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Virtual Insights:
The Design, Development and Evaluation of a Strategy for Online Communication in Teacher Professional Development

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A Thesis

in

The Department

of

Education

Presented in Partial Fulfillment of the Requirements
for the degree of Master of Arts at
Concordia University
Montreal, Quebec, Canada

January 2000

***Virtual Insights*: The design, development and evaluation of a strategy for online communication in teacher professional development**

By Jeanette Caron

This thesis discusses the process of the design, development and evaluation of a strategy for online communication within a model of professional development for teachers and the results of an eight-month pilot project involving two school teams. The pilot project involved two school teams and an online process with a newsgroup, email, and online mentors. The strategy for online communication was designed to support a constructivist-based environment. Considerations for the design and development of an online communication strategy for a model of professional development include: the instructional needs of the learners, the needs of the model for professional development as a self-sustaining system, and support mechanisms for the new media and novice learners.

Participatory evaluation methods were used to assess the strategy for online communication. Insight into the integration of participatory evaluation methods into the instructional design process of building an online community suggest that participatory evaluation methods have potential, but require a significant amount of timing, planning and resources.

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To my family and friends who supported me along the way – thanks!

Part One: Introduction and Literature Review

Chapter One: Problem and Significance, Focus and Research Questions

Introduction

What constitutes a model of professional development for teachers in today's world? How does a strategy for online communication support the process of professional development? Recent years have witnessed the integration of computer-mediated-communication (CMC) into the worlds of both formal and non-formal education. CMC in education is fast becoming a major topic for research. Professional development, limited in this context to non-accredited learning, may also benefit from the infusion of technology. The focus of this research is on the use of online communication in the professional development of teachers in the English sector of the Québec school system.

Thesis Statement

This thesis examines the '*qesn.connection*' as a model of teacher professional development. More specifically, it investigates the strategy of the online communication, embedded in the model, in terms of how the online communication strategy (including a newsgroup, email and 'online mentoring') serves the *qesn.connection* professional development community. By following the design, development and evaluation of the online communication strategy for the 'qesn.connection' pilot project, this research examines critical issues for professional development and instructional design. In other

words, from an instructional design perspective, what should a strategy for online communication for professional development include? How does a strategy for online communication support teachers in their professional growth? How does one evaluate a strategy for online communication within professional development?

Thesis Structure

This thesis is divided into four sections. The first section serves as an introduction to the issues related to the use of online communication in professional development for teachers and presents a literature review. The second section recounts the design and development phase of the qesn.connection pilot and implementation period. Included in this section is a description of the pilot sites, people involved in the pilot and the role of the research team. The third section describes the thesis methodology and data analysis. The final section of this thesis features a discussion of the research questions, conclusions, recommendations and suggestions for future research.

Research Objectives

This document represents the culmination of personal experience working with teachers in a face-to-face environment, personal and professional experiences online, a variety of theoretical foundations including distance education, learning theories, and participatory research. This topic was chosen in order to gain exposure to online communication, as an innovative medium for learning and for experience in participatory evaluation, as a different approach to instructional design. Aside from my personal interest, there are many reasons why the study of this topic is of theoretical significance

This thesis offers insight into both theory and practice of the design and development of a strategy for online communication for teachers within the *qesn.connection* and an evaluation strategy for the same. Insights into the *qesn.connection* online environment will be discussed based on existing models of online communication for professional development, the theoretical underpinnings of the project and real-world realities of schools and teachers. This research is of interest to those involved in the creation of virtual communities for professional development and for those interested in different approaches to the development and delivery of professional development for teachers.

Limitations of the study

The major limitation to this study was time. The importance of time within a project investigating the design, development and evaluation of an online environment cannot be understated. Time was a factor with respect to access to the participants and the timing of the pilot project. The pilot project coincided with the merging of school boards, accompanied by numerous administrative-related hurdles. In addition to time constraints, the pilot involved a small sample size. Finally, researcher inexperience within a non-traditional method of evaluation further complicated matters.

Research Questions

With respect to the strategy for online communication, based on a literature review, assessment of the learning environment, and needs assessment, what should a strategy for online communication for professional development include? What criteria should be used to develop a strategy for online communication? How is online communication being used in existing models of professional development today?

With respect to building an online community, what factors must be considered so that the online environment will be self-sustainable ? What factors are important with respect to the teacher use of the *qesn.connection*? How does the combination of a newsgroup, listserv and 'online mentoring' serve the *qesn.connection* community?

With respect to the conditions of the model, how does the strategy for online communication within the *qesn.connection* allow for 'differences in learning situations'? How does the online communication strategy support a model of distance education designed to 'conform to the philosophy of the MEQ with regard to school culture and direction toward professional development? Does the strategy for online communication support teachers in their professional growth?

Finally, what implications does this research yield for the theory of online communication and the professional development of teachers in Québec? What implications does participatory evaluation hold for instructional design?

Chapter Two: Literature Review

Online Communication and Education

An area of education that is continually redefining itself due to advances in technology is distance education (DE). Trentin (1997) describes online education as a third generation distance education system, in which 'participants interact in a fully-fledged learning community, which helps them overcome their isolation and enhances their contribution to the group.' (p.262). Trentin's description characterizes the evolution of distance education from an isolated experience (i.e. postal delivery correspondence courses) to a collaborative online experience. Learning theories have observed a shift from instructor-led to more collaborative, student-centered approaches to education within the face-to-face environment. The trend of a collaborative approach to learning can also be applied to non-accredited learning environments such as professional development for teachers.

Today, instructional designers have greater choices with respect to the mode of instructional delivery. Cost-effective means of delivery and support through online communication is becoming the norm. Many workplaces are turning to online communication as a cost-effective method of communicating with their employees. With the infrastructure in place, infusing professional development with online communication is possible. There are many characteristics of online communication that lend itself to professional development in the teaching environment (Schrum & Berenfeld, 1997).

However, little is known about the development of online communication within the context of the professional development for teachers. Generally accepted characteristics of online communication brought into the context of teachers include the potential to bring together groups from diverse geographical regions around the world quickly and cost-effectively. The asynchronous nature of online communication provides time-constrained teachers with convenient access to resources. The ability of online communication to transcend spatial and time constraints is not the only benefit for teachers. Merging online communication with professional development may also help to resolve a sense of isolation commonly experienced by teachers (Watts & Castle, 1992; Cole, 1996; Schrum & Berenfeld, 1997) due to a daily schedule with minimal time reserved for reflection or sharing of classroom practice with peers.

Constructivism, online communication and professional development

Over the past few years, researchers have encouraged the integration of constructivist approaches into teacher professional development. Siegel, (1978) confirms the importance of engaging in dialogue with peers, in activities framed within the context of the classroom. Constructivist notions of collaboration, construction, context and conversation (Jonassen, D., Davidson, M., Collins, M., Campbell, J., & Bannan Haag, B., 1995) are inherent in online communication. As previously mentioned computer-mediated-communication transcends geographic and time constraints normally placed on human interaction. Computer conferencing provides a space for learners to gather and

exchange ideas. The development of 'communities of learners', or 'communities of practice' is another potential of CMC. This is increasingly evident as more and more people gain access to the online environment. According to Burge & Roberts (1993), as quoted in Jonassen et al, '...technology can be used to create communities of learners and practitioners and can facilitate the interactions and activities necessary for solving real-world problems' (Jonassen et al, 1995, 8). Research supports the idea that a community of learners, in which participants are free to set their own goals within a flexible environment, best accommodates the needs of adult learners (Hayes, 1990; Kasworm & Bing, 1992).

Virtual Communities/ Communities of Practice

Online communities have formed a presence on the Internet as newsgroups, discussion forums, and support sites grow rapidly (Schrum & Berenfeld, 1997). The infusion of an online community of practice with professional development extends new potential for training, and collaboration. Mixing teacher professional development with the potential of an online community results in an interesting space for personal, professional growth and reflective practice. Anderson (1993) echoes the arguments of Cevero (1990), who suggests that encouraging professional reflection with peers is far more valuable than developing prescribed content materials as a means to support professional development of teachers. Computer-mediated-communication through email, newsgroups, or listservs provides teachers with an opportunity to converse with peers online, offering the potential to extend professional development activities beyond the traditional face-to-face workshop.

According to Jones (1995) there are two assumptions made concerning CMC. First, computers transcend traditional time and space boundaries and secondly, break down cultural hierarchies by providing easier access to people and information. These assumptions fuel discussion concerning the relationship between computer-mediated-communication and organizational change. Although delving into the complexities of organizational change goes beyond the limitations of this thesis, it is important to state the implications of using CMC within professional development of teachers. The use of online communication within teacher professional development may facilitate a break away from the traditional 'top-down, instructor-led' workshops, by supporting ongoing dialogue between teachers, and valuing the reflective nature of the activity. However, the question of whether CMC will stimulate organizational change by breaking down existing hierarchies and encouraging communication within the school hierarchy is definitely beyond the scope of this project.

Models of Professional Development Using Online Communication

Increasingly, strategies for online communication are integrated into the instructional design for models of professional development (Trentin, 1997; Cole, 1996). Canadian models of online communication supporting teacher professional development are also available. Although not formally considered a 'system of professional development', the Federal Government's 'Canada's SchoolNet/ Rescol canadien' programme provides online resources such as sample lesson plans, links to a variety of online projects, and

links to other governmental departments with aims to bring Canada online for teachers. The SchoolNet 'Grassroots' programme encourages teacher participation on the site by offering special funding in exchange for lesson plans that integrate the Internet in the classroom. Submitted lesson plans are posted online within SchoolNet's database for other teachers to access. Provinces and territories involved in this project include: Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Saskatchewan, and the Yukon.

In addition to the Grassroots project, Alberta offers the TELUS Learning Connection (TLC) website. The TLC uses a cascade model, with lead teachers from the various school boards as support to provide Internet training to teachers. The project also includes a website. The website contains resources, links, and lesson plans to help teachers use the Internet in their classrooms. Funds are available to allow the lead-teachers to work with other teachers on Internet-related projects.

British Columbia hosts the Community Learning Network (CLN) to provide teachers with adequate skills to promote the use of technology. The CLN website also contains a vast wealth of resources with the goal of supporting teachers as they integrate the Internet into their classrooms.

The Acadia Institute for Teaching and Learning provides another model of professional development for teachers. The Institute offers summer institutes, continuous online

resources and online support free of charge to Nova Scotia teachers. Online resources include job aids and online tutorials for popular software applications.

In general, most sites reviewed include resources for teachers, sample lesson plans and information about upcoming professional development workshops with links to post-secondary education institutions offering distance education courses. However, few provinces integrate the use of online communication with a program for teacher professional development in any official capacity.

Challenges to Online Communication in Teacher Professional Development

Using online communication within professional development is challenging. Technological glitches, system crashes, limited access to computers, low level software, little experience using computers and lack of time to learn pose additional challenges to the learning environment (Hiltz, 1990,1993; Harasim, 1993). These challenges will be discussed throughout this thesis.

The Design, Development and Evaluation of a Strategy for Online Communication

Harasim attributes a strong instructional design for the success of two university level online courses, which transformed a space for online communication into an educational experience (Harasim, 1993). The same careful planning must accompany the design and development of a strategy for online communication within the realm of professional

development for teachers. However, non-accredited professional development is different from a university-required course. How does the instructional strategy encourage professionals to interact and reflect with their peers online without university-bound incentives, such as grades? How does one encourage participation in an online community?

Evaluation and Instructional Design

Within a traditional instructional design approach, end-users (or representatives thereof) participate in the needs assessment and evaluation stages in the development of an educational product. If the 'educational product' being developed, is an 'online community' shouldn't the development process include the end-users in a more in-depth role? If so, at what point in the instructional design process should the end-user become more involved in the development of the process? The evaluation stage offers an interesting opportunity for participation.

Evaluation plays a key role in the instructional design process. There are many different forms and strategies for evaluation. Tovar (1989) writes about three types of evaluation as categorized according to political orientation and provides two examples of democratic evaluation: responsive evaluation (Stake 1975, 1977; Guba and Lincoln, 1982) and utilization-focused evaluation (Patton, 1982, 1986). The main features of these two strategies are that the evaluator works in collaboration with the client, producing a better quality evaluation, based on real needs and situated in a richer context. It is argued that by

working in closer collaboration with the client, a better relationship is developed and the recommendations based on the evaluation will be supported. The collaborative approach enhances the overall acceptance and value of the evaluation, which in turn facilitates implementation of the recommendations. A secondary benefit of a collaborative approach to evaluation, according to Tovar (1989) is the positive influence of the 'learning by-products' within the system as a result of employees and evaluators working closely together.

