CHAPTER 1

CHAPTER 1
Strange New Worlds: Introduction

In a landscape without bearings, teachers create
and internalize their own maps. (Kagan, 1992)

1.1 Introduction

Michel Tournier (1972), in his novel *Vendredi ou les limbes du Pacifique*, retells the tale of Robinson Crusoe, a young man stranded on a desert island, exiled from civilization as he knows it, a stranger in a strange land. Not long after his arrival on the deserted island, Robinson begins the arduous task of adapting his environment, of changing it in such a way as to make the wild, immense and virgin island conform in every way to the civilization which he left behind in his native Holland. Robinson goes to great lengths to ensure that every aspect of civilized life is represented in his new environment. Constructing, organizing, ordering, measuring, mapping, legislating, exploiting, administering, regulating, labeling: these are some of the activities in which Robinson engages in order to "metamorphosize" the island. His zeal extends to attempts at tagging every bird, labeling every plant and even to imposing a penal code. Tournier's tale evolves into somewhat of a parable as Robinson's self-constructed world eventually and literally explodes. Robinson finds himself once again in an environment which does not bear any resemblance to the civilized world. However, this time, it is Robinson who, instead of changing his environment to suit him, does the reverse - he begins to adapt to his environment. It is he himself who changes his appearance, his relationship with the only other inhabitant of the island and his daily habits. He no longer aims to change the island; rather he marvels at its natural state. Thus, this time, it is Robinson who undergoes the metamorphosis. A sense of calm now characterizes his state of mind. He becomes more reflective, more in tune with his inner self, more at peace and content to live on the island without needing to transform it.

Robinson's experiences, by analogy, evoke in many ways the immediate response that, as humans, we instinctively take when faced with new environments in particular or with newness in general. We impose the map on the territory. We rely and depend on the familiar. We facon the new on the old. We recreate that which is absent. We compare with what we have already. We pattern from the past. We think within the dominant paradigms. Thus, we are as McLuhan (1964) so articulately mused, "dragged into the future" moving forward while "looking into a rear-view mirror". Unfortunately, such tendencies create dilemmas. To move forward, we must have the ability and will to transpose or detach ourselves from the present and past patterns and paradigms that dictate the ways in which we think, do, feel and believe. Most importantly, we must have the ability to change or accommodate our ways of thinking to suit the world instead of changing our representation of the world to assimilate it to our ways of thinking.

The need to be able to detach ourselves from the past has perhaps never before been so imperative as it is now. It has almost become cliché to comment on the exponential rate of

change facing humanity at the beginning of the 21st century. The change is nonetheless startling, rapid and all-encompassing. Mention need hardly be made of the magnitude and scope of changes affecting all aspects of society and the world as a result of the evolution and progress in the area of technology and telecommunications. Perhaps more than ever in the history of humanity are humans facing changes in their environment. More than ever are they forced to adopt new ways of thinking, doing and being. Change is not exclusive or selective in terms of the sectors of society which it affects. Industry, health, education, politics, business: all are affected.

In the area of education, there now exist new online environments for learning. Such environments offer great potential and many possibilities for education and particularly for the teaching of French as a second or foreign language (FSFL). However, their potential may only be realized if teachers can accommodate their personal theories, beliefs and practices to suit the characteristics of the new environment. The potential may not be realized if, like Crusoe, teachers expect that the new environment will allow a simple transposition of their beliefs. Instead, teachers may need to define new maps, to adapt to the new environments and to evolve their beliefs to ensure that they are compatible with learning in the online learning environments.

This study is concerned with understanding how certain individuals react when faced with new environments. Thus, the dominant metaphor for the study is a geographical one. The terms *environments, lands, landscapes* and *territories* are used synonymously to refer to the settings for learning. The study takes an ecological perspective as a means of gaining insight into the relationships between online learning environments (OLEs) and teachers' beliefs about teaching and learning in such environments. Along with these environments and landscapes, we have the metaphor of the map, i.e., the representation of the environment or territory. The map is symbolic in this study of teachers' beliefs, personal knowledge and implicit theories. Just as the map serves as the traveler's guide through unknown territories, so too do teachers' own theories and beliefs largely influence the direction or approach they take in their teaching. The study's use of geographical metaphors is necessary in order to understand and conceptualize the new phenomenon of online learning environments with their accompanying technologies and tools. The entire concept of OLEs can best be conceptualized by relating it to concepts with which we are already familiar.

The online learning environments that are referred to in this study are comprised of the wide array of Internet tools and mediums that can be combined and exploited for educational purposes. The Internet itself can be many things to many people. The interest of this study is in the Internet as an open learning environment. By using the term learning environments we place a greater emphasis on the place in which learning takes place. In general, use of the term learning environments highlights a shift in thinking which is taking much of the focus away from teaching and redirecting it instead towards learning. For Perkins (1996), an environment has "length and breadth, places and parts, non living and living, simplicity and complexity, constancy and change" (p. v). Wilson (1996) describes a learning environment as "a place where people can draw upon resources to make sense out of things and construct meaningful solutions to problems" (p.3). The traditional reference of the "classroom" as the setting for learning means little when we think of OLEs. The term "virtual classroom" suggests that the new environments

for learning must, by necessity, be modeled from the "real world" counterpart. As this study aims to illustrate, the digital landscape of the Internet stands in stark contrast to the four walled classroom and, as such, has no equivalent in the "real world".

