety of language levels participated and were provided the same access to all module content regardless of language level. Students participating in the study accessed the site from home although the potential was there for access anywhere the student had Internet connection. Although students were free to use the support and resources available to them in the project room, participating students did not revisit the project room at anytime following the initial orientation.

The project module comprised six lessons, each one presenting an integrated language skill approach covering all of the main language skills in one environment. The theme of the module was "In the Neighbourhood," and the specifics of the each lesson were organized in the following way:

**Lesson One—Casual Conversations**

The readings were titled the same as the dialogues; however, the readings provided more story detail than the dialogues and extended the context provided in the
dialogues. This connection between the dialogues and the readings was intended to encourage the creativity of the learner in reacting to a simulated context and eventually creating his or her own reality from the details provided. Lesson One introduced the student to a character called Yen, who, in the reading and dialogue, met her neighbours and exchanged greetings, casual conversation, and leave taking. The reading for this section drew the student closer to Yen as an individual and what she enjoyed about her neighbourhood and friends. The pronunciation practice focused on [h] and [aw] sounds and asking and answering greeting questions. The coffee break discussion was between two characters presented throughout these discussions in all the lessons. One of these characters was female and the other male, and in these discussions they present their individual opinions about the characters in the lesson, or the topic itself. In Lesson One the discussion focused on the weather and shared different opinions about how the weather affects the decisions people make. The grammar focus for this lesson was the verb “to be” in positive, negative and question sentences. Each lesson also included new words and phrases, conversation practice, interactive exercises at the end of each section, and a telephone prompt to call the teacher for more practice. All of the sections were supported by audio files, and these files were also accessible through a personalized audio search, so that students could customize their pronunciation tutorial work.

The intention of the module design was that, rather than accessing the various sections and resources of the lesson in a linear form, which would mean that higher level learners would be forced to deal with easy language and perhaps lose interest, the students would be free to access whatever they felt was useful to them within the context of the lesson. Therefore, students who needed pronunciation practice or grammar practice could concentrate their efforts in those sections, or those students who needed to improve their reading skills could spend time on the reading sections. This design also meant that teachers could draw from existing content and create additional, perhaps more complex assignments for higher level students. For example, the coffee break discussion could provide a helpful context for teachers and students to integrate their own opinions and perhaps create an additional context in which to share those opinions with other students in a question and answer chat session. Therefore, the level of the student influenced the choice of content and resources and form of language application.
Lesson 2—A Weather Report

The reading in Lesson Two was titled “The Decision,” and in this reading two male characters, Roo and Ali, were listening to a weather report and deciding what to do with their day. The reading extended the context of the dialogue in which the same two characters discussed if they should attend a ballgame; their decision was based on the weather. The pronunciation focused on the [th] and [f] sounds as well as the pronunciation of “zero” as in “zero degrees”. The coffee break discussion focused the discussion on playing sports in various weather conditions. The grammar section addressed question words and their use in sentences and the future with “will”.

Lesson 3—Housing

In this lesson, the student was introduced to two characters, Mohammad and Joe, who had previously known each other and had recently moved to the same neighbourhood. The first character made several suggestions to his friend about the best places to live in the neighbourhood. As in all the lessons, the reading expanded the context and in this lesson, described the move of the second character to his new home. The pronunciation for this lesson focused on the [a] and [au] sounds and the coffee break discussion presented various opinions about house chores. The grammar for this lesson addressed object pronouns and simple present tense.

Lesson 4—Getting Around

The content in Lesson Four was about various forms of transportation. The dialogue for this lesson presented a young female character, Akiko, who needed information from the ticket officer at a local train station, while the reading described a shopping trip with Akiko and her friend, Judy. The pronunciation tutorial focused on the [z] and [s] sounds and practicing the words, “sometimes,” “usually,” and “always”. The grammar workshop addressed the use of the simple present in question sentences and the coffee break discussion presented opinion sharing about preferred ways to travel.

Lesson 5—Shopping for Clothes

In this lesson, the main character, Keiko, tried to buy a pair of shoes in a shoe store. The pronunciation tutorial focused on the [u] and [ch] sounds and the coffee break discussion presented opinions about the activity of shopping, both positive and negative.
The grammar workshop for Lesson Five addressed singular and plural endings and prepositions.

**Lesson 6—Health and Sickness**

The last lesson of the module was Lesson six. In this lesson, the main character, Maria, needed to schedule an appointment at the doctor's office. The dialogue presented her conversation with the receptionist, while the reading deals with her thoughts and fears of visiting the doctor. The pronunciation for this lesson addressed the pronunciation of words describing various parts of the body, silent letters, and homophone words, as well as [v] sounds. The coffee break discussion shared opinions about visiting a doctor's office, and the grammar section provided a review of the grammar from the whole module.

**Pre- and Post-Lesson Quizzes**

Each lesson had one quiz that was presented to the student before the lesson and after the lesson. The first part of each quiz had eight to ten cloze sentences for the students to complete. Following the sentences, a question was posed that required a free response from the student but required some demonstration of the use of several of the vocabulary words from the cloze sentences. The idea was to provide a context for knowledge demonstration and needs assessment based on the feedback from the teacher to each submission. All quizzes were electronically completed and submitted directly to the quiz section under each student's study code.

The site also included additional tools and instructional supports which featured the following (see Appendix A, site screens 1-14):

- Online Instructor,
- Online dictionary – [http://www.babylon.com](http://www.babylon.com),
- Audio sound search,
- Asynchronous discussion/assignment centre,
- Synchronous chat,
- Online technical support.

Therefore, the site design incorporated various supports and resources into a learning system that could be activated on an as-needs basis by individual students involved in a language-learning programme. Rather than prescribe the learning experience, then, each
student could negotiate his/her own learning, guided by the teacher and supported by various learning supports. Breen (2000) emphasizes the importance of teacher-student "procedural" negotiation both in curriculum planning and professional practice within the classroom. He states, "A major purpose or procedural negotiation in the classroom is... to reach a shared understanding at appropriate moments... of both requirements... and the different learning agendas in the class"(p.9). When students and teachers negotiate, outcomes can be clearly understood by all participants and directly related to the needs of the learner.

Brasche (1991) also proposes a design for a computer-mediated reading tool and states, "Cognitive tools are designed to aid users in task-relevant, cognitive components of a performance while leaving the performance open-ended and controlled by the learner... Cognitive tools may facilitate learning by defining or structuring the work space in such a way that certain behaviours are more likely to occur"(p.23). Therefore, the intention of the design of this study site was to provide an environment in which students could access cognitive tools to support their own learning and to support their language skill development. In addition, while the content of the Internet lessons was similar to that available in the correspondence programme, it was presented to the students as a series of learning resources in the Internet site, rather than in a linear book form as it was in the correspondence course. Therefore, in the Internet environment, the support and guidance of the teachers were crucial to the effectiveness of the experience for the learner. That is, while the site provided self-directed learning resources and supports, it was assumed that the self-directed selections would be made within a context of teacher-student negotiation resulting in a needs-based learning plan. There were also certain realities that influenced the project: the students and teachers involved in the study were drawn from an existing programme so, as such, nothing "artificial" could be constructed around the experience, such as unfamiliarity with distance learning or the integration of technology in the learning experience. Beyond, that, however, given the nature of the existing programme, no other selection criteria were applied; otherwise, the characteristics of the existing programme would be skewed (volunteer, free-of-charge programme). In addition, the existing programme was relatively small; therefore, the
number of participants involved in this online project was even smaller. As such, a decision was made to make the study exploratory in nature.

Section 3-Site Design

The design of the site basically embodied the five characteristics of “dynamic distance language learning” that emerged from the literature presented in Chapter 2. These were:

1. Self-selected resources for content construction and to support learner autonomy.

The intention of the Internet site was to provide teachers with immediate resources, including a pre-lesson quiz that would help in this assessment process more effectively and to provide more self-selecting resources, without preclusion based on language levels, with which to establish an individualized learning path for each student. Therefore, the site provided the learner with an opportunity to move from individual learning goals through an interactive resource environment to construct the learning path best suited to those needs. By self-selecting learning resources and by initiating teacher support, the learners were encouraged to participate fully in their learning experience and to use the language learned as they selected to do so. The teachers, too, had opportunity within the design to remain active in communication with the learners and to respond to specific requests and learning goals in assigning customized work and language practice in relation to those learning goals.

2. Interactive media-supported resources.

To address each of these questions, the site was developed in keeping with current second language skill-based electronic design (Chapelle, 1999; Turbee, 1999; Vilmi, 1999) and provided self-selecting options for the learner. An electronic relational database was designed and developed to monitor all activity and to keep track of all student on site activities, assignments and quiz submissions. The onsite resources included grammar, vocabulary, conversational exercises, pre-recorded situational dialogues, context readings, and question and answer responses, as well as an assignment and discussion centre, a chat centre, an online dictionary, and an online teacher.
3. Instructor intervention and feedback. Additionally, each instructor had access to an authoring centre to develop customized assignments and tutorials based on the learning needs expressed and/or demonstrated by the learners. Instructors were also asked to submit regular progress reports to the coordinator of the correspondence programme from which the study teachers and students came.

4. Communication through the site and externally through email and telephone. Each teacher and student was given an email address for the study. In addition, each student had access to a 1(800) telephone number for additional support and an email address for technical support. Internally, the site included an asynchronous discussion centre in which teachers were encouraged to post assignments, create collaborative connections between students and students were encouraged to post questions to each other. The site also provided a synchronous chat centre so that teachers could chat either individually or collectively with their students. The chat software facilitated both text and voice communication.

5. Dialogue for needs assessment and instructional planning. In my study site, opportunity was intentionally provided for teachers to dialogue openly with students throughout the process and provide immediate and effective feedback (via email, chat and telephone), customize content and introduce various media as needed (using the authoring centre), provide students with authentic practice and application of language learned (through the use of asynchronous notice board, group collaboration with other students via chat and telephone) and provide chat with authentic English speakers, the “experts” in this context, via chat. The design of the site for this research study was greatly influenced conceptually by the process of the transformative approach articulated by Cummins (2000), by providing tools (dictionary, sound search and instructor contact) to access the meaning of the language used, by providing tutorials and workshops to focus on language form and by providing areas to demonstrate language use through dialogue (chat, telephone and email, and a discussion board for questions and answers and to publish work) although certain modifications were made to suit the specific confines of the foundational programme used in the study (LINC). The prior knowledge of the learner was accessed through a pre-lesson quiz that provided an opportunity to
demonstrate knowledge and use of the language of the lesson, as well as to submit a creative writing piece describing the individual understanding of the vocabulary and theme of the lesson. The literal meaning of the text used in the lesson in readings, dialogues and exercises was accessible through an online dictionary, as well as the support of the online teacher.

Activities themselves could be modified by the learners by extending the activity, requesting additional practice and creating their own sample of language learned. The limitation in the site was that the authoring capabilities (i.e. the ability to actually change and/or recreate an interactive exercise or quiz) were in the hands of the teachers, not the learners. That meant that changes to the actual activity design could only be made by the teacher although at the request of the learner. The notion of learner initiation and control, promoted by Dede (1990), puts more tools in the hands of the learner to author and modify the learning environment directly.

The purpose of the design was to support the negotiation of the learning space as much as possible by providing direct and self-directed access to all learning resources. Both teachers and learners had equal access to all sections of the site and could work through the resources in a flexible manner according to individual learning needs. The "distance" between the learners and teachers was transactional in the sense that it was situated within a negotiable framework. Therefore, the technology, not only connected distant participants physically but also provided a flexible framework within which participants could negotiate roles, responses, and activities. Moore's (1993) notion of motivation stimulation influenced the inclusion of audio files and self-directed search and practice tutorials. The evaluation, in keeping with a constructivist approach (Bednar et al, 1992), involved the accumulation and presentation of all work completed through each lesson, as well as a post-lesson quiz that once again asked for preset vocabulary use and creative language application. The cognitive exercises were well situated in real life contexts, and open communication with the teacher was encouraged through a variety of media, including telephone, email, and online chat. Modeling (Collins et al., 1988) was demonstrated by prerecorded input as well as learner-initiated input from the teachers, and opportunity for collaboration was presented through online discussion boards and email learning groups. The actual lesson was constructed within the technical system as
a process between teacher and student, similar to the participatory curriculum promoted by Auerbach (1992) and the negotiative process as discussed by Breen (2000).

In the correspondence programme, after the initial placement assessment, the instructor is connected with the learner for an initial interview. During this process, a learning plan is established including learning goals, language needs, and contact schedule. Learners can negotiate specifics of content and assignments with their instructor and various modifications can be made to the course of study pursued by each learner. The needs assessment for the online Internet participants took place through the initial lesson quiz (see Appendix A-Screen 1), followed by an email exchange between teachers and students in order to establish a learning plan through the lesson.

There are five modules in the correspondence course, each with 5-6 lessons of units of study (see Appendix A-Screen 2). At the end of each module, the instructor works with the learner to establish progress results using a proficiency checklist guideline. Further study options are made, based on this evaluative checklist process. The significant difference between the correspondence programme and the online project was that rather than wait for regular mail receipt of the workbooks and tapes, students could work on their own, selecting whatever resources they needed to create their own lesson or learning session. Therefore, although the actual resources were similar to those in the correspondence mode, in the online environment they could be selected and used very differently from student to student (see Appendix A-Screen 3).

Many of the project students had already been involved in the development of new material for the correspondence programme for a period of five months, and therefore, were familiar the idea of testing study materials such as workbooks and audio tapes. The learners provided feedback to content themes, logic and flow of the course, instructional supports and specific assignments. This content was then developed for Internet delivery. For the purposes of this study, one content module was made available to learners via the Internet. There were two possible online modes, linear and dynamic. Each mode was clearly identified by a marked hyper linked button as Mode 1 (Dynamic) or Mode 2 (Linear) on screen (see Appendix A-Screen 4). The choice was the learner’s, as each one offered the same content. The learner also had the option of choosing either
mode before each online session. Students could move from one mode to the other mid-session.

The Dynamic Mode (Mode 1) offered six clearly laid out lessons, including

- Reading assignments (see Appendix A–Screen 5),
- Situational dialogues (see Appendix A–Screen 6),
- Written assignments—both preset and as assigned by the instructor,
- Online dictionary (see Appendix A–Screen 7),
- Vocabulary-building exercises—interactive and preset (see Appendix A–Screen 8),
- Pronunciation tutorials—preset and those available through audio-search (see Appendix A–Screen 9),
- Grammar exercises (see Appendix A–Screen 10),
- Conversation exercises,
- Language use assignments—both preset and as assigned by the instructor,
- Audio-search of dialogues, searchable under two headings, pronunciation and use (see Appendix A–Screen 11),
- Asynchronous notice board (see Appendix A–Screen 12),
- Synchronous chat (see Appendix A–Screen 13),
- Email connection with an instructor who, in turn, submitted to me an online log of any learner-instructor contact made during the unit and the nature of the support requested (see Appendix A–Screen 14).

In Mode 1, learners were free to select which lesson content and instructional tools they wanted to use. In addition, the audio-search feature provided a self-directed instructional tool for each learner to use, as he or she felt appropriate. This search engine was built by coding the situational dialogues according to three categories: pronunciation features, functional use (for example, asking questions, sharing opinions, or disagreeing), and grammar. The grammar exercises were coded according to the language function and the vocabulary-building exercises were coded according to the new words being used. The actual language use assignments were the same in both modes; however, the length of time each learner spent on a learning activity was timed.

The Linear Pre-set Mode was accessed through a hotlink and coded as a Mode 2 button. This mode offered a pre-set organization of content, clearly marked for the
student and made available through a lesson-by-lesson layout. It included six clearly laid out lessons, including

- Reading Assignments,
- Situational dialogues,
- Written assignments—both preset and as assigned by the instructor,
- Online dictionary,
- Vocabulary-building exercises—interactive and preset,
- Pronunciation tutorials—preset and those available through audio-search,
- Grammar exercises,
- Conversation exercises,
- Language use assignments—both preset and as assigned by the instructor,
- Asynchronous notice board,
- Email connection with an instructor, who submitted an online log of any learner-instructor contact made during the unit and the nature of the support requested.

In both modes, the learners had access to the asynchronous notice board and assignment centre, while only Mode 1-learners had access to the synchronous chat. Therefore, Mode 1-learners had synchronous and asynchronous Internet options, and telephone contact, whereas learners in Mode 2 had access only to an asynchronous notice board and direct contact to teachers and technicians through telephone. The communication activity between students and teachers was also tracked according to the number of times students and teachers contacted each other and for what purposes. In addition, the instructors monitored the numbers of times learners contacted them and the nature of the support requested. The actual language-use assignments were the same in both Modes; however, the length of time each learner spent on an exercise was timed. In addition, the responses of each learner were submitted to the instructor for feedback. Also, the instructors monitored the numbers of times learners contacted them and the nature of the support requested.

At the beginning and the end of each lesson (six lessons), there were pre- and post-quizzes involving a cloze vocabulary exercises and a writing assignment involving the new words from the lesson in an authentic setting. The pre-lesson quizzes were used by the instructor to identify language gaps in terms of mistakes made and frequent misuse.
of language in the context of the writing. The quizzes were also used to influence specific assignments and to provide practice suggestions for the learner to practice challenging areas of language use in keeping with personal interests and goals. Students took the quiz again at the end of the lesson, and the scores were compared in order to provide the students with a means to observe their own improvement. The instructors provided feedback to all students' written submissions on a scale of 1-5, where 1-2 indicated "not yet achieved", 3 indicated "achieving but needs additional work" (and additional work was set), and 3-4 indicated, "highly achieved". At the end of all six lessons, each teacher set a specific final summary assignment building on the work completed, as well as integrating the various aspects of the lesson in one context. All quizzes were administered online and the scores were electronically logged. On the basis of the pre-quiz, the instructor collaborated with the learner to establish a learning plan for the module and to encourage an individual learning space for each learner based on individual needs and interests, as well as individual culture and learning goals. This learning space did not exclude group and peer work but supported a context for individual influence choice.

**Data Collection Process**

All research participants were involved in an orientation (mid July) during which the expectations were clearly laid out, as were the tracking systems and the evaluation processes. In addition, each mode was clearly explained and learners had an opportunity to practice the features. At this meeting, learners were assigned to an instructor for the period of the study (10 weeks). There were seven instructors involved in this study; they were briefed to not interfere with the students' choice of learning mode and to simply respond to the requests of the learners in meeting their learning needs, as well as set customized assignments to suit the learners' needs. These contacts were logged electronically as they occurred.

Once the study had begun (end of July, 2000) the learners' choices were tracked electronically to see which mode was selected and if that choice changed at any time. In addition, the length of time spent on all exercises was tracked. Before each lesson, the learners were involved in a brief pre-quiz of vocabulary knowledge and creative language use, and this submission was electronically recorded. The same quiz was administered at
the end of the lesson, and the instructor also evaluated each quiz submission. The learners then received the scores for these quizzes along with feedback from the instructor. The instructor also received a data report on the learning behaviour of the learner throughout the lesson, so that the instructor could find out why certain choices were made and how they were of benefit to the learner. The three main reasons for the tracking of the behaviour were to investigate the patterns of use in connection with the type of instructional features chosen, the number of times particular features were chosen, and the length of time spent on each activity.

Instructors submitted an electronic report each time a learner made contact with them, and the report included the nature of the request, the technology used to make the request (i.e., telephone, email, onsite boards, or chat), as well as the response provided and the perceived role of the teacher in the request process. A debriefing session at the end of the study with all the study participants helped to talk through some of the issues encountered in terms of technology, design, and learner choices. This debriefing session took place in a face-to-face group discussion. Instructors and learners were involved in this discussion. Because perception is a large part of the learning experience, each participant was asked to recount his or her own experiences and perception of the success or lack of success of the process.

The student activity database recorded student patterns of use according to the login and password of each student. The data was then transferred into an Access\(^1\) database so that the results could be searched according to category. As each site function and activity was coded, as well as the time spent on each activity, individual student's uses of various site resources and activities could be searched. The data sheets included the following categories: activity/resources choice, start time, end time, and mode choice. The communication between teachers and students could be accessed through email inboxes since teachers and students were given coded email addresses. These addresses were issued by the web master for the project. The online reports from teachers were also entered into the database according to teacher ID as were the quiz submissions of the students.

\(\text{\textsuperscript{1}© Microsoft Access database programme}\)
The project site was designed for clear registration procedure with a registration form (see Appendix D). ASP (Active Service Pages) were used to generate dynamic web pages so that data could be retrieved from a database and text files according to the needs of the user. ASP web pages could also be used to save data that each user inputted into the database, for example, quiz responses. HTML (Hypertext Markup Language) can only create static web pages, in the sense that data cannot be altered according to individual user needs. JavaScript was also used to make the web pages animated, for example changing colour and size of the font or other content details. A database was created to track the data of content and activity use, assignment and quiz submissions and interactive exercises. The software programs used for each section were Notepad and Microsoft Interdev. The servers used were Microsoft NT server 4.0 as the operating system, Internet Information Server (IIS) as the Internet connection system, and Microsoft SQL Server 7.0 as the databases system.