Participatory evaluation is another method of evaluation that works within a collaborative spirit. Participatory evaluation originates from fields such as international and community development (Whitmore, 1998). Researchers, who have used this method to evaluate school-based projects and programmes in the Canadian educational system (Cousins & Earl, 1992), describe participatory evaluation as:

> ...applied social research that involves trained evaluation personnel (or research specialists) *and* practice-based decision makers working in partnership...Participatory evaluation is best suited to formative evaluation projects that seek to understand innovations (programs) with the expressed intention of informing and improving their implementation. (Cousins & Earl, 1992, p. 8)

The main difference between participatory evaluation and other collaborative-type approaches is found in the role of the researcher and the participants. Traditionally, the evaluator is solely responsible for planning the evaluation. In a participatory evaluation model, the evaluator works in partnership with the evaluation participants to decide criteria, methods and analysis. The increased involvement in the process provides the

participants with an opportunity to discuss process issues and challenge traditional beliefs within the framework of an evaluation. (Cousins & Earl, 1995) However, the decision to use participatory evaluation within a project must be made with the understanding that the process requires more support than other evaluation methods. According to Cousins,

> The effort needs to be supported seriously and consistently with release time, technical support, support services, and recognition. In the absence of such back-up, the hardworking, dedicated organization members charged with "add-on" research responsibilities will quickly see intrinsic motivators evaporate in the face of overwhelming demands on their time and energy with relatively little payoff.' (Cousins, 1996, p.23)

Participatory Evaluation and the Online Community

What if members of an online community engage in an evaluation, and by doing so, strengthen their roles within the online community and their online participation increased? Online learning environments are a relatively new phenomenon and many are concerned with developing appropriate methods for evaluation (Lanfranco, 1999). Participatory evaluation follows a constructivist framework, involving all parties in the discussion of evaluation criteria and in the assessment of their own learning. Participatory evaluation offers great potential to the development of online communities, and holds promise for instructional design.

Cousins (1996) describes evaluation as 'the provision of support through systematic inquiry for educational decision making' (pg4). A conventional definition of evaluation

usually contains judgements of value and worth of the product being evaluated (Scriven, 1991; Stufflebeam, 1994).

Traditional forms of evaluation used in instructional design provide limited roles for the participants. However, the major difference between the traditional evaluation and participatory evaluation is within the conceptual and ownership issues of the evaluation. Traditional forms of evaluation leave the interpretation of the data (the participant's input) to the evaluator. Participatory evaluation values the opportunity of having the participants analyze their own data. Through this experience, the participants learn more about the issues surrounding their context.

This thesis argues that in the case of evaluating an online environment, increased participant participation is a positive step towards the development of the environment. Developing a sense of ownership over the evaluation of the online environment may serve to encourage activity in new participants, raise awareness of the online community and deepen the overall commitment of the user to the environment. Participatory evaluation methodologies have been successful in other fields. By integrating participatory evaluation techniques into the process of instructional design perhaps some of the benefits may also transfer into the process of developing an online community.

Analysis of the Online Environment

Regardless of the method chosen for evaluation project, data are collected and must be analyzed. One approach to analyzing data from online environments involves using descriptive statistics, participant observation, transcript analysis, and interviews (either through email or through face-to-face contact) to determine site usage (Harasim, 1993; Fishman & Gomez, 1997). However, other indicators are available for investigating online environments. Harasim (1993) looked for active participation, peer interaction, and divergent thinking as signs of a successful online environment in her research involving two university-based accredited courses. Transcript analysis of the online environment was used to determine the 'purpose' of the learning (Harisim, 1991, 1993). In order to evaluate the success or value of an online site, criteria must be devised.

A review of past research projects involving online data collection provided useful ideas. Correll's (1995) study of a virtual café, as described in Kilker & Kleinman (1997), drew parallels between public and interpersonal communication, telephone interviews, personal email, and field notes as participant-observer. Kilker & Klienman (1997) support the incorporation of the study of social interactions in research in order to explain the online context and not simply rely on message content. Cole (1996) presents a framework for analyzing electronic messages. She separated messages into general categories, then into different types within each category. She used this framework in order to describe the various kinds of messages posted by teachers on a national professional development

online forum for math. She started with the general categories of statements, questions and replies. During face-to-face interviews, participants were asked to describe their online experience in order to verify observations and data analysis.

Part Two: The Design & Development and Implementation Period

Chapter Three: The Design & Development of the Strategy for online communication

Introduction

This chapter presents the case story of the design phase of the *qesn.connection*'s online communication strategy. Background information essential to understanding the project is presented, followed by a discussion of the design process.

Background of the Project

The *qesn.connection* project began in April 1998, following a request by the Ministère de l'Education du Québec (MEQ). The objective was to design and implement a professional development infrastructure to support teachers in the anglophone sector of Québec. The resulting model of professional development integrates various media (video, website, computer-mediated-communication) and site-based collaboration among teacher participants. It is designed to support school teams at a distance within school-centered schedules.

Site and Sample Selection

Originally, three schools (two elementary and one high school) were chosen from various school boards in Québec to be involved in the pilot project. However, in the midst of the project, the high school terminated their participation, leaving the two elementary school teams as pilot participants. The sites chosen for the '*qesn.connection*' pilot project were located outside of the greater Montreal area, far enough away to be considered 'at a distance', yet close enough to permit visits to the school by the *qesn.connection* team should the need arise.

The research for this thesis was conducted during the pilot-test period of eight months, November 1998 to June 1999. Research activities were conducted at Concordia University, the pilot school sites, various interview sites and in cyberspace (through newsgroups, listserv and email).

About the 'qesn.connection Team'

The team responsible for the development of the '*qesn.connection*' included graduate students and faculty from the Department of Education and the Centre for the Study of Learning and Performance (CSLP) at Concordia University. Members of this group were experienced in issues related to professional development of teacher and the integration

of technology into the curriculum, having worked with the Services à la communauté anglophone, Direction des politiques et des projets (SCA-DPP) and as members in the New Technology Information Communication team (the NTIC team), also from Concordia University.

About the SCA-DPP

The Services à la communauté anglophone, Direction des politiques et des projets (SCA-DPP) is a section of the Ministere du l'Education de Quebec (MEQ). Part of the SCA-DPP's mandate is to support teachers from the anglophone sector with the implementation of new curriculum, part of the new school reform currently facing Québec. In order to assist the SCA-DPP with its task of supporting approximately three hundred and fifty schools distributed across Québec, a model for distance delivery of professional development, the qesn.connection, was developed.

The Original Design Request for the Development of the qesn.connection

According to the SCA-DPP's original request for the design and development of an infrastructure for professional development, the resulting prototype had to reflect the philosophy of the MEQ. The MEQ's philosophy (SCA-DPP, email message, June 1998) centers around professional development being an on-going process, with importance

placed on autonomous school teams making decisions about their professional growth. The learning must include meaningful activities, embedded within the context of the school. Finally, assessment also plays a role within professional development, as reflection becomes an ongoing activity.

The qesn.connection Model of Professional Development

The *qesn.connection* is an infrastructure for teacher professional development built around a framework of collaboration, construction, conversation and context. Using resources available from the *qesn.connection* website, teachers engage in a learning activity centered on their own students and classroom context. The teachers plan, implement and reflect upon the activity, which they developed and planned for their classrooms.

Within the *qesn.connection*, school teams are responsible for planning their own professional development days, arranging for release time and supporting each other through the process. During the pilot project, the *qesn.connection* team provided an initial facilitator's workshop for representatives from each of the school teams. During the facilitator's workshop, participants were introduced to the qesn.connection video, the website and the *qesn.connection* newsgroup.

During the Kick-off Day at each school, the teachers watched the video, supplied as a catalyst for conversation, and explored the website and newsgroup. The following

'Breakdown of Activities' is available online on the *qesn.connection* website. It is included in order to illustrate the *qesn.connection* process.

Breakdown of Activities

Activity/Session	Time Frame	Scheduling requirements	Team Flexibility
'On-site Facilitator' training	5 hours	One full day	Two members of the team
Video, discussion, media choice, filling out planner & working on project materials	5 hours	One full day	Whole team
More work on project materials	3 hrs	Half day	Whole team or small subgroups
In the lab / using computers with students and with another teacher for support + reflection & discussion time	45 – 60 mins lab time per teacher 30 – 40 mins reflection	one lab period or subject time + reflection time per teacher	in pairs or tryads
More lab time	45-60 mins	regular class time, no release necessary	each teacher
Putting finishing touches on project outline and e-mailing to website	2 hrs	flexible scheduling	each teacher or in pairs
Sharing experiences, putting together school-wide technology skills integration plan	2.5hrs	half a day	whole group

(Direct from Website http://www.qesn.meq.gouv.qc.ca/connection/tier2/lowdowny.htm)

Theoretical Foundation for the strategy of online communication

The online communication strategy was designed to reflect the principles and assumptions of the *qesn.connection* model. The strategy for online communication of the *qesn.connection* is based on a constructivist approach to learning. Jonassen, et al (1995), describe the fundamentals of such an approach under the rubric of 'conversation' as in dialogue/ negotiation between learners, 'construction' as in the construction of

knowledge, 'collaboration' among learners, and 'context' as in the natural setting of the learning.

Conversation

> "...Individuals and groups must negotiate plans for solving situated problems before initiating those plans. This planning involves reflecting on what is known, what needs to be known, the viability of various plans, and their potential effectiveness. " (Jonassen et al, 1995, p.14)

'Conversation' involves an exchange between the learners. The online environment not only provides access to other learners, but it also provides insight into other people's reflections. The *qesn.connection* supports learning conversations between participants involved in the project through various media. The following table illustrates the availability of communication channels embedded in the *qesn.connection* model for conversations 'within school' and 'between school'.

Within a School	**Mode of Communication**
Teacher to teacher (<->)	
Teacher to Administrator (<->)	Face- to-face, online (email)
Teacher to student (<->)	
Between Schools	
Between teachers	Email, newsgroup, telephone, face-to-face, fax
Between teachers and mentors	
Between school teams	

Table 1 Channels of Communication within the *qesn.connection* model

Construction

> *Construction* of knowledge is the result of an active process of articulation and reflection within a context. (Jonassen et al, 1995, p.13)

The online environments provide teachers with an opportunity to construct knowledge by offering a space for posting project updates, questions, responding to queries and articulating reflections to other teachers. These exchanges may occur online through a newsgroup or email, between teachers or 'online mentors'.

Collaboration

> Through the process of articulating covert processes and strategies, learners are able to build new and modify existing knowledge structures. (Jonassen et al, 1995, p.13)

The strategy for online communication is designed to encourage collaboration through the use of online mentors, and the newsgroup. The resources are provided in order to give teachers access to others interested in similar topics. This is especially important within the context of Québec schools. Should one school find itself in an isolated region, the online environment allows teachers to collaborate with others hundreds of kilometers away.

Context

> Context includes features of the "real world" setting in which the task to be learned might naturally be accomplished. (Jonassen et al, 1995, p.13)

The launch topic for the *qesn.connection* pilot project is the integration of technology into the classroom. In this case, online communication is a highly relevant learning tool. However, in any educational situation, learning will only take place only if the learner participates in the process. An interesting concern of this project related to the contextual use of the online environment, is how to encourage teachers' use of the online environment. The on-site process of the *qesn.connection* is situated in the classroom. It is important that the online communication strategy does not lose site of its contextual anchors. Resources designed to help teachers accomplish their personal goals are available online. Throughout the *qesn.connection* process, teachers are encouraged to explore the online environment, but are not 'told' or 'forced' to participate online as part of the process. However, at the school's completion of the process, the projects are to be uploaded on to the site in order to share with other teachers.

The asynchronous characteristic of the online environment allows teachers to access the newsgroups and participate online at their leisure. Different schools have different technological arrangements. Not all schools provide teachers with access to a computer in

the staff resource room. Therefore, much of the correspondence from the teachers originated from their home computers on their own time.

Feenberg, (1989), suggests there is more at stake to building an online community than technical and administrative issues. He describes context as a 'social encounter based on specific social practices' and warns that '..failures and breakdowns occur at the social level far more often than at the strictly technical level.' (p.28). The social, political and cultural powers within a school vary greatly from school to school. The online communication environment, through a newsgroup or email to an online 'mentor', provides a shared context for teachers participating in the *qesn.connection* project. If supporting elements are missing from their personal school context, it is hoped that they will be able to find the necessary nurturing elements online.

Newsgroups, email, listservs and online mentoring

The theoretical foundation for the *qesn.connection* is best reflected in the newsgroup, email, listservs and online mentoring. These online methods of communication were chosen due to their high potential to facilitate conversation, construction and reflection between *qesn.connection* participants.

Email facilitates conversation and reflection among teachers by providing a venue to exchange questions, comments and concerns person-to-person or to a group. The newsgroup provides a space for group interaction. Messages can be posted and replied to

by an unlimited number of participants. A listserv is another method of sending messages online to a group. Messages are sent out to people through a distribution-type list. The messages arrive directly in the subscribers' personal mailbox. Such examples of online communication allow teachers to converse, reflect and exchange with each other, and, through this process, construct their own meanings and experiences (Brown & Campione, 1990; Harasim & Hiltz, 1995; Tolmie & Barbieri, 1997).

Often models of professional development pair new teachers with more experienced teachers in a mentoring relationship. In the case of the *qesn.connection*, online communication adapted traditional mentor relationships into the virtual environment with the presence of online mentors (Sanchez & Harris, 1996). The online mentors provided additional support to teachers. Research supports the presence of an online facilitator in any 'online community' (Tagg, 1994; Harasim, 1993). The role of the facilitator can be shared by other 'administrators' or by the students (the participants) themselves. Tagg suggests that this adds a valuable learning experience to the process (Tagg, 1994). During the pilot project, members of the *qesn.connection* team acted as 'online mentors' and supported the teachers at a distance, through email and newsgroups.