For the sake of convenience, and because the term *Internet* is more common than the term *online learning environments*, the two terms are used synonymously in this study. At the same time, the difference between the two terms should be made clear. The distinction between the two is that *online learning environments* refers specifically to use of the Internet for the purposes of teaching and learning and includes e-mail, video-conferencing technologies, the World Wide Web, discussion lists, telnet, FTP, gopher, Veronica, newsgroups, MUDs, MOOs, chat rooms, search engines, real audio, shockwave, HTML, VRML, Java and other such new, emerging technologies. The term *Internet* places greater emphasis on the tool or medium. However OLEs are far more than tools: they are places or spaces for learning of which the tools are simply one component.

What happens when the traveler or explorer visits new, uncharted lands? What happens when the map corresponds only partially, or perhaps not at all, to the territory? Faced with the newness of this environment, teachers can only rely on and adapt the maps that they have already and that are representations of the world of the classroom. Yet, while the classroom environment is familiar, the environment of the Internet is foreign or strange. How do their beliefs about the traditional classroom mesh with the new environment? How do they see their role? How do they see their students' role? What do they perceive as the value of this new learning environment? How do they perceive and interpret the experiences they have there? What type of approach to the teaching of FSFL do they favour when working in this environment? These are some of the questions and issues that are investigated in this study.

The primary question that has driven this study is: What are some of teachers' beliefs about teaching and learning FSFL in online learning environments? It is this question which can serve as a starting point for attempts to face the task of evolving second- and foreign- language teaching practices to bring them more in line with the demands, needs and possibilities of teaching and learning in online learning environments. Equally important is the need to understand these beliefs within a larger conceptual and historical context. This research thus aims to profile the beliefs and, as well, to situate them in relation to a broader context of the evolution of language teaching and of technology use in language teaching from the end of the 19th century up to the 21st century.

1.2 The Evolution of Second- and Foreign- Language Teaching

We are entering a new millennium, a new age one which Negroponte (1995) terms the "digital age". The digital age is an age of bits instead of atoms, an age of "ubiquitous computing" with smart cards, smart cars, "wearable media" and "digital butlers". Most importantly, it is an age of exponential change. Such change presents new possibilities and potential for learning. MUDs, MOOs, virtual worlds, 3D worlds, micro worlds, intelligent environments, simulated environments, global networks, adaptive systems and hypermedia environments are now

characteristic of the digital landscape for learning. Video conferencing, e mail correspondence, virtual travel, web publishing, key pals, electronic mentoring, electronic searches: these are but some of the categories of activities in which students can engage in the context of learning online.

Perhaps more than any other area of the curriculum, the teaching of a second or foreign language can capitalize on the potential and possibilities of online learning. The Internet facilitates, in a very large way, authentic and meaningful communication and presents significant potential for making language learning both more purposeful and more meaningful for students. Furthermore, sites, projects and activities for learning FSFL increase daily as interest in the Internet grows in education circles. Virtual communities, museums, virtual travel, global exchanges, visits to the Louvre in Paris, conversation with Francophone keypals, access to Francophone libraries: developments and progress in the Internet offer students of FSFL opportunities for authentic, meaningful, communicative language activities by recreating a virtual French environment in their very classroom. The concepts of virtuality and simulation characteristic of the Internet are not new to the teaching and learning of FSFL. One of the conventions assumed of a language class is the willingness and capacity to suspend belief and to participate in simulated communication. Thus, the teaching and learning of FSFL actually depends on these concepts in order to recreate the essence and elements of being in the milieu of the second or foreign language.

Methods for teaching FSFL have varied based on whether or not the learner has had direct access to the culture of the target language. The learner's access to oral practice or lack of it largely dictated the method. Advances in technology mean that all learners can now have virtual access to the target language and culture. Whether the learner is in a classroom in a remote Anglophone community in Canada or directly in Québec City or Paris is less of a constraint. The emerging technologies of the Internet and virtuality provide a "binocular illusion", "a magical window onto other worlds", the experience of being in a virtual world or remote location (Rheingold, 1991).

1.3 Strange New Worlds

The new landscapes for learning are ready to be explored and exploited by teachers. But are teachers ready or prepared for this new landscape or learning environment? Is it simply a matter of transposing one's knowledge, beliefs about and approaches to learning? Is the online learning environment different from the classroom only in the fact that it is virtual - in bytes instead of in atoms? This study is premised on the argument that online learning environments represent, metaphorically speaking, a strange land or foreign phenomenon with which teachers are largely unfamiliar. The newly created, unorganized and decentralized world of the Internet is a strange land particularly for educators: strange not only because of its nature but because of how it contrasts with traditional learning environments. This section looks at OLEs in order to appreciate and understand the ways in which they differ from the traditional classroom environment.

De Kerckhove's (1997) reflections on the Internet provide us with a perspective that highlights its uniqueness and newness. The author argues that the Internet constitutes the most comprehensive, innovative and complex communication medium in existence representing the mega-convergence of hypertext, multi-media, virtual reality, neural networks, digital agents and even artificial life. It is a "quasi-organic environment of millions of human intelligences" (p. xxiii). The ecology of such a network can be characterized by three essential elements: interactivity, hypertextuality and connectedness. In contrast to the information technologies of the past which were aids to memory, the Internet serves as an aid to intelligence. It is the "ultimate decentralizing force" that suppresses all distances and all delays. The lack of "horizon" on the Internet leaves its users with a "loss of a clear sense of boundaries". The notion of personhood is challenged by extending the body's reach and range and through use of hypertext which "turns everybody's memory into everybody else's".