Summary

The design of this project site integrated as many Internet information transferring tools as possible, such as voice chat and text chat systems, bulletin board, and email systems, thus maximizing connectivity with instructors and other learners. In addition, I attempted to make the learning experience as communicative as possible by including extensive opportunities for practice of the target language. We also attempted to make these practice opportunities as authentic as possible within the constraints imposed by the medium. Students could support their learning by choosing their own supports from grammar, phonetics, and language use. Exercises were designed as objective, following preset patterns of multiple choice, matching and true/false structures and providing immediate feedback to the learner. Students could practice these exercises as often as required. The benefits of having language students interact with new vocabulary and grammatical structures in similar instructional designs have been highlighted in other studies (Harrell, 1998; Flottenmesch, 2000). In addition to interactive exercises and language practice, assignments were subjective and were posted on the notice board. These assignments were based on the specific needs and interests of the learner and were submitted directly to the instructor. The assignments were posted on an
assignment board, with due dates (Lawless, 1994). The design was dynamic, in that, while the content involved a certain amount of preset material, the use of the instructional supports and language learning supports could be guided by the teacher in view of the language needs of the learner and as a self-selecting process by each individual learner. The dynamic design meant that no two learning experiences should have been the same. Students also could choose to progress through the lesson content in a linear, lock-step format in which one lesson was totally completed before the student would progress to the next lesson. Students could also choose between the Dynamic and Linear modes either before beginning a lesson or during a lesson if he/she wanted to do so and these choices were recorded in the database for each student.
CHAPTER 4

FINDINGS

Overview

This study focused on discovering the level of dynamic learning patterns that were demonstrated by students when presented with a self-directed, resource-rich online learning environment. As part of that discovery, the activity of the students was electronically logged, as well as were the online reports of contacts between students and teachers. In addition, the e-mail communication between students and teachers throughout were recorded in email inboxes designated for the study, and feedback from both students and teachers was gathered in a face-to-face feedback session with teachers at the end of the project and in a telephone survey of participating students, also at the end of the project.

While the main focus of this study remained with the results of the student activity log, it was also necessary to analyze the students’ interactions with their teachers, as well as the teachers’ perception of the whole experience in order to view the process as a whole from various perspectives. Some of the data are quantifiable in terms of electronic logs, and some are more qualitative in nature, due to the subjectivity of individual situations and mindsets. However, whatever quantifiable data exist should be interpreted in conjunction with the qualitative feedback from the project participants in order to understand the online experience more fully. Therefore, this chapter will present the results and findings of the various data sources, and Chapter 5 will interpret these findings according to the context of the original project objectives, identifying the dynamic learning patterns of online language students.

The immediate use of the student activity database results, then, was to try to establish patterns of use that became evident through the tracked online activity of all student participants. Later, the data from email inboxes were tabulated in order to present as much relevant information as possible regarding the interactions between students and teachers throughout, the role of the instructor and the amount and nature of support requests from students. Finally, the results of the feedback from teachers and students helped to put the whole picture together in terms of the experience of those who
participated. Some key points raised by the teachers at the feedback session were followed up individually by email question-and-answer dialogue to help clarify meaning, as well as to further the discussion. These results are also presented in this chapter. Twenty-six (56%) of the forty-six registered students actively participated in the study to the extent that their online activity could provide enough data to establish significant patterns of use. Also, although there were seven teachers involved, not every instructor demonstrated the same level of participation. Nevertheless, the results of the electronic report forms as well as the email inboxes assigned to study participants provided some data that could be analyzed in a meaningful way regarding the role of the instructor and students’ needs. These data are relevant to the discussion around student autonomy and level of dynamic learning achieved.

This chapter is divided into five sections. Section 1 looks at the activity of the students and the focus areas into which the data was organized. Section 2 examines the activity of the teachers and the focus areas that helped to organize these data. Section 3 presents the feedback from students gathered through post-study telephone interviews and Section 4 presents the feedback gathered from teachers at the initial post-study feedback session as well as through additional email interviews. Section 5 presents two case studies, one student and one teacher, who demonstrated the most complete use of the site of all the study participants.

Section 1-Student Activity

The student activity was analyzed in keeping with the initial questions of this study and focused on six significant focus areas:
Focus Area 1-Total number of student attempts to access the site;
Focus Area 2-Total number of minutes on site;
Focus Area 3-Preferred mode (linear or dynamic);
Focus Area 4-Activity choices (self-directed selection of the tools and resources available on the site: notice board discussion and assignment centre, audio/text chat, sound search, readings, quiz, interactive exercises, various tutorials and practice sessions, including dialogues, pronunciation, conversation, grammar, and an electronic dictionary);
Focus Area 5-Specific time-on-task for each activity chosen;
Focus Area 6—Student support requests.
The data will be presented in tables according to the six focus areas.

Focus Area 1—Total number of Student Attempts to Access (or login to) the Site

In order to establish a significant pattern of use for each student, all of the online activity of the student was tracked from the moment a student logged onto the site, through the activity selections, to the assignment submissions and contact with the teacher. It was important to discover if the students were actually logging onto the site independently of teacher guidance and how often the students entered the site over the study period. Table 4.1 identifies seven number groupings from five to more than two hundred. These groupings were organized according to the numbers in the database; the database showed that students access the site as few times as five and as many as more than two hundred. Table 4.1 also shows how many students accessed the site in the number groupings and what percentage this number was of the total number of students logging onto the site in each category.

Table 4.1—Total number of student-user access [login] attempts to the site

<table>
<thead>
<tr>
<th>Attempts</th>
<th>No. of students</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>10-30</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>30-50</td>
<td>6</td>
<td>23%</td>
</tr>
<tr>
<td>50-100</td>
<td>7</td>
<td>30%</td>
</tr>
<tr>
<td>100-150</td>
<td>4</td>
<td>15%</td>
</tr>
<tr>
<td>150-200</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>Over 200</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>26 students</td>
<td></td>
</tr>
</tbody>
</table>

The largest group of students logged between 50-100 attempts (30%), and the average number of attempts per student was 111.70 times. Each time a student user logged into the site, the use was recorded in the database whether or not the student remained active on the site to work through some learning activities. Therefore, knowing the number of access attempts per student was not helpful in discovering why each students had logged
into the system. Therefore, several students logged access attempts, yet did not record any study activity. There could have been several reasons for this problem: several students mentioned that they had technical problems logging in from a remote location. It is also interesting that students referred to as “inactive” or “unresponsive” by the teachers logged a considerable number of access attempts in the database. Therefore, some students were trying to access the site without the teacher’s knowledge. This gap between student activity and the teachers’ knowledge that the activity was taking place could have been addressed more effectively by creating a link to the email inbox of the teacher each time a student attempted to access the site.

Consistently throughout the analysis of the study findings, it became apparent that there was a gap between what the students perceived and what the teachers perceived in terms of weaknesses, successes, benefits to learning, and the roles each expected of the other. This perception gap was actually one of the most significant features of this study as the study participants (teachers and students) had not been prepared for it, yet it actually influenced the outcome of the study profoundly. In order to illustrate the perception gap more fully, each section of this chapter is followed by a section of “Perceptions” of the student participants. These perceptions came from post-study telephone interviews (see Appendix E) when students provided responses to a number of questions about the study. Seven of the twenty-six participating students responded to the telephone interview questions and their comments are quoted directly. The Student Perception Sections (A-F) follows each Focus Area except Area Three according to the main theme of the section. Student Perceptions A presents several comments made by the students in the area of online convenience and flexibility. These features of the online environment would support the fact that students continued to access the site without the teachers being aware of it. The comments suggest that students enjoyed the fact that they could access the site at any time within their own specific life contexts.

**Student Perceptions A–Online Convenience and Flexibility**

The following are several direct quotes from participating students regarding the flexibility and convenience of accessing the project online. Four of the seven students who responded to the telephone questions made these comments.
"I liked the Internet project because it was flexible. Whenever I had some spare
time from my baby I could sit at the computer and study."

"Main thing for me. I can learn at home anytime, can be flexible, and do not have
to worry about timing. Even the middle of the night is okay."

"This form of study is very interesting and convenient."

"I like the flexibility of the Internet."

These responses revealed that, although students identified individual preferences in
terms of accessing the site, the times chosen were extremely varied and at all times of the
day and night.

Focus Area 2—Total Number of Minutes on the Site

The second focus area examined the number of minutes each student spent on the
site. As soon as the students logged onto the site, the database recorded the minutes spent
on the site itself, either navigating through or selecting study content. The number of
minutes spent on each activity were also recorded. The total number of minutes spent
was helpful as an indicator of how much time the students spent overall, and in order to
observe the relation between time spent and work completed. Table 4.2 shows seven
time groups, ranging from the lowest amount of time registered to the most. The
groupings were organized in groups in keeping with the times indicated by the students.
Table 4.2 also shows how many students remained on the site for the various numbers of
minutes and the total percentage of students who spent that number of minutes on the
site.

Table 4.2—Total number of student activity minutes on site
<table>
<thead>
<tr>
<th>Number of minutes</th>
<th>Number of students</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>10-50</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>50-100</td>
<td>9</td>
<td>34%</td>
</tr>
<tr>
<td>100-200</td>
<td>9</td>
<td>34%</td>
</tr>
<tr>
<td>200-500</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>500-1,000</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Over 1,000</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26 students</strong></td>
<td></td>
</tr>
</tbody>
</table>

The largest number of students logged between 50-200 minutes on the site, and the average number of minutes per student was 173.54 minutes. The numbers in Table 4.2 do not help to establish how the time onsite was spent, only that a certain amount of time was spent by each student. There were only twenty-six participating students, although more than forty actually registered online. When informally asked via telephone follow up by the programme assistant, those students who did not even begin with the study gave various reasons. Interestingly, when asked, students did not make any consistent connections with technical or other study-related challenges; rather, they expressed a wide variety of reasons as to their lack of participation, ranging from family vacation trips to work schedules and family care responsibilities. It is clear from Table 2 that only two students spent more than five hundred minutes on the site. One of these students completed two-thirds of the module content, and the other completed the entire module content. The remainder of the students, while working with many of the study activities on site, did not complete whole sections of the module content. In addition, most of the students who did identify technical challenges as reasons for their lack of progress spent the most amount of time on the site. In the telephone interviews, students seemed to concentrate on the self-directedness of the online study as a reason that they enjoyed spending time on the site.
The students thought that there were activities for them to work through which made their time worthwhile. These comments are presented in Student Perceptions B.

**Student Perceptions B—Self-Directed Learning**

Two of the seven students interviewed made the following comments on the self-selecting format of the activities and learning resources:

"I enjoyed the pronunciation practice. I could practice as much as I wanted without other human presence. It feels good."

"I can study what I want."

These responses revealed that there was a flexibility about the programme that suited both the learning needs and the learning styles of students.

**Focus Area 3—Preferred Mode**

The third focus area observed the mode choices made by the students each time they accessed the module lesson content. The mode choices included, Mode 1 (Dynamic) and Mode 2 (Linear). The mode options were presented to the students each time they were prompted for their user name and password. In other words, students had to make a conscious choice of study mode before they could actually access any lesson content. Once inside the lessons, students could also change the mode choice if they thought a change was necessary. Table 4.3 presents the number of students and the variations of mode choice demonstrated by the students (Mode 1, Mode 2, equal use of both), as well as the number and percentage of students who made those choices.

**Table 4.3 - Preferred mode**

<table>
<thead>
<tr>
<th>Mode choice</th>
<th>No. of students</th>
<th>% of total mode choices made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode 1 Dynamic</td>
<td>20 students</td>
<td>77%</td>
</tr>
<tr>
<td>Mode 2 Linear</td>
<td>4 students</td>
<td>15%</td>
</tr>
<tr>
<td>Equal</td>
<td>1 student</td>
<td>4%</td>
</tr>
<tr>
<td>*Neither (site access only)</td>
<td>1 student</td>
<td>4%</td>
</tr>
</tbody>
</table>

NOTE: The student who registered as having no choice accessed the site only and did not make a lesson choice and therefore, was not active on the site.
The users who spent the most time on the site demonstrated a movement from one mode to another quite consistently even within one study session. The two students who spent more than five hundred minutes on the site consistently made a mode choice to enter the lesson content, but chose the second mode after some time in Mode 1. These choices had to be intentionally made by the student. Although there were no clear patterns of choice demonstrated, this movement from one mode to another was always after a period of time spent in one mode. In other words, the more familiar the site became, the more the student was likely to make more than one mode choice within a study session.

The following are examples of students who spent almost 300 minutes up to over 500 minutes on the site. Students 1 and 2 spent over five hundred minutes and Student 3 spent almost 300 minutes on the site.

**Student 1**

This student spent a total of 583.07 minutes on the site and demonstrated a movement from one mode to the other during specific study sessions. Student 1 spent 85 minutes in Mode 1 and a remaining fifteen minutes in Mode 2 during the first study session. Student 1 then returned to Mode 1 for the next session and the first 45 minutes of the third session, changing to Mode 2 for the remaining six minutes of that session. This pattern of either completing all work in Mode 1 or most of the work in Mode 1 continued through all of the student’s study sessions. Because there is no difference in the type of study activity chosen by the student in either of these modes, the actual purpose for the selection remains unclear. For all of the fourteen study sessions conducted by this student, each session began in Mode 1 and moved to Mode 2 during the session.

**Student 2**

This student spent a total of 1,315.32 minutes on the site and also demonstrated a movement from one mode to the other during various sessions. The movement demonstrated by this student occurred more often than Student 1, even within one session. For example, in one session this student spent 25 minutes in Mode 1, followed by 103 minutes in Mode 2, then returned to Mode 1 for the remaining 30 minutes of that session. In another session, this same student spent 34 minutes in Mode 1, then 30 minutes in Mode 2 and returned to Mode 1 for the remaining three minutes of the session.
Again, there is not a clear connection between activity choice and mode choice as the types of activities chosen in each mode were the same. Of the twenty-four study sessions conducted by this student, only two began in Mode 2. The remaining twenty-two began in Mode 1 with the student moving to Mode 2 during the session.

**Student 3**

This student spent a total of 286.92 minutes on the site and demonstrated an equal number of Mode 1 and Mode 2 choices (see Table 4.3). Student 3 made only one in-session move between modes, out of three sessions and in both of the other study sessions, this student made a pre-session choice and remained in that mode throughout the session. Again, there does not appear to be any connection between mode choice and activity type and all activities were the same in all sessions.

**Focus Area 4—Activity Choices**

This focus area concentrated on the type of activity chosen by the students and the amount of time (minutes) spent on those activities. These numbers help to identify which activities the students chose and how much time they spent on each particular activity type. Table 4.4 shows the number of minutes spent, the number and percentage of students who chose the activity, as well as the type of activity chosen.

<table>
<thead>
<tr>
<th>Minutes spent on activity</th>
<th>Number of students</th>
<th>% of total students</th>
<th>Activity chosen</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10</td>
<td>1</td>
<td>4%</td>
<td>Reading</td>
</tr>
<tr>
<td>10-20</td>
<td>2</td>
<td>8%</td>
<td>Exercises/Dialogue</td>
</tr>
<tr>
<td>20-50</td>
<td>11</td>
<td>42%</td>
<td>Quiz/Exercises Pronunciation</td>
</tr>
<tr>
<td>50-100</td>
<td>5</td>
<td>19%</td>
<td>Quiz</td>
</tr>
<tr>
<td>100-200</td>
<td>2</td>
<td>8%</td>
<td>Quiz</td>
</tr>
<tr>
<td>Over 200</td>
<td>4</td>
<td>15%</td>
<td>Quiz/ Pronunciation Exercises</td>
</tr>
<tr>
<td>N/A</td>
<td>1</td>
<td>4%</td>
<td>None</td>
</tr>
</tbody>
</table>

**Total** 26 students
The time grouping per activity were organized according to the minutes logged in the database, and most of the students logged in the 20-50 minutes group. Table 4.4 shows that 11 students (42%) spent between 20 and 50 minutes in one session on study activities, and the same number of students spent more than that time (50-over 200 minutes). The table also shows that the most time was spent on the quizzes, pronunciation work, and exercises. There are several possible reasons for the students spending so much of the time on quizzes. In addition to the fact that the students would receive feedback and a numerical grade for their quiz submission, the students were instructed by the teachers to complete the quiz before entering the lesson. Quiz completion was an important activity for the students; teachers continued to refer participating students to the quizzes before they would support them through the lesson; and, as the quizzes were presenting considerable technical challenges, they remained a "sticking point" for the students. These choices would suggest that the students were interested in self-tutorial types of activities where they could interact with content for as long as they felt they needed in order to practice the use of the language. The following section (Student Perceptions C) provides comments from students about the types of activities offered in the site.

**Student Perceptions C—Successes of the Environment**

All seven students who responded to the telephone interview commented on the types of activities and the aspects of the environment that they found most helpful:

"I learned how to email."

"I can learn technology while studying English."

"... study many words and hear them that allowed me to practice my pronunciation."

"Access to sound is very essential. I want to know if it is possible to have sound for the whole lesson, not only the dialogues."

"I wanted to practice using my computer."

"Words can be repeated more frequently for pronunciation—never too much practice."

"I wanted something new. The technology is there and I want to learn more."
“I'm a new immigrant and I want to take advantage of every possible way to learn English. Computer technology is everywhere now. I wanted to check how it works.”

Theses comments support the idea that, the length of time spent on an activity (e.g. the quizzes) was not indicative of the preferred activity of the students.

Focus Area 5 – Time on Task

This focus area concentrated on the specific activity choices made by the students, how often the choices were made, and how many minutes were spent on each activity choice. In Table 4.4 the activities were grouped in general “type” groups based on the amount of time logged in the database. Table 4.5 breaks down student choices to specific activity choices and numbers of times the activities were chosen (frequency of use). That is, from the program code, the actual activity itself is registered so that the learning choice is clearer.

Table 4.5.1-Activity choices and numbers of students making that choice

<table>
<thead>
<tr>
<th>Activity</th>
<th>No. of students</th>
<th>% of students</th>
<th>Frequency of use</th>
<th>% of total no. of choices made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forum Disc.</td>
<td>13</td>
<td>(50%) of total</td>
<td>219 times used</td>
<td>(13%)</td>
</tr>
<tr>
<td>Chat</td>
<td>0</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>Dictionary</td>
<td>0</td>
<td>N/A</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>Audio Search</td>
<td>12</td>
<td>(46%)</td>
<td>81</td>
<td>(5%)</td>
</tr>
<tr>
<td>Readings</td>
<td>24</td>
<td>(90%)</td>
<td>430</td>
<td>(25%)</td>
</tr>
<tr>
<td>Pronunciation Prac.</td>
<td>13</td>
<td>(50%)</td>
<td>62</td>
<td>(3%)</td>
</tr>
<tr>
<td>Dialogue Prac.</td>
<td>13</td>
<td>(50%)</td>
<td>91</td>
<td>(5%)</td>
</tr>
<tr>
<td>Conversation Prac.</td>
<td>12</td>
<td>(46%)</td>
<td>99</td>
<td>(6%)</td>
</tr>
<tr>
<td>Coffee Break Disc.</td>
<td>13</td>
<td>(50%)</td>
<td>63</td>
<td>(4%)</td>
</tr>
<tr>
<td>Grammar Wkp.</td>
<td>11</td>
<td>(42%)</td>
<td>55</td>
<td>(3%)</td>
</tr>
<tr>
<td>Quiz</td>
<td>16</td>
<td>(60%)</td>
<td>115</td>
<td>(7%)</td>
</tr>
<tr>
<td>Exercises</td>
<td>23</td>
<td>(80%)</td>
<td>508</td>
<td>(29%)</td>
</tr>
</tbody>
</table>
The most popular activities chosen were the readings. Twenty-four students (90%) chose this activity 430 times (25% of total number of activity choices made). Twenty-three (80%) of the students chose the Exercises activity 508 times (29% of total activity choices made). This table is interesting in that it illustrates the popularity of certain activities based on the number of times the activity was accessed by the user. In addition, because one of the intentions of the site design was to support an integration of language skills, these numbers can also illustrate the applied use of these activities on language skill development. The activity choices in each lesson included a selection of activities that supported all four language skills of reading, writing, listening and speaking. Therefore, by observing the activity choices as logged in the database, one is also able to see which of the language skills were being practiced by the students in each activity. For example, if readings (25%) and exercises (29%) are combined with other tasks that support the language skills of reading and writing, such as, quiz (7%), grammar workshop (3%), and forum discussion (13%), the combined average totals, from Table 4.5.1, are the following, as recorded in Table 4.5.2.

Table 4.5.2—Combined averages for reading and writing skills activities

<table>
<thead>
<tr>
<th>*Average number of students</th>
<th>% of total number of students</th>
<th>Average frequency of use</th>
<th>% of total minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>(65%)</td>
<td>1327 times used</td>
<td>(77%)</td>
</tr>
</tbody>
</table>

* This average was calculated by adding the numbers of students who used the reading, exercise, quiz, grammar, and forum activities on the site and divided by the number of activity choices examined (5).

Also, the combined average totals, from Table 4.5.1, of the tasks that support the language skills of listening and speaking, such as audio search, pronunciation practice, dialogue practice, conversation practice, and coffee break discussion, are recorded in the following Table 4.5.3.
Table 4.5.3–Combined averages for listening and speaking skills activities

<table>
<thead>
<tr>
<th>*Average Number of students</th>
<th>% of total number of students</th>
<th>Average frequency of use</th>
<th>% of total on-site minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>(50%)</td>
<td>396 times used</td>
<td>(22%)</td>
</tr>
</tbody>
</table>

*This number was calculated by adding the numbers of students who used the search, pronunciation, dialogue, conversation and discussion activities as recorded in Table 5.1 and divided by the number of activity choices examined (5).

Therefore, more students (65% versus 50%) chose reading and writing activities and spent more of the total time on site working on these activities (77% versus 22%). These statistics are not, however, clear indications of the success of the reading and writing activities over the listening and speaking in an online environment as the listening and speaking activities would (as conversational practice) require more communication with a teacher and other students, while the former could be sustained independently within the environment. The conversational practice choice should be observed further in another study when both teachers and students are participating fully in the environment. If there had been more connection between teachers and students, the listening and speaking activities may have been more popular.