'Administrative' Structure

From the perspective of the participants, the strategy for online communication includes a newsgroup, email, online mentors and a listserv. As mentioned, learning theories provide

the foundation for the online communication structure. The needs of the learners are always first priority. However, a substantial amount of 'behind the scenes' structure is required for a sustainable system. Determining appropriate support mechanisms in order to ensure the stability of the online environment, was an important consideration for this project.

Literature from the field of distance education provides examples of sustainable 'distance education systems'. Models of distance education provide examples of administration, rules and regulations for the overall operation of a viable system. However, little is known about the needs of an online community, or how to frame the needs within a larger context. In an attempt to structure the online community within a strong self-supporting system, the needs of the *qesn.connection* online community were framed within guidelines outlined by Boyd (1993). Boyd discusses an approach based on Stafford Beer's 'Viable System Theory' and Habermas's 'Discursive Legitimation Theory'. The article describes five system levels including: System V, 'a constitutive discourse space (create or dissolve the organization), a judiciary discourse space (regulations)'; System IV, a second level of discourse space 'allocated for planning future development'; System III, a 'task allocation and monitoring system' (responsibilities include marketing and recruiting for the system); System II, is responsible for 'resource allocation, monitoring and balancing' of the system; and finally, System I includes, "Instructional design and production systems; teaching broadcasting/publication distribution systems; learning-teaching conversation discourse-space systems; and learner support discourse sub-systems." (Boyd, 1993).

The framework of the *qesn.connection* can be placed within Beers' five system-levels. The following chart illustrates the *qesn.connection* within the above framework.

Level	***'qesn.connection'* Equivalent**
System V Discourse spaces (Constitutive/ Judiciary)	· Website, dialogue about administrative rules and regulations, code of conduct for the site, membership terms · Self-regulated environment
System IV Discourse spaces (Planning the future)	· Creation of a plenary planning committee or a conference created to investigate the future options for site growth, i.e. a board of directors made up of teachers (if possible).
System III 'task allocation and monitoring system' (responsibilities include marketing and recruiting for the system)	· Task Allocation: specified roles for participants, facilitators, online mentors etc. · Monitoring system: self-monitored, web master, online mentors · Recruitment/marketing: promo pack developed by the SCA-DPP to market the *qesn.connection* to schools, word of mouth, other strategies (presentations by *qesn.connection* team to school boards) · Resource acquisition: as directed by the SCA-DPP · Waste disposal system: web master to archive old messages, establish rules (i.e. limitations on length of messages, etc.)
System II 'resource allocation, monitoring and balancing'	· Web master, · Online observations by mentors · Feedback from participants
System I 'learning-teaching conversation discourse-space systems; and learner support discourse sub-systems'	• Newsgroups • Online resources • Online mentor-student interaction • Email between the *qesn.connection* team and school teams

Table 2 *qesn.connection* in a Beer Framework

Elements of the suggested system are present within the *qesn.connection*. However, certain elements such as a code of conduct or administrative rules and regulations were left undeveloped, in keeping with the participatory philosophy about the site. It was believed that a code of conduct or other regulatory decisions should be made with teachers present and should be developed as the community developed. The school teams were aware of the professional-development goals of the qesn.connection and therefore, a code of conduct was believed to be understood. Envisioning the *qesn.connection* online

environment in terms of a system helped define roles of *qesn.connection* participants and estimate potential future needs of the system. Unfortunately, the length of the pilot project was not adequate to test the viability of this framework. Only time will test if the proper mechanisms are in place.

Interactivity and the qesn.connection

Kasworm & Yao (1993) offer another concern for the design of an online environment, that of the information architecture and how the design relates to learner autonomy and self-directed learning. In the study of a university credit course, Kasworm & Yao (1993) underline the connection between gradual decrease of instructor 'dominance' and learner autonomy and self-directedness. Essentially, the beginning of the course included a heavy online instructor presence, as the course progressed, the students became more comfortable with the online environment and the instructor presence gradually decreased.

In terms of the *qesn.connection*, the Kasworm & Yao (1993) model can be adapted with respect to the different levels of interaction available to the participant. Interaction in this case is defined as to the level of participation in the online environment (either through presence on a newsgroup, communication to online mentors or electronic communication to other teachers). Levels of interaction may vary depending on the comfort level of the participant with the online environment, their project or learning needs. Providing the participant with various avenues of participation was a key element in the overall online structure.

The following diagram denotes the various levels of interaction available to participants of the *qesn.connection*.

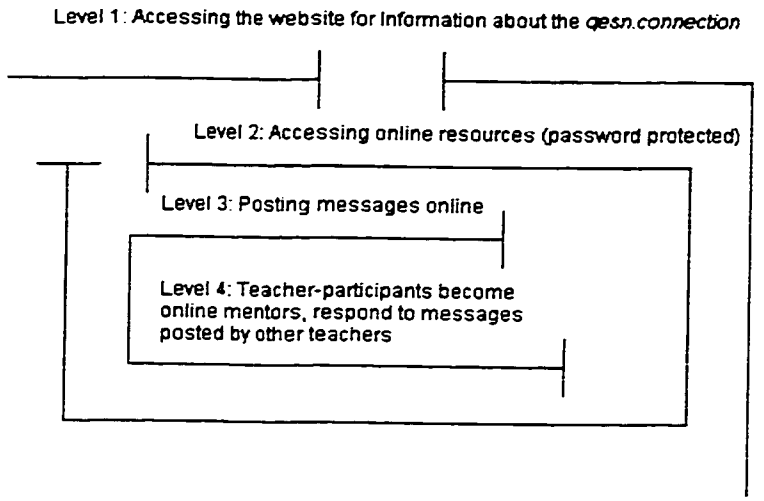

Figure 1 Levels of interaction in the qesn.connection online environment

Level One represents the *qesn.connection* website Homepage. This page introduces the project and provides instructions on obtaining a password. Level two requires a password. Procedures for obtaining a password involve sending an email to the *qesn.connection* team. A password is sent out within 24 hours upon receipt of the request. Once inside Level Two, participants have access to the online tools and job aids to help subscribe to the newsgroup. At this level, participants may lurk on the newsgroup, but not necessarily contribute. Participants may also choose to contribute a story to the 'It Happened to Me' section of the website. Online mentors are also available at this stage to foster discussion and reflection. The third level is defined by the active presence of the participants online. This involves posting messages to the newsgroup, communicating online with the online

mentors or other teachers. The fourth level of interaction describes participants who change their roles from 'participants' to 'mentors' by supporting other teachers online. The idea the participants taking on a leadership role is supported by Tagg (1994) who suggests that a hierarchical structure of conference moderation is not necessarily the only available, 'intra-group leadership' is a fair rival. The reinvestment of the participants into the system, in roles such as online mentors, also works to sustain the *qesn.connection* for future iterations. The object of the *qesn.connection* is to promote autonomous learning, by encouraging teachers to take on leadership roles within the *qesn.connection*, the direction of the project will be shaped to better suit the professional development needs of the teachers.

The following diagram illustrates the design considerations of the *qesn.connection* online environment.

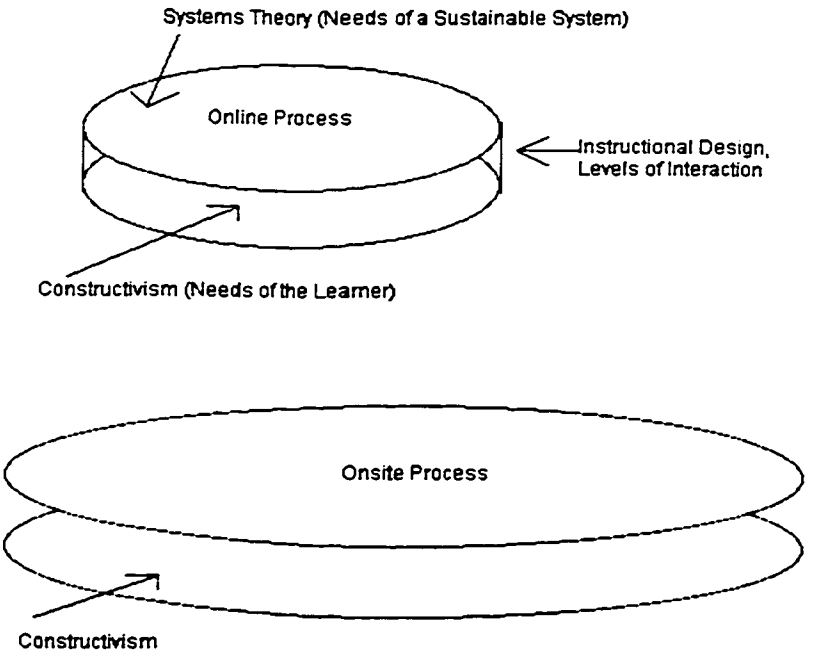

Figure 2 Design Considerations

The design of the *qesn.connection* online environment took into consideration the needs of the learners (based on a constructivist environment), the needs of a viable system and instructional design issues with respect to the online environment and novice users. The following section outlines how the *qesn.connection* was received by the teachers.

Chapter Four: The Pilot Project

Introduction

Following the design and implementation period, the *qesn.connection* (including both the face-to-face component and the online component) was piloted for a period of eight months (November 1998 – June 1999). Two elementary schools completed the pilot project. Data collection occurred during the pilot period. This chapter describes how the online component of the qesn.connection project unfolded. The following section outlines the methodology and details of the data collection.

The Participants

The people involved in the pilot project included school teams (made up of teachers, administrators and teacher-facilitators), the *qesn.connection* design team, members of the CSLP were present during regular debriefing meetings and a representative of the SCA-DPP. Interviews were conducted at the end of the pilot project with representatives of various groups involved with teacher professional development in Québec.

Training

Facilitators' Workshop

In November 1998, a facilitator's workshop was held at Concordia University to introduce representatives from the school teams to the *qesn.connection*. A total of eight teacher-facilitators were present. In the morning, the teacher-facilitators were introduced to the *qesn.connection* process and the video. The afternoon agenda introduced the website, provided demonstrations on how to set up the newsgroup, and where to find newsgroup-related job aids online. Although all of the teacher-facilitators were familiar with email, few had participated in the start of a newsgroup.

My role in the workshop involved briefing the facilitators on the qesn.connection newsgroup. For this, I prepared a job-aid/activity. The workshop was facilitated by all of the members of the *qesn.connection* team.

This workshop was the only face-to-face training received by the teacher-facilitators. They were further encouraged to send any further questions or concerns to the *qesn.connection* team through email or by posting questions to the newsgroup.

Preparing for the pilot...

In preparation for the pilot phase, a newsgroup was set up on the QESN server by the webmaster of the Quebec English School Network (QESN) website (the QESN website houses the *qesn.connection pages*). In the words of the webmaster, 'Access to the newsgroup requires dedicated newsreader software (e.g. Free Agent, Newswatcher, Microsoft Outlook Express) or a recent browser with newsreading capabilities (e.g. Netscape Communicator 4.0 or higher).' (personal email communication, August, 1999). The newsgroup was created prior to the training. I posted a 'welcome message' prior to the training.

qesn.connection 'Kick-off Day' at the pilot schools

Two of the schools held their 'Kick-off Days' during a province-wide professional development day (PED day) held due to provincial elections at the end of November. The third school held their session two weeks later. Two *qesn.connection* team members were present for each of the auspicious occasions. An example of the resources available online for the school teams can be found online at 'http://www.qesnconnection.qesn.gouv.qc.ca'.

Online Strategies for Encouraging Online Participation

Throughout the pilot project various online strategies were used to stimulate participation in the newsgroup. An initial welcome message greeted the new qesn.connection school teams; online mentors (members of the *qesn.connection* development team) were quick to respond to any message posted and a newsletter was sent out to all school teams (which summarized the online activities to-date). In addition, various informational messages were posted online relating to current events and URLs for relevant online resources (journal articles) were posted. These strategies were used in order to keep a consistent level of activity on the newsgroup.

Part Three: Methodology and Data Analysis

Chapter Five: Methodology

Introduction

This thesis is exploratory in nature and relies on multiple qualitative methods as primary modes of data collection. Data collected to evaluate the *qesn.connection* online environment as a strategy for professional development concentrated on the online participation of school teams, field notes from the *qesn.connection* team members and interview data from individuals interested in the *qesn.connection* process. Data were collected through various methods: newsgroup usage data, participant observation, transcript analysis, and interviews (via email and face-to-face). Data collection occurred during the eight-month pilot project period of the *qesn.connection*. The following section describes the research conducted for this thesis according to two project phases. Phase one involves the design and development period and phase two, the evaluation period.

Methodology/ Data Collection Matrix

Phase One, the design and development of the strategy for online communication for the *qesn.connection,* involved a literature review spanning the fields of education, distance education, computer-mediated-communication and teacher professional development and a review of existing models of teacher professional development that integrate online communication (see chapter three for more details).

Phase Two involved the launch of the Pilot project (see chapter four for more details). A prototype of the *qesn.connection* was developed and implemented in the pilot schools. Research techniques used during this period, include online participant observation interviews and analysis of field notes posted by the *qesn.connection* team members, interviews and an end-of-year debriefing meeting for the pilot teams.