An additional distinguishing feature of the Internet relates to the notion of time. De Kerckhove explains the new conception of time created through Internet use:

> To conduct e-mail and related Internet activities, one needs a different sense of time. The difference is that the time in use is not linear. It is not real time because inputs or messages are not guaranteed an immediate response. However, the exchanges are not really out of time like the content of books, for instance, because they are almost as contextualized as a conversation is. They are like a telephone conversation in slow motion (and, of course, in text). This is the secondary "real-timeliness" of the web. One might call it "expanded" or "non-linear real time." The time of the net is expanded to include and accommodate the same level of context as an oral exchange, but over multiple entry points. (p. 82)

Internet communication is most often asynchronous which results in the element of time playing a less important role than in non-Internet communication. As Newhagen and Rafaeli (1996) observed in relation to time: "The Net stretches the edges of the synchronicity continuum. Communication on the Net travels at unprecedented speed. It can also be consumed at unprecedented delays" (p.2). The Internet can also be characterized as unorganized, uncensored, decentralized and unordered. It provides for non-linear presentation and communication as well as sensory vastness (Ibid.). Another important feature of the Internet is its openness. "On the Net, due to historical reasons perpetuated by the discovery of other functions, the organizing principle is to have no organization, or deliberate, orderly anarchy. The message keeps its own gate, carries its own homing device. The net treats censorship as noise and is designed to work around it" (Ibid., p.2).

One type of learning environment provided by the Internet or an approach to learning which it supports or facilitates can be described as constructivist. Mather (1996) argues that the Internet is a very natural partner for the computer technology that exists in the information age. He posits that the anarchy of the Internet, with its non-linear hypermedia, is a "natural proving ground for constructivism". Constructivist approaches to teaching and learning are based on the following assumptions:

- Knowledge is not transmitted and received, rather it is actively constructed by individuals through interaction with their physical and social environments. (Cognition Technology Group at Vanderbilt, 1996)
- Teachers play the role of a "midwife in the birth of understanding" as opposed to being "mechanics of knowledge transfer". Their role is not to dispense knowledge but to provide students with opportunities and incentives to build it up. (von Glasersfeld, 1996)
- An awareness of the social construction of knowledge suggests a pedagogical emphasis on discussion, collaboration, negotiation, and shared meanings. (Ernest, 1995)
- The learning process is student-centered whereby students play an important role in setting the goals for learning. (Honebein, 1996)
- Rather than behaviours or skills as the goal of instruction, concept development and deep understanding are the foci. (Fosnot,1996)

Knowledge collaboration and construction, student-centered learning, shared meanings, life-long learning, learning communities, knowledge building and sharing, communication, high learner control, problem-solving, active learning and authentic activities: these are some of the important values of constructivist approaches and are facilitated by online learning environments. They are not, however, necessarily well supported by traditional learning environments (TLEs). The differences between the OLEs and TLEs arise, not only from the differences in approaches which they support, but from the fundamental characteristics of each environment as explained in the following section.

1.4 Familiar Worlds

The learning environment of the traditional classroom is a legacy of the 15th century printing revolution - a system of schooling that relies on a print environment. Linear sequential order, uniform curriculum divided into subject disciplines, centralized bureaucracy, emphasis on book learning, a focus on content as opposed to process: these are all characteristic of TLEs (Logan, 1995). Farnham-Diggory (1990) describes how many aspects of TLEs which we take for granted today are actually modeled on the factory environment:

> There are standardized ways of keeping records, planning curriculums, furnishing classrooms, dividing up school days (into periods), dividing up curriculum (into units and lessons), administering discipline, instructing, and grading. Every school, every district, and every state has manuals that detail exactly how things are to be done. Ideas of quality control and interchangeability were borrowed from the workplace and applied to education. (p.23)

The classroom environment is highly structured, controlled and organized. It is generally physically designed to be teacher-centered with a blackboard at the front facing rows of student desks. It uses a traditional text-based curriculum which is delivered through a lecture-recitation-seatwork mode, with teacher as dispenser of knowledge and with the common tools being textbooks, workbooks, ditto sheets and overhead projectors (Dwyer, Ringstaff, Sandholtz, 1992 1992b). The physical environment of schools impacts on the types of activities that take place, on

the types of rapports that exist and, no doubt, on the beliefs that motivate teachers' behaviours in these schools. The classroom is traditionally bounded, not only by four walls, but by the structures, rules, procedures, schedules and curriculum. In an investigation of the types of learning that are supported by different physical environments, Stuebing, Celsi and Cousineau (1994) describe the traditional school building:

> From a physical perspective, the traditional school building is a double-loaded corridor that compartmentalizes classrooms, as well as students and teachers, into what has commonly been called an "eggcrate" arrangement. This historical model for school organization has been associated with an emphasis on control of students and on teacher-centered, lecture-format learning. (p.2)

Part of the setting or organization of schooling includes the element of time. TLEs allow for instruction organized around short blocks of time (Means et al.,1993). The dynamics of clock and calendar dictate much of the activity in schools. The report of the National Education Commission on Time and Learning (1994) investigated the role of time in learning and illustrated the dominance of time in the school environment. Schools are characterized by:

- fixed times for opening and closing;
- fixed time for the length of the school year;
- a division of the day into six-periods with about 5.6 hours of classroom time a day;
- regardless of the complexity or simplicity of the school subject, the schedule assigns each an impartial national average of 51 minutes per class, period, no matter how well or poorly students comprehend the material;
- secondary school graduation requirements are universally based on seat time - a standard of measurement representing one credit for completion of a one-year course meeting daily;
- the school clock governs how families organize their lives, how administrators oversee their schools, and how teachers work their way through the curriculum;
- time governs how material is presented to students and the opportunity they have to comprehend and master it.