The following section of students’ comments (Student Perceptions D) support both the notion that there was more writing taking place in online study sessions and that there was a sense that not everything was being used to its maximum effect in the environment. The following two comments were made by two different students during the telephone interviews.

**Student Perceptions D—Amount of Writing in the Online Programme and a Comparison with the Correspondence Programme.**

Students commented on how much work they completed:

“I wrote much more than in the correspondence course.”

“The correspondence stuff has more to offer, but I think I did not catch everything that was available in this online course.”
The following Table 4.5.4 follows from Table 4.5.1 and presents the actual time (in minutes) that students spent on each activity.

Table 4.5.4—Total time (minutes) spent on each activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of students</th>
<th>% of students participating students</th>
<th>Total number of minutes spent on this activity</th>
<th>% of total minutes spent on site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forum</td>
<td>13</td>
<td>(50%)</td>
<td>138.61</td>
<td>(3%)</td>
</tr>
<tr>
<td>Chat</td>
<td>0</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dictionary</td>
<td>0</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audio search</td>
<td>12</td>
<td>(46%)</td>
<td>30.35</td>
<td>(1%)</td>
</tr>
<tr>
<td>Readings</td>
<td>24</td>
<td>(92%)</td>
<td>722.97</td>
<td>(18%)</td>
</tr>
<tr>
<td>Pronunciation</td>
<td>13</td>
<td>(50%)</td>
<td>391.18</td>
<td>(10%)</td>
</tr>
<tr>
<td>Dialogue</td>
<td>13</td>
<td>(50%)</td>
<td>201.01</td>
<td>(5%)</td>
</tr>
<tr>
<td>Conversation</td>
<td>12</td>
<td>(46%)</td>
<td>141.77</td>
<td>(4%)</td>
</tr>
<tr>
<td>Coffee break</td>
<td>13</td>
<td>(50%)</td>
<td>134.40</td>
<td>(3%)</td>
</tr>
<tr>
<td>Grammar</td>
<td>11</td>
<td>(42%)</td>
<td>97.45</td>
<td>(2%)</td>
</tr>
<tr>
<td>Quiz</td>
<td>16</td>
<td>(61%)</td>
<td>1394.98</td>
<td>(34%)</td>
</tr>
<tr>
<td>Exercises</td>
<td>23</td>
<td>(88%)</td>
<td>782.37</td>
<td>(20%)</td>
</tr>
</tbody>
</table>

Twenty-four students chose the reading activity and spent 18% of their total time on the site, doing these activities. Also, 23 students chose the exercises activity and spent 20% of their total time working on these activities. It is interesting to note that even though only 16 students chose the quiz activity, they spent 34% of the total time on the site on this activity. In fact, students spent more time on the quiz activity (time-on-task) than on any other activity. This finding is interesting because the quiz activity was not intended to require as much time from students as they obviously spent. Rather, the quizzes were intended to be assessment activities to help students and teachers plan a course through the lesson content. It would seem, then, that more time was spent per quiz task than any other. This result is misleading, however, as most of the technical complaints submitted by teachers and students in the email correspondence and online reports, concerned the quizzes. Therefore, it is possible that much of the time devoted to the quizzes could have
been spent on the technicalities of the activity rather than on an assessment of learning needs. Another interesting observation is that almost the same number of students chose both the reading and exercise activities and spent almost equal time on these activities. It is important to note, however, that the exercise activities were linked to the readings electronically (each reading was followed by a hotlink button to the exercises) and, therefore, there would be a natural sequence of choice for the students.

It is also interesting to compare Table 4.5.1 and Table 4.5.4. Several activities that logged frequency of use (e.g., the forum, the readings, and the exercises, see Table 4.5.1 had less time spent on them by the students than did some of the other activities. Examples of these activities are the grammar workshops and coffee break discussions (see Table 4.5.4). Students used the grammar workshops and coffee break discussions but they spent less time on task with these activities than with other activities such as the readings and quizzes. For example, the Forum activity was used 219 times by students, yet only 3% of the total time spent on the site was actually spent by students on this activity.

This finding suggests that the popularity of the activity choice is not always consistent with the length of time spent on the activity chosen. An interpretation of this finding could be that the students may have wanted a simple self-practice-style tutorial, without spending many minutes, or it could also suggest that students were demonstrating a preferred activity choice, even though the activities chosen were not being responded to by the teacher, and, therefore, the work on the activities was without direction or application by the teacher. An example of the latter is the forum selection. The purpose of the forum was to host asynchronous online discussions, group meetings, and assignments. It was, therefore, the “connection” point for the learner with the teacher and other students. However, as most of the teachers did not reach this level of connectivity with their students, this area remained unused by most of the teachers, although accessed frequently by the students. This finding is consistent with the comments of the students who said that they were waiting for responses from the teachers to the various work they had submitted. Therefore, even though they did not receive the responses they were waiting for, they continued to access the forum.
Tables 4.5.1 and 4.5.4 also illustrate that several activities logged 10% or less of the total activity choices made and the total number of minutes spent on tasks. Examples of these are the audio search (81 times-5% of total activity choices made and 1% of total minutes on the site), pronunciation (62 times-3% of activity choices made and 10% of total number of minutes on the site), conversation (99 times-6% of activity choices made and 4% of total number of minutes on the site), coffee break (63 times-4% of activity choices made and 3% of total number of minutes on the site), and grammar workshops (55 times-7% of activity choices made and 2% of total number of minutes on the site). Four activity choices showed a closer consistency between frequency of use and time on task. These were the dialogue activity (91 times-5% of total activity choices made and 5% of total time spent on task) and conversation activities (99 times-6% of activity choices made and 4% of total time on task), coffee break (63 times-4% of activity choices made and 3% of total time on task), and the grammar activities (55 times-3% of activity choices made and 2% of total time on task).

Conversely, the activity that was used less frequently yet registered as the longest time on task was the quiz. Students’ quiz activity choices totaled only 7% of the total activity choices made, yet students spent 30% of the total site time on task on the quiz activities (see Tables 4.5.1 and 4.5.4). This finding could be explained again because the quiz had many technical challenges, yet the teachers repeatedly referred the students to the quizzes before they would begin working with the students through the lesson. In addition, the students received marks for their submissions, and these marks undoubtedly held great value for the students. Only one teacher eventually told one of his students to stop trying to send the quiz and he began working with the student through the lesson. This student was the only one who continued through and completed the entire module content. Therefore, the time spent on this activity is not necessarily indicative of the usefulness of the activity itself or of its content. Rather, both teachers and students perceived it as the gateway to the lesson. It should also be noted that other student activity was logged in the database as “login,” and it registered a certain number of minutes in navigational time, such as registration, login, lesson selection, and user identification. The total percentage of navigational time spent was 11%, an average of .004% per student.
Focus Area 5 has concentrated on the students' choices of activities and time spent on each activity. The students also made some interesting comments during the telephone interviews about the types of activities they would have liked on the site. The following statements (Student Perceptions E) were made by two students in response to a question about what they liked about the site.

**Student Perceptions E—Additional Activity Requests**

Two of the six students questioned made direct requests for future activities:

"I would like to see more grammar explanation, more words."

"I would like more grammar, more grammar exercises."

These comments seem to suggest that certain expectations of the students were not met in this new environment. That is, if students are more familiar with a grammar-based approach, then they might perceive there to be little or no grammar available in the current format. The grammar supports available were based on the lesson content, however, the application of the grammar was provided through teacher direction and assignments. In other words, the grammar was integrated, rather than a prescribed activity for the students and, as such, the students may have not been fully aware of the resources in this area.

**Focus Area 6—Student Support Requests**

Throughout the study students were encouraged to contact their teachers as often as they needed support. The teachers were asked to record each of the contacts with students using an online report form (see Appendix E). Table 4.5.5 presents the results of those reports according to the type of request made by the students, the frequency of that type of request, and the percentage of the total requests made.

Table 4.5.5—Student support requests
<table>
<thead>
<tr>
<th>Type of request</th>
<th>Frequency of request</th>
<th>Percentage of total requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>General communication</td>
<td>7</td>
<td>11%</td>
</tr>
<tr>
<td>Requests for Quiz codes</td>
<td>5</td>
<td>8%</td>
</tr>
<tr>
<td>Request for technical help</td>
<td>13</td>
<td>2%</td>
</tr>
<tr>
<td>Requests for feedback to assignments and next steps</td>
<td>23</td>
<td>35%</td>
</tr>
<tr>
<td>Quiz feedback requests</td>
<td>8</td>
<td>12%</td>
</tr>
<tr>
<td>Requests contact appointments (Chat and/or telephone)</td>
<td>7</td>
<td>11%</td>
</tr>
<tr>
<td>Site function explanations</td>
<td>2</td>
<td>3%</td>
</tr>
</tbody>
</table>

Table 4.5.5 shows that the most frequent requests made by students were requests for feedback to assignments submitted (23 requests, 35% of total requests made) and to make requests for technical support (13 requests, 2% of total requests made). This finding demonstrates the students’ awareness of the role and importance of the teacher in the process. The students initiated each of these requests. Moreover, the requests for feedback were submitted at regular intervals throughout the study and demonstrated a consistent need for this kind of support. Instinctively, the students requested from the teachers the kind of support and guidance that they needed as they progressed through the lesson. According to the responses of the students to the telephone interview, they perceived the lack of teacher input and feedback as the weakest point of the study. Although they talked about the lack of teacher support, this concern did not seem to prevent several from continuing to work on their own. Therefore, although they could continue to work, they did not feel that their time was being spent in the best possible way without the teacher input and feedback.

Although the students spent a lot of time on the quizzes (1394.98 minutes-34% of the total time spent), not many quizzes were successfully sent and received. In fact, according to the database entries, only eight quizzes were submitted and successfully received teacher response. Several students mentioned that they had completed quizzes
several times but that the teacher had not responded to them. The following is an example of how determined one student was for the teacher to receive their submission even though the quiz technology did not work properly:

Hi. I can’t understand how you didn’t receive my story. I write the story
And after that complete the exercise from Yen [a character from the lesson reading] story and send you. My story was something like that: My country Is Bulgaria. In Bulgaria has four season. The winter is cold and snow but in my country is little bit hotter than here. The spring is very nice. Everything is green. The birds come back from hot country. The life begin again. This is my favorite season. In summer the weather is nice too. It is hot. Everybody take vacation on the Black Sea in this time. The fall is beautiful season because has a lot of fruit and vegetables. The weather is soft and rainy. Every season in my country is beautiful because has something special.

I will do nothing in this weekend and I will try to finish everything. Do I need to make new account with new password?"

On the other hand, several teachers reported that they were not successfully receiving the quizzes that students were attempting to send. In addition, one teacher reported that a series of quiz access codes had been confused and that two teachers had received the same student codes. Therefore, the technical exchange did not work well, and although there were many completed and sent quizzes, only a few were received and responded to by the teachers. The students had more to say about the need for teacher support as well as how they felt the teacher support had been in the study than any thing else about the site. Student Perceptions F presents the student comments relating to this theme.

Student Perceptions F–Need For and Role of the Teacher

All of the seven students who responded to the telephone interview commented on their perceptions of the amount and effectiveness of teacher support and what they perceived the teacher’s role to be in their learning experience online.

“I never heard from my teacher. I think the teacher should check my assignments and tell me how I did.”
"The teacher helped me with giving me the assignment number but never checked the assignments I submitted. I expressed my problem but never got my assignments back."

"When the course is just online you feel a little neglected. I strongly feel that it should be combined – online and correspondence. Conversation is very important to me."

"Yes, I got an assignment from the teacher and she submitted it back. It was one of the tests."

"I did not like that my work was not sent back to me and I still did not know where I made mistakes. I'd like my work sent back to me with teacher's corrections and comments."

"When I sent an email I got an email from the teacher in two to three days. Sometimes I felt that no one really cared."

"I don't remember any assignments sent to me by my teacher."

"My teacher did not give me any assignments."

"It was perfect for me. Want to know if teacher can help and how often the teacher can help with this study."

"I would like the teacher to contact me. There was no phone call, no email. I did not get any assignment . . ."

Each of these comments emphasizes the importance the students placed on immediate teacher response and the need for specific feedback to questions and assignments. The lack of conversational contact encouraged a feeling of neglect within the students that they did not feel with the scheduled weekly telephone contact with the teachers in the correspondence programme. Although the site provided conversational practice and exercises, the students did not feel that conversation was being addressed without the live contact with the teacher.

There were additional comments about technical difficulties:

"Yes, I had technical problems all the time...when I sent exercises to the teacher I got messages that they weren't sent through. The teacher wasn't able to find my exercises...I finished everything, but technicians received only half of the stuff I sent. I asked for help all the time."
"...I did not have technical problems except for waiting for sound...no big deal. I asked the technician to help...he sent me a letter and I had to contact my teacher. I did not contact the teacher."

"I had some problems with the sound exercises. Other than that, it was my computer. I didn’t ask the technicians or the teacher for help."

These comments did not communicate significant or hindering technical difficulties for the students. In other words, the students were able to continue on their own even with the technical difficulties they encountered.

And regarding preferred delivery:

"I would like to continue both courses [online and correspondence] if there is more feedback from my teacher and my corrected work is sent back to me."

"I can learn technology while studying English."

"The best for me would be to go to school but I can’t right now. I think that correspondence and online courses require real self-discipline. This may be very difficult."

Each of these comments says something quite different about the delivery. The first comment suggests that the student would like to continue with a combination program of both the correspondence and online methods as long as the feedback from the teacher is regular and effective. The second comment suggests a desire to learn the technology of the online programme while learning the language, while the last comment seems to suggest that either correspondence or online delivery would not be the first choice of the student. The “self-discipline” required, as the student says, is a challenge, rather than a motivator for the student.

The next section of this chapter addresses the activities and feedback of the teachers. The findings of this section are particularly interesting in light of the findings and feedback of the students as in many aspects, there appears to be quite a gap between the experience of the teachers and the experience of the students in this study.
Section 2–Teacher Activity

Interactions with Students and Coordinator

The activity of the teachers was analyzed according to the three contact and communication types available to the teachers throughout the study. These were

Type A–Teacher to student contacts and communication through emails,

Type B–Teacher to coordinator contact through online reports,

Type C–Teacher to site communication through assignment and discussion centre postings in the site assignment centre.

The activities in each of these areas were tracked through the database (teacher to coordinator and teacher to site) and through email inboxes for both teachers and students (teacher to students). The study participants were given email addresses for the study so that all communication could be observed. The findings from each of these courses are presented in a series of Tables (4.6–4.10) in this section. Tables 4.6–4.10 should be read keeping in mind that there were a total of seven teachers who had agreed to participate in the study and that each instructor had either three or four students for whom they were responsible.

The teachers were asked to send an initial email to their assigned students. In this email teachers welcomed the student and gave a brief overview of the project. The teachers provided an access code for the student to use for the quiz; then the student was asked to wait for further contact from the teacher after reading and responding to the quiz. Together the teacher and student identified the language needs of the learner, based on the results of the quiz, and continued dialogue via email and telephone to map out a learning path through the module. The teachers were asked by the coordinator to not influence mode selection and/or learning activities, rather to work with the student to negotiate the site and to use the resources and activities constructively to support his/her language learning.

Type A–Teacher to Student Contact and Communication

Teachers communicated to students using external email addresses. The following are two samples of messages sent from teachers to students to demonstrate the type of communication that took place:
Sample 1
Student message-“First I want to say thank you for your instruction. I finished everything. I can’t open the exercise from the workshop only. I will try later. What I have to do after?”
Teacher’s response-“Could you tell me exactly which exercise you can’t open up. Do you mean the one in the reading section, the pronunciation, dialogue…or, do you mean one of the exercises that I posted under “Discussion”? Please tell me exactly where you are having trouble opening the exercise.”
In this exchange, the student and teacher are addressing a technical issue regarding the accessibility of certain exercises yet they both seem to have an understanding of the importance of communication and guidance through the site.
Sample 2
Student message-“I have to go out all day but tomorrow I am at home all day to 6:00 p.m. Will be your choice to call me or to go chat line.”
Teacher’s response-“Tomorrow, I can meet you in the chat room at 8:00 a.m. If this is too early for you, please let me know. If it is okay, please e-mail me back to confirm.”
This exchange is an example of teacher and student attempting to arrange a synchronous connection either by telephone or chat.
Sample 3
Student message-“Which test I have to fill up to be finished Module 1? The exercise of the last 6 parts in grammar workshop or quiz test? Because I did on Friday.”
Teacher’s response-“I mean the same quiz test that you did to exit the lesson 1. I suggest that you review some of the materials from the lesson 1 again but don’t do the exercises again. Then do the exit test using the exit test code that I gave you – [test code].”
This exchange is an example of teacher and student negotiating content progression and completion. It is interesting to note that while there were no significant postings of student work on the site itself, these email exchanges demonstrate quite direct communication and broad language use of technical as well as content and communication concerns.

Table 4.6 below presents the details of the teacher to student communication in terms of the type of communication, the number of teachers who participated in these types of communication, the number of messages sent, and the number of messages that
received a response from the students and the percentage of the total number of messages sent by the teachers.

Table 4.6 – Teacher to student communication

<table>
<thead>
<tr>
<th>Type of communication</th>
<th>Number of teachers</th>
<th>Number of messages sent</th>
<th>Number that received a direct response from the student</th>
<th>% of total messages sent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial contact</td>
<td>7</td>
<td>23</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>General information</td>
<td>5</td>
<td>16</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>Technical support</td>
<td>3</td>
<td>13</td>
<td>16</td>
<td>21%</td>
</tr>
<tr>
<td>Progress check</td>
<td>5</td>
<td>56</td>
<td>13</td>
<td>20%</td>
</tr>
<tr>
<td>Assignments</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>10%</td>
</tr>
<tr>
<td>(instructions and/or</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>feedback)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quiz instructions</td>
<td>6</td>
<td>39</td>
<td>17</td>
<td>22%</td>
</tr>
<tr>
<td>and feedback</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content selection</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>8%</td>
</tr>
<tr>
<td>Customized tutorial</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>8%</td>
</tr>
</tbody>
</table>

Table 4.7 shows that the largest number of messages sent from the teachers to the students were either in the form of progress checks or in response to the quizzes. These messages were not always responses or feedback to quizzes; they were more often instructions for the use of access codes and instructions for sending the quizzes. The instructor support functions that received the most direct responses from students were the quiz and technical support messages. It is important to note that several of the numbers in Table 4.7 indicate more student responses than initial instructor messages: technical support, feedback requests, content selection and customized tutorial requests (including the setting up of telephone or chat sessions, pronunciation tutorials, and/or specific writing assignments). In order to understand this statistic better, one must refer to “Student Requests” in Table 6. That table indicates that there were more messages sent
to teachers by students than received responses from the teachers. Therefore, there were messages from students in teachers’ inboxes that did not receive a direct response from the teacher. This is difficult to understand unless teachers did not check their email inboxes regularly.

Type B—Teacher to Coordinator Contact

The second area of teacher activity that was logged in the database was the reports to the coordinator. These were retrievable by the coordinator, and teachers were asked to submit the reports electronically following each time a student requested contact. These reports substituted the regular monthly reports that were required of the teachers in the correspondence programme. The reports noted requests for information in the following categories:

- Type of technology used for contact (i.e., electronic, telephone),
- Nature of request (i.e., information, technical support, instructional support, general communication),
- Teacher’s role (i.e., information source, instructor, learning facilitator),
- Response offered by the teacher.

In all, five of the seven teachers submitted a total of 36 of these reports, representing approximately 7.2 submissions per teacher.

These reports revealed that the technology used most often for contacts with students was email (26 contacts). Telephone was used only seven times. Table 4.7 shows the actual nature of the request from the student and the frequency of that request.

Table 4.7—Nature and frequency of request from the students to the teachers

<table>
<thead>
<tr>
<th>Nature of request</th>
<th>Frequency of request</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical difficulties</td>
<td>25</td>
<td>63%</td>
</tr>
<tr>
<td>Information question</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>Content feedback/instructional support</td>
<td>5</td>
<td>12%</td>
</tr>
<tr>
<td>Not entered</td>
<td>4</td>
<td>10%</td>
</tr>
</tbody>
</table>
Table 4.7 shows that technical difficulties were reported most frequently (63% of the time) as the nature of student requests. However, several of these requests had more than one "nature of the request" entered into the field. Obviously, teachers were not always totally clear about the request students were making.

Table 4.8 shows how the teachers perceived their role based on the nature of the request made by the students. The table is organized by the type of teacher's role, the number of requests made by students for that specific type of support, and the percentage of the total number of support requests made.

Table 4.8—Teacher's role based on student support requests

<table>
<thead>
<tr>
<th>Teacher's role (as perceived by the teacher)</th>
<th>Number of entries for that role</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of information</td>
<td>26</td>
<td>68%</td>
</tr>
<tr>
<td>Learning facilitator</td>
<td>5</td>
<td>13%</td>
</tr>
<tr>
<td>Source of language practice</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Not entered</td>
<td>4</td>
<td>11%</td>
</tr>
</tbody>
</table>

Several of the fields had two or more roles identified by the teachers, indicating that the request being made by the student may not have been totally clear to the teacher; consequently, the teacher did not register the nature of the contact specifically.