Members of the *qesn.connection* team and myself acted as online mentors to the teacher-participants during the pilot project through newsgroup and email contact. From this role, I was able to gain insight into the teachers' use of the online communication facilities as an online participant observer. The schools were visited periodically by the *qesn.connection* team members, field notes were recorded and shared. The periodic school visits included an end-of-year debriefing in which the school teams reflected on their projects and the *qesn.connection* process. The evaluation process of the qesn.connection included interviews with people either working in schools or within the

school environment (at school boards or the ministry of education). The following matrix illustrates the data collection methods for the design, development and evaluation of the strategy for online communication associated within each phase of the project.

Phase One: Spring/Summer 1998 Design & Development	**Phase Two: Fall / Winter 1998-99 Evaluation of Pilot Project**	**Project Wrap-up Spring 1999**
Literature Review	Observe Online participation	Develop report
Review of existing models of professional development	Participatory evaluation of the *qesn.connection* online environment (see next table)	Submit to participants
Needs Assessment	Participant – Observer	Request feedback on the report
Select criteria for evaluation	Field notes	Revise report as required
Online resources evaluated	Online focus groups	Revise as required
Production of an online strategy		

Table 3 Methodology Matrix - Adapted from Watkins, 1997

Ethics and Consent of the Participants

Prior to the start of the pilot project, members of the *qesn.connection* team visited schools interested in participating in the qesn.connection in order to explain the process, and what the pilot project with a research aspect would involve. Once the school teams volunteered to participate in the pilot project, consent from the individual participants was requested during the facilitators' training day and again from the rest of the school team participants during their respective school 'Kick-off' days. Consent for research was requested for both the online environment and face-to-face process. In addition to the teacher-participants, the people who were contacted for evaluation interviews also signed consent forms. Interviews conducted through email correspondence were initiated by a brief email message sent to potential participants requesting their participation in the evaluation. The initial message included an explanation as to the purpose of the research and how the

collected responses collected would be used. Participants in the evaluation interviews also received a brief summary of the responses for their verification. A copy of the consent form is included in Appendix B.

The qesn.connection team meetings were audio-taped during the evaluation phase, based on verbal consent granted by team members at the start of the evaluation phase. Consent to use the field notes and newsgroup participation of the members of the qesn.connection team in this thesis was confirmed through an email message. A sample of the message is provided in Appendix A 'Researching Online'.

Participants, Site and Sample Selection

Three schools chosen from various school boards in Québec were involved in the initial pilot project. Site selection was the responsibility of the representative for the SCA-DPP. The research was conducted during the pilot-test period of the 'qesn.connection' project, November 1998 to June 1999. Also, with respect to the evaluation phase of this research, the following groups were approached:

- The teachers from the three schools were approached to participate in this research project.
- Representatives of the SCA-DPP
- School Board Pedagogical consultants, Centres d'enrichissement en micro-informatique scolaire (CEMIS)
- Members of the *qesn.connection* team
- Individuals who requested passwords for the *qesn.connection* website

Although three school teams started the process, only two finished. The two teams that completed the entire process were from elementary schools. Both teams included teachers with experience in the K-6 levels.

School Team	**School A**	**School B**	**School C**
Level	Elementary	Elementary	High School
Total # of people on this team	8	6	4
Facilitator workshop	2	4	2
School Kick-off Day	Yes	Yes	Yes
The team completed the qesn.connection	Yes	Yes	No
# of teachers who participated online from this school	4	2	0

Table 4 Description of the school teams

The range of computer skills found within each school team varied from novice to expert. The school 'experts' provided support to the rest of the team members. Both teams had difficulties accessing the Internet at school. Due to a reorganization of the school boards in September 1998, and accompanying administrative hurdles, Internet accounts were slow to be set up for the schools. Likewise, individual email accounts for the teachers were also not created. The majority of the messages posted on the *qesn.connection* newsgroup originated from the teachers' homes, not sent from school computers. During Team B's school 'kick-off' day, the newsgroup was demonstrated. Two messages were posted by during the demonstration. The messages introduced the teachers and the school to the other team.

qesn.connection Evaluation Team Meetings

Regular team meetings were held during the evaluation phase of the *qesn.connection* pilot project. The following chart represents the groups present at the evaluation meetings, their role in the evaluation process and their objectives with respect to the evaluation process and the *qesn.connection* pilot project.

Stakeholder Group	**Role in the Evaluation**	**Evaluation Objective**
Services a la communaute anglophone – direction des politique et des projects (SCA-DPP)	· The client · Contributed evaluation criteria	Does the *qesn.connection* support teacher professional development?
'*qesn.connection*' Design & Evaluation Team	- The creators of the '*qesn.connection*' - ·Contributed to the evaluation criteria - Participant-observers in the evaluation process - Online support, school visits	Analyzing how the *qesn.connection* work in practice and how can it be improved
Centre for the Study of Language and Performance (CSLP)	· overall Project management	Concern for the rigor & validity of overall evaluation design
Graduate Student A	· Participant observer - member of the *qesn.connection* design & evaluation team	Studying onsite process
Graduate Student B	· Participant observer - member of the *qesn.connection* design & evaluation team	Studying the *qesn.connection* team's process
Myself	· Participant observer - member of the *qesn.connection* design and evaluation team	Studying the online process

Figure 3 Research/Evaluator's Interests

The meetings were transcribed to provide a record of the ongoing evaluation process. The minutes were posted onto an online research conference (accessible only to the evaluation

group). Field notes were shared, project updates were announced, methods and approaches were debated during the team meetings. The meetings discussed the evaluation of the entire *qesn.connection* process including the online, on-site, resources and tools.

The approach of the evaluation team meetings was participatory in nature. All of the groups represented discussed expectations of the evaluation process. The goals and objectives of the evaluation process were negotiated at these meetings. Unfortunately, the teacher-participants were missing from the table during the evaluation discussions. Had the teacher-participants been present during the evaluation team meetings, the participatory nature of the evaluation would have been strengthened. Measures for data collection and the data collection process were conducted by two graduate students researching the *qesn.connection* pilot project. I was one of the two graduate students who collected the data. While I concentrated on the online environment of the qesn.connection, another graduate student researched the onsite process of the teachers involved in the *qesn.connection* pilot project. In order to maximize the teachers' participation time in this project, we collaborated with respect to the end-of-year debriefings. Graduate student A and myself were present at the end-of-year debriefings at both schools.

The Participatory Approach to Evaluation

An underlying objective of this research is to observe an application of participatory

evaluation methodology in the parameters of the *qesn.connection* and to reflect on the role of this approach within the field of instructional design. This approach was adopted due to the dynamic nature of the *qesn.connection* online environment. Rather than simply judge the qesn.connection based on pre-existing criteria, the focus of the evaluation became, 'how to further develop the system'. In the first section of this paper, I compared the design of the qesn.connection with a model of distance education suggested by Stafford Beer. Although this diagnosis/evaluation model would be excellent to critique the design and suggest changes, a participatory approach to evaluation involves key participants and allows the development of the online environment to be centered on foundations suggested from the grassroots.

However, in theory, the evaluation methodology was supposed to follow a participatory framework. In reality, the process resembled a blend of stakeholder evaluation and participatory evaluation.

The following table outlines the steps taken in the evaluation process. One column (Theory) describes the ideal and the second column (Reality) describes what happened in the real life application of the *qesn.connection* context.

Step	Theory	Reality
	Initial conditions: The client must be in agreement of a participatory evaluation process	The SCA-DPP, the client, was open to various evaluation methodologies, and supported the process.
1	· Teachers invited to participate in the pilot project · Role of 'evaluator' is discussed and agreed upon · A timeline is developed with scheduled evaluation meeting times.	· Teachers invited to participate in the pilot project of the qesn.connection. · Underlying role of the teacher-participants as evaluators discussed but not in great detail during the initial meetings. · No evaluation timeline developed.
2	· As a group (either online or face-to-face), discuss and develop evaluation criteria for the qesn.connection. In an ideal situation, the evaluation group would consist of representatives from the SCA-DPP, CSLP, *qesn.connection* design team, teachers, CEMIS, and pedagogical consultants.	· Discussions concerning evaluation criteria took place one-on-one, with a few teachers. · School teams were invited (through email) to add questions to an evaluation questionnaire being developed and delivered to pedagogical consultants, CEMIS and people who had requested passwords to the site. These became the evaluation questions used during the evaluation interviews held at the end of the year.
3	· The evaluation group develop evaluation tools (questionnaires, questions for focus groups)	· Evaluation tools developed by myself, based on personal observations of the *qesn.connection* process
4	· Data collection by the evaluation group	· Evaluation interviews conducted by myself and transcribed for accuracy. · Newsgroup data collected · End-of-year debriefing focus groups (for school team A and school team B, co-led by myself and graduate student A.)
5	· Whole group responsible for analyzing the data (could also be delegated to a few representatives)	· Data analysis of online environment, field notes, evaluation interview transcripts, end-of-year debriefings, with respect to the online environment were analyzed by myself.
6	· Whole group responsible for writing the evaluation report	· Interim update, of the information collected during the interviews to date were discussed during the end-of-year evaluation (team focus group) and evaluation interviews · Summary of information collected (by myself) and distributed to the evaluation interviewees
7	· Whole group responsible for implementing the recommendations	· Changes implemented by the qesn.connection team.

Table 5 Participatory evaluation and the school teams

When reflecting on the participatory evaluation experience of the *qesn.connection* project, one of the major limitations can be identified as an initial underestimation of the amount of time and commitment required by the researchers and the participants in a participatory evaluation approach. The *qesn.connection* project provided extra funding to pilot schools for release time for teachers to work on their projects. Responsibilities for the evaluation, in theory, would fall within the portfolio of the teacher-facilitators, with the rest of the school team participating at the end-of-year debriefing. A recommendation for future applications of participatory evaluation in the qesn.connection would have extra release time available to the school teams to organize their own evaluation of the process, including both online and face-to-face aspects of the project.

A Critique of Participatory Evaluation

Participatory evaluation is a unique method which focuses on the process of evaluation rather than on an output, or product. In other words, the value of participatory evaluation comes from the participants' involvement in the process of being critical about their own environment. This characteristic of participatory evaluation limits its use. The process-oriented approach inherently takes more time to implement than a 'regular' evaluation. The participant-focused orientation involves more people with decision making responsibilities, further complicating the process. Finally, due to the complexities involved in the evaluation process, the product or environment that is being evaluated should be something that the participants are familiar with.

With respect to the *qesn.connection* a limited time period was allocated for evaluation. The time constraints impeded the participatory evaluation process, yet evaluation data were successfully completed and analyzed, using a hybrid-approach of various evaluation models. This suggests that perhaps, given the time constraints, the participatory model may not have been appropriate – as other less complicated models are able to produce satisfactory results and gain insight into the process being evaluated.

The examples and case studies of the use of participatory evaluation, focused on products or environments that were known to the participants. In the case of the qesn.connection, the teacher-participants were new to the environment, and new to the goals and philosophies behind it. This further complicated matters. The teacher-participants were in the process of understanding what is the *qesn.connection* and finishing their class projects. Little time or energy was likely to be spent on learning a new form of evaluation.

Finally, participatory evaluation is designed for use in the formative stages of a product or process. Within the realm of instructional design, the formative evaluation stage is fairly young in a product's life. Perhaps the same challenges will appear; the participants must be comfortable with the product to be evaluated prior to initiating a participatory approach. Otherwise, time will be wasted and it will be hard to focus on the evaluation. However, before one disregards participatory evaluation as a strategy, one must be sure to

consider the benefits of involving people in the process and allocated sufficient time and resources to support the intiative.

Evaluation Timeline

The following Chart illustrates the activities present during the 'Evaluation/ Implementation' phase of the online component of the *qesn.connection* pilot project.

Activity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Creation of Newsgroup	X								
Facilitators' Workshop		X							
School #1 Kick-off		X							
School #2 Kick-off		X							
School #3 Kick-off			X						
Email contact		X	X	X	X	X	X	X	X
Online discussion		X	X	X	X	X	X	X	X
Interviews									X
Debriefing School #3									X
Debriefing School #1									X
'*qesn.connection*' Team meetings	X	X	X	X	X	X	X	X	X

Table 6 Phase Two Evaluation Timeline (October – June, 1999)

The Online Environment

Participant-observation and the Newsgroup

In order to remind participants that the *qesn.connection* pilot project was also a subject of academic research, an occasional message was posted online reminding participants of the ongoing observation of the newsgroup. Such strategies have been used successfully in past online research projects (Kilker & Kleinman, 1997).

Online Participation

Online participation consisted of a total of 82 messages posted to the newsgroup. Online participation is defined simply as a participant posting a message to the newsgroup. Online participation was observed from three different groups: the *qesn.connection* team, teacher-participants and pre-service teachers. The *qesn.connection* team acted as online facilitators and online mentors for the pilot project. The teacher-participants were directly involved in the project as members of the school teams engaged in the *qesn.connection* project. The pre-service teachers who were indirectly involved in the *qesn.connection* newsgroup came from a pre-service education class from a local university. They were using QESN newsgroups as part of their course assignments and drifted into the *qesn.connection* newsgroup.