Farnham-Diggory (1990) has also noted the important role that time plays in TLEs. Time, structure, organization, compartmentalizing: these are all dominant features of the school environment as the author describes:

> Days are subdivided into periods, periods are subdivided into lessons, lessons are subdivided into objectives (for example, working ten problems correctly). Even within a forty-minute period devoted to the same subject matter (social studies for example), there is often no clear unifying theme. There are exercises to be gone through, daily lesson "scripts" that the children have learned to expect, but there is little internal organization to the material. At the end of the period, work in one area is "put away", and work for the next area is "gotten out". Sometimes students go to another room and another teacher. The adjacent lessons seldom have any connection and the lessons that address the topic just covered, won't come round again for at least a day, and sometimes not for several days or even a week. (p. 145)

Papert (1993) argues that much of present day schooling "remains largely committed to the educational philosophy of the late nineteenth and early twentieth centuries". Tests, "segregation by age", teachers as technicians who mold passive minds, and an emphasis on reading as the "essential route to knowledge" are the prime characteristics of today's education system according to Papert. Schools use a "Gothic Cathedral model of learning" with the "knowledge architect" who will specify a plan for the placement of "knowledge bricks" in the minds of children. Knowledge is transmitted through a pipeline from teacher to student and is "treated like money, to be put away in a bank for the future". What Papert is describing is the transmissionist or instructionist models or practices characteristic of most classrooms (Cognition Technology Group at Vanderbilt, 1996). Transmission models of teaching and learning are based on the following assumptions:

- Learning involves the accumulation of particular sets of facts and skills; teaching involves the transmission of facts and skills by an expert;
- assessment involves an accounting of whether the desired facts and skills have been acquired;
- the role of the teacher is to deliver information while the role of the student is to demonstrate that what has been transmitted has been attained; and
- typically, all students are taught the same thing at the same time. (Cognition Technology Group at Vanderbilt, 1996)

When we examine the traditional environment of the classroom, we can identify a number of prominent characteristics and defining features. The environment is highly structured, controlled and organized, text-book centered and curriculum and time driven. It is modeled on a philosophy of learning from the past. The most appropriate metaphor to describe the model would be that of the factory or assembly line. Such an environment best supports what can be termed as a transmissionist or instructionist approach to learning and teaching. Such an environment contrasts radically with OLEs which were described in the previous section. The following section of this chapter aims to highlight the differences between these two types of environments. More importantly, it questions what occurs when the two types of environments overlap, or when teachers move from one environment to the other.

1.5 The Map is not the Territory

This study takes an ecological perspective and therefore considers, not only the environment but, as well, the relationships and interplay between the elements in the environment. For this reason, we have noted the physical characteristics of both traditional and online learning environments while at the same time considering the types of learning situations which each best supports. Thus, behaviourism or a transmissionist approach to learning cannot be overlooked as an essential element in TLEs. Likewise, OLEs can be used to support forms and aspects of behaviourist learning. However, this is not the theory of learning or approach that is most easily supported by this environment given its unstructured, uncontrolled, vast nature. The following table contrasts the two environments by considering, not only the physical characteristics, but, as well, the types of learning and teaching which they most easily support.

Table 1.1 Comparison of traditional versus online learning environments

Traditional learning environments	Online learning environments
Support instructional approaches	Support constructivist approaches
Synchronous communication	Asynchronous & synch. communication
Linear, sequential pattern	Non-linear/hypertextual pattern
Structured by time	May operate independent of time
Highly structured and organized	Decentralized & unorganized, unstructured
Censored, controlled	Uncensored, uncontrolled
Closed environment	Open environment
Print/text-book bound	Characterized by sensory-vastness
Filter reality	Generate reality
Sameness and stability	Growth and change

While the trend may once have been to talk of “Brave New Worlds”, it would seem more appropriate to refer now instead to “Strange New Worlds”. As a learning environment, the Internet appears to have little in common with what is typically associated with school and education. The Microsoft tagline “*Where do you want to go today*?” epitomizes the unbounded or unlimited nature of the Internet.

The classroom environment with its clearly delineated boundaries, both physical and non-physical, contrasts sharply with the comparative open nature of the “real world”. Yet, just as we can compare the bounded world of the classroom with that of the “real world”, so too can we compare the “real world” with the “virtual world”. In so doing, we are likely to find the “real world” to be bounded in comparison to the online learning environments of the Internet. In the online, virtual world, the absence of time, but more importantly, the absence of distance means that those who enter this world are almost unlimited in terms of the access afforded them: access to places, to people and to experiences that they could never have in their classroom or perhaps even in the town in which they live. It is indeed global access and even more since the Internet can allow access to recesses otherwise often hidden. Online, a student may converse with a prison inmate, with a famous author. He/she may research a question from how to do a science experiment to how to build a bomb. While such examples are extreme, they nonetheless illustrate the open nature of the Internet. More importantly, the examples illustrate the enormous abyss which lies between the world of the classroom and that of OLEs.