In the electronic reports, the teachers were also asked to indicate how they responded to the requests and the nature of the support they actually provided. Table 4.9 shows the type of support provided by the teacher in response to the student requests, the frequency of that kind of support provided by the teachers, and the percentage of the total support provided.
Table 4.9—Type of support provided by the teachers and the frequency of that support

<table>
<thead>
<tr>
<th>Type of support provided</th>
<th>Frequency of that response</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical</td>
<td>10</td>
<td>26%</td>
</tr>
<tr>
<td>Instructional</td>
<td>10</td>
<td>26%</td>
</tr>
<tr>
<td>Procedural (i.e., procedures of course)</td>
<td>15</td>
<td>38%</td>
</tr>
<tr>
<td>Motivational</td>
<td>4</td>
<td>10%</td>
</tr>
</tbody>
</table>

Several student requests asked for support in more than one category, so each request was not a separate contact with the teacher. Also, teachers often found technical information from the technicians, at the request of the students, then responded to the students’ technical questions themselves, rather than direct the student to the technicians. Therefore, the teachers often provided technical support, even though the technicians were available to do so, which would suggest that teachers perhaps felt that they had to provide support for the students however they could.

**Type C—Teacher to Site Communication**

The teachers were also asked to post additional assignments for the students in an assignment/discussion notice board area on the site. This area was organized according to the activities provided on the site, thus providing a link with the content provided, while moving the student beyond the preset content into a wider area of application. Only three teachers posted any assignments in this area over the ten-week study period. Table 4.10 shows the related site activity area and the number of times the teachers posted assignments.

Table 4.10—Instructor to site assignment postings
The posts from teachers were mostly relating to the reading activity (42%) and grammar workshops (30%).

Section 3-Student Feedback

Telephone Interviews

Although the students were invited to participate in a face-to-face feedback session with teachers and technicians, no students actually attended. Each participating student was contacted by telephone and asked a series of questions based on the various aspects of the project (see Appendix F). These aspects included technical challenges, course content, teacher support, individual progress, and overall reaction to the experience.

There were twenty-six active students throughout the duration of the project, but only seven students responded to the telephone survey (30% of the total number). The reasons for this low number of responses were varied. Thirteen did not respond; three said that they were too busy; two were on a holiday trip and were not available. Students were asked what they liked or disliked about the project and their overall impression of the experience. In response, seven students were positive and thought that the flexibility of the Internet delivery and the new technology challenges were the main reasons they felt that it was something beneficial. One student did not express a positive feeling, and the reason given was that there were too many technical difficulties to overcome specifically regarding the downloading of the sound files. Another student mentioned that although he liked the idea of the project, the problems he experienced with the
technology, particularly accessing the sound files, was frustrating since the area of pronunciation was what he wanted to work on the most. Each of the eight students who responded made several suggestions for improvement:

- More grammar and grammar exercises (two students);
- More contact with a teacher (four students);
- Faster downloading time for the sound files (three students);
- Better editing of content (one student);
- More immediate and effective feedback from teachers on specific assignments (two students);
- More conversation opportunity and pronunciation practice (two students).

The technical problems mentioned by the students included access to the site itself, sound file downloading time, and Internet connections. Two students said that they had no technical problems, and one student mentioned a problem with navigation from one lesson to another. Two students talked about how they enjoyed learning more about technology while learning English.

In the area of teacher contact, six students said that the teacher had made contact with them, and two said that there had been no contact from the teacher. All of the students said that they would have preferred more contact from the teacher and more regular feedback on assignments. Three students said that the teacher had been helpful; two said that the teacher had not responded directly to the assignments and/or questions they asked. Four students said that they had been given assignments from their teacher. One student said that the teacher responded to her email request two to three days after the initial email, and one student said that he did not contact the teacher at all because the teacher had not made contact with him. One student also said that she received none of her assignments back from the teacher.

In response to questions about preference between the correspondence programme and the online study, five students said that they would prefer a combination of the two programmes. The main reasons for wanting to keep studying online were flexibility in terms of scheduling and learning with new technology. The main reasons for wanting to retain the correspondence delivery were that the students wanted more customized content and immediate feedback from the teacher. Students were familiar
with the correspondence procedure of weekly telephone calls, the purpose of which was to talk with the students and practice conversation and pronunciation. These calls would often take 30 to 40 minutes.

In response to questions about the main differences between online and correspondence and the feasibility of an Internet environment for language learning, the seven students who responded to the question said that they felt it was possible to study English online and that saw the main differences to be the following:

- More opportunity for writing in the online environment (two students);
- Flexibility (anytime, anywhere) (five students);
- Pronunciation practice (practicing as much as you need without disturbing anyone else and specific self-directed tutorial opportunity) (two students);
- Learning technology with the language (two students);
- Self-selecting learning environment (three students);
- More tests and more exercises (two students).

Section 4-Teacher Feedback

Feedback Session and Email Questions

The feedback from the teachers was recorded during a face-to-face session at the end of the project (see Appendix G for a list of the questions). The comments were then transcribed and analyzed according to actual online activity and project participation and individual perceptions of the experience. The main areas of the discussion focused on the perception of teachers of their “journey” through the project, their role throughout, specific frustrations, technical challenges, and the relationship with the correspondence delivery. All seven teachers participated in the feedback session.

Regarding their personal journeys, all seven teachers said that they were mainly frustrated throughout due to technical difficulties, lack of clarity around the expectations of the project and their role, and the lack of response from students. Three teachers expressed a real enthusiasm at the beginning of the project but thought that various realities negatively affected that enthusiasm:

- Basic access blocks due to server problems;
• Lack of training on the site functions;
• The apparent confusion on the part of the students as to the teacher's role (i.e., being put in the role of technical support rather than teacher);
• Not feeling that they functioned as a teacher, more as a guide;
• Feeling redundant to the students as they did not have enough technical knowledge to help with the technical problems, and did not know enough about the site to help students learn;
• Lack of response from the students.

When teachers were asked to compare the online project with the correspondence environment, they said that there was more opportunity to connect with students, set clear learning goals and customize content in the correspondence mode than in the online environment. Also, when asked what they thought worked well in the online environment, six teachers reported that there had not been enough activity from the students to be able to comment either positively or negatively. Two teachers commented that two or three of their students really seemed to like the environment and moved through it quickly and that the content was too easy for those students. One teacher commented that one of her students really wanted more content.

The teachers were also asked if they thought that students would likely want to continue to study online. Four teachers responded to this question. Three teachers said that they thought that the students would not want to continue; one said that she thought at least one of her students would want to continue online due to the flexibility possible through the Internet mode. The three teachers who said that the students would not want to continue gave the following reasons for their responses:
• Students would prefer actual courses;
• Students would need more orientation time;
• Students should be taught basic computer skills before learning online;
• Teachers would need more training;
• More content variety would be required;
• Students should be screened for higher language levels before accessing an online course.
Individual Email Interviews

The teachers’ comments were recorded and transcribed (see Appendix G for a list of the questions asked at the session). The teachers were asked at the session if they would be willing to respond further to specific questions based on their comments at the feedback session. These questions were intended to bring more clarity to the comments made by the teachers in the session and were sent via email. Four of the seven participating teachers responded individually to the email questions. These results are presented together with the questions posed in order for the reader to understand the connections being made. The results will also be attributed to individual teachers, distinguished by letter codes. The responses from each of these teachers have been organized into the four major themes addressed: the importance of the teacher’s own perception of the role he or she has in the process, the importance of students having clear learning goals, the importance of learner autonomy, and the importance of customization of content.

Teacher A - Role of the Teacher

Teacher A had taught in the correspondence programme for two years and worked with approximately twenty students at one time. This teacher had demonstrated a keen awareness of the challenges of distance learning and demonstrated an ability to work with the learner’s needs and to customize the content to meet those needs. Teacher A also demonstrated an ability to integrate email and Internet technology to augment the correspondence programme and to help students apply their language to a variety of real life situations. Teacher A had also been the lead developer of the correspondence materials and was very familiar with the content used in this study. This teacher responded in the feedback session by referring to inadequate training and feelings of ineffectiveness as a teacher. In the feedback session, Teacher A said the following about the study project:

In the beginning I had a lot of enthusiasm. I was starting this journey with many expectations of me as a teacher and lots of expectations of my students. I thought I was a good teacher and I already used email technology and I thought I would have no problems . . . I didn’t understand how the site worked . . . I was familiar
with the content, but I didn’t understand how the site worked . . . as a teacher and as a facilitator, I didn’t do a good job.

Therefore, in order to understand better what the teacher was thinking about her overall response to working in an electronic, rather than a correspondence environment, I asked her, “Does an “unnerving” take place for teachers in an electronic environment?” Teacher A responded as follows,

Not necessarily. I feel confident using e-mail and the Internet resources with my students but in this case, I did not know the environment very well. The …website was new to me and I did not feel well prepared to handle all the technical questions from the students. There is another reason for potential frustration and it is the teacher’s inability to monitor the student’s real involvement in a programme . . . I don’t mean active interference; just monitoring….whether the student is really working on the exercises. In my opinion, then, the potential problem lies with the administrative preparation of a site, not with the idea of web teaching itself.

I wanted to identify how the teacher felt as essentially a “co-learner” with the student given the “newness” of the site to both. I asked her, “Is it difficult for teachers to co-learn with students in a learning environment?” Teacher A responded,

That is really up to the teacher….I would say that since web-based teaching is devoid of personal contact, it forces the teacher to be even more innovative in his or her endeavors, thus evoking the need for learning – searching for new approaches, new methodology perhaps, or just new ways to keep communication with the student interesting.

I wanted to explore further the teacher’s desire for more effective monitoring of student activity and I asked, “Do you think that there might have been learning taking place outside the more conventional teacher-student interactions?” To this question, Teacher A responded,

But of course! . . . the bigger the student’s exposure to the English-speaking world, the more learning is taking place . . . a virtual class only facilitates a small part of a learning process, the rest is up to the student . . . online.
Learning. . . requires dedication and a strong will to learn because the site or any other site, regardless of its sophistication, can only offer so much. . . In the electronic environment, the student has to be more resourceful in order to overcome some new challenges that the environment presents. That, by itself, I think, is learning outside the conventional methods.

Finally, in response to the overall sense of inadequacy that Teacher A described, I asked her, "Do you think the teachers' feelings of inadequacy would stifle creativity and innovation? Why?" In response to these questions, Teacher A said,

I think that in any situation which requires us to rely on our professional competence, we perform much better when feeling prepared, knowledgeable, and 'in the right place'. Certainly we owe it to ourselves and to the students to be adequately prepared...after all, we, as teachers are supposed to be familiar with the environment in which we are teaching . . . if we are not adequately prepared to handle the environment, how can we create anything in it?

Teacher A, then, while remaining fairly enthusiastic about the idea of a web-based teaching and learning environment for language learners, clearly emphasized the importance of her level of confidence, not with the technology itself, but the methodology of applying the site actively with students. This teacher also emphasized the importance of teacher monitoring of student progress while still supporting student-led learning. This teacher did communicate an awareness of the site's potential as a learning environment and was also aware that she needed more time to become accustomed to the new environment, not just the technology itself.

Teacher B- Student Learning Goals

Teacher B had worked for six months as a correspondence teacher, although she had previous experience in another distance programme for literacy students. This teacher worked with approximately ten students on a regular basis. Teacher B was very supportive of the online concept and was eager and energetic in all the training and orientation sessions, as well as during the first stage of the study. This teacher demonstrated a keen awareness of her role in the initial stages of contact with the students and attempted to connect with the students on a regular basis during the first four weeks of the study. This teacher also participated in the feedback session and
emphasized her feelings of frustration about not being properly prepared or trained for the environment. She also communicated a preference for structured courses that would be more meaningful for the student. The following are her comments made in the feedback session in reference to such courses:

Although we knew about the communication network (email), because we were on such a learning curve and the students were on a learning curve, we weren’t able to access the mechanisms available...most of the correspondence students have a clear learning goal and the online content was not clear for them...the content...wasn’t individualized and the students really missed that...I think that by offering actual courses and a variety of courses, we could meet students’ learning goals more effectively.

Teacher B also communicated a real sense of frustration that connection with the students was so ineffective through the site. I asked her, “Why do you think that the already familiar technologies, e.g., telephone and email, were not made more use of in the moment of [perceived] crisis, by the teachers?” Teacher B responded as follows:

They were used, but with limited student response. Students were contacted via email and telephone and were encouraged to use the call line. I think it was too overwhelming for students to understand.

In response to Teacher B’s comments about the newness and unfamiliarity of the site, I asked, “Why do you think that being on a learning curve would stifle, rather than challenge a teacher’s innovation and creativity?” Teacher B replied,

I don’t think it stifled the teacher’s innovation and creativity... we were dealing with an unfamiliar environment. This limited our creativity. Most of us have limited experience managing an online environment and we were given limited instruction on how to do so. I believe through time, the results, not only from the students, but the creativity on the part of the teachers, will be amazing.

Teacher B had also commented on how unclear the learning goals were for the students and I asked her, “What exactly was not clear, in terms of learning goals, given that the content came directly from the correspondence program, already familiar to you and the students?” Teacher B replied,
The level was too high for some of the students. It didn’t meet whatever their individual learning goal was. We need an online assessment tool to see if the course would meet the student’s learning goals and objectives.

Following on from the concern expressed by Teacher B that the specific learning needs of each student were not met in the online environment, I asked, “What do you normally do if and when the correspondence course material is not exactly helpful to the learning goals of the learner and why was that not possible online?” To this, Teacher B replied:

The correspondence material is used as a skeleton. I build on it for each student...first of all, specific learning goals were not ascertained from the online students, so that we couldn’t make the material individually specific and...there wasn’t enough time to create something that could be adapted for online use.

Also, in an attempt to clarify what Teacher B meant about her preference for “actual courses” of study, I asked her, “What kind of actual courses do you mean?” Teacher B responded as follows:

...I mean Business English with a variety of modules like chapters, that students could access, dependent on their specific learning goal.

Teacher B described the environment as “unfamiliar” and assumed that the students must have also been feeling overwhelmed. The solution offered by this teacher was for a more structured courses for the students to complete, rather than the self-directed approach of the site. In addition, Teacher B missed certain aspects of the correspondence course and seemed to be looking for a direct correlation between the two programmes in the area establishing learning needs and goals for the student.

**Teacher C-Learner Autonomy**

This teacher had worked in the correspondence programme for one year and always remained committed to meeting the needs of the learner through customization of content and remaining flexible in scheduling telephone contact times. Teacher C was supportive of the online concept mainly because her students were mothers of small children who would find great flexibility in working on their own terms. This teacher worked with twenty correspondence students on a regular basis. Teacher C participated in the feedback session and stressed the importance of identifying potential distance education students; not all students can survive a distance environment because it
requires great discipline and self-motivation. During the feedback session Teacher C made the following comments:

... the students couldn't seem to understand or follow the directions. I think this has something to do with their lack of independence as students. This was very new to them. To be an independent student does take extra discipline ... my [perceived] role as 'nag' to the students could have been mainly because the students did not understand their role as an independent learner.

Following up Teacher C's concern that some students may not be suited to an online environment, I asked, "How would you describe a student who would study well in a distance mode, in particular, online versus correspondence?" Teacher C replied:

The online student must be motivated to independently produce a certain amount of work ... complete assignments without the assurance that a facilitator will be contacting them weekly to discuss difficulties, and monitor/evaluate progress ... the online student must have a higher level of independence than the correspondence student.

It should be noted that Teacher C based her comparison on the assumption that the correspondence course requires weekly contact from the teacher whereas, the online does not. In addition, this teacher noted that the successful online learner would, in her opinion, have a higher level of formal education, have an individual learning style that relates well to an autonomous learning experience, and have an established learning structure and routine on which to rely. Further, in an attempt to clarify how this teacher perceived the role of the teachers and students in both distance modes (correspondence and online), I asked, "How do you think your role changes between online and correspondence teacher and how do you think the student's role changes between the two?" Teacher C responded as follows,

With the correspondence course, I feel my role is one of a conductor or manager...leading, directing, initiating activities and developing the trust of the students. I also see myself as a stimulator to encourage students to study and use their English outside the programme, and as a monitor to supervise and report on student progress. In the online environment, my role changes to consultant, facilitator and co-communicator (behind the scenes). I feel the teacher-student
relationship is a more equal one. The role of the correspondence student is an imitator, imitating the instructor’s model, giving feedback and following directions. Also, a controller, accepting responsibility for his or her own learning.

The role of the online student is also a controller, but also becomes a manager of his/her own learning and a developer of their own learning strategies.

This teacher’s comments highlight the importance of learner autonomy in the process and expressed a clear concern that students may not have understood or achieved a level of autonomy necessary for an online environment. It is interesting that the teacher perceived a difference between the correspondence and online programmes in learner autonomy and understood that her role as teacher must change between the two, from conductor to “consultant” or facilitator. Teacher C also stressed the importance of a change in the role of the learner from “imitator” to manager.

**Teacher D-Customization of Content**

This teacher had worked in the correspondence programme for two years with 20 to 25 students on a regular basis. Teacher D demonstrated an innovative approach to his students and always found ways to integrate other technology, such as email and Internet, as well as support a high level of autonomy in the learner by encouraging individual learning goals that would often mean creating content from a wide variety of sources in addition to the set content of the programme. Teacher D was also one of the main developers of the correspondence materials, as well as sections of the online programme, including readings and quizzes. This teacher said that two of his students loved the environment and worked to complete the modules on their own. During the feedback session, Teacher D commented,

Most of my students were at a much higher level than Module 1, therefore, it was difficult for them to appreciate all the work that Module 1 presented. Everything was too easy for them and, for my part, I wasn’t clear that the learning objectives would be for higher level students….there were two students of mine who actually loved the entire project, moved through the site easily and wanted more – the content was too basic for them.
I wanted to know more about Teacher D’s comment that the content was too easy for students so I asked him, “How do you usually modify material/content to suit student’s needs?” Teacher D replied,

I modify by providing additional content....I use a variety of resources....then I build up exercises and assignments around the topic...I try grammar points addressed in the content....and I increase the level of difficulty and ultimately move the student to a higher level.

In an attempt to discover how this teacher perceived how these correspondence strategies would differ in an online environment, I asked, “Why was this customization not possible in the online environment?” To this, Teacher D responded,

The online environment provides a great opportunity to enhance almost any content . . . as facilitators, we can freely move from teacher-centred, to student-centred modes....we can let students explore the site using only our suggestions and general guidelines as a frame of reference....one of my students did this successfully, but she is well used to computer technology. This would be a different story for computer-challenged students. In the project, I just wanted students to become accustomed to the online environment...there were some problems with communication, and the site design itself . . . I myself wasn’t totally switched on to the online thinking then. Now I have a better idea of what to do. We can use the web itself as a resource for students . . . then we can direct students to various readings and grammar exercises on the site . . . we, as teachers, are already using the web to make assignments more interesting . . . we could provide hyperlinks to resources and construct the site to suit the needs of the learner.

Teacher D was aware that a high level of customization of content was necessary and seemed to become more aware over time that the site was actually designed to facilitate customization rather than dictate content. This teacher’s instinctive desire for students to become familiar with the site seemed to reflect his own need to do the same.

The following section presents two case studies of one student and one teacher who participated to the end of the ten-week study period and who demonstrated the most complete use of the site design and features.
Section Five-Case Studies

This study was intended to be an exploration of an innovative new distance-learning environment for language learners. As is normally the case, research projects often prove to be much more than the researcher expected. This was certainly the case with this project. Although I functioned as the researcher for the study, I had been and continued to be the programme coordinator for the distance-learning programme from which this study drew its teacher and student participants. As coordinator, I had worked with some of these teachers for several years. This role gave me a particular perspective on the project, but it would be true to say that it, perhaps, interfered with the outcome in some ways. For example, as researcher, I had provided an orientation session at the beginning of the study, along with several information emails. However, as coordinator of the correspondence programme, I had worked for some time to prepare the teachers for the transfer of programme content from correspondence to online. In addition, two of the participating teachers had worked with the actual content used in the project module for over one year in the correspondence field test. During the study all of the teachers also had direct access to my office, as before, yet no one seemed to take advantage of my experience and knowledge. It seemed to me, as coordinator, that the teachers perceived certain unspoken expectations from me during the study, expectations which might have contributed quite considerably to their feelings of inadequacy and "poor performance," almost as if I expected them to already know about everything without asking questions as the study progressed.

Also, in the correspondence course, the students had already been asked to participate in a pilot of new correspondence course material, and perhaps this experience prepared the students more effectively for the context of "piloting" something. However, both of these observations are only subjective commentary. Nevertheless, these, together with the challenges of the study itself, such as, the free participation\(^2\) in the programme itself, and the lack of adequate time to test the site before the launch of the project, all led to data that, although interesting, is difficult to quantify. Therefore, in order to address the various aspects of dynamic language learning as proposed in this study, two case studies of one teacher and one student who participated in the study, will be presented.

\(^2\) LINC is offered free-of-charge to all new immigrants to Canada.
The case studies will help to better compare the original questions and interests of this project with the results. The case studies presented examine one student’s and one teacher’s detailed participation in the study. The student chosen spent the longest time online and covered all of the material in the module. The teacher demonstrated the most complete use of the site functions to work with one student. Interestingly, the teacher and student examples chosen for these case studies actually worked together and, therefore, demonstrated the most dynamic patterns of use and teacher-student communication of all study participants.

Both case studies will be examined according to the patterns of use of the site, as well as the amount and level of email communications, online reports, and customization of lesson content, and application of language learned. The student examined in the first case study will be referred to as “Student X,” and the teacher in the second case study will be referred to as “Teacher Y.”