A majority of the messages posted by the *qesn.connection* team were administrative messages concerning the pilot project, team updates, upcoming visits and posting of

online articles. However, the *qesn.connection* team members also posted resources, in response to requests from the teachers. In this capacity, *qesn.connection* team members acted as 'online mentors'. The following is a sample message from the newsgroup.

> Hi [name of teacher],
>
> I've been on worm patrol. Here's what I've found so far:
>
> These sites were found using both Alta Vista and Yahooligans search engines.
>
> Worm World:
> http://www.nj.com/yucky/worm/
> This excellent site aimed at children has information about many different types of worms, a section on their anatomy, one about worms as recyclers, even an Art gallery. There are feature "interviews" with different worms, such as the earthworm, leech, planarian, tapeworm and bearded worm. The site also includes sound files (interviews with worm experts) and video clips (ex. a worm being hatched).
>
> At Ask Wendell: Everything you wanted to know about Science (http://www.yucky.com/wendell/) kids can send in their questions and get responses to them. The site is updated weekly.
>
> http://res.agr.ca/lond/pmrc/faq/earthwor.html
> Frequently Asked Questions about Earthworms from Agriculture and Agri-Food Canada.
>
> The Borrow:
> http://gnv.fdt.net/~windle/
> This page is sponsered by Worm World, inc. which promotes vermicomposting. Obviously much info about raising earthworms, lots of Frequently Asked Questions, a Fact Sheet, Important, Strange and Funny Facts.
>
> Alien Explorers: Worms and Leeches
> http://www.alienexplorer.com/ecology/topic18.html
>
> Information about various worms, aquatic worms and leeches delivered in readable paragraphs. No illustrations, no activities.
>
> One of the worm experts (Mary Appelhof) interviewed in Worm World has her own site:
> Worm Woman
> http://www.wormwoman.com/bio.html
> It's a commercial site, books, videos, worm bins etc. but has some interesting info on worm composting.
>
> Huggins' Happenings On-line: Worm Study
> http://iibiz.com/huggins/worm.html
> Follow the progress of a grade three class and their worm bin.

> Unfortunately, not all the pictures are linked properly, so they can't be viewed. However, it might be updated at some point.
>
> Hope this will be helpful.

The teacher-participants posted messages consisting of project updates and questions. An example of the first conversation that took place online concerned the purchase of a digital camera. A teacher posted a question looking for advice on digital cameras. This posting sparked a longer conversation involving members of the *qesn.connection* team and a pre-service teacher. The following are sample messages from this conversation.

> We have been investigating buying a digital camera for ... [our school] this year. One thing that we have discovered is that they are expensive! Grad student A and Grad student B had an Agfa camera with them when they came to the school. I noticed that the Agfa ephoto 307 is on sale at Compucenter for $299.
> This is a really basic camera. Is this the camera that was brought ... for our ped day? If it is, would you recommend it as a camera for
> school use?
>
> Can anyone recommend any other digital camera in the under $500 price range?
> --
>
> [teacher, School Team A]

The third group of participants, the pre-service teachers posted messages looking for classroom lesson plan ideas. The teacher-participants were the first to respond with insightful ideas. Participation by the pre-service students was unexpected but welcomed.

The following chart illustrates the categories of the 82 messages posted on the *qesn.connection* newsgroup.

Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
.qesn.connection team members	1	6	10	8	3	10	8	2	1
Teacher-participants	0	4	12	4	3	1	4	1	0

Pre-service teachers	0	0	1	0	1	2	0	0	0
Total	1	10	23	12	7	13	12	3	1

Table 7 Frequency of Online Participation on the *qesn.connection* newsgroup

In keeping with the founding constructivist notions of the *qesn.connection*, the online messages were first categorized in terms of 'conversation', 'collaboration', 'context' and 'construction'. This proved to be difficult because all of the messages were within the same context (the *qesn.connection* projects), few dealt with construction or collaboration issues (the teachers worked onsite on their projects, no telecollaborative projects were pursued, nor discussed online). Evidence of these categories may have been found in the personal email exchanged between *qesn.connection* team members and the teacher-participants, unfortunately, due to time and project constraints the personal email messages were not analyzed.

Instead, the groups of messages were categorized according to the following headings: 'conversation', 'comment', and 'question'. These terms better describe the online participation in the newsgroup. In this context, a group of messages was categorized as a 'conversation' if the message thread contained more than two messages. A 'comment', described as a single posted message (i.e. an announcement or project update) with no response. A 'question', was identified as a message containing a question with a maximum of one response. More than two responses to a 'question' would be considered a 'conversation'. The messages were analyzed and coded. The following table illustrates the process.

Number	Time	Date	Participant	Subject Line	Code
1	5:45	29-Oct	1	Welcome message, Read this first	Comment
2	9:46	9-Nov	1	More Teachers to have access to this newsgroup	Comment
3	9:48	9-Nov	1	How are things at your school?	comment/question
3.1	12:21	15-Nov	1	An update on the pilot project for everyone	
4	22:48	10-Nov	2	Netscape Navigator 3	Question
4.1	4:21	12-Nov	1	Re: Netscape Navigator 3	response (conversation)
4.2	23:59	12-Nov	1	Re: Netscape Navigator 3	response (conversation)
4.3	23:03	12-Nov	2	Re: Netscape Navigator 3	response (conversation)
4.4	10:40	16-Nov	1	Re: Netscape Navigator 3	response (conversation)

Table 8 Sample data analysis sheet

The following table illustrates the summary of the newsgroup messages out of a total of 42 message threads, organized according to months.

Category	Oct	Nov	Dec	Jan	Feb	March	April	May	June
Conversation		1	3	1		1	1		
Comment	1	3	3	3	4	6	7	1	1
Question		1	2	2		3			

Table 9 Description and Distribution of Message by Month

As this research was conducted on a pilot project, existing 'baseline' data was not available upon which to compare the level of participation and to assess the success of the newsgroup, based on quantifiable data.

However, assessing a newsgroup based on quantifiable data (# of messages) provides a limited understanding of the newsgroup. The idea that a successful newsgroup must contain many messages may also be erroneous it is a common assumption based on personal experience with newsgroups, which I believed in the early stages of this research project.

One of the benefits of getting deeply involved in the context of a research project, is that one can view the project from many perspectives. During the *qesn.connection* pilot project, I was also a member of a listserv for teachers in Quebec. The listserv provided a space to advertise upcoming conferences, share resources and post questions. One of the questions posted on the listserv was from a preservice teacher asking about 'sponge activities' (a buffer activity used to soak up spare time). The student promptly received a response from an academic who suggested that real teachers do not use sponge activities in their class. This particular message thread lasted an additional one or two messages, but seemed to die-out online. However, the online exchange was discussed at one of the pilot schools. Three of the teachers from that school were members of the listserv. One of the three relayed the conversation to the rest of her colleagues. A conversation ensued. The relevance of this outside event to the online research is twofold. Firstly, although only a few teachers were subscribed to this listserv, the rest of the team knew about the incident. This speaks to the flow of communication within the school team. If the team members share information in this way, not all of the teachers have to participate. They can rest assured that someone will gather the important information and bring it back to the group.

The following is an excerpt from an end-of-year interview with a teacher, who is explaining how she uses online communication for her professional development. It is also indicative of how resources are shared between teachers.

> '...I thought that frustrating, I can talk to [name of a colleague] in class. I don't have to send him email. And I like the mail ring because it is individual. So, if someone posts something, I save it...so for me this year, I am on a few mail

> rings. We all know each other. On the other hand, I get about 15 emails a day.... I sent the address to [name of another teacher] a couple of times. I posted a message to the mail ring. I also gave it to a friend of mine...' (Interview, June 1999)

Secondly, this speaks to the natural flow of communication within the school teams. The use of a newsgroup will not resemble a traditional exchange of mass messages. Instead, the newsgroup (or online environment) will encourage collaboration, construction and conversations which may or may not continue online.

The following message is provided in order to illustrate the activity on the newsgroup. It is a 'summary' message posted onsite and sent to the teacher-participants in order to keep everyone up-to-date with the online environment.

Online Summary/ Newsletter

As part of a strategy to keep everyone informed and curious about the newsgroup, online participation was summarized into email message and sent to members of the *qesn.connection* pilot project. A sample of the newsletter follows.

Hello!

This is the first newsletter for the *qesn.connection* newsgroup. This newsletter is being sent out to all members of the pilot teams and to everyone who heard about the site and requested a password. It is intended to summarize the activity on the newsgroup for everyone involved in the *qesn.connection* project. If you haven't been online for awhile, please take a moment to get caught up, then drop by and say, 'Hello'.

A Brief History

The *qesn.connection* newsgroup was created in late October to provide a space for people interested in / or participating in the *qesn.connection* pilot project. The purpose is to share pedagogical expertise, classroom experience and a sense of adventure with other teachers. It is slowly growing from a blank space into a rich source of knowledge and friendly collaboration.

Getting Connected

As with most stories involving technology, there were a few 'challenges' getting online. Thanks to Frank who persevered, got connected and suggested an easier route for others. His suggestion can be found in the 'Help files' on the *qesn.connection* website. If anyone else has other suggestions or helpful hints, please let us know and we will add them to the resources. Also, if you are still having trouble getting online to the newsgroups, please let us know and we will try to help.

Information to Subscribe to the Newsgroup

Server Address for the Newsgroup: mail.qesn.meq.gouv.qc.ca
Name of the Newsgroup: *qesn.connection*
Help files available: under 'practically speaking'
http://www.qesn.meq.gouv.qc.ca/connection

Making the connection...

Three pilot schools held their 'Kick-Off' Days in November and December '98. Each school experienced unique joys and challenges. Some of the project ideas and updates are online. Please feel free to check out what everyone is doing, post questions, comments, and/or suggestions.

Online Activities

A few teachers, Stephen, Jennifer & Frank posted project ideas to which the *qesn.connection* team members responded with great links to mollusks, echinoderms, arthropods, and worms – yum~!?

Diane is keeping us up-to-date with Team B's plans for their 'Bicentennial Activities'. While Marlene, Joan and Jane have successfully tested the newsgroup's accent and coloured text capabilities! Joannie and Paul joined Frank in a discussion about digital cameras. Joannie pointed out important criteria for when choosing a digital camera –i.e. it must be easily held in small hands. These are important considerations especially when there are so many choices of cameras with great fancy features to get distracted by. The pre-service class is also online. They have a newsgroup set up on the qesn server, and have been invited to participate within this newsgroup. Janet and Lena have already exchanged a great lesson plan involving macaroni and quotation marks!

Expanding the connections...

As previously mentioned, this newsletter is being sent out to all members of the pilot teams and to everyone who heard about the site and requested a password. This message goes out to everyone who has browsed the site, please feel free to join the newsgroup, post questions, comments etc. Let us know your reactions to the *qesn.connection*. We want to hear from you!

We are Online

Please do not hesitate to post project ideas for brainstorming etc. We are always online and eager to help, even if it means uncovering a site for (of?) worms ! Sorry, I couldn't resist!

Improving the *qesn.connection* newsgroup

The *qesn.connection* newsgroup is offered as part of the *qesn.connection* process in order to assist in your professional development. In the coming weeks, we will be asking you for your input on how to improve this space. Please think about it. If you have an idea already, please let us know – by either posting your thoughts on the newsgroup, or via email to us at connection@qesn.meq.gouv.qc.ca

All for now! See you online!

Jeanette Caron,
On behalf of the *qesn.connection* team

(Note: names have been changed)

Barriers to electronic participation

All of the schools complained of limited access to the Internet. One team could not access the newsgroup from the computers at school due to the incompatibility of their Internet browser. Instead, the teachers accessed the newsgroup from their home computers. A second team initially involved in the pilot project, had problems connecting to the

newsgroup through the computers at school due to a school board-based 'firewall'. One school lost Internet connection for three-week period in the middle of the project due to a faulty server connection. Not all of the teachers have computers at home, nor did they all have email accounts. September 1998 marked the beginning of a new structure for the Québec school system, school boards are no longer separated by linguistic divisions. New school boards were formed as the old boards merged. As the school boards worked to reestablish systems, integrate new schools, and new employees, Internet Service Providers were also being switched. Although technology integration is a commitment for most school boards, providing new email accounts to teachers was not high on the list of priorities at that time. Many teachers coped with the situation by setting up personal 'Hot Mail accounts' until the school board was able to provide personal accounts.

The purpose of the initial analysis, was to describe patterns of online participation in terms similar to those used in other learning contexts. Unfortunately, the school year ended before the *qesn.connection* team received the final projects from the teachers. This in turn meant that the projects were not uploaded to the website until the beginning of the following school year (i.e. in September). In terms of evaluating the online environment, a critical catalyst for online activity was missed. It was anticipated that once projects were uploaded, the newsgroup would be a popular space for teachers to exchange comments and stories. Time was also a critical factor in the development of a critical mass important to building an online community. Unfortunately, the eight-month period of time allocated for this pilot project was not long enough to establish a critical mass of lively online activity.

On-site visits (Participant Observation/ Field notes)

Two *qesn.connection* team members were present as participant-observers during each of the scheduled professional development days for the school teams. The participant-observers recorded field notes that were later discussed with the larger research team. Observations from the on-site visits provided contextual information for this thesis and insight into the participants' reaction to the online environment.

Overview of Evaluation Interviews

The following table describes the stakeholder group and the nature of the questions asked.