Logan (1995) argues that such a difference between two environments is not a unique situation. However, as he aptly argues, this time, the mismatch is far more pronounced than in the past:

> The current mismatch between the newer forms of information processing and the institutions designed for older forms is not historically unique. In every age and in every society that has undergone significant technological development and change, a mismatch between the new techniques and the old institutions has been a problem. Our era is no different except that the transition between the old technologies and the new ones has been more rapid and hence the mismatch has been greater. (p.214)

Teachers accustomed to a structured, bounded and teacher-centered, environment no doubt find themselves in a foreign landscape when using the Internet for learning. Their map no longer represents the territory. Using the Internet for learning involves or necessitates a shift in thinking and beliefs about learning and teaching. Becker (1991) argues that improving education through use of technology "will require teachers and administrators to modify their concepts of appropriate and inappropriate teaching behaviours, to reprioritize the value of different types of instructional content, and to change habits and assumptions that guide their classroom and school management strategies" (p.8). Technology based on constructivist theories cannot simply be assimilated into traditional classroom practices (Cognition Technology Group at Vanderbilt, 1996). Moving from one environment to the other such as from the traditional, bounded classroom to an online learning environment is much more challenging when the theory of learning underlying the technology requires a transformation of existing classroom practices or when the map no longer represents the territory.

At the same time, it is possible that the environment itself can have an impact on beliefs. Kagan (1992) speculates about how the learning environment actually reinforces and ingrains beliefs. She describes how beliefs grow out of a need to adapt to and survive in the particular and somewhat peculiar environment of the classroom:

> A significant characteristic of classroom teaching is its many uncertainties. A teacher cannot continue to orchestrate instruction and maintain control in the highly unpredictable environment of the classroom without knowing whether things are going well; a teacher must be able to identify, label, solve, and evaluate the solutions to problems. Because there are no indisputable external guidelines, teachers create their own, in the form of a personal cohesive pedagogical system that they can support without reservation. In a landscape without bearings, teachers create and internalize their own maps. (p.80)

Kagan's theory highlights the role that the teacher's environment plays in formulating beliefs. If indeed one's environment affects one's beliefs, then, does changing the environment of the teacher provide a concomitant change in beliefs? What happens when Kagan's metaphorical landscape is altered? Do teachers formulate new maps? Do they change their beliefs? Is there a conflict between the environment and their beliefs?

In his discussion of “The Stranger”, Schutz (1944) theorized from a sociological perspective about what happens when one's environment changes:

> Strangeness and familiarity are not limited to the social field but are general categories of our interpretation of the world. If we encounter in our experience something previously unknown and which therefore stands out of the ordinary order of our knowledge, we begin a process of inquiry. We first define the new fact; we try to catch its meaning; we then transform step by step our general scheme of interpretation of the world in such a way that the strange fact and its meaning becomes compatible and consistent with all other facts of our experience and their meanings. (p.507)

This “scheme of interpretation” to which Schutz refers are similar to what Wehling and Charters (1969) refer to as representations, or cognitive maps, of the external world and to what Kagan terms a “personalized pedagogy” or “belief system”. When confronted with uncharted territory, Schutz's stranger is forced to reconceptualize, to rethink existing notions, to reinterpret and define new maps. When teachers move from the traditional landscape of the classroom to OLEs, they essentially become Schutz's stranger “who has to place everything in question” (Schutz, 1970). They are the “stranger in a strange land”. The new patterns of the strange land are as Schutz describes “not a shelter, but a field of adventure, not a matter of course, but a questionable topic of investigation, not an instrument for disentangling problematic situations, but a problematic situation itself and one hard to master” (p. 93).

Teaching and learning assisted by emerging technologies may only represent a step forward in the history of education if teachers' practices take full advantage of the potential and possibilities of the technology. For this to happen, teachers must be able to shift their beliefs to accommodate new ways of learning, thinking, working, collaborating, sharing and building knowledge. They must be able to redesign their maps to fit the new territory. However, these beliefs must first be articulated and made explicit so that they can be questioned, understood and evaluated by the teachers themselves. This research thus represents a first step in assisting teachers to make their beliefs more explicit and in helping them evolve their teaching approaches.

Chapter 2 of this study focuses specifically on the evolution of approaches to teaching FSFL. The influence of learning theories in teaching languages is outlined from a historical perspective. As well, the chapter traces the evolution of the role played by technology and the interplay between technology use, learning theories, and approaches to FSFL teaching. As part of the evolution, a vision for the teaching and learning of FSFL in the 21st century is described. The vision relies on teaching and learning in OLEs using a constructivist approach. The study will aim to understand teachers' beliefs by interpreting them in relation to this evolution.

1.6 Research Questions

Landscapes without bearings, strange lands, uncharted territory: these are metaphorical characteristics of online learning environments where teachers, as foreigners, must begin to define new maps to guide their way. This study provides teachers of FSFL with the opportunity to talk about their experience in online learning environments. Through an exploration of their beliefs, it is hoped that insight may be gained into teachers' personal pedagogies, knowledge and theories that guide their practice and that form the philosophical basis for the approaches which they take to the teaching of FSFL using the Internet. The two questions which guided the research are as follows:

1. What are some of the beliefs of teachers of FSFL in relation to teaching and learning in online learning environments?
2. What do these beliefs reflect in terms of the evolution of approaches and use of technology in the teaching of FSFL?