**Student Case Study**

Student X spent a total of 1,315.32 minutes online, which was actually more than 50% more time than any other student. The total number of access attempts [logins] was 853; 31% more than that of the closest student. The consistent preferred learning mode of Student X was the Dynamic Mode (1), using it approximately 60% of the time, and used Mode 2 (Linear) for 40% of the time. The longest time on task spent by Student X was a total of 372.52 minutes and this time was spent on interactive exercises. The student’s learning activity choices involved use of most of the resources and tools, discussion forum, exercises, quiz, sounds search, coffee break discussion, dialogue practice, conversation practice exercises, pronunciation practice, readings, grammar workshops, during each onsite study session. In fact, the patterns of use for this student demonstrated a use of 78% of all of the available resources. In addition, the student completed all six lessons and submitted a total of three quizzes out of a possible six, although these were not received by the teacher due to technical difficulties. The total number of minutes this student spent on the quiz feature was 216.23, and the student contacted the teacher a total of 21 times in the project, over a period of ten weeks, approximately two times per week. The main reasons for these contacts were help with quiz work, assignments, and to schedule a telephone meeting.
The student began the project at LINC language level 5 and specific CLBA scores of listening/speaking 4, reading 5 and writing 4. She did not improve these scores during the project (in the correspondence programme, students take longer than ten weeks to progress one language level); however, she did seem to maximize most of the resources available to her through the site and remained keen to the end of the project in attempting to submit assignments to her teacher. Student X has a high school education from her country of origin and is keen to learn English in order to open her own business as a seamstress. She has already demonstrated great success in the correspondence programme and improved her language level from LINC level 3 to LINC level 4 in four months of correspondence study. This achievement demonstrates a highly motivated and focused student, and both of these characteristics may be the greatest indicators of success in the online environment. The student did not have any special training or work experience with computer technology before the study and did not allow the technical challenges to pose barriers to her progress. She was not able to send her quizzes successfully, so she began to work freely through the content and contacted her teacher as she needed. Her emails indicate a high level of attention to the teacher’s suggestions and an interest in following through on the suggestions made by the teacher. She continued to work through the content, making use of most of the resources available to her, including retrieving a customized assignment from the assignment centre and completing it. She also made a particularly innovative suggestion to her teacher to set up a telephone call in order to continue with the work, regardless of the technical problems.

In each working session online, the student worked through a variety of activities that included practice with all language skills, as well as many emails to her teacher with additional assignment requests. The following are her responses to the telephone interview at the end of the project.

1. What did you like about the project?

   “I liked the flexibility of the Internet. The whole program is very good.”

The response to Question 1 is interesting in light of the fact that, in the correspondence programme, Student X demonstrated a learning style that was perceived by her correspondence teacher as being unstructured and “erratic” in terms of scheduling calls
and work submission was concerned. Her correspondence teacher had this to say about her learning style in the correspondence programme:

....her [Student X] learning path is erratic. She has great difficulty meeting our lessons due to shift work and unscheduled shifts. She has her own business, which makes it very difficult. I believe she did so well with the on line because she could tune in whenever she had a spare moment. Her learning style is independent and sporadic. She is at an English language stage where she can follow direction and gains pleasure from her own learning.

Although the student’s learning style did not suit the regularity needed for the correspondence programme, it seemed to work well in the online, self-directed environment.

2. What did you not like? What would you change?

"I would like to see more grammar, more grammar exercises."

The response to Question 2 suggests that the student worked well alone and would have enjoyed even more work to complete, especially in light of the fact that she completed the entire content available to her.

3. What technical problems did you have? Did you ask your teacher or the technician for help?

Yes, I had technical problems all the time. When I sent my exercises to the teacher I got messages that they were sent through. The teacher, however, wasn’t able to find my exercises. I finished everything, but technicians received only half of the stuff I sent. I asked for help all the time.

Data entries in the database support this claim. There were quiz submissions from this student as well as email messages in the student’s and teacher’s inboxes that indicated a two-way dialogue around the quiz submission difficulties.

4. Did you find the answers to your problems?

"Partly."

The teacher directed the student to the technicians for help and on two occasions, Student X communicated with the technician directly about the quiz submissions. In the end,
three of the quizzes were submitted to the teacher and returned to the student with feedback.

5. Was your teacher helpful?
   "Yes."

The teacher finally suggested that Student X continue to work through the module regardless of the quiz submissions. The teacher also worked with Student X by providing three on-site assignment postings that extended the preset content of the site to the specific needs of the student.

6. Did your teacher contact you?
   "Yes."

The teacher contacted Student X 12 times, over the ten-week period, regarding assignments (at least once per week). Although the frequency is similar to the correspondence programme schedule of once per week, it is interesting that, while the correspondence teacher commented on the “erratic” learning style of Student X, in the online study, the same student demonstrated a regularity of contact with the teacher.

7. Did your teacher give you assignments?
   "Yes. I asked for assignments and the teacher sent them to my email address."

Therefore, even though the site design presented ongoing technical challenges for assignment exchange, Student X demonstrated initiative in asking the teacher to by-pass the site and send the assignments directly to her inbox.

8. Did your teacher call you?
   "Yes. Twice."

According the student and teacher inboxes data, one of these calls was requested by the student.

9. Did you call your teacher?
   "No."

This response is interesting because it suggests that while Student X demonstrated initiative with teacher contact in the online environment, she did not with the telephone technology available to her. A possible suggestion for this finding might be that telephone technology represented a correspondence technology for the student, in which
case, the initiative for calling rests with the teacher; whereas in the online environment, the student felt more in control of initiating contact with the teacher when it was needed.

10. Do you like the correspondence or the online better? Why?
   “It’s hard to say. I would like to combine them.”

This response is interesting, and although I tried to follow up with further questions to the student as to why this might be, I did not receive a response. There may be some relevance in the fact that the Student X thought that she needed more content, and in the correspondence programme, students have five modules of content; whereas this study project only offered one module.

11. Do you want to continue to study online or return to the correspondence course?
   “Both.”

12. Why did you want to participate in this study?
   “I wanted something new. The technology is there and I want to learn more. “

This is an interesting comment, in that, although some of the teacher’s comments suggested that the technology might present a problem to students, Student X refers to the technology as a main part of the learning involved in this study. Therefore, learning technology along with the language was appealing to this student.

13. Do you think that you could learn English online?
   “Yes.”

14. What is different for you online?
   “I wrote much more than in the correspondence course. More exercises.”

This is very interesting as, in the correspondence modules, students have the same opportunity to respond in writing to the lesson content. Student X demonstrated that because she was able to work within her own time and schedule (unlike the correspondence programme that is teacher-driven) she submitted much more work that should would have in the correspondence framework.

The following section presents the patterns of use demonstrated by Student X in relation to the characteristics of dynamic use as presented in Chapter 5.
**Dynamic Patterns of Use**

The site database and email inboxes data show that Student X demonstrated patterns of use that most closely resembled the characteristics of dynamic use presented in Chapter 5. Student X accessed both teacher and technician support, although it seems that the connection with the technicians was through the teacher first. The student worked consistently with the teacher to submit the quiz in the correct order (quiz–lesson–quiz), but only was successful three times. Finally, at the teacher’s suggestion, the student began to work through the lessons without quiz submission. This plan proved to be quite successful, as the student completed most of the content. In addition, the student requested additional assignments and responded with written work. There were three functions of the site that were not accessed by this student: online dictionary, language toolbox and chat. Again, although I followed up with questions as to the reason for these omissions, I did not receive a response, although the teacher informed me that a chat time had been schedule by telephone with Student X, but the work schedule of the student did not allow for the chat session to take place. Therefore, the synchronous nature of the chat session would present the same problems as the synchronous telephone contact of the correspondence programme and would have, for this student, proven difficult to schedule. In addition, as Student X was assessed as LINC level 5 before the study, it would be reasonable to assume that most of the vocabulary used would not require the help of a dictionary for this student.

The student chose Mode 1 (Dynamic) most of the time (60%), although she seemed to choose Mode 2 (Linear) intentionally about 40% of the time. For the most part, this choice seemed to demonstrate that the student wanted to work specifically on one task for the session, as each of the Mode 2 selections illustrated a long time on task for one activity. Table 4.11 presents the overall the breakdown and frequency of choice, for Student X, and also shows the type of activity chosen and the total time (minutes) spent by Student X on each activity. Total percentages are also shown.
Table 4.11—Breakdown and frequency of activity choice for Student X

<table>
<thead>
<tr>
<th>Activity type</th>
<th>Frequency of use</th>
<th>Total time spent (minutes)</th>
<th>% of total time spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercises</td>
<td>105 times</td>
<td>372.52</td>
<td>32%</td>
</tr>
<tr>
<td>Readings</td>
<td>87</td>
<td>197.33</td>
<td>17%</td>
</tr>
<tr>
<td>Dialogue practice</td>
<td>30</td>
<td>78.60</td>
<td>7%</td>
</tr>
<tr>
<td>Forum</td>
<td>66</td>
<td>8.11</td>
<td>0%*</td>
</tr>
<tr>
<td>Conversation practice</td>
<td>39</td>
<td>65.90</td>
<td>6%</td>
</tr>
<tr>
<td>Sound search</td>
<td>31</td>
<td>15.85</td>
<td>1%</td>
</tr>
<tr>
<td>Coffee break discussion</td>
<td>28</td>
<td>59.94</td>
<td>5%</td>
</tr>
<tr>
<td>Grammar</td>
<td>27</td>
<td>47.02</td>
<td>4%</td>
</tr>
<tr>
<td>Pronunciation practice</td>
<td>24</td>
<td>64.97</td>
<td>5%</td>
</tr>
<tr>
<td>Quiz</td>
<td>17</td>
<td>266.23</td>
<td>23%</td>
</tr>
</tbody>
</table>

* rounded to the nearest decimal

Table 4.11 shows that Student X spent the most time on task working on the exercises (372.52 minutes-32% of the total time spent on the site. Student X also spent 266.23 minutes or 23% of the total time on site, working on the quiz assignments. If, however, all of the activities requiring reading and writing skills are added together, the total is 891.21 minutes, 76% of the total time Student X spent on the site. Therefore, the time spent on reading and writing tasks/activities is consistent with the student’s comment that she was able to complete more writing work in the online study than in the correspondence course. What is interesting about these findings, then, is that the student was able to spend time on the tasks that supported her interest.

The most impressive observation, from the point of view of patterns of use, was that Student X accessed almost all of the site features and resources in her study sessions. She understood the functionality of the site and was prepared to use as much of the site as possible to help her learn; she used the site as a learning environment. She did not, however, limit her learning to what was preset on the site and instinctively asked for more assignments from her teacher and used external communication technology to try to
achieve the most connectivity with her teacher as possible. Although the student did not work through the quizzes in sequence with her lesson progression, or complete all the assignments she intended, she clearly demonstrated the most efficient use of the site as a learning environment and resource centre.

Student X provides a useful example of site use within the framework design of the study. Student X demonstrated a self-directed progression through the site content, using the resources provided, as well as initiating contact with the teacher when help was required. Student X also demonstrated that she was able to communicate with her teacher and technicians using email communication and telephone contact. Student X was also clear about which language skills (reading and writing) she was able to use most and requested more work in keeping with those skills.

Teacher Case Study

Teacher Y started this online study project and began as a correspondence teacher at the same time. Teacher Y had no previous experience with the correspondence programme before beginning the online study. All prior teaching and learning experience for this teacher was in conventional classroom settings. Teacher Y had also never taken an online course himself and had no prior experience with the module content. Teacher Y was going through basic orientation and training for both contexts at the same time. This doubling could have worked to his advantage as he had no other distance-learning programme with which to compare the online study experience. Most of the other teachers had worked in the correspondence programme for at least two years, and this experience may have made their transition to the online environment more challenging in the sense of isolation of current practice from innovative change (McCarthy & Makosch, 2000).

The teacher demonstrated a regular (weekly) pattern of contact with the student and used almost every feature of the site in his instructional support. The teacher consistently referred the student to the technicians for technical support, as well as following up with progress checks on all his students regularly. In addition, this teacher submitted the most number of online reports to me (11 = 1/week as requested) and contacted all the students to do an initial introduction, regular checks and give feedback to assignments. However, some miscommunication or misunderstanding seems to have
developed as the student, in the case study, mentioned that her teacher did not respond to all her work. The teacher, however, in directly addressing this particular student said:

This student worked hard right until the end of the project, to participate in the study. She had ongoing technical difficulties and I sent regular emails to technical support about her ongoing problems in an effort to get her rolling. Her tests repeatedly never registered at all. This problem continued right up until the end. At one point I finally told her to forget the process and just begin the lesson.

She also had some problems with parts of that. It is obvious that this teacher kept regular contact with the student throughout but did not reach a point of success with assignments. It is interesting that this teacher did not resort to external communication and assignment transfer. It seems that the teacher was determined to work within the context of the site rather than reach a working arrangement with the student. The teacher did attempt to support the learning of his students by posting three assignments in the assignment centre. These assignments pointed the student to a specific resource on the site and used it as a basis for the assignment. In addition, each of these assignments were posted in three different forums so that the students would be encouraged to access more of the site. Here is an example of one of the assignments:

**Language Tool Box Forum**

- Review the Language Toolbox for Module 1, Lesson 1.
- Then return to ‘Dialogue’ of the same lesson to hear how the language is used in casual conversation.
- Does the language seem different to you in the dialogue compared to the way it is written in the language tool box?
- Read along with the dialogue while it plays to see how it sounds to you.

This assignment supported the student’s independence, while helping to make more sense of the site resources. The assignment included lesson review, practice of listening and speaking skills (with which Student X needed support, as the reading and writing skills were being practiced regularly by this student—see student case study section) and language use (i.e., the appropriate use of language within a specific context). The assignment also focused the student on two comparable resources on the site and then
asked the student to compare and decide on the differences. The language used in both lesson resources (Tool box and Dialogue) demonstrated the same vocabulary in different contexts. The student was asked by the teacher to listen to the use of the language in the dialogue and compare with the use in the toolbox. This approach allowed the student to listen to the language closely to identify the use without rote repetition from the teacher and successfully guided the student without imposing unnecessary and irrelevant expectations. The teacher, however, did not specifically state how or where to send the assignment or when it was due. Both of these aspects were covered in the orientation session, and without these specific instructions, it seems clear why the miscommunication occurred between teacher and student and why the student would lose heart and feel left in a vacuum.

While demonstrating a keen sense of site use, the teacher, due to inexperience, did not grasp the importance of pace and progression through assignment postings and scheduling. It should be noted again, however, that only one other teacher used the assignment board and then only to post quiz codes, not to help the students work with the content. Teacher Y also, in another assignment, asked the student to apply the exercise to the real world in a conversation practice with friends and family. Once again, however, there was no direction concerning when the assignment should be done or what to do with feedback after it was completed, stalling the process and mis-communicating expectations.

Nevertheless, Teacher Y cited in this case study did demonstrate an awareness of the site as a resource centre, a learning environment for language learners. The teacher clearly understood the importance of his own knowledge of the site and application of the site in assignment development and tutorial practice for the student. In addition, while the interaction of this teacher with the student in this case study demonstrates the most complete example of constructing a dynamic learning experience for the learner, the teacher also demonstrated consistent and persistent attempts to motivate and encourage all the students who had been assigned to him. Teacher Y also provided innovative alternatives for students who were frustrated with the technology by suggesting telephone conversations, chat sessions and external assignments, rather than allow the learning process to be interrupted. Teacher Y managed to schedule two chat sessions with
students, although these were not realized due to time availability of the students involved.

Teacher Y participated in the teacher feedback session and made comments and observations that were similar to observations from the other teachers regarding preparation and orientation. The following are the responses, which Teacher Y made to questions 1, 3, 4, and 7 (see Appendix G).

1. Describe your journey through this project.

The first half was a journey of someone who was trying to figure out the system and teach online at the same time. Lack of student response and other technical difficulties made it frustrating.

In this response, Teacher Y seems to perceive the study to have evolved into two halves yet does not explain what the “second half” was like. This response is interesting in the sense that it suggests that some progress was made in terms of his own understanding of the system and its application.

3. Were the learning objectives identified for the students and how were they made clear to the students?

Not as clearly as they are in the correspondence programme where we can clearly identify students’ needs and wants and find a learning path that way. But with a set programme [online] it was impossible to define clear objectives.

This comment seems to reflect more of the comments of the other teachers in the feedback group because, at the time of the feedback session, Teacher Y had little experience with the correspondence programme. The intention of the question was to see if the teachers were intentionally using both the lesson objectives presented on the site and the quiz submissions from the students to identify the learning needs of the students. Teacher Y’s activity and response to the student in the email communication indicated that he was aware of establishing the student’s learning needs and was trying to use both to help identify a learning path for the student. His comment at the feedback session did not, however, reflect that he had been attempting a needs assessment process with the student at all.
4. What did you perceive was your role during the study?

I felt like a combination of a teacher-in-training and an intermediary between students and technical support.

This comment is significant because Teacher Y was the only teacher to identify his role as involving his own learning in relation to his teaching practice rather than the technology alone. In other words, Teacher Y sees the challenge to his current practices as a teacher.

7. What were your expectations of the project?

My expectations were that I would have had more preparation, time to understand the different components of the system and what it was we were actually trying to accomplish in the project.

Although Teacher Y makes a clear point about feeling less than prepared for the task, unlike the other teachers, this attitude did not seem to stall his own initiative and innovation with the challenges presented to him through the study.

I followed through with Teacher Y in asking several more questions via an email interview. These questions were intended to examine more specifically Teacher Y’s participation in the study. The following is a transcript of several questions asked in this e-interview and the responses made by Teacher Y. My own additions are parenthesized.

1. What was your understanding of the site when you began?

Unfortunately, I was new to the programme at hand [LINC correspondence], as well as this new medium. In fact, I was introduced to the site before the [correspondence] programme. My understanding was quite limited. I had a hazy image of a site that was constructed of pre-set lessons with exercises, quizzes and options for teacher interaction. I wasn’t clear on how to navigate through the site or manipulate functions.

Obviously, Teacher Y was unclear about the various functions and uses of the site. What is interesting, however, is the way in which Teacher Y immediately sees the online lessons as preset in that the content was recognizably the same as the content in the correspondence programme. Even though this teacher saw the online site before the correspondence materials, the preset nature of the correspondence material immediately affected his interpretation of the site.
2. Did you understand how to use the site as a resource, rather than a course?

No.

Therefore, although the resource centre design was explained, the ‘concept’ had not been understood or grasped, while the concept of the correspondence programme did not seem to present a problem to Teacher Y.

3. How did your understanding change through the study experience?

Through continued questioning of the technical support staff I was able to eventually navigate the site. I also played a little to help me help the students. Also, full comfort with the site was never realized for me. I really only had one student who interacted and she was bogged down with technical difficulties. As well, there were still some parts of the site that I never did master. In order to really utilize the site, I would need some more direction on how to use the system. Just “touring”, practicing and asking questions don’t seem thorough enough for a teacher or student.

These comments are significant because they illustrate the realization of the teacher that the site and its functions needed to become more familiar to him, and he took the responsibility of asking questions and practicing the use of the site. Whereas all of the participating teachers asked questions of the technicians, none of the teachers asked questions of me about the concept of the site. Teacher Y, however, did continue to pursue his own learning through continual practice.

4. How would you describe your understanding of the site system now?

My knowledge of the system hasn’t increased....I haven’t practiced or utilized the tool [since the study]. ....I have had two new students who have expressed interest in using the site. I will try again to navigate the site and reacquaint myself with it. I think that a learning tool for teachers may help me. Perhaps I should ask more questions.

Instinctively, Teacher Y acknowledged that the site is still somewhat of a mystery, but he is willing to employ the same learning strategies as before in asking questions and practicing. In these comments, there is a very real sense that without practice, the teacher will feel out of touch with the use of the site.
5. You posted several assignments referring to various learning resources on the site. Can you think of other things [strategies] you could have done [employed] to better use the site? Utilizing the chat room to talk to students and encourage them to do the same amongst themselves would help. I tried to do so, but the student...had some kind of problem.

Teacher Y did attempt to use the chat room and thought that this activity would enhance the experience for the student. The idea that the chat activity would greatly enhance the learning experience for the students could also be a reflection of the use of the telephone in the correspondence programme rather than a strategy that had been developed through the use of the site.

6. Do you like the idea of customizing each course, drawing from the resources there, or would you prefer a more traditional approach of a preset course? A preset course is less individualized. A customized course ...helps teachers to more efficiently manage student loads. Probably a combination of the two would be useful.

Again, it seemed that Teacher Y requested the two approaches out of a sense of what was familiar, rather than something that had become obvious through the use of the site.

7. Were you aware that one of your students was completing the entire module? If so, did that make you feel redundant?

I told the student not to worry about quizzes or other technical glitches at the end. ....I told the student to work ahead.....possibly I felt redundant considering that I felt at a loss with regards to reviewing quizzes and the student’s inability to open lessons. I had already given the student detailed directions on how to approach each component of the first lesson.

These comments are interesting in that they communicate an awareness of the role that the teacher played in the progress of the student, in that, although he was unable to help the student as he would have liked (therefore a feeling of redundancy), Teacher Y was aware of the role he played at the outset in explaining and directing the student. This contact between teacher and student was probably the main reason that Student X completed as much as she did; Student X received better preparation from her teacher
than the other students did from their teachers, and there was ongoing email communication between Student X and Teacher Y throughout the entire study.

9. How would you now go about identifying students’ needs and planning lessons with the students online?

At this point, I would probably do my own diagnostic work with the student outside of the site. Then, I would refer the student to specific components, as I do with the hard copy modules.

Form these comments it seems clear that working in the correspondence programme had since given Teacher Y a better understanding of establishing a learning plan with the student before beginning the course of study.

10. What new strategies would you employ to contact, motivate and support the students online different from those you employ with correspondence students?