Stakeholder Group	**Information to be collected**	**Method of collection**
Teachers involved in the pilot project	Reaction to the tools/environment Perceived use of the tools/environment Vs. Reality – how were the tools/ environment used? Strong/weak points	Online participation Interviews Email questionnaires
QESN resource people	Reaction to the tools/environment Perceived use of the tools/environment Vs. Reality – how were the tools/ environment used? Overall assessment of the online environment based on their experiences with teachers	Interviews Online participation
CEMIS (Les Centres D'Enrichissement en Micro- Informatique Scolaire)	Reaction to the tools/environment Perceived use of the tools/environment Vs. Reality – how were the tools/ environment used?	Interviews
Pedagogical consultants (From the school boards)	Reaction to the tools/environment Perceived use of the tools/environment Vs. Reality – how were the tools/ environment used?	Online participation Interviews
SCA-DPP	Reaction to the tools/environment Perceived use of the tools/environment Vs. Reality – how were the tools/ environment used?	Online participation Interviews

Table 10 Schedule of Interviews

Semi-structured interviews were conducted during the evaluation phase of the project. Various members of the Québec anglophone sector, with interest in teacher professional development were chosen for interviews. Groups represented in this process included the SCA-DPP, school board pedagogical consultants, centres d'enrichissement en micro-informatique scolaire (CEMIS), members of the *qesn.connection* project development team and individuals who requested passwords for the website. The purpose of the

interviews was to invite key representatives into the evaluation process, obtain their criteria for evaluation, and gain insight from their perspective of using online communication for professional development of teachers in Québec. The individuals selected for interviews either work as animators for professional development, or work to support the professional development of teachers. Needless to say all of the individuals contacted represented a group which could benefit from the infrastructure of the *qesn.connection.*

All initial contact for the interviews were made over email. With the exception of a small number of electronic interviews, most interviews occurred face-to-face. The interviews were transcribed for accuracy.

The interview questions inquired about the individual's overall reaction to the *qesn.connection*, how it fits into their context, the use of online communication in their schools and welcomed additional thoughts and/or comments. Initial questions established the participant's role within the Québec school system and their stake in professional development by asking for a description of their job. The next set of questions introduced the *qesn.connection* and asked for reactions to the tools and resources available. The participants were then asked to describe their use of online communication for professional development, if they subscribed to the existing Québec English School Network (QESN) listservs, and if their school or school board were connected to the Internet. Participants were also asked to suggest criteria for the evaluation of the strategy for online communication.

The interview content was analyzed. Categories developed were framed within the following headings aimed at improving the process: structure or architecture, supporting resources (job aids), technical barriers (access). These categories represent common themes present throughout the interviews (Guy, 1996). Highlights of the interviews were summarized and sent back to the participants for verification. This action was included in part to maintain the integrity of the interviews and also as a reflection of the participatory process. The goal of this step was to provide people with the opportunity to read other's concerns and participate even more in the evaluation process by reacting to the issues. Although the topic of my thesis is the online environment, conversations throughout the evaluation often included issues related to the on-site process of the *qesn.connection* or on more global topics including the organization of the MEQ and support to schools. All of the ideas are valid and are linked to the online environment. The following section outlines some of the issues and concerns about the qesn.connection and teacher professional development in general that were uncovered during the evaluation process.

Summary of Interview Data: Participant Reflections

The interview period occurred in the spring of 1999. Analysis of the data occurred during the summer of 1999. In the fall, an email message was sent out to evaluation participants in order to stimulate dialogue and/or gain additional comments about the *qesn.connection* in general. The message included a summary of the interview data, an update on the *qesn.connection*'s development.

Unfortunately, the time period of the message corresponded to the first weeks of school in September, an extremely busy time of year for the school system. Few responded with additional ideas, although many responded with a word of 'thanks'. Many appreciated being included in the evaluation process and being kept up-to-date on the progress of the *qesn.connection*. This speaks to the importance of the participatory evaluation process. The comments collected were included in the final evaluation report and submitted to the SCA-DPP. The following section provides an overview of the responses collected from the evaluation from the interviews conducted in the spring of 1999.

Issues & Concerns

Many of the issues and concerns centered around access and technical barriers to technology by teachers. Teachers have limited access to online communication at school. Many school boards were slow to issue personal accounts to teachers.

The following excerpt illustrates this point:

> Question: Where can teachers check their email? Is there a computer set up in the staff room? Where do you check your email? At home?
>
> Response: I had it at home and use the one in the library.
>
> Question: So there are computers available if you wanted to use them...
>
> Response: Yes, but very limited. The lab is being used all the time – it is booked solid. The one in the library, I think of it as my own personal computer. I often send kids out to work on it. But now, they [school board] made all of the connections for teachers to have access in their rooms. If they have a computer, they can access from their rooms. I don't have a computer in my room.

(Interview data from a teacher, spring 1999)

It was suggested that some school boards currently block Hot Mail and Yahoo email accounts for security reasons. Therefore, a teacher may take initiative and setup a personal email account, only to have access denied by a firewall set up by the administration to deter students from abusing email privileges. Other problems cited with respect to access and technology relate to the number and placement of computers in the schools. Teachers rarely have access to the Internet in a private location (i.e. staff room). Other barriers include unstable Internet connection, in the case of one school team, access to the Internet from school ended in April although the pilot project concluded in late June. 'We finished in April, then after that it was gone.' (Interview data, spring 1999). Limited knowledge of the Internet, little experience using email, or subscribing to a newsgroup or listserv are other barriers to participation.

It is difficult to integrate the use of email into teachers' everyday life. Figures for one school board suggest that 'only four out of thirty schools are actively using online communication as part of their daily cycle' (interview data, June 1999).

Time is also a concern for the online environment. With access to so much information, how can teachers find what they need without 'wasting' so much time?

Newsgroup Vs. Listserv

> 'Certainly, the opportunity to talk to colleagues is lacking in our profession. We cannot always talk with teachers in our own school, but I do find it very useful communicating with those outside my immediate school environment. Listservs would be ideal, but most lack structure and moderation.' (Interview data, spring 1999)

During the evaluation, a debate between the virtues of listservs and newsgroups as a means for teacher communication erupted. On the one hand, listservs are convenient because the messages are sent directly to the participants' mailbox. On the other hand, if the listserv is active, a participant's mailbox may become filled with messages of no personal interest. With a newsgroup, the participant must 'go to the messages', once there, he or she can choose the messages to read. Limited by the software used at the time, by the *qesn.connection* during the pilot project, the participant still had to subscribe to the newsgroup. The process of subscribing to the *qesn.connection* newsgroup was described as complex for the novice computer user, another barrier to overcome. The following excerpt from an evaluation interview explains further.

> 'What I noticed in terms of the pattern of communication...was that the Concordia team [qesn.connection team] was generally initiating most of the communication... It works that way on listservs to, then you get to a certain point that it does become self-generating. But it takes time to develop into a culture and I think it takes time longer than the *qesn.connection* has been running. (Interview data, spring 2000)

It was noted that a successful online environment needs time to develop and a critical mass to make it successful. Animators (people to post information, messages) need to be encouraged to keep the dialogue active.

Publicity/ Presenting the *qesn.connection* to potential participants

> 'The thing that worked best was one-on-one communication, mentoring works in well but it must be sustained.' (Interview data, spring 1999)

Publicity was an issue for most participants. It is very important for teachers to hear about the *qesn.connection* in order to develop a critical mass of participants. It was suggested that the *qesn.connection* take advantage of existing bodies in the Québec system in order to publicize the programme. For example, a memo could be sent through the CEMIS to the schools about the *qesn.connection*; a presentation could be developed especially geared towards pedagogical consultants to invite their participation and to spread the word. Also, professional development workshops open to everyone should be offered, flyers sent to schools and old fashion (but reliable) word of mouth publicity should be encouraged.

Organizational Development

Evaluation participants liked the idea of schools and teachers sharing information. Often, school boards work on separate initiatives with little communication between the boards. In most cases, communication is also limited within schools.

> Question: How long will it take for electronic communication at the school level?
>
> Interview response: Only 4 of 30 schools with every teacher has an email account. In the case of a few schools, the principals use email for school announcements.
>
> (Interview data, spring 2000)

Additional collaboration between the school boards, pedagogical consultants and the CEMIS would be a positive and welcome step. It was suggested that the QESN could play a role in the collaboration by acting as a 'clearinghouse', the 'qesn could pull the thread of that together' and have the various groups working together. (Interview data, June 1999).

The QESN could become a 'One-stop shopping' space for teachers, moderated well so to avoid duplication of services. Support could come from online space for a newsgroup or listserv and by connecting resources together. An important observation volunteered by

one of the participants is that training received by the teachers is often fragmented into multiple workshops. Many training delivery groups are vying for the same training dollar. An example can be found in the initiatives developed by the Universities to support the integration of technology into the classroom. Concordia University hosts a 'Summer-Institute', McGill University offers a distance education diploma in Educational Technology and Bishops University offers a successful Institute in the spring. The *qesn.connection* could play a role to encourage collaboration between the institutions by 'sharing experiences, and common themes that lead to best practices' (interview transcript, 1999).

This concludes the summary of the evaluation interviews. A lot of information was collected, that focused not only on the use of online communication for teacher professional development, but also teacher professional development in general, and the current state of affairs for teacher in Quebec regarding the integration of technology. The conversations were rich, and the information powerful. The experience of being able to share viewpoints of other participants during the interviews in order to gain a reaction was also beneficial. The participants were interested in hearing the viewpoints of others. It is unfortunate that the participatory method was not employed to the key. Based on the responses and reactions observed a participatory process would have been welcomed, given more time and careful advance planning.

Triangulation of data

Triangulation is the use of multiple data sources to corroborate findings in order to validate conclusions of a research project. Triangulation was used in this project by comparing online participation with participant observations, field notes and interview and end-of-year debriefing transcripts from the participants. The following table is provided in order to better illustrate this process. Scenarios or case specific stories were analyzed according to the observations made from the following perspectives. Examples will be discussed in this thesis using the same format.

Newsgroups (Researcher as Participant observer)	Newsgroup (Teacher participation)	School visit (field notes)	End-of-year (School debriefings transcripts)	Evaluation interviews (Transcripts & email)
Scenario to be analyzed	Same scenario	Same scenario	Same scenario	Same scenario

Table 11 Triangulation table

Use of 'Contact Summary Sheets'

Gall & Borg (1996) suggest using contact summary sheets in order to manage emerging data throughout the research process. This idea was adapted and an electronic file was used to keep the correspondence from the teacher-participants and the interviews. An electronic database provided easy access to the literature base and the online messages were electronically coded for data analysis.

Research Team Online Conferencing

> ...for the first time in history, we have the opportunity to create virtual subcultures where our students and teachers can assemble electronically, across time and space, to engage in and extend the powerful dialogue of learning. (King, 1998, p. 366)

A computer conference was created for the *qesn.connection* research team. The team shared messages, exchanged ideas and debated issues online through the electronic system. It is interesting to note that the constructivist philosophies that guided the development of the *qesn.connection* were also reflected in the project development by the *qesn.connection* team. Evidence of construction, collaboration, context and conversation are present in the electronic archives of the conference. As a student writing a thesis at a distance from the university, the collegial support provided through the conferencing system was greatly appreciated. The experience of discussing problems and issues as they relate to the development of this document increased the learning. Analysis of this rich data source exceeds the resources allocated of this research, but is an area suggested for future research.

Researchers' role

My role in this research project is varied. I was a member of the *qesn.connection* team and therefore participated in the design of the *qesn.connection*. I was also responsible for evaluating the online component of this project. This dual role of both designer and

evaluator is acceptable within the realm of Educational Technology. Formative evaluation is an important aspect of the systems approach to instructional design (Dick & Carey, 1996) with instructional designers often involved in the evaluation of their products.

The role of the participatory evaluation researcher is to teach the 'participants' evaluation skills and methodologies so that they are able to evaluate and reflect upon their own contexts. Cousins (1996) responds to concerns about the researcher's active participation in the process with the following:

> ...the evaluator working on a participatory evaluation project is not the principal investigator in the sense of controlling the project. The research project is viewed as a partnership where researches and members of the community of practice share control of the project and negotiate project decisions based on the specialized knowledge and expertise each brings to it. (Cousins, 1996, p. 5)

In the case of the qesn.connection evaluation, observations were always discussed with other team members. Personal biases were kept in-check through the group discussions in which reported observations were usually shared by the two observers present at the schools. With respect to the online environment, the entire team had access to the same newsgroup. Therefore the shared experience provided another filter against personal bias presented in the observations, conclusions and recommendations contained in this study.

Part Four: Challenges and Discussion

Chapter Six: Research Questions & Discussion

Introduction

This chapter focuses on the thesis research questions, the outcomes of the evaluation and reflections on the process.

The strategy for online communication

> Based on a literature review, assessment of the learning environment, and needs assessment, what should a strategy for online communication for professional development include? What criteria should be used to develop a strategy for online communication? How is online communication being used in existing models of professional development today?

Drawing from the literature review and the experience gained from this research project, a strategy for online communication must take the following three groups into consideration: the needs of the learner, the needs of the learning environment as a system and special considerations with respect to the online environment and novice users.