The first question is very broad and seeks to identify the range of different beliefs held by teachers. These beliefs represent teachers' personal knowledge and their implicit theories that serve as cognitive and affective maps which they have evolved and which guide them in their daily interactions in their environment. Research question 2 qualifies the beliefs according to a historical continuum from the end of the 19th century and into the 21st century. The second question aims to interpret these beliefs in relation to this conceptual and historical framework. Teachers' beliefs or implicit theories are thus interpreted in relation to the official theories of language learning specifically and in relation to theories of learning in general. Do teachers' beliefs reflect the earlier attempts at teaching languages when Grammar-Translation, the Direct Method or Audio-Lingualism represented popular approaches to the teaching of FSFL? Do the beliefs reflect a behaviourist approach or a constructivist approach? Do the beliefs reflect aspects of the vision for learning FSFL in the 21st century as outlined in Chapter 2? Do they represent an attempt to take full advantage of the potential of OLEs to transform the learning process?

1.7 Methodology: Overview

The study relies on a variety of means to probe and profile the beliefs of teachers. The potential of the Internets a tool for research is exploited by the present investigation which relies on an online discussion list and e-mail correspondence with some of the discussion list participants. The study also includes use of a more traditional research technique, that of a mail-out, open-ended questionnaire and semi-structured interviews with some of the questionnaire participants. The data are collected, analyzed and interpreted in relation to the historical and conceptual framework outlined in Chapter 2 of this study.

The present research aims to understand the meanings which individuals in a particular context have evolved. Specifically, it seeks to understand some of the underlying beliefs or implicit theories of teachers. It attempts to make sense, to understand, to make more explicit, this underlying aspect of the teacher's complex world. The socially-constructed realities or worlds of teachers constitute the object of this study. The role of the researcher as ethnographer is to

observe these multiple realities, to articulate, interpret and reconstruct them (McMillan Schumacher, 1997). The methodology is described in detail in Chapter 4 of this study.

1.8 Rationale for the Study

Pajares (1992) argues that the investigation of teachers' beliefs "should be a focus of educational research and can inform educational practice in ways that prevailing research agendas have not and cannot" (p.307). The research of Jakubowski and Tobin (1991) suggests that teachers' metaphors and beliefs not only influence what teachers do in the classroom, but that changes in these same metaphors and beliefs can result in changes in teachers' practices. Brousseau, Book and Byers (1988) affirm that knowledge gained through investigation of teachers' beliefs can provide insight for teacher education programs and instructional leaders. They argue that the first step toward understanding how to affect the process of schooling would be to understand the values and beliefs of those who drive those processes. Understanding teachers' beliefs and how they are impacted on by a change in context or environment is a necessary first step in bringing about positive change in teaching and learning.

As interest grows in use of the Internet for teaching and learning, we must ensure that teachers are able to fully capitalize on the potential that this new environment has to offer for the learning of FSFL. Teachers can be assisted in this effort by professional development that builds on their existing beliefs and knowledge. However, both pre- and in-service efforts may well miss their mark if they are premised on assumptions inconsistent with teachers' beliefs and implicit theories. We must be assured that teaching represents a true innovation and evolution. Ideally, such teaching will not aim to "extend or replicate the classroom model" (Bates, 1996) but, instead, will dramatically transform it. Understanding teachers' beliefs about teaching and learning in OLEs will undoubtedly provide the type of insight needed in order to work effectively with teachers to assist them in evolving their beliefs.

1.9 Significance of the Study

The study provides a significant contribution in terms of its scope. Three areas are linked and combined to provide insight into the complex interplay between online learning environments, the evolution of FSFL methods, and teachers' beliefs. While previous research may have explored teachers' beliefs and FSFL or teachers' beliefs and technology, this study links three different areas. As well, the scope of this study is significant because it focuses on a wide range of experiences in terms of the teachers who participated in the study. These teachers represent different grades, experiences and geographic areas. The approach represents an experiment with an alternate means of collecting data in general and, in particular, it represents an effective means of eliciting beliefs through conversation and discussion. In this sense, it represents innovative use of emerging technologies for research purposes and could serve as an example for other research designs.

The increased interest in cognitive psychology has resulted in a shift in research efforts away from the product and observable aspect of teaching to the cognitive process, i.e., to teacher thinking, attitudes and beliefs. Until now, much of the research on teachers' beliefs has focused on the areas of science and math education or on reading. These investigations have frequently been concerned with understanding how teacher beliefs impact on practice. The present investigation differs from these past studies in several ways. The focus here is not only on teachers' beliefs about teaching and learning FSFL but on teaching and learning in online learning environments. Rather than considering how these beliefs impact on practice, the present investigation explores what happens to teachers' beliefs when they find themselves in an altered context or "strange land". The present study also differs from other studies of teachers' beliefs by its emphasis on the individual beliefs themselves as opposed to an emphasis on sets or systems of beliefs belonging to individuals. For example, some studies may focus on four or five individuals in order to profile the beliefs of each person. The present study focuses on the different types of beliefs themselves. Such a focus provides an opportunity to gain insight into the range of beliefs that exist among teachers and to understand the periods in the evolution of teaching which these beliefs reflect.