First, I would make sure that students were scheduled for a mandatory tutorial (in person) on how to use the system. A package would be given to them outlining their responsibilities in maintaining contact and submitting exercises and quizzes. Perhaps the system could send automatic emails to students updating them on their progress in a particular module. In addition, the students would have scheduled meetings in the chat room in lieu of a contact call or in addition to a contact call. Scheduled contact encourages some responsibility [in the student]. The chat component provides a motivating novelty aspect and offers an opportunity for real verbal two-way communication.

There are several useful design suggestions offered here by Teacher Y including email updates to students, orientation packages, and use of synchronous communication tools to keep connected with the students and to keep them interested. It would appear, however, that Teacher Y did not grasp the use of asynchronous tools or the concept of distance, rather than face-to-face programming. The need to “see” each student participant is not required in the correspondence programme and could not be accomplished logistically through an online programme either. It could be assumed that the perceived need to “see” the students is probably more reflective of the unfamiliarity of the environment than of anything else. The notion of a full online orientation that involves a visual presentation
(simulated site use) is a good one and might help bridge the distance gap for the teachers as well as the student.

Summary

In summary, then, both of these study participants demonstrated a high energy level throughout and both demonstrated a keen desire for the student to work autonomously throughout. Both were determined to make contact, find relevant information and progress through the study yet the teacher’s support remained towards learner interaction with and application of the content provided in the lessons. The student also remained aware of the necessity of the teacher’s guidance and often initiated contact and made specific requests for direct instructional support.

Most of the students (21) accessed the site less than 150 times during the ten-week study period, and only five students accessed the site more than 150 times. Most of the students (24) worked on the site for a total of less than 500 minutes (500 minutes equals approximately 8 hours and 1,000 minutes equals approximately 16 hours). In the correspondence programme, students are expected to spend at least 1 hour per week in telephone contact with their teacher and directed study. An additional four hours per week are encouraged for self-directed study) and only two students worked on the site for more than 500 minutes; one of those worked on the site for over 1,000 minutes. The majority of the students (22) preferred the dynamic mode, and only four students preferred the linear mode. The students spent most of their online time on quizzes, readings, exercises, and pronunciation practice (82% of total time spent), and they selected the readings and exercises more often (54% of total activity choices made). Seventy-seven percent of the activities selected concentrated on reading and writing skills, and only 22% concentrated on listening and speaking. The majority of the support requests from students to teachers were for technical support (25 of the total 40 requests made-63%). Three of the teachers provided support responses to students in all areas, and five teachers attempted progress checks with students. Five teachers provided reports to the coordinator with approximately seven reports per teacher. The main requests, according to the teachers’ reports, were for technical support, while the complete record of responses from students to teachers show that the majority were
asking for help with quizzes and assignments (68% of total responses from students to teachers). The main role of the teacher, as perceived by the teachers, was as a source for information. The students, on the other hand, commented on their need for feedback and guidance. All of the teachers thought that they had not been adequately prepared for the site and believed that the students thought the same way. Four teachers spoke strongly about the potential of the site and believed that with adequate training and practice the online environment could offer a successful learning opportunity for distance language learners. Three teachers posted assignments in the Assignment Centre, and only one teacher posted assignments that referred to and made use of more than two aspects of the site. The main issue presented by the teachers regarding the ineffectiveness of the project was lack of student participation and response. The main issue presented by the students about the ineffectiveness of the project was the lack of teacher participation and response.

Although the student activity database proved to be a helpful tool for gauging the online activity and study choices of the students, there were obvious design issues that could have made the data more specific. For example, logging only the access time, activity time, and choice and not the reason for the choice meant that there was no way of knowing the instructional purpose of that choice. In addition, having only data external to the site that is relevant to student-teacher communication meant that there was no way to track the actual connection with the learning purpose. Also, because the only measurement tools were the quizzes, and these proved to be technically challenged, there were no means to actually measure the language learning that took place in any quantifiable form. What is apparent, however, is a misconception on the part of both teachers and students. Students provided considerable feedback about the lack of teacher participation, while teachers provided the same observation of the students. Several students (four) were quite active throughout the entire project period, and others were certainly more active than the teachers thought they were. Also, students did not make the same criticisms of the project as the teachers thought they would. Students had the most to say about teachers, and teachers spoke most often about lack of student participation, technical difficulties, and level of language used in the content. Students, however, did not identify the technical difficulties or the level of language used as the main problems. Therefore, a wide gap seemed to have developed between the teachers
and the students during the project, each assuming the other to be uninvolved. What is clear from the teachers' perspectives was that the environment was overwhelming for them; even though they also thought it was overwhelming for the students, the environment remained mainly a teacher problem.

Perceptions of roles, as well as actual functions, are crucial to any learner-teacher interaction, and this fact is in no way challenged by the results of these data. When the roles and expectations of the key participants are not clear, then the experience is less than what it might otherwise have been had everyone participated to their full extent. In addition, technology in itself, although initially intriguing, does not provide a dynamic learning opportunity. Without the full cooperation and participation of the actual people involved in the process, teachers and students, the environment remains ineffective and static. It is only as it is accessed and applied within a meaningful learning context that a dynamic learning experience can happen. This finding is further discussed in the next chapter as the findings are applied to a dynamic learning continuum for interpretation.
CHAPTER 5
DISCUSSION

This chapter will discuss the data analysis of the previous chapter as it applies to the dynamic language-learning framework being tested in this project. The limitations of the available data will also be considered. The chapter is divided into two sections: Dynamic Learning Results and Interpretation of Data.

Section 1 - Dynamic Learning Results

Before a useful discussion of the findings takes place, it is necessary to provide the frame of reference I used to interpret the available data so that the connections between the initial goals and the resulting data can be made. Any analysis of data surrounding a research project involving real life participants is highly subjective. Also, the challenges of integrating all the possible variables present in a learning process and the realities of actually implementing a learning environment for the first time presented me with the task of finding a way of “measuring” what happened. Based on the notion that an Internet learning environment should be flexible and open-ended (see Figure 1, Chapter 2), I developed a Dynamic–Linear Continuum that would represent the scope of possible uses of the site by the learners (see Figure 2 below). This continuum is representative of not only the selection of the Dynamic Mode option by the learner but also the various self-directed and self-initiated uses of the site and instructional supports and resources available to the student online and as outlined in the six characteristics of dynamic learning in Chapter 2. These supports and resources included the language learning resources available on the site, as well as the additional supports of online dictionary, teacher, and technical support. Given the subjective nature of individual response, a continuum best represents the open-ended possible choices of each student.

Figure 2 - Dynamic–linear continuum
This continuum concept provided the basis for analysis of the teaching-learning process that took place within the study from the point of view of learning patterns as demonstrated by amount and type of learner activity, interactions with teachers, and degree of autonomy exhibited by the learner. In order to help with the analysis, the continuum was represented as a matrix, and the participants were plotted within the matrix according to their response and activity throughout the project (see Figure 3 below).

Figure 3 - Response matrix representing the possible response variables

Each of these matrix sections helps to represent various levels of response, where students demonstrated a variety of strategies and degrees of dynamic learning responses. This matrix also provided a clearer understanding of the teachers' understanding and response to the process of dynamic language learning as defined below.

The categories of dynamic learning are first of all described, then represented in a table in relation to the results of the students' patterns of use. The patterns of use as shown in the table are then plotted on a graph to clearly show how the students used the site during this study.
A. **High Dynamic**

A learner in this category demonstrated the following patterns of use:

- Consistent self-directed choice of Mode 1 for every site session (Dynamic Mode);
- Choice of three or more learning supports /activities, practicing all four of the major language skills (reading, writing, speaking, listening) in every study session;
- Self-directed use of the interactive practice exercises during each study session;
- Direct response to the guidance and suggestions of the teacher (conversations, either written or spoken, learning suggestions, assignments);
- Self-directed use of the teacher as a resource guide and learning facilitator for all of the support requests posted;
- Consistent use of the technicians for technical support when problems occurred;
- On time submissions of creative assignments that demonstrated language use beyond the confines of the preset content of the lesson.

B. **Middle Dynamic**

A learner in this category demonstrated the following patterns of use:

- Self-directed choice of Mode 1 for more than 50% but less than 100% of the site sessions;
- One or more of the learning supports practicing at least three of the language skills (reading, writing, listening, speaking) during each study session;
- Self-directed use of at least two interactive exercises during each study session;
- Direct response to the guidance of the teacher for more than 50% but less than 100% of the suggestions posed;
- Self-directed use of the teacher as resource guide and learning facilitator for more than 50% but less than 100% of the support requests posted;
- When technical problems occurred, the student directed more than 50% but less than 100% of the requests directly to the technicians;
- Creative submissions for three of the six lessons completed.

C. **Middle Linear**

A learner in this category demonstrated the following patterns of use:

- A choice of the Linear Mode (Mode 2) for at least 50% of the study sessions;
• Self-directed use of one or of the learning supports, practicing at least one of the language skills during each study session;
• Self-directed use of at least one interactive exercise during each study session;
• One direct support request to the teacher;
• One direct contact with technicians for technical support at the teacher’s request;
• One creative submission to the teacher.

D. **High Linear**

A learner in this category demonstrated the following patterns of use:
• Consistent choice of Mode 2 (linear) for every study session;
• No self-directed use of learning supports and only in response to the teacher’s direction;
• No self-directed use of the interactive practice exercises and only in response to the teacher’s direction;
• Only indirect response to the contact from the teacher (that is, acknowledgment of contact, but no follow through or helpful response);
• Use of teacher as source for all support, including technical (demonstrating a lack of understanding of various input sources);
• Submissions only within the parameters set by the teacher, demonstrating no creative language use beyond the parameters of the lesson.

The following Table 5.1 illustrates the various degrees of dynamic learning demonstrated by the students. These findings are further plotted in a graph (Figure 4).
Table 5.1 – Degrees of dynamic learning demonstrated by students’ patterns of use

<table>
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<th>Exercises</th>
<th>Teacher contact</th>
<th>Role of teacher</th>
<th>Use of technicians</th>
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* Each of the student’s behaviour or patterns of use is represented on this graph according to the continuum designations of D (dynamic), MD (middle dynamic), ML (middle Linear) and L (linear).
In Table 5.1 students who, according to the database, logged a linear pattern across all sections of the table were identified as demonstrating “Linear” (L) patterns of use, and students who logged a linear or middle linear pattern across at least three sections of the table were identified as demonstrating “Middle Linear” (ML) patterns of use. Students who logged a dynamic or middle dynamic pattern for at least three sections of the table were identified as demonstrating “Middle Dynamic” (MD) patterns of use, and students who demonstrated a dynamic pattern across all sections of the table were identified as demonstrating “Dynamic” (D) patterns of use.

Table 5.2 presents the pattern of use and the number of students who demonstrated that pattern, as well as the total percentage of students.

Table 5.2 - Patterns of use as demonstrated by students

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<th>Learning type</th>
<th>Number of students</th>
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<tr>
<td>High Dynamic</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

The remaining six students, while registering several task choices and time on task, did not register enough activity to provide any quantifiable data in relation to these categories. In addition, both extremes of the continuum, high dynamic and high linear, did not register, given that not every description was identifiable in the online activity of the students. Even though several students made a consistent Mode choice, they often did not demonstrate enough of the choices consistent with either extreme place on the continuum.

It is interesting that more students demonstrated a linear learning pattern of use, even though several clearly chose the dynamic mode within which to work.
A possible explanation for these patterns could be that without intense teacher support students simply made activity choices based on visible site section titles, such as "Reading" or "Dialogue" in a logical and systematic sequence as they appeared on the web pages, rather than making choices according to preferred learning style. Therefore, although students initially chose the dynamic mode, they did not receive instructional guidance in order to maximize the use of the mode once they chose the learning mode.

Of the nine students who demonstrated a middle dynamic learning type, four were working at a LINC level 3 or 4, four were at level 5 and one was at level 6 [i.e., lower to upper intermediate proficiency levels in regular ESL courses]. Therefore, the mode choice was not related to the language proficiency level (i.e. it was not the more advanced students who chose the dynamic mode). One student at level 3 and one student at level 4 increased a language level through their work online (working in a middle dynamic learning style), while all the rest of the students, including those who demonstrated a middle linear style, remained at the same language level throughout, based on the CLBA evaluation checklists. All of the students who submitted work demonstrated a middle linear approach in the sense that, although they completed both the preset and creative sections, they did not actually submit assignments that used language beyond the scope of the lesson. They also did not use the submissions to plan a learning path with the teacher. However, it should again be emphasized that only eight of the thirteen quizzes submitted received responses from the teachers. Therefore, the lack of learning plans must be attributed, at least in part, to lack of interaction between students and teachers rather than a result of a learning type.

Figure 4 graphically presents the patterns of use demonstrated by the students. The graph helps to illustrate the distribution of the patterns as a group.
Figure 4-Student patterns of use (of those students recorded in Table 5.2)

Pattern Types

High Dynamic

Middle Dynamic

Middle Linear

High Linear

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

Students

Interpretation of the Results

The initiation of student-teacher contact by the student was documented as effective examples of pro-activity on the part of the learners (Thorpe, 1994: 150, Sleeman, 1999). However, if a student contacted the teacher often but tended to ‘misuse’ the teacher as a technical support person, then the frequency alone did not indicate a dynamic use of that resource. Rather, an efficient, not a frequent, use of the teacher as a learning facilitator indicated dynamic use. Similarly, if a student contacted the teacher often but did not either apply the directions of the teacher or the teacher did not respond, then the student would also have not engaged in a dynamic use of the resource. In contrast, if a student consistently chose a linear mode of study but interacted with the teacher well, that student would not have demonstrated an exclusive linear pattern of use in that area. While the initial matrix provided a graphical reference of possible student
responses, the application of that matrix became increasingly difficult as each student's activity was analyzed. For the most part, the students demonstrated a fairly consistent mid-pattern of use, rather than anything closer to either extreme.

**Mode Choice**

During the orientation session for the study and the initial explanatory and introductory emails sent out to students, the differences between the two modes were explained and demonstrated. Students were informed that they could freely choose, if they wanted, to access the content in a linear, lesson-by-lesson sequence, or by a self-selecting, non-linear sequence based on interest. Teachers were also told that they should not interfere with that choice, unless, they found it restrictive or confusing for the learner. The results, however, show that no student chose either mode exclusively and that several, in fact, spent equal time in each mode. What was interesting was that those who chose the linear mode demonstrated a sequential pattern of use, such as reading → exercise → dialogue or dialogue → exercise → pronunciation practice, fairly consistently. This pattern could have been due to the fact that, once a linear mode was chosen, the logic of the site design and navigation was more likely to become a natural sequence for the students (i.e. the readings appeared before the exercises and so on; therefore, they would be chosen first). There were no obvious sequential patterns of use apparent when the dynamic mode was chosen.

Furthermore, once a mode was chosen, students usually remained in that mode for at least 10-20 minutes and did not change to a different mode during a learning session. In other words, the mode choice was deliberate and made before beginning each study session. Students did not interrupt any session with a mode change. Also, mode selection did not seem to affect learning progress since the students who chose Mode 1 completed as much of the module as the students who chose Mode 2. The completion of the work seemed to be influenced by other variables than mode choice, however, the students who completed the most amount of work demonstrated an equal use of the modes. This finding might suggest a preference based on what type of work was being completed (e.g. readings and exercises or conversation and tutorial practice) or where the student was in the process. In general, however, it is important to emphasize that only
four students completed more than half of the module content and only one completed all of the content.

**Self-Directed Use of Resources and Supports**

There were two basic data areas logged in the electronic database:

1. Activity or task selection,
2. Time on task.

The reasons for these data-area choices were to establish patterns of use and preferred tasks and to discover the amount of time typically spent on any selected task. Within the High Dynamic category, students were expected to demonstrate “regular” use of three or more learning resources and interactive learning supports, such as exercises. As this environment was a language-learning one, the students were also expected to select resources that would enable them to practice all four language skills: reading, writing, listening, and speaking. As the results in the previous chapter illustrate, the preferred task did not automatically mean that it was also where the student spent the most time. In other words, the task selection did not relate to activity choice and time spent. In addition, as there were no apparent sequences of use that could be connected with patterns of use or content selection, conclusions cannot be drawn. In other words, use, although frequent, for example, the high numbers of forum use (see chapter 4, Table 4.5.1), did not clearly indicate purpose.

What can be recognized from the data is that, according to the students’ emails to teachers, the highest requests they made to the teachers concerned assignments, either submission or feedback, and as the forum was called “discussion,” this activity may have been perceived as the “meeting place” for the study (see chapter 4, Table 4.5.2). If this perception was accurate, it would seem to have been on the part of the students alone, as only three teachers used the forum feature (assignment and discussion centre) at all, and these posted only four assignments, two of which were quiz codes, not direct assignment postings.

The most frequently registered tasks were the exercises (29%) and readings (25%) (see chapter 4, Table 4.5.4). This choice could have been the result of the design of the web site, since a reading was always the opening screen of each lesson and the exercises followed each reading. This connection would suggest a natural logic that could have
affected the frequency of use. It would not, however, necessarily influence the time on task. Students were free to select yet seemed to choose to spend time on those tasks before selecting another task (see chapter 4, Table 4.5.4). Both readings (16%) and exercises (17%) remained relatively significant in terms of time on task, a statistic that would support the conclusion that the students quite regularly preferred these tasks.

The task that was not selected as often, yet required the most time on task, was the quiz activity (chapter 4, Table 4.5.4). Both teachers and students consistently complained that the quizzes were problematic in terms of technical functionality. The teachers did not receive many quiz submissions, and the students did not receive feedback to those they submitted. This result meant that the purpose of the quizzes was not being realized. Teachers did not receive work by which a needs assessment could be conducted for each student. Because teachers had been instructed to wait for test results before proceeding with students, the perceived lack of success with this feature meant that submissions were not successful, and as far as the teachers were concerned, students were not participating, even though eight quizzes were successfully submitted and returned. Therefore, the time on task may have had as much to do with technical difficulties, as with any necessary learning time. What does seem clear, however, is that both students and teachers recognized the importance of the quiz to the process and focused a lot of time and energy on the completion of these tasks.

Regarding the language skill activities, there did not seem to be a balance between the tasks/activities chosen by the students in terms of all language skills. The data indicate that the reading and writing tasks were chosen 77% of the time and that tasks supporting listening and speaking were chosen only 22% of the time. In addition, 66% of the total was spent on reading and writing tasks and only 18.08% of the total time was spent on listening and speaking tasks. This finding could be interpreted in several ways. Language is essentially a dynamic process, and even though technology can provide a high level of interactivity and conversation simulation, the perception of the user may be that, without a real life interaction, conversation practice cannot take place. Therefore, it may not have seemed a good use of time to the students to spend time talking to the computer.
It should be emphasized, however, that, had the teachers been more active throughout the process, the students might have been more encouraged to practice conversation on their own, if there was a purpose to the exercise (that is, a guided practice for real use). The pronunciation feature was well liked by students because practice could take place as often as necessary but without teacher intervention, the exercise may have lost purpose and application for the students. This interpretation would certainly be supported by the logged requests of the students for more contact with the teachers (see chapter 4, Table 4.6). This interpretation is also supported by the students' comments about their interest in having the online course and the correspondence courses combined in order to have more contact with the teacher.

Role of the Teachers

According to any definition of dynamic learning, students should have demonstrated effective self-directed use of the teacher as a resource guide and a learning facilitator. The activity chart (Chapter 4, Table 4.8) indicates that three teachers attempted to check the progress of students at least once per week during the project and that only approximately one quarter of the attempts were successful. It is interesting to note that students recorded more attempts to request help with assignments than they received responses from teachers (a ratio of 2-1). This ratio includes the requests for help with content selection or individual tutorial work. However, teachers sent out more messages about the quizzes than they received responses from students. Overall, taking the comments as well as the electronic data into consideration, it would be true to say that the teachers thought that the students were not participating, while the students thought that the teachers did not care. This observation is indeed difficult to interpret, although there are several points to consider when interpreting the apparently opposing views of teachers and students:

1. The quiz was seen by teachers as a "must" before students could continue, and teachers continued to struggle with the technology and helping students with the quiz before beginning the lesson;

2. Students were continuing anyway, thus looking for help from teachers when the teachers had nothing prepared, due to their perception that "it had not started yet"; Teachers felt unprepared and not empowered to become guides in an unfamiliar
territory and therefore did not use the environment to develop their own learning paths with the student;
3. Students accepted the autonomy of the situation and looked for teacher support;
4. Teachers seemed to think that the environment should offer the students variation of content and level of language use;
5. Students were looking to the teachers to provide more immediate feedback to assignments and regular contact throughout;
6. Teachers felt inadequate and perhaps redundant in a learner-directed environment;
7. Students felt independent;
8. Teachers saw the technology problems as barriers to their professional performance;
9. Students worked on what they could access.

It is interesting to consider that when the teachers perceived that the environment was too challenging or confusing for them they did not automatically revert to the technology that they had been already using with their students in the correspondence programme, (e.g., telephone and email). For the most part, the teachers gave up and thought that the project had been a failure. Several students, however, continued to work online even when the project had officially ended, and one student continued to send assignments via email during her visit to Pakistan. In all, the students seemed to demonstrate more determination than the teachers. Although several teachers demonstrated great energy initially, their energy seemed to fade after they assumed that the students were not participating. However, the teacher described as a case study in Chapter 4 demonstrated a persistent and wide use of the various sections of the site.