Key to any educational endeavour is the learner. The design of the online environment must include elements that support the construction of knowledge (Jonassen et al, 1995; Harasim & Hiltz, 1995) and are suited to the learning environment. In the case of the *qesn.connection*, emphasis is placed on autonomy and flexibility. The online environment supports the construction of knowledge through a process of conversation and

collaboration. In this case, the online environment provided an extra space for dialogue. As mentioned in this document, the online environment is slowly finding a space within the everyday life of teachers.

The following is an excerpt from one teacher's evaluation interview. It provides insight into how the online environment is supporting conversation, collaboration and construction within the context of the teaching environment, with respect to online environments in general.

Teacher # 1: '... I can talk to [Name of a colleague] in class. I don't have to send him email. And I like the mail ring because it is individual. So, if someone posts something, I save it... so for me this year, I am on a few mail rings. We all know each other. On the other hand, I get about 15 emails a day on the other mail rings that I am on.' (Interview data, Spring 1999).

More specifically, the qesn.connection also provided support, as this teacher expressed with the following.

Teacher #1: '...I talk about cooperative learning... I want something that I can use right now. I want to have something that will make me a better teacher. So having a qesn.connection was perfect.' (Interview data, spring 1999).

Further evidence of the support gained from the online environment comes in the form of resources posted to the newsgroup by the online mentors, and the prompt replies to questions. For a sample of the messages posted by the online mentors, please see Appendix A.

A second consideration is the notion that an online community is part of a system, a system in need of input, output and feedback to prosper (Boyd, 1993). Members of the

qesn.connection have an opportunity to participate within the system. Approaching the development of the newsgroup from the perspective that it represents a piece of a larger system, helped to identify roles and structures that must be in place. This approach instills a philosophy from day one, in the mentors and the participants, that there is no one predefined role for everyone, and that one can participate on their terms.

A third consideration speaks to the novelty of the online environment. The online environment is still relatively new. This is especially true for most of the teachers in the K-12 sector who are supported by the *qesn.connection*. It is therefore important for the design of an online community to account for varying comfort levels with computer technology. Online mentors, online resources, and the website allow the participants to engage in the *qesn.connection* at their own pace – accessing the tools/resources, posting or reading messages online or responding to another teacher's query online. Likewise, it is important for experienced participants to be able to contribute online at a level that develops their skills. The collaborative nature of the environment provides facilities for computer users of all levels.

Recognizing that novice computer users require additional support also provides an opportunity for 'local experts' to help their colleagues. This was discussed at one of the school debriefings.

'....I think the other advantage was having someone like [name of a colleague] here.'
' Yes, I think the project would have fallen apart if it wasn't for him.'
' I think they found the same thing at [name of the other project team]. I think they had one resident expert...' (End-of-year debriefing, June 1999)

With respect to the online environment, technical barriers may prove too much for novice teachers unless structures are in place that resident experts can assist their colleagues.

A brief survey of existing models of professional development for teachers in Canada today suggests that online communication is increasingly being used. Its primary function is to facilitate the sharing of information about upcoming workshops, and to post information and resources for teachers. With respect to professional development of teachers, the majority of the websites include links, resources and information for teachers. Teacher unions and associations also provide a variety of links to resources and publications online. This is evidenced through the plethora of websites and resources available online for teachers. The electronic medium is seen as a mechanism for efficient communication. In this respect, the online environment is not being used to its fullest potential of communication, collaboration and construction of knowledge. However, as technology is integrated further into the schools and the infrastructures and support mechanisms are in place, online communication will be used more and more. Information gained during the *qesn.connection* pilot project observed that future plans for the schools involve placing one computer in each classroom, corroborating a future direction.

Building an online 'community'

> What factors need to be considered so that the online environment will develop into an online community? The online community will become self-sustainable?
>
> What factors are important with respect to the teachers' use of the *qesn.connection*?
>
> Does the combination of a newsgroup, listserv and 'online mentoring' serve the *qesn.connection* community? How does the online strategy serve the *qesn.connection* community? How are the elements being used?

The eight months allocated for the pilot project to unfold was not enough time to examine the needs of an online community. Instead, this research can speak to the fact that a longer critical time period is required for the development of an online community.

Online observations reflect the need for a critical mass of participants. One of the evaluation participants commented on the fact that the website was not constantly being updated. This was seen as a weakness in the *qesn.connection* project. Visitors to the site may be frustrated if there is no change, and therefore, no reason to keep visiting the website. The same is true about the newsgroup. Messages were posted to the newsgroup, but not every day. The occasional visitor to the newsgroup may not return if there is no activity on the site. Unfortunately, this uncovers a fine line within a common approach to the online environment and the goals of the learning environment. Although it is important to keep the newsgroup and the website fresh and dynamic, it is also important that the content be relevant to the teachers involved with the project. This concern was voiced during the end-of-year interviews by one of the participants. '...people expect to

see some kind of change on the site, so they are not apt to contribute if they do not see changes on an ongoing basis...' (interview, June 1999)

What type of information should be posted online? How often should the site/ newsgroup be updated? Project updates, information about upcoming visits are examples of regular postings to the newsgroup. However, postings not directly related to the school projects did not stimulate discussion. Unfortunately, the timing of the pilot project coincided with the end of the school year and the teachers did not have a chance to react online to the final projects posted by the teams. The final projects may have acted as a 'catalyst' for online discussion amongst the school teams, but due to limited time, this will remain unknown.

Increased online participation by all members of the school teams would also alleviate some of the responsibilities of the online mentors. The time allocated for the online mentors in this project was funded through the SCA-DPP and the CSLP. Funding for these roles may not be available for a continued period. In order for the online environment to become self-sustaining, the online community must be active and work together to share resources and post ideas online. Online mentors cannot be responsible for maintaining ongoing discussions online.

Satisfying The Conditions of the Model

> How does the strategy for online communication within the *qesn.connection* allow for 'differences in learning situations, for example, learner time and place, locale, support and available technology' as requested by the SCA-DPP? How does the strategy for online communication support teachers in their professional growth?

The asynchronous nature of the online environment provides options to the participants that satisfy the design request of the SCA-DPP. Teachers can communicate with each other at times and places that are mutually convenient. However, electronic communication will not succeed unless support from the larger body of the MEQ accompanies the implementation of the *qesn.connection*. Schools need support (technical and financial) in order to have access to technology. The MEQ recently announced (June, 1999) an allocation of a sum of money to be distributed to the schools in support of teacher professional development. Although this is a positive step for professional development of teachers, the culture of the institution must also embrace a new form of communication if online communication is to prosper.

In one school board (of approximately thirty schools) four schools have integrated the use of electronic communication into their everyday administrative life. The principal communicates with the staff through email. Electronic communication is now embedded into the school culture. Radical steps such as these must be taken in order to a school to adopt a new way of communicating. Integrating online communication into the everyday

life of the teacher is a step in the direction of building a community of learners, an idea that is reflected in the design request.

Providing an online space for communication is not the equivalent of building a 'field of dreams' in hopes that 'if you build it, they will come'. Instead, placing an emphasis on electronic communication in teacher professional development is supporting a revolution in the school system. The integration of technology into the classroom is the catalyst for change. Schools are being equipped with new tools that provide access to a multitude of information and communication capabilities.

The online strategy of communication for the *qesn.connection* provides teachers with space for reflection. In this regard, it supports the professional development of teachers. The purpose and reason for their discussion, which is the crux of the *qesn.connection*, is the actual professional development. Online communication is but one channel for their professional growth. It can be improved by encouraging more teachers to gain familiarity with the online environment, and thus encourage the development of a large critical mass of users.

Theoretical Foundation/ Reflections

> What implications does this research yield for the theory and reality of online communication and the professional development of teachers in Québec?

What implications does the participatory evaluation method hold for instructional design?

The observations from this project support existing research in the field of online communication. The process of creating an online community of practice is complex and deserving of more study. Further investigation should focus on how online conversations make their way into the face-to-face discussions of the staff room. The nature of communication within schools, although beyond the scope of this research, would be an interesting topic for further research.

The use of online communication in professional development for teachers points to larger issues of organizational change. One must approach the development of an online community as building a puzzle, one piece fits into an overall system. In this way, important elements will not be overlooked and the online community may be integrated into the existing community easier. Models of professional development must be developed to fit within a larger system in order to become self-sustaining and grow.

Participatory evaluation, as a method to evaluate an online community is an interesting idea. I am satisfied with the results and experience gained from this process. Participatory techniques promotes the *qesn.connection* further in the field (by increasing awareness of the *qesn.connection* within the larger Québec education community) and also helps integrate the ideas and needs of the community into the *qesn.connection*. The richness of the ideas and comments speaks to the positive aspects of using participatory methods within an Instructional Design framework. Other participatory methods were mentioned

(i.e. stakeholder analysis, utilization-focused evaluation) but they do not share the same goals as participatory evaluation.

The difficulty in using this method rests with the amount of time that must be allocated to planning, consulting, collecting data, analyzing data, sharing the data and developing conclusions within the constraints of real work schedules, time and energy. Integration of participatory evaluation methods into this thesis were not all successful. An example of this can be found in the fact that the teacher-participants did not create evaluation criteria for the online environment. Rather, criteria were developed indirectly, through the teachers' reflections on the overall process. This oversight should be interpreted as a function of limited time and the inexperience of the researcher, with respect to this novel evaluation strategy, rather than a weakness on the part of participatory evaluation methodology.

It would be useful for instructional designers to become familiar with participatory evaluation methodology. An environment that thrives on continuous development, as is the case of an online environment, would benefit from participatory evaluation techniques. Participants have the opportunity to shape 'their contexts' through assessing, reflecting and discussing their ideas. Such participation from the 'end-user' should be recognized by the instructional designer as integral to the success of the learning process and must be integrated into the overall instructional design process.

One weakness of participatory evaluation discussed in this thesis is the fact that the participants must be comfortable with the environment or the product being evaluated in order for the process to be successful. Otherwise, too much time will be spent first learning the environment and secondly, learning about participatory evaluation. The second weakness discussed relates to the use of participatory evaluation within the process of instructional design and formative evaluation. Although participatory evaluation is designed to shape a product, or a process – perhaps one must consider the life cycle and ensure that there is sufficient time to dedicate to a participatory approach, prior to final production of the product.

Conversation, Collaboration, Construction and Context – Jonassen's Model

The face-to-face component of the qesn.connection and the online environment used Jonassen's core constructivist building blocks of conversation, collaboration, construction and context in order to design a structure that supports teacher professional development. Constructivism is a complicated approach to education and requires much planning and behind-the-scenes structure. Applying Jonassen's themes into the online environment provided guidance on the learning structure, but as this document has discussed, other support mechanisms were also required. If I were to do this same process over again, I would certainly include Jonassen's conversation, collaboration, context and construction but I would also dig deeper into the literature to locate other guiding factors. The online environment requires sophisticated structures which are better developed in collaboration with many approaches to learning.

Chapter Seven: Conclusions & Reflections

Introduction

This chapter contains conclusions and reflections based on the research contained in this document. Suggestions for future research topics are also included in this section.

Future Direction for Teacher Professional Development

Although the results of this study cannot be generalized, the insights gained from this experience suggest that there is a future for online communication and teacher professional development. Just as online communication technologies are slowly filtering into the curriculum as part of the natural flow of learning for students, so too will online communication technologies permeate into the realm of teacher professional development. It is difficult to state whether the catalyst for change is the integration of technology into the schools or the recognition that sharing resources, reflecting on process and supporting peers is essential to professional development, regardless, the contribution will be positive. With an increasing number of schools equipping their classrooms with information and communication technology, the isolated teacher will soon have a gateway to communicate with peers (either within schools or between schools).

The integration of online communication into professional development will take time. Time for infrastructure to be set in place, for schools to be 'connected' and for online

communication skills to be developed. This process has already started and as more and more educators gain exposure to this new learning environment, online communication in teacher professional development will flourish.

Reflections on the Thesis Research

Working, writing and researching this topic as a thesis was extremely interesting. However, given more time, energy and resources, there are a few things that I would do differently.

General

First, the project scope must be narrowed. The design, development and evaluation of a strategy for online communication is a large topic for in-depth research. In hindsight, a focus on one phase of the instructional design process would have afforded a deeper research treatment.

There are many branches that I would have liked to explore deeper within this topic, for example, the idea of an 'online community' is linked to the use of online communication. Ideally, the *qesn.connection* will eventually develop into a self-sustaining 'online learning community'. An investigation into existing face-to-face 'learning communities' informally created within schools today, would enrich future online endeavours. In addition to online learning communities, the idea of school culture and adaptation to

change is another area suggested for further research. In the case of the *qesn.connection* pilot project, two schools participated, each with a very different school cultures.

Although a literature review was conducted in the early stages of the research, it was difficult to continue researching as the pilot project continued. In light of the dynamic nature of the project, this project would have benefited from an ongoing literature review.

Research Design & Analysis

One of the areas that may be interpreted as a weakness in this thesis is the limited number of participants. The pilot project started with three schools, however, one school terminated their participation. More effort should have been concentrated on communicating with the forfeited team, in order to enrich the evaluation by investigating the reasons for ending their participation. Information concerning why people do not participate is equally as enriching as information that explains why people do participate. Such questions should have been directed at both the teachers and the administration. However, despite best efforts, within a limited time frame, such questions were not answered.