1.10 Limitations of the Study

This study is limited to profiling the beliefs of teachers and to understanding their nature in relation to the conceptual and historical framework outlined in Chapter 2 of this study. The study is very broad and does not focus specifically on one area. This broad scope was necessary in order to provide an initial foray into an area which has, until now, not been studied. For this reason, the study did not focus specifically on one grade area such as primary or secondary or on one aspect of language learning such as writing or speaking. It did not focus on one program such as French Immersion or Core French or on one area such as Newfoundland. Nor did it focus on one aspect of online learning such as MUDs or MOOs. Thus the study is limited to a very general synopsis or overview of a broad topic.

The study aims to capture or profile a wide range of different beliefs, and in so doing, it has needed to include a large sample of teachers. The large selection does not, however, indicate an aim to provide data which might be generalized to a wider population. Instead, the onus is on the readers of this study to generalize the beliefs to their situation. The choice of participants is motivated, not by a concern for representativeness, but by a conceptual question. In order to understand teachers' beliefs on this issue, we must see different instances of these beliefs, in different places and with different individuals.

The beliefs profiled in this study are those that teachers were able and/or willing to articulate or those which the researcher gleaned in collecting data. There are, no doubt, many beliefs that teachers did not articulate either because they did not have the vocabulary to do so, because the beliefs were not at a level of consciousness where teachers could recognize them, or because, simply, the teachers chose not to reveal them. There are other beliefs which teachers may hold in relation to teaching FSFL in online learning environments which they may not have had the opportunity to articulate in the context of this study. Although every effort was made in the data

analysis to ensure the integrity of the beliefs which were expressed or uncovered, it was not possible to categorically verify that these beliefs were indeed truly held by the teacher. No attempt was made in the study to determine whether or not the beliefs were strongly or not strongly held. Not all experiences could be accounted for in the context of the investigation, nor could all topics be touched on. Thus, the beliefs profiled in the study are not inclusive of all the beliefs on teaching and learning FSFL in online learning environments held by the teachers in the study.

1.11 Definitions and Clarification of Terms

Teachers

For the purposes of this study, the focus is primarily on teachers at the classroom level - i.e., Kindergarten to grade 12. However, the term will also refer to individuals teaching at the preschool or the post-secondary level.

Beliefs

A complex and inter-related system of personal and professional knowledge that serves as implicit theories and cognitive maps for experiencing and responding to reality. Beliefs rely on cognitive and affective components and are often tacitly held.

French as a Second Language

This term also includes French as a foreign language but does not include French as a first language. Reference will also be made to second languages in general particularly in the review of the literature. This reference to second languages will be considered as inclusive of French as a second and foreign language.

Online Learning Environments

Use of this term in this study will generally be synonymous with the Internet. The distinction between the two terms is that Online Learning Environments refers specifically to use of the Internet for the purposes of teaching and learning and includes e-mail, video-conferencing technologies, World Wide Web, discussion lists, Telnet, FTP, Gopher, Veronica, newsgroups, MUDs, MOOs, chat rooms, search engines, Real Audio, Shockwave, HTML, VRML and Java and other new and emerging online technologies, tools and systems.

Mailing List/Discussion List

Mailing lists are lists of email addresses held by a computer listserv which are used to forward messages to groups of people. Mailing lists are set up to discuss specific topics which interested people subscribe to. Correspondence is sent to the listserv which forwards the mail to the whole list. (Williams, 1997)

Discussion

A purposeful and systematic exchange of experiences, anecdotes, personal knowledge and implicit theories, by means of electronic, asynchronous, written communication by a group of teachers sharing a common interest in the teaching and learning of FSFL in online learning environments.

Computer-Assisted Language Learning, CALL

The use of computers to assist in second or foreign language instructional activities. It is CAI (Computer Assisted Instruction) applied to L2 learning and acquisition. (Merrill, Tolman, Christensen, Hammons, Vincent, Reynolds, 1986)

World Wide Web

The World Wide Web is a set of software tools and standards that allows individuals to distribute and obtain information stored on the Internet. (Haughey Anderson, 1998, p.26)

The Internet

The Internet is a network of networks formed by the connecting together of computers and computer networks around the world through telephone and high-speed transmission lines. (Ibid, p.12)

Core French

A program of instruction in which students study the various aspects of French language during a regularly scheduled time slot.

French Immersion

A program designed for non-French-speaking individuals in which French is the language of instruction in the classroom for all or some of the subject areas.

1.12 Overview of the Study

The inclusion of so many elements in this one study is evidence of the recognition that education is a process where many factors or elements interact and combine in curious and often complex ways. The data consist of individual and group "discussions" with teachers as well as use of questionnaires. Teacher talk is privileged in this study as a means of making explicit the otherwise implicit and tacit beliefs of teachers. The discussions and questionnaires each focus on understanding how the different elements combine and interact. The interpretation of the data centres around understanding teachers' beliefs in relation to the conceptual and historical framework outlined in Chapter 2 of this study. The following paragraphs outline the organization of the study as a whole.

This first chapter presented the problem addressed by the study. The traditional environment of the classroom was compared and contrasted with online learning environments. One of the most important differences in the two environments relates to the reliance on differing learning theories. Whereas TLEs often support a teacher-centered, transmissionist style of learning, OLEs support a more learner-centered, constructivist approach to teaching and learning. Teachers' beliefs come largely from their experiences in the traditional learning environment. What happens when teachers' beliefs interact with the online learning environments? "Strangers in a strange land" is the analogy used to evoke and explain the experience of moving to a foreign environment. This study provides teachers with the opportunity to articulate their experiences of being a stranger in a strange land, of adapting to a new environment. The study aims to profile a range of beliefs of teachers about working in OLEs.