Another important misconception on the part of the teachers was that they saw the study as a pilot of a course, rather than a pilot of a learning environment. The content had been taken from the correspondence programme in which the teachers were already participating, and it was edited and modified to suit an online environment. Interestingly, in the correspondence programme the teachers used the workbooks only as a starting point with the students. Through an initial needs assessment with the students, they augmented the content of the workbooks with additional and individually suited content and assignments to help the students learn more effectively. In the online environment,
the teachers seemed to view the content pages as an electronic workbook, due to their unfamiliarity with the environment, they did not use the additional resources of the site itself to augment the content with the students. Rather, they were looking for a complete electronic textbook. It was as if the teachers expected that an electronic environment should not require the same need for content modification as the correspondence course had. They were looking for a complete and exhaustive course, rather than an electronic environment where specific needs of the students could be addressed within a dynamic learning framework. Therefore, rather than a static course for everyone, the site had the potential of providing easy customization to suit individual student needs. The learning-environment concept had been described, explained and demonstrated to the teachers, but conceptually, teachers seemed to have difficulties making that adjustment. This outcome could have been due to the fact that the teacher participants were active in the correspondence programme where much of the same content was delivered in a textbook format. However, while in the correspondence course, the teacher would modify, augment, and develop content, based on specific student needs; the teachers did not seem to see the online environment in the same way. This is consistent with the teach change literature (Bransford et al., 1999) that emphasizes the necessity of considering providing enough time for teachers to make the necessary adjustments from one learning environment to another. The teachers' expectations in my study seemed to have been that the environment itself should establish the outcomes for each student, take the student logically through course materials, and test and apply the learning. The teachers seemed to perceive their role as passive, rather than active. In addition, the transition to the online environment empowered the students to a greater level of independence, and one teacher explained that he just wanted the students to work on their own and get used to the site, again assuming a passive rather than an active role for himself.

The passive role assumed by the teachers (for most of the study) suggests a faulty assumption on my part: that teachers who could work to creatively and innovatively augment and customize content in a correspondence programme would make the transition to the online environment without too much difficulty. Rather, the teachers needed more time to make that adjustment, and it would have been preferable to spend that time before the study so that they could have felt more comfortable using the
technology constructively to actively support the students’ learning process. This is consistent with the literature reviewed earlier in this thesis (Brandsford et al., 1999; McCarthy & Makosch, 2000; Ivanic, 2000). Both students and teachers would have benefited from a more structured orientation session, as well as a series of training sessions throughout the study period. These sessions would have given everyone an opportunity to learn the site structure and navigation in the context of the site itself. The teachers could also have been tutored onsite and introduced to the various functions and resources, as well as the communication system, of the project. Explaining this information outside the site seemed to be less helpful, at least for many of the participants.

There were no data to directly link student drop out with technological challenges and no data to link student drop out with lack of teacher contact and support. There were also no data to support the connection between lack of teacher involvement to technical challenges (either design or connectivity) and lack of student response. The role of the teachers in this project, however, proved to be critical. “Role” refers here not only to what the teachers did but also to how valuable the teachers perceived their participation to be and how important the students perceived teacher intervention to be. What has clearly emerged from my study is that, even when students were presented with a self-directed environment, the student’s need for the teacher seemed intuitive. Students demonstrated through their many support requests that they knew when and why they needed the teacher’s support. In fact, when the teacher support was not taking place, several students simply ceased contacting the teacher, finished the project, yet knew very well that they had experienced something less than they would have experienced if the teacher had been involved. A recent study (Lawrence, 2000) shows how important it is to involve teachers in curriculum planning and to provide enough computer access to encourage teachers to use computers more effectively in the language learning process. However, my study clearly supports the notion that, in an online learning environment, this level of involvement may not be enough. The teachers in my study were already involved with the development of the content used in the study and had continual access to the learning site and the students via the Internet; however, they still felt overwhelmed. I would suggest that the teachers’ feelings of being overwhelmed had as much to do with
pedagogy and methodology as it did with unfamiliarity with the technology. That is, the actual functionality of email, notice board, and chat were familiar to the teachers in isolation (see Chapter 4, Teacher feedback) yet when all were combined in one learning centre, the concept of integrating all functions into one learning experience seemed to be very different and ultimately overwhelming for the teachers. Therefore, I would suggest that the application of the technology in a learning environment requires additional and intense training.

Self-Directed Use of Technical Support

For the most part, the students demonstrated a consistent self-directed use of technical support in that they initiated all the technical support requests. However, the students seemed to see the teacher as the main source for this help and not the technicians. This perception was probably related to the fact that the students were familiar with the teacher being the only contact and support person in the correspondence programme and, therefore, they assumed that the teacher was also the main, if not only, contact in the online study. Use of the project technicians for support was initiated by either the teachers or the coordinator, although, once the technician-student contact had been initiated, students seemed comfortable with approaching the technicians independently. The technical support was introduced, along with email addresses and telephone numbers, at the orientation session and through an initial welcome email from the researcher. The introduction and explanation of the technical support, however, did not seem to address the situation adequately. Once again, perhaps the transfer from the correspondence mode, where the teacher was the only contact with the student, influenced the students’ perception of the role of the teacher in this project.

Assignment Submission

A dynamic learning experience requires the regular submission of individual work, based on the self-directed learning choices, and the guidance and help of the teacher. This did not happen in my project. The assignments submitted were largely the quizzes offered in the site, and students did not offer additional work on their own. Once again, the number of requests from students for help with setting or providing feedback to assignments is relevant here. Since most of those requests remained unanswered, students were left on their own. That action meant that the work they did complete was
the preset material on the site. One teacher submitted two additional assignments to students, but without any result. Either the students had already dropped out of the project, or they did not realize where the assignments were posted. Again, with effective teacher support, guidance, and instruction, the results may have been quite different.

Other Significant Factors in the Study

While there were contact and assignment opportunities within the environment through quizzes, notice board and chat facilities, other telephone and email connections were not traceable because they were outside the site environment. In addition, while there was an actual project room available to all teachers and students participating in the study, most of the activity happened at remote locations. This finding suggests that other support could have been solicited without my knowledge. Also, while all of the online activity was logged, if any external learning activity took place, I would not necessarily know without direct report from the students. Also, if students were not consciously aware that they were engaging in a learning activity, they would not necessarily report that activity. Other learning resources could have been accessed without me, or the teachers being made aware of it, for the same reasons. Another important point is that since the students in this study were part of a free-of-charge programme, the participation level was not always consistent, and final conclusions could not be drawn about learning styles and patterns of site use. Furthermore, these students were aware throughout the study that they were involved in a study for only a few weeks and after that time they could continue in the regular programme without interruption. This temporary condition of the study was necessary in order for it to be an unobtrusive as possible to the existing programme. The sense of the study being a temporary break from the correspondence programme did, however, open up the possibility that students were not as motivated to participate consistently as they would perhaps be in a fee-paying course, or if this learning opportunity was the only one available to them.

Also relevant is the fact that the study was conducted during the summer, a time period which many students see as a downtime to be with children and families. This perception could mean that students did not, perhaps, view their participation in this study as an important activity in the face of other family priorities. Lastly, the administration of the project was managed by a variety of people (e.g., coordinator,
teachers, technicians, and onsite forms). As such, the results are again not conclusive and may only be helpful as a demonstration of the variables that affect the learning type demonstrated by students within this kind of environment.

Summary

What has emerged from this study is that a dynamic learning experience may only be possible when all aspects or characteristics of dynamic learning are present and understood by learners and teachers. That is, the capabilities of the technology itself cannot replace the human application of that technology in a real life process of negotiation between teacher and student. Also, while several students seemed eager to adapt to the independence and self-directed feel of the environment, teachers were less quick to adapt. The environment did, however, force both teacher and learner into active roles. This outcome is obvious from the student activity database, as well as from the reported frustrations of the teachers who instinctively knew that they should have been more involved, even though they thought that they could not be. It is interesting to note that the teachers collectively expressed a feeling of failure, while the students expressed a feeling of challenge. However, as Kennedy and Kennedy (1996) emphasize, attitudes are not sufficient indicators of future behaviour or acceptance of innovation and change on the part of teachers. In fact, the teachers in this study collectively affirmed the original site concept and communicated their belief that it could promote a more effective way of learning for the distance language learner. The teachers equally and collectively disclaimed their own participation in the study as either ineffective or irrelevant.

The major result from this study is that although Internet technology can provide the potential for dynamic learning environments for students in a distance-learning mode, the environments do not promote learner autonomy without teacher and student actively involved together in the teaching and learning process. Technology can provide media- and resource-rich learning systems, however, such systems require teacher and student dialogue and negotiation in order to truly affect the learning that is taking place. This study has also helped to emphasize the critical nature of teacher preparation, not only in the actual use of technology itself but also in the application of new technology in
teaching and learning. This was highlighted in my study even with the participation of correspondence teachers rather than traditional classroom teachers.

The final chapter will discuss the findings of this study in relation to the original conceptual framework in which the site design and study were based. While there were many findings that would suggest autonomous student activity, there were significant gaps in the framework due to lack of teacher intervention and ongoing teacher-students dialogue and communication.
CHAPTER 6
CONCLUSION AND FUTURE WORK

In this concluding discussion chapter, I will revisit the original conceptual framework of the study design and discuss which of the conceptual phases were realized and which were not. This chapter will be divided into four sections. Section 1 will revisit the conceptual framework as it was presented in Chapter 2. Section 2 will present some general comments and what significance my study has to the field of distance education for language learners, and Section 3 will offer suggestions for future work and research in this area. Finally, Section 4 will provide concluding remarks.

Section 1—Framework Revisited

In the original conceptual framework of this study, four main focus areas, based on Cummins' (2000) model were presented, which I suggested provided the basis for the conceptual design of this research site. The four areas were

1. Presentation,
2. Interaction/Practice,
3. Dialogue
4. Production.

The Internet site was designed and developed to provide various opportunities for each of these areas to be addressed. Each lesson presented content to the learner with which the learner could interact and practice as needed. Each learner was assigned a teacher with whom open dialogue and ongoing communication could take place. Finally, through the exercises, quizzes, and notice boards capabilities of the site, students had opportunity to produce new and authentic work samples of what they had learned. In addition, the technology provided for networking with other learners in the study, as well as with other learners in the LINC programme.

Also in Chapter 2, six essential characteristics of a dynamic and autonomous language-learning environment were presented. These characteristics were:
1. A learning environment that provides self-directed use of resources to accommodate individual lesson construction based on learner autonomy theory;

2. An interactive, media-supported learning environment to engage and stimulate the learner's attention based on current theories of media-supported and computer-mediated instructional design for language learners;

3. Intense instructor intervention through all communication tools based on the notion that effective learner autonomy depends on relevant and immediate teacher intervention and feedback;

4. Open communication based on distance education theories of communication and connectivity;

5. Ongoing dialogue between teacher and student to negotiate and meet learning needs based on process curriculum and content construction theories and strategies;

6. Opportunity for authentic and individual application of the language used based on transformative learning theories of language acquisition.

Each of these six characteristics was intended to support the conceptual framework of the design itself.

Although each of these characteristics was supported by the site, it is realistic to state that not each characteristic was demonstrated in each student's learning experience during the pilot study. In general, the presentation of the content of the site was media-supported and self-directed by the learner and seemed to interest those students who participated throughout the study period. The students who participated and responded to the email interviews all commented favourably about the lesson content, especially the audio pronunciation practice and the self-selecting capabilities offered. This finding was also supported by the fact that the students chose the flexible Mode 1 (Dynamic) for the majority of the time (60%) to access the site content. The students did, however, request more varied content with more interactive exercises. Each student did freely and individually select the content as he or she desired. None of the content choices was similar—each was individual. The students also commented on their enjoyment of the flexibility of the medium and the fact that geography and time posed no barriers to their...
continuing the study, even when one student visited Pakistan and continued to work from there.

The major weakness of the study was that although the activity of the students was tracked electronically, there was no measure to relate activity to learning outcome. In other words, the study did not show how effective the learning was or how important any or all of these dynamic learning characteristics were to the actual learning experience. Because of this lack of connection between activity and outcome, the conceptual framework remained essentially untested. The conceptual framework itself required intensive teacher-student communication and negotiation for the third and fourth aspects (dialogue and production). Without teacher-student communication, there were no effective needs assessment for the students, customization of content to suit learning needs, or authentic production of language learned. Consequently, students ended up working in a vacuum and did not produce any meaningful evidence of language learned. Much of this result was due to the technical "bugs" in the submission system as well as to the feeling of inadequacy and lack of preparation expressed by the teachers. Although there were over 3,000 data entries of student activity in the site database, most of this work was site exploration and discovery on the part of the students, rather than an intentional use of learning resources to meet learning needs. This would support the notion that successful learner autonomy depends on teacher intervention with both teacher and student working together in a learning environment (Little, 1995; Cotterall, 2000).

Section 2-General Reflections

Vilmi (1999) in her chapter "Language Learning Over Distance" suggests that, although there are few ESL/EFL courses currently offered in a distance mode via the Internet, the desire for this mode of language-training delivery will increase rapidly. Just as students are requesting courses of study in other disciplines and interest areas, students will also increasingly look for distance language courses. The author, however, suggests that these distance courses will be very different from traditional course delivery:

I believe that methods for teaching languages, now for English but in the near future for all languages are about to change
dramatically. The artificial teacher-students-classroom peer environment (in which the student writes or speaks for the purposes of improving accuracy and receiving a grade) will gradually be replaced by authentic, dynamic student-teacher-global peer situations....they [students] need to exchange ideas...make personal contact....and learn the technical and social skills necessary for surviving in today's rapidly evolving world...autonomous learning made possible by technology, is a significant aspect of this new approach to global education. (p. 440)

As more and more students request second language courses via the Internet, their expectations must be met. Students learning in an Internet environment are already using technology that makes immediate interaction, direct communication, and global networking possible. Language courses could exploit this medium to the full in providing a dynamic language-learning experience for distance learners. Campbell (1998) discusses the use of the World Wide Web for teaching foreign languages and examines the learning styles of current student population, and the changes in how students and teachers approach the teaching and learning process, as well as how these changes affect the role of instructors in this context. Campbell proposes that new approaches should maximize how current students think (non-linearly) and how they pull together various pieces of information as a whole. Campbell proposes a model of learning that encourages students to select what they want to learn and practice, use the language structures to organize the content and integrate new knowledge into the students' own databases through the grammar learned. The site designed for my study explored the potential of Internet technology to provide a completely different language learning experience for distance ESL learners. A similar model of selection, practice and application was used, however, the difference was that my study explored the flexibility of student-initiated learning within a distance education framework that also included communication and negotiation with teacher and student to establish outcomes and language use. My study also explored the integration of all four language skills by integrating media files and search and study tools for self-study and instructional preference. Rather than augment existing delivery modes with Internet technology, the
delivery of this study was totally Internet-based and for distance learners. In addition, rather than examine teachers or students independently as other studies have done, this study based the entire design on the full participation of both teachers and students in the learning process. Rather than separate aspects of teaching from aspects of learning, this study looked at both equally throughout and as integral parts of the full experience. In other words, even though students and teachers had different perceptions of this experience, it was the combined view that informed the development and will inform future work with the site. In addition, the study provided a completely self-directed and self-initiating opportunity for the learner, thus maximizing the potential for learning autonomy and the roles of the teachers and students in relation to that reality. Other studies have looked at the effectiveness of Internet technology to delivery courses of study or to maximize communication within and using an existing electronic delivery system (Siekman, 1998). My study developed a new learning system, delivered by the Internet, that explored the dynamic potential of the technology and its use by teachers and learners without systemizing content presentation as a linear course. In addition, unlike other studies with students from a homogenous group of university students studying foreign languages (Kuntz, 1999), this study worked with adult learners from a variety of educational and professional backgrounds and language levels within the same learning environment and studying English to settle within a new culture and social environment.

My study has presented a glimpse at an electronic learning system that supported each student's individual needs and goals in order to provide a unique learning experience. Therefore, the "course" depended, to a great extent, on the dialogue and negotiation of teacher and student. One teacher while teaching several students, each with equal access to the site, facilitated an individual learning experience for each student. Because no two lessons had the same outcomes, the site accommodated a customized tutorial experience without altering the resources for other students. The resources remained the same; they were simply accessed and applied differently for every student.

Although the quantifiable data are lacking significantly in this study, as an exploratory study (as was the original intent), it was a success. Substantial theoretical background influenced the study design and, as such, the design itself remains essentially untested rather than inadequate. Individual comments from teachers and students
supported the concept of the model itself even though significant frustrations were experienced with the technology used in the site. In terms of distance education for language learners, however, the site design remains a viable framework for dynamic distance language learners. The theories of transactional distance (Moore, 1996) and transformative pedagogy and negotiation (Breen, 2000; Cummins, 2000) remain sound. In addition, the second language theories of media-supported instruction of vocabulary (Esch, 1994; Sheerin, 1997; Benson, 2000) also remain sound. Through this study, I have attempted to bring together these theories to support language learning at a distance.

If further research were to be conducted on this site over a longer period of time and with more concrete measurement tools, with favourable results, distance language learning via the Internet for language learners could be changed significantly. Rather than distance language learning merely referring to a mode of delivery, using the concept of this site, distance language learning could mean a dynamic way to learn language. Moore’s (1973) notion of transactional distance and Breen’s (2000) concept of negotiation come together through the interactive and communicative capabilities of the Internet to realize open negotiation and direct communication more effectively for each individual student. In addition, Cummins’ (2000) framework for transformative language learning through meaningful input and relevant production and Saba’s (1999) notion of open instructional systems also become integrated within the interactive framework of this Internet-based instructional system for language learners. I have basically learned through this study that the Internet does provide the potential to create dynamic learning environments for language learners and teachers, however, I also remain intrigued by what a more in-depth and quantified study of the use of the site might demonstrate in light of the theory cited. I would also be interested to study how effective the learning is when teachers are active participants in the site environment. With effective teacher intervention and guidance throughout, learner autonomy may be reached more effectively when an individual learning space is created electronically and with open negotiation and dialogue between teacher and student than within a traditional language classroom environment.

I have also learned some practical and logistical lessons through this study. The importance of having all participants involved equally throughout cannot be overstated. I mistakenly assumed that teaching and learning strategies used in the correspondence
mode would easily transfer to the online environment, such as the initial negotiation between learner and teacher, goal-setting for the learner, modification of content, and adaptation of exercises and assignments. I also mistakenly assumed that the teachers' existing knowledge of technologies like email and telephone would continue to be used when needed while they worked through the online module. Apparently, when teachers were confronted with the online environment, they did not automatically see the points of transference from correspondence to online. Neither did they see the potential for modification and customization. It was as though the online environment was viewed as a textbook publication, a fixed and final production that could not be altered. In addition, it was as though the concept of "environment" escaped the teachers, and they expected it to be an exhaustive and preset resource with which students could interact and learn. In other words, their own role within an active and dynamic environment was lost. The students also struggled with seeing the teacher in a different role from that of the sole resource and contact person in the correspondence programme. In the online environment self-directed learning choices as well as self-initiated contact with teacher and technical support meant that the teacher-student relationship was very different for the students. The students asked the teachers questions that need not have been directed to them, particularly regarding the technology itself.

Consequently, if I were to conduct this study again, I would consider the following:

1. Identify only three teachers and twelve students who could meet in a physical location to work together through an intense period of orientation and training prior to the study. This preparatory period would also identify problems with the site, problems that could be resolved prior to the study period.
2. Choose a fee-paying course to ensure maximum participation.
3. Select learners with the same language level so that outcomes can be measured more helpfully.
4. Introduce the technicians as accessible support personnel and make sure that everyone understands exactly how to make contact with the technicians and for what purpose. The technicians could also initiate periodic contact with students
throughout the study in order to provide support and to monitor student progress with the technology use.

5. Practice the concept of “authoring” instructional material with the teachers already posting several introductory assignments for the students to get the project moving.

6. Ensure that teachers and students understand all methods of communication whether internal or external to the site.

7. Identify through examples the similarities and difference between correspondence and online, dynamic and linear modes.

8. Take a longer time for site development and make sure that an administrative centre is included in the site so that all assignment submissions could be sent and responded to.

9. Provide a self-directed outline of learning goals for each lesson.

10. Provide pre- and post-lesson quizzes in a lock-stepped format to prevent confusion and use existing student login for access.

11. Provide a clearer overview of the content and provide a searchable content index for grammar as well as pronunciation.

12. Provide a clearer, icon-based navigation rather than the text-based navigation of the test site (see Appendix A).

13. Develop a more thorough database that could store information about why certain instructional resources and supports are being used and to table results of each exercise and assignment directly following each submission.

14. Develop a clearer scoring procedure for language progress in which each language skill is measured through more frequent cloze vocabulary exercises and independent written submissions.

15. Include chat and/or telephone conversations with teachers and other students as an integral part of each lesson.

16. Develop a student “portfolio”, published by each student to be viewed by all students in the programme.

In addition, there were some challenges around the fact that all the students were involved in the programme free of charge, and these obstacles were difficult to manage.
because students were not necessarily committed to the study as a structured course of study. I believe, however, that if only a few students and teachers were involved and lived near the physical project location they would feel more inclined to stay involved and participate more throughout the project. Also, the area of teacher preparation would have to be addressed more thoroughly and would involve three major areas of teacher training and development:

- Technology readiness
- Communication methods
- Teaching methodology and helpful strategies in a process-based electronic learning environment

Each of these areas would require adequate time for teach change and familiarity to develop before beginning a study project.