As mentioned in this document, the timeframe allocated for researching the development of the strategy for online communication was not adequate. It takes time for people to become familiar with the online environment. In future research projects, the timeline of a natural flow for online development should not be underestimated. In light of the time

requirements, future studies should not limit the analysis on the online environment to the 'public' domain (such as the newsgroup). Instead, analysis of personal email between the participant-teachers and the *qesn.connection* team members should be included, or in other words, all sources of online data (related to the project) should be included in the study. Such efforts would increase the depth of the data collection.

Analysis of the online environment is still a relatively new activity. As such, methods for data analysis are not as apparent with respect to other data sources. Given more time, I would have liked to investigate other projects involving online communication analysis or community development evaluation and integrated additional methods into this study.

Participatory evaluation requires careful planning, ample resources, time and commitment. I strongly recommend that research efforts continue along the path of integrating participatory evaluation methods into instructional design. However, participants must be aware of the commitment, time requirements and expectations in the early stages of the evaluation process. Participatory evaluation processes must be integrated into the project life cycle. Using the example of the *qesn.connection*, integrating participatory evaluation into the project would involve including evaluation sessions in the breakdown of activities for the teachers. A more in-depth analysis of evaluation methods used in education and other fields would further enrich these data.

Although triangulation was used in this study to decrease personal biases, through analysis of the online environment, end-of-year interviews and field notes, it is difficult to

eliminate personal biases altogether. I have personal experiences using online communication in a learning environment, and have worked with teachers in the past to develop professional development workshops. Having personally experienced successful use of the online environment for learning, it is difficult to not be enthusiastic about the potential of this tool. However, it is important to constantly view the situation from the point of view of the participants and ensure that mechanisms are in place to support the participants and that nothing is taken for granted. Specifically, my personal preference for the online environment entered into the design of the evaluation through my estimation of the time to be allocated to observe the 'online community'. In addition to personal biases, a reasonable limitation was also placed on this study. The time limitation that must be placed on Master's level research projects, to ensure that the study is conducted in a timely manner and that the student graduates, led to an underestimate of the time required for analysis of an online environment. It is interesting to note, that I had originally estimated a three-month timeframe to allow the online community to develop. This was quickly lengthened during the project.

There are definitely more factors involved with the design, development and evaluation of a strategy for online communication than the ones mentioned in this report. Although the results of this study cannot be generalized, the insights about the research process are valuable to other researchers interested in these topics.

Summary

This thesis discusses the process of the design, development and evaluation of a strategy for online communication within a model of professional development for teachers and the results of an eight-month pilot project involving two school teams. The pilot project involved two school teams and an online process with a newsgroup, email, and online mentors. The strategy for online communication was designed to support a constructivist-based environment. Considerations for the design and development of an online communication strategy for a model of professional development include: the instructional needs of the learners, the needs of the model for professional development as a self-sustaining system, and support mechanisms for the new media and novice learners.

Participatory evaluation methods were used to assess the strategy for online communication. Insight into the integration of participatory evaluation methods into the instructional design process of building an online community suggest that participatory evaluation methods have potential, but require a significant amount of timing, planning and resources.

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Appendix A

Scenes from the Newsgroup

Sample Welcome Message

As part of the preparation for the pilot project, a welcome message was posted introducing the newsgroup to the project participants. The following is an example of the first welcome message. Please note the names have been replaced in all of the sample messages in order to protect the identity of the online participants, except in the case of messages posted by myself.

Hello and welcome to the *qesn.connection* newsgroup area!
Who is this space for?
This space is for everyone! The main goal of this area is to provide you with space to share your pedagogical expertise, classroom experience and your sense of adventure with other teachers!

Everyone reading these messages is involved in the same pilot project. So please, contribute your thoughts, ideas and enjoy your online experience!

Feel free to either address the questions already on the site (by using the 'reply to group' option), or start a new discussion (by using the 'new message' option).

Okay, that's it for now! Enjoy!

Online Summary/ Newsletter

As part of a strategy to keep everyone informed and curious about the newsgroup, online participation was summarized into email message and sent to members of the *qesn.connection* pilot project. A sample of the newsletter is included:

Hello!

This is the first newsletter for the *qesn.connection* newsgroup. This newsletter is being sent out to all members of the pilot teams and to everyone who heard about the site and requested a password. It is intended to summarize the activity on the newsgroup for everyone involved in the *qesn.connection* project. If you haven't been online for awhile, please take a moment to get caught up, then drop by and say, 'Hello'.

A Brief History

The *qesn.connection* newsgroup was created in late October to provide a space for people interested in / or participating in the *qesn.connection* pilot project. The purpose is to share pedagogical expertise, classroom experience and a sense of adventure with other teachers. It is slowly growing from a blank space into a rich source of knowledge and friendly collaboration.

Getting Connected

As with most stories involving technology, there were a few 'challenges' getting online. Thanks to Frank who persevered, got connected and suggested an easier route for others. His suggestion can be found in the 'Help files' on the *qesn.connection* website. If anyone else has other suggestions or helpful hints, please let us know and we will add them to the resources. Also, if you are still having trouble getting online to the newsgroups, please let us know and we will try to help.

Information to Subscribe to the Newsgroup

Server Address for the Newsgroup: mail.qesn.meq.gouv.qc.ca
Name of the Newsgroup: *qesn.connection*
Help files available: under 'practically speaking'
http://www.qesn.meq.gouv.qc.ca/connection

Making the connection...

Three pilot schools held their 'Kick-Off' Days in November and December '98. Each school experienced unique joys and challenges. Some of the project ideas and updates are online. Please feel free to check out what everyone is doing, post questions, comments, and/or suggestions.

Online Activities

A few teachers, Stephen, Jennifer & Frank posted project ideas to which the *qesn.connection* team members responded with great links to mollusks, echinoderms, arthropods, and worms – yum~!?

Diane is keeping us up-to-date with Team B's plans for their 'Bicentennial Activities'. While Marlene, Joan and Jane have successfully tested the newsgroup's accent and coloured text capabilities! Joannie and Paul joined Frank in a discussion about digital cameras. Joannie pointed out important criteria for when choosing a digital camera –i.e. it must be easily held in small hands. These are important considerations especially when there are so many choices of cameras with great fancy features to get distracted by. The pre-service class is also online. They have a newsgroup set up on the qesn server, and have been invited to participate within this newsgroup. Janet and Lena have already exchanged a great lesson plan involving macaroni and quotation marks!

Expanding the connections...

As previously mentioned, this newsletter is being sent out to all members of the pilot teams and to everyone who heard about the site and requested a password. This message goes out to everyone who has browsed

the site, please feel free to join the newsgroup, post questions, comments etc. Let us know your reactions to the *qesn.connection*. We want to hear from you!

We are Online

Please do not hesitate to post project ideas for brainstorming etc. We are always online and eager to help, even if it means uncovering a site for (of?) worms ! Sorry, I couldn't resist!

Improving the *qesn.connection* newsgroup

The *qesn.connection* newsgroup is offered as part of the *qesn.connection* process in order to assist in your professional development. In the coming weeks, we will be asking you for your input on how to improve this space. Please think about it. If you have an idea already, please let us know – by either posting your thoughts on the newsgroup, or via email to us at connection@qesn.meq.gouv.qc.ca

All for now! See you online!

Jeanette Caron,
On behalf of the *qesn.connection* team

Researching Online

In order to remind participants of the participant-observer presence, I posted a non-obtrusive message that served as a gentle reminder of the research. The following is an example of the message.

Hello Everyone!

I would like to extend an invitation to the Concordia Education Department's Student Symposium on Feb 5th and 6th... this weekend. It is a two-day event featuring students (grad and undergrads) presenting their research papers and projects.

Your online mentors and I will be briefly presenting our respective research topics (Feb 6th) that are related in one way or another to the *qesn.connection* (all roads lead to the connection!).

Wish us luck!
Talk to you later,

Jeanette
Please see http://doe.concordia.ca/symposium/index.htm for more information.
A schedule and abstracts will be posted soon.

Appendix B

Consent forms

Consent form sent by email to members of the qesn.connection evaluation team:

The following is to state that I agree to participate in the evaluation and assessment of the qesn.connection. I understand that the purpose of the evaluation is to gain a greater understanding of how the qesn.connection process unfolds in schools. This evaluation is being undertaken in part as a thesis research project by Jeanette Caron, a graduate student at the Centre under the direction of Dr. Philip C. Abrami.

I authorize:

- my participation in the discussion and feedback sessions of the qesn.connection team (1998-1999) to be used for research purposes in the evaluation of the strategy for online communication within the qesn.connection. NB - the feedback and discussion sessions were audiotaped for accuracy based on consent given during the sessions.

- my fieldnotes posted in the qesn.connection team shared conference folder (First Class, qesn.connection, DE Research & Eval, DE Project) to be used for research purposes in the evaluation of the strategy for online communication within the qesn.connection.

- my participation in the qesn.connection newsgroup (1998-1999) to be used for research purposes in the evaluation of the strategy for online communication within the qesn.connection.

I understand:

- -that my name remains strictly confidential and will not be revealed in any report or publication.
- -that my opinions and input are important to the design team for improving the qesn.connection and may be used in reporting on the design and implementation process, both formally - in a publication, and informally - in an internal document.
- -that I may withdraw my consent at any time without repercussions
- -that I may request a copy of any reports or publications emanating from this research.

I have read and understand this agreement, I freely consent and agree to its terms.

Name:

Date:

Appendix C
Other Sample Messages From the Newsgroup

Hello and welcome to the qesn.connection newsgroup area!

Who is this space for?

This space is for everyone! The main goal of this area is to provide you with space to share your pedagogical expertise, classroom experience and your sense of adventure with other teachers!

Everyone reading these messages is involved in the same pilot project. So please, contribute your thoughts, ideas and enjoy your online experience!

Feel free to either address the questions already on the site (by using the 'reply to group' option), or start a new discussion (by using the 'new message'option).

Okay, that's it for now!

Enjoy!

Jeanette

Hi,

At School Team A, we have Netscape Navigator 3 installed in our lab. We are unable to connect to the qesn.connection with its newsgroup reader. We don't have Internet Explorer because our former school boards were Netscape aficionados. I am very hesitant to install Internet Explorer because it does things to Windows 95, and I don't want the lab to crash as a result. Netscape Communicator allows you to set up different users, but you must select the correct one when you logon. As children are also using the program, I don't want to complicate their logon more than necessary. I will see if I can get a copy of Outlook 98 from our new school board. If I can't get one, I'll install a shareware newsgroup reader such as Free Agent which will allow the teachers to post and receive from the newsgroup.

Any ideas about getting the Netscape 3 newsgroup reader to read Qesn would be appreciated.

(Teacher from School Team A, November, 1998)

Hello Folks,

Just wish to let you know that [School Team B] will be launching the project on Dec. 7th. Our PDIG grant came through for a project that will coordinate well with qesn.connection. We will be doing some preparation

next week and will keep you up to date on our progress. At the moment our secretary is working on finding supply teachers for the whole staff - seven of us. Should be an interesting day all round.
Will close as I took a little time to make this connection - not sure what I did to make it work. I'm on a PC at home and will try to make connection from a MAC at school.

Will be in touch again.
(Teacher from School Team B)

Hi
Just checking to see if I hooked up correctly.
[Teacher from School Team B. December, 1998]

Congratulations! You made it!

Did you have much trouble getting online? What school are you from? How did your PED day go? Sooo many questions!

Talk to you later,
Jeanette

Jeanette,

I am from [School team A].I teach a 4/5 split. Our ped day went well. I am still thinking about my "project". I think I will team up with one of our Kindergarten teachers. We are thinking of having my kids create a webquest for her class. (Teacher from School Team B, December 1998)

Bonjour people!
Nous sommes présentement à notre première journée pédagogique pour ce projet. Cette petite communication est une tentative de rejoindre des enseignants et enseignantes qui sont dans la même situation que nous.
Nous sommes deux enseignantes de français langue seconde dans une école bilingue. S'il y en a parmi vous qui ont des trucs ou commentaires à nous faire parvenir, n'hésitez pas à communiquer avec nous.

Teacher One
Teac her Two
[School team B, December 1998]

Hi Everyone,

Some of us at [School Team A] have come up with ideas for our qesn.connection projects.
[Teacher A] is having his students put together Slide Shows on Canadian provinces.
[Teacher B & C] are thinking about a WebQuest project on My Favorite Sport. If you have any ideas or suggestions please let us know.

I'm thinking of having my class do some research on the different classes of invertebrates. Each student would have to pick a class and gather information about it via the Internet and other sources. They would make

use word processing, spreadsheets and images to present their research. The images would be downloaded and/or scanned. I'll be looking for sites that would have info. and images on invertebrates so, if you know of any, I'd appreciate you letting me know.

Well, that's all for now.

(Teacher from School Team A, Dec 1998)

Hello to everyone at qesn.connection,

Our bicentennial project that was mentioned earlier is rolling. Classes are involved in a variety of activities. In two of our classrooms technology integration is a rather seamless affair. Computers, the scanner and the digital camera are used where needed and suitable. Perhaps these teachers will write a note here about what they are doing.

In our English grade one class students have cooked, eaten, talked about, read about and written about pancakes