The purpose of Chapter 2 is to provide background information on the evolution of approaches and of technology use in the teaching of FSFL which will serve as a historical and conceptual framework for the study in general. The chapter traces the influence of learning theories on practices and in the use of technology in the teaching of FSFL throughout the past century. A vision is outlined for teaching and learning FSFL in the 21st century. This vision is premised on use of OLEs and draws heavily on the theory of constructivism. It serves as a frame of reference for analyzing and interpreting teachers' beliefs.

Chapter 3 presents a review of the literature on the topic of teacher beliefs. Included in this review are studies and literature related to:

1. The nature of beliefs;
2. beliefs and change;
3. teachers' beliefs about teaching and learning;
4. teachers' beliefs about teaching and learning with technology;
5. teachers' beliefs about teaching and learning FSFL.

Various studies have contributed to our knowledge about teachers' beliefs on such topics as teaching FSFL and teaching with technology. These studies provide a useful starting point or framework from which to begin to build an understanding of teachers' beliefs about teaching and learning FSFL in online learning environments. Many of the studies included in the review aim to understand beliefs in relation to learning theories and, as such, present a perspective with which this study's data can be compared and understood.

Chapter 4 outlines the research methodology used to investigate the research questions. Eliciting beliefs and assuring the integrity of what is uncovered requires sophisticated and unobtrusive techniques that allow teachers to articulate what would be otherwise unconscious, implicit, tacit and unarticulated. Ensuring the integrity of such teacher talk also requires a wholistic means of analysis that captures the interrelatedness and complexity of the construct specifically and of the teacher's world in general. The present investigation relies on an online discussion which took place over the period of September, 1998 to June, 1999 and included participation from teachers primarily in Canada and the U.S. as well as in Europe, Australia, Africa and South America. As well, data were collected by means of questionnaires which were distributed to teachers in Newfoundland and Labrador, Canada. Finally, dialoguing was conducted with 16 discussion list

participants and with 5 of the teachers who completed the questionnaire in order to gain a more in-depth understanding of the beliefs.

Chapter 5 presents the findings in a descriptive format. Excerpts from the discussions and questionnaires are presented in order to illustrate teachers' beliefs. The chapter aims to present the data with a minimal amount of interpretation. Chapter 6 presents an interpretation of the findings. The aim of the interpretation is to provide an answer to research question 2. The beliefs are analyzed in relation to the evolution of teaching approaches, learning theories and technology use in second- and foreign-language education as outlined in Chapter 2. Chapter 7 groups the major findings into themes and moves beyond an interpretation of the findings in order to understand the implication of these findings for educational practice and research. A discussion is presented on methodological considerations. Recommendations are made for educational practice as well as for educational research.

1.13 Conclusion

The conditions at the turn of the century are evolving in such a way as to encourage educators to reformulate goals, reconceptualize roles, redefine learning and teaching, and to rethink what they do. But none of these acts can be accomplished successfully without first reevaluating what they believe about goals, roles, learning and teaching. Schools are busy places where the key players often don't have much time to tend to important acts such as thinking about what they do and, more importantly, why they do it. Their behaviours have become automatic - dictated by years of practice, by institutional conventions and, sometimes, by unquestioned, unscrutinized beliefs. Schools are about learning. Yet, how often do teachers have the opportunity to ask themselves: How do children learn best? What is learning? What is a teacher? The responses to these questions and to many others like them essentially become the blueprints for action, the maps that guide the teacher's way through days and years of classroom interaction with hundreds and perhaps thousands of children in the course of a career.

This study aims to get at the heart of teaching and learning. It looks behind the scenes and takes aim at the key actors - the teachers - for it is they who are the gatekeepers, who will ultimately determine much of the experiences to which students will be exposed within the confines of their schooling years. As such, this study provides intimate insight into hidden worlds, into the heart of teaching. The timing of this study is critical in the sense that it comes at a time when new technologies are beginning to impact on every aspect of life. Were this study conducted 40 years earlier when television represented the latest technological revolution, it would not have had the same impact. Whereas television had the power to improve teaching practices, OLEs have the potential to transform them. Whereas, 40 years ago, the educational community was immersed in a philosophy of behaviourism, today's community is on the verge of a possible paradigm shift to a philosophy of constructivism that reconceptualizes teaching and learning. More than ever today do we need to have insight into teachers' beliefs.

The teaching of FSFL has often been reflective of the prevailing social, educational and political trends. As such, it is unlikely to remain immune to the changes currently taking place in

technology and in educational philosophy. Teachers will be affected either directly or indirectly. The emergence of new technologies combined with an interest in and understanding of constructivism provides a backdrop for a change in approaches to the teaching of FSFL. This study will provide insight into the dynamics of this change from the perspective of the key stakeholders - the teachers.

Constructivist philosophies would have us see the teacher as a facilitator. Other metaphors for the teacher might include that of the master, sage, guide, banker or gardener. For the purposes of this study, it is useful for the reader to conceptualize the teacher as an explorer. The teacher is exploring new territories or new landscapes for learning- ones which are unknown, strange, without bearings, and unlike anything they have previously encountered. They have few reference points, few coordinates for their journey beyond the maps which they have used in the familiar territory of the traditional classroom. The following chapter describes the theories and thoughts of the last 100 years of second- and foreign- language education in order to understand what some of these reference points or coordinates might be. The remainder of this study then follows its own journey into the heart of teaching - into teachers' beliefs.