Section 3- Future Work

The findings of this study, as well as the successes and weaknesses of the case studies identified in this chapter, suggest important considerations for future work. First, the use of only one module of content did not really effectively test the dynamic inclinations of the students or language learning benefits of the site. That is, the module content was of the same general language level and theme. It would be interesting to see how freely students would choose content areas, given more choices and proficiency differences. Second, because the project lasted for only ten weeks and involved only a few students and teachers, definite patterns of use and learning styles could not be observed. Establishing strong patterns of use and generalizeable trends could only be achieved with more participants involved with more content over a longer period of time and if some sort of measure could be designed to show the correlation between learner choices and activities and learning styles. While dynamic use of the site was possible, in some measure, through this small exploratory study, in order to effectively observe dynamic learning patterns, a future study would have to set up a carefully monitored measure for each of the six dynamic learning characteristics in relation to the actual learning behaviour of individual study students. These measures would mean that patterns of site use could be examined in relation to learning patterns, so that a more
complete view of dynamic learning could be assessed. Third, the database was accessible only to the technicians during the project. For a fuller understanding of what was taking place during this study, the database should have been accessible to the coordinator and researcher, in a readable format, at any time during the study. This accessibility would have allowed a better realization of what was taking place on a regular basis both from the teachers’ and students’ perspectives. To achieve a more conclusive study, it would be necessary to track patterns of use across content and for various purposes. In other words, it would be necessary to observe if the patterns demonstrated by the student depended on the outcome of the learning, or if the navigation and layout of the site influenced the use more than the learning style of the user. Additionally, it would be necessary to quantify language skill levels more effectively and monitor progress after a period of time in order to observe the effect of the technology on the actual language learning process itself. Also, due to time and financial constraints, a monolingual approach to content development and site design was used; however, to provide a culturally accessible site, either there should be translation options or access to online bilingual or multilingual dictionaries in a future study.

Future work in this area should also look at more creative authoring and application potential of the Internet medium itself to maximize the individual identity and sense of self for each learner. Some suggestions would be an internal web page authoring centre where students could represent themselves and post various creative works from the lessons that best illustrate their learning. In this way, the individual learning space could be visually created for all study participants to see. In addition, the collaboration between learners should be demonstrated in these individual sites, in order to clearly represent the community of learners constructed in the study sessions, as well as the individual learning achieved by each learner.

Section 4-Conclusion and Epilogue

As noted earlier, this study was conceived as an exploratory investigation into the functioning of an innovative ESL learning environment for distance learners. It has highlighted issues that could now be investigated more fully in a more comprehensive study. Because the Internet is being used more and more to deliver training, its potential
for instruction must be explored at every level. This study demonstrated that students were eager to access as many resources as possible and enjoyed the freedom of those choices in personal tutorial work. Students in the study were eager to listen to aural texts and practice pronunciation while working through grammar exercises and dialogue practices at their own pace and for their own specific language needs. The study also showed that students, while enjoying a certain level of autonomy, instinctively knew when and why they needed teacher intervention and as a result knew that their learning experience had not been as good as it could have been. The importance of the teacher was emphasized by each student who responded to the telephone interview. The teacher was so important to the students that they requested a combination of the existing correspondence programme with the online programme because they had experienced more teacher intervention in the former than in the latter. All of the students did, however, communicate a desire to continue online as a new and interesting way to learn technology and language together. Therefore, the intrigue of the computer and Internet technology itself inspired the students to participate. This study also showed that while both teachers and students were aware of changing roles and expectations, teachers felt unable to participate fully due to a lack of familiarity with the site design and purpose. In other words, teachers needed more time to adjust before fully participating in the study. This is again consistent with the literature in the field of teacher change that suggests the most successful teacher learning opportunities to be those that are ongoing rather than isolated de-contextualized workshops (Bransford et al., 1999).

What this study was not able to do was to quantify in any significant terms how effectively the Internet supported various learning styles and/or provided an opportunity for new learning styles to emerge. It also did not establish a clear link between effective language learning and the technology used. In order to address these two concerns, the framework would have to be tested over a longer period of time, using more content choices with various levels of language difficulty, and different data collection methods. In the correspondence programme students usually take four months to progress through a language level. That pace would mean that students could enter the programme at LINC level 3 and leave 12 months later at LINC level 6 [this rate does depend on the individual student and teacher involved]. It would, therefore, be a useful study to test the
online distance-learning framework for a period of 12 months and observe how the students demonstrate consistent patterns of use between linear and dynamic and if the language learning progress was comparable in any way to the progress of students in the correspondence programme. Such a study could then begin to provide some helpful statistics in the areas of learning styles and learning progress for online distance ESL learners.

Epilogue
Since the completion of my study project, I have not been able to continue work on the study site. The organization that owns the site development has continued to use the site to distribute lesson materials to LINC students and to deliver the LINC Home Study Programme to students across Ontario but, to my knowledge, no further research or development work has been done on using the Internet site as a learning environment with instructional tools. In addition, the participating teachers have continued to teach in the correspondence program but have not yet received further training on the use of the site as a learning and resource centre or on process-based teaching and learning. Additionally, to my knowledge, a new teacher has been hired specifically to teach the online ESL students and I have no information on the training she has received. I no longer coordinate this program and I am, therefore, unable to access information beyond these general comments.
REFERENCES


World Conference on Educational Multimedia and Hypermedia & World Conference on Educational telecommunications.


Thanasoulas, D. (2000). What is learner autonomy and how can it be fostered? I-TESL-J. VI, (11), 1-12. iteslj@ge.aitech.ac.jp


APPENDIX A
Site Screens 1-14
Screen 1-Quiz

Filling Blank

(1) negative sentence: They _______ from Italy.
(2) positive sentence: We ______ students.
(3) negative sentence: You ______ doctors.
(4) positive sentence: She ______ my mother.
(5) negative sentence: I ________ technician.
(6) positive sentence: I ________ a student, too.

Screen 2-Modules
Screen 3 – Content selection options

Language Toolbox

Check the DISCUSSION in left menu for your assignment

Greetings
How are you? – Fine thanks, and you?
Hi How are you? – I'm fine thanks, and how are you?

How are you doing? – Fine, thanks.
How are you? – Okay, thanks.

Ways to say hello:
How are you? / How's it going?
How are things? / How's everything?

Ways to respond:
I'm fine, thanks.
Fine / Oh / Great / Not bad / Can't complain / Wonderful / Thanks.

Screen 4 – Mode selection

Lesson 1:

Casual Conversation

Lesson Objectives:
In this lesson, you will learn to:
- Say hello in different ways
- Ask your friends how they are
- Tell your friends how you are
- Talk about the weather
- Say goodbye in different ways

Study Tasks:
To complete this lesson, you should:
- read the passage and answer the questions
- be able to spell the new words and expressions
- listen to the dialogue and do the exercises
- learn presentation rules
- complete the final written assignment
- call your teacher by phone to tell if the dialogue
- join in discussion to complete community tasks
Yen's Neighbours

Yen lives in a pretty and small neighbourhood. She lives in the west side of town.

Yen likes her neighbours and she has many friends.

When Yen walks around her neighbourhood, she talks to her neighbours. She greets her neighbours and they talk about how they feel and also about the weather. There are always many things to say about the weather.

Every day Yen goes for a walk and meets and talks with her neighbours. Katya is a neighbour who lives in a house at the end of Yen’s street. Katya has three children, Paul, Angela and little Frank. Frank is Katya’s baby. Katya’s other two children are at school. Paul is in grade 3 and Angela is in grade 1. Katya’s children are so cute! Katya is a nice neighbour to have.

Mr. Rzewinski is another neighbour. He lives on the other side of the street. His house is big with huge windows on the south side and vines climbing the north wall. He is always friendly and he likes to talk. Mr. Rzewinski’s family are all living away from his home. He has two sons and two daughters. They are working and have families of their own.

Screen 6-Situational dialogues

**Yen’s Neighbours**

1. Katya: Hi Yen, how are ya?
   Yen: Hi Katya, I’m fine thanks, but little Frank sounds unhappy.
   Katya: Oh, he’ll be okay. He’s just tired. Isn’t it a lovely day today?
   Yen: Yes, it’s sunny and warm. I’m happy it’s not windy. I don’t like windy weather.
   Katya: Oh, I know what you mean. Well, I need to get home before Frank falls asleep. Have a good day Yen. See ya later.
   Yen: Bye, Katya. Bye, Frank!

2. Yen: Good morning Mr. Rzewinski. How are you?
   Mr. Rzewinski: Hello Yen. I’m not so good today. It’s warm outside, but I feel cold. I think I have a fever.
   Well, I hope you feel better soon, Mr. Rzewinski. It’s such a beautiful day. Take care. Good-bye.
   Mr. Rzewinski: Good-bye, Mr. Rzewinski. Good-bye

3. Yen: Hi, Monica. Great day, isn’t?
   Monica: It’s wonderful. How are you?
   Yen: I’m fine thanks. Is this your new puppy?
Screen 7 – Dictionary always available in side bar

Workshop

You aren't (are not) a doctor.
He isn't (is not) Canadian.
She isn't (is not) rude.
It isn't (is not) cold.
We aren't (are not) energetic.
You aren't (are not) late.
They aren't (are not) friendly.

The Verb "be" Questions

We put the verb "be" before the subject to make questions.
Am = I
Are = you
Is = he
Is = she + noun (doctor) or adjective (happy)?
Is = it
Are = we
Are = you
Are = they

Screen 8 Interactive exercises

Multiple Choice

1. Which side of town does Yan live?
   A: east
   B: by the supermarket
   C: west
   D: by the park

2. How many children does Kaya have?
   A: one
   B: three
   C: two
   D: Kaya has no children

3. Where does Mr. Rzewinski
   A: with Mr. Rzewinski
   B: in the neighbourhood
   C: in the house across the street
   D: away from his home

4. What does Monica do?
   A: works at the factory
   B: watches TV
   C: studies at the university
   D: goes to the dance school
Screen 9—Pronunciation tutorials

Screen 10—Grammar workshops
Hi Yen,

How are you?

Yen: Hi Katya.

I'm fine, thanks, but little Frank sounds unhappy.

Katya: Oh, he'll be okay. He's just tired. Isn't it a lovely day today?

1. Yes, it's sunny and warm. I'm happy it's not windy. I don't like windy weather.

Katya: Oh, I know what you mean. Well, I need to get home before Frank falls asleep. Have a good day Yen. See ya later.

Yen: Bye, Katya. Bye, Frank!

2. Hello

3. Hi, how are you?

4. How are you?

5. How are you?

I'm fine, thanks.

Great, thanks.

[End of Result]

Screen 12 Assignment and discussion centre

Welcome to LINC Forums

Search | Login | Search | Forum | Admin List

You last visited: 9/12/00 3:56:15 PM

Total Posts: 17, Total Users: 19

Show topics from last day

Go

| LINC Teacher 1 | | | | |
|---|---|---|---|
| Topic | First | Last | Modifier |
| Reading | 7/21/00 12:39:12 PM | | Admin |
| New Words and Phrases | 7/21/00 12:13:19 PM | | Admin |
| Dialogue(s) | 7/21/00 12:13:33 PM | | Admin |
| Pronunciation | 7/21/00 12:13:53 PM | | Admin |
| Language Toolbox | 7/21/00 12:14:09 PM | | Admin |
| Coffee Time | 7/21/00 12:14:38 PM | | Admin |
| Grammar Workshop | 7/21/00 12:15:16 PM | | Admin |

| LINC Teacher 2 | | | | |
|---|---|---|---|
| Topic | First | Last | Modifier |
| Reading | 7/21/00 12:23:22 PM | | Admin |
| New Words and Phrases | 7/21/00 12:13:19 PM | | Admin |
| Dialogue(s) | 7/21/00 12:13:33 PM | | Admin |
| Pronunciation | 7/21/00 12:13:53 PM | | Admin |
| Language Toolbox | 7/21/00 12:14:09 PM | | Admin |
| Coffee Time | 7/21/00 12:14:38 PM | | Admin |
| Grammar Workshop | 7/21/00 12:15:16 PM | | Admin |

| LINC Teacher 3 | | | | |
|---|---|---|---|
| Topic | First | Last | Modifier |

173
Welcome to LINC voice chat room!

Status: Connected,
chantiago has joined.

Exercise / Quiz / Test Editing Kit
(Fac. Teacher Use Only)

Select a target Course / Unit / Lesson / Section to add exercise / quiz / test to:

- First, you need to select a COURSE: English On Your Own
- Second, you need to select LESSON: Module One
- Third, you need to select SECTION: Casual Conversation
- Then you need to select SECTION: Reading
- Finally don't forget to select the test type: Exercises  Quiz  Test

Select an option above before working on one of the following:
APPENDIX B
Student Information and Consent Letter
Dear Home Study Student:

I am a doctoral student at the Ontario Institute for Studies in Education, University of Toronto. I am conducting a research study of the Home Study Internet Course. The title of the study is *Intentional Language Learning within a Computer-Mediated Distance Education Framework*. I want to find out what students think is a good way to learn English using Internet technology.

The study will involve Module 1 of the Home Study Course. This includes 6 lessons and it will take you about 6-8 weeks to complete (1 lesson each week). This is the same course as the Home Study course and you can decide to continue to study through correspondence, or you can decide to study online. Please call your instructor and let him or her know if you want to continue with the correspondence course, or if you would like to begin to work through the Internet. If you would like to participate in this study, please sign this form and fax or mail it to me. The fax number and mailing address are at the end of this letter.

As part of the study, you will be asked to come to a meeting at 100 Elm Drive, Mississauga (for 1 and ½ hours) where the study will be explained to you and your instructor. I will lead that meeting and, although you will meet some instructors, you will not be matched with an instructor at that time. You will be matched with an instructor electronically when you login online. At the meeting, you will be given a login name and password for the course and you can work from home, or wherever you have Internet access. An instructor will be given your code and you and the instructor will communicate anonymously during the course. You can also work from the CLTA Distance Learning Centre at 100 Elm Drive in Mississauga, if you choose. At the meeting, you will also meet, Mr. Sibin Lu, the Web Master. Mr. Lu is also working for the Centre for Language Training and Development, as a Web developer.

At the end of the study, you will be asked to come for another meeting (for 1 and ½ hours) at 100 Elm Drive, Mississauga, when you will be able to talk about the study with your instructor other students and me. All your work will have been submitted before this meeting, so it will have no affect on your results. This session will be tape-recorded and I will be the only one who will listen to the tape. This is to help me remember all your comments. No one will use this tape to evaluate you or your progress as a student. During the study, your progress will be tracked electronically and my study supervisors and I will be the only ones to see this information. The tracking is similar to the Progress Report your instructor already submits in the Home Study Course.

It is important that you understand that your name will not be used in the study, only a code, and that this has nothing to do with your progress in the Home Study Program. You should also know that you could withdraw at any time from the study and still
continue as a student in the Program. All raw data will be stored in a database for the
duration of the study and will be available to only the researcher and the study
supervisors. At the end of the study, the data will be downloaded and stored on disc.
Only the researcher will have access to this data over a period of two years, after which
time, it will be destroyed.

If you are interested in volunteering to participate in this study, please sign on the space
below and fax or mail this page back to me using the information below. Also if you
have any questions, please contact me, or the study supervisors, at the numbers below.

Please note: If you need a translation of this letter, call me and ask me for a translation
in your language. Thank you.

Sincerely,

Ruth Reynard – Student Researcher
Tel: 905-949-0049 Ext.2007; Fax: 905-949-6636; email: rreynard@clta.on.ca
2, Robert Speck Parkway, Suite 690
Mississauga, ON L4Z 1H8

Dr. J. Cummins- OISE/UT 416-923-6641; email: jcummins@oise.utoronto.ca (Study
Supervisor)
Dr. M. Turnbull- OISE/UT 416-923-6641; email: mturnbull@oise.utoronto.ca (Study
Supervisor)
DEPARTMENT OF CURRICULUM, TEACHING AND LEARNING – Ontario Institute for
Studies in Education (OISE), University of Toronto (UT)

Please read carefully and put an X in the appropriate box

☐ I have read all of this information and I agree to volunteer as a student participant
in this research study.

☐ I have read all of this information and I DO NOT agree to volunteer as a student
participant in this research study

Date: ____________________________

Signature: _______________________

E-Mail: _________________________

Telephone: _____________________
APPENDIX C
Teacher Information and Consent Letter
Dear Distance Education Instructor,

This letter is to inform you of a Research Study I am conducting called *Intentional Language Learning within a Computer-Mediated Distance Education Framework*. I am a Ph. D. student at the Ontario Institute for Studies in Education, University of Toronto, and I am interested in looking at how Internet hyperlink technology can affect the language learning process for adult ESL learners.

I understand that the Centre currently employs you as a full time distance education instructor and I would, therefore, benefit greatly from your assistance in this project. The project will involve Module 1 of the course you are currently teaching (LINC Home Study) and it will take approximately 6-8 weeks of time for the participating students to complete the 6 lessons of this module online.

The study will provide the content in two different online modes, Linear and Dynamic. Both modes will offer the same content, but in the Linear mode, the content will be organized in a traditional linear form where students will be expected to complete a lesson before attempting the next lesson and so on. In the Dynamic mode, the content will be supported by a self-selecting search engine into which students can type their problem requests and receive specific audio-based examples and practice opportunities in response. In addition, this mode will offer a chat room and notice board facilities. Both modes will also have online dictionary support and e-mail connection with the instructor.

The object of this study is to electronically track the learning choices each student makes, the frequency and nature of requests to the instructor, the time spent by the student on each exercise and the submissions to a pre- and post-module test to indicate learning progress. You will be asked to attend, as part of your online professional development, an orientation session before the study starts. This will be held at 100 Elm Drive in Mississauga, and will last for 1 and ½ hours. I will lead this session and, although you will meet the student participants, you will not be assigned any students until after the meeting. Therefore, all communication and contact with your students will take place anonymously. At this session, all participating instructors and learners will have a full explanation of the expectations of the study, parameters, and technology involved and tracking methods. As a participating instructor you will be asked to electronically record each student contact and the nature of the request. This will take the place of the Progress Report you currently submit for students and, therefore, will not require any additional time. You will also offer instructional support to the learners, without influencing their negotiation through the course and the delivery mode they choose, and their choices will not affect their final grade. In short, you will be teaching these students online, rather than through the correspondence course.

You will also be asked to attend a feedback session at the end of the study, again for 1 and ½ hours at 100 Elm Drive in Mississauga. This will be an opportunity to discuss the perceptions and reactions of both learners and instructors to the research study, the design and technology and the benefits to language learning for the distance learner. This session will take place after all final students’ submissions have been received and graded. Also, this session will be tape recorded and selectively transcribed by me. These
face-to-face sessions are informal and, as you will be working with the students using code names, there will be no risk of intimidation. All raw data will be stored in a database for the duration of the study and will be available to only the researcher and the study supervisors. At the end of the study, the data will be downloaded and stored on disc. Only the researcher will have access to this data over a period of two years, after which time, it will be destroyed.

It is also important that you understand that you can withdraw from this study at any time without any consequences on your teaching status with CLTA. If you would like to volunteer your time to be involved in this study, please sign in the spaces below and fax this page or mail it to me using the information at the end of this letter.

If you have any questions, please contact me at the number listed below. Thank you.

Sincerely,

[Signature]

Ruth Reynard – Student Researcher
Tel: 905-949-0049 Ext.2007; Fax: 905-949-6636; email: rreynard@clta.on.ca
2, Robert Speck Parkway, Suite 690, Mississauga ON L4Z 1H8

Please read carefully and put an X in the appropriate box

☐ I have read all of this information and I agree to volunteer as a teacher participant in this research study.

☐ I have read all of this information and I DO NOT agree to volunteer as a teacher participant in this research study.

Date: __________________________

Signature: _______________________

E-Mail: _________________________

Telephone: _____________________
APPENDIX D
Site Registration Form
(Plain Text Version Only)
Student Information Register

First Name:

Last Name:

Class Number:

User Type: Student Administrator Visitor Teacher

Phone Number:

FAX Number:

E-mail:

Address:

Gender: Male/Female

Comments:

User Name:

Password:

Confirm Password:

Home Page Help
APPENDIX E
Teacher Reports
(Plain Text Version Only)
Electronic Contact Report

Researcher Editing Page View and Contact Information

Please complete and submit each time you are contacted by one of the study students.

Student Name:

Student Password:

Class:

Teacher's E-mail Address:

Other:

How the student contacted you:
   By Telephone/ Electronically

Nature of the request (Please check out as many boxes as apply)
   Technical difficulties
   Explanation of exercise
   Explanation of assignment
   Question about grammar
   Question about language use (vocabulary meaning, correct usage etc.)
   Conversation practice
   Feedback on content
   Question about research study

Please describe your response:

Your perception of the role you play in the student's learning process
   (Check as appropriate):

   Source of information
   Source of language practice
      Expert advisor
      Learning partner
   Learning facilitator
APPENDIX F
Student Telephone Survey Questions
Telephone Questions

1. What did you like most about the project?
2. What did you least like? What would you like to see changed?
3. What kind of technical problems did you have during the project? Did you ask your teacher or the technicians for help?
4. Did you find the answers to your problems?
5. Was your teacher helpful to you during the project? How?
6. Did your teacher call contact you? (Email)
7. Did your teacher give you assignments?
8. Did your teacher call you by telephone?
9. Did you call your teacher on the telephone?
10. Do you like the correspondence or the online programme better? Why?
11. Do you want to continue to study online or return to the correspondence programme?
12. Why did you want to participate in this study?
13. Do you think that you could learn English well online?
14. What are the main differences for you online?
APPENDIX G
Teacher Feedback Questions
Feedback Questions

1. How would you describe your journey through this project?
2. What specific frustrations did you experience and why? What, if any were your solutions?
3. How were the learning objectives identified for the students?
4. Were the learning objectives clear for the students?
5. What role did you perceive you provided for the students in the project?
6. What were the expectations of the project, in your opinion?
7. What were your personal expectations of the project?
8. What teaching skills transferred well from the correspondence programme? What could not be transferred to the online environment?
9. What worked well for you and the students?
10. How likely do you think it is that the students will want to continue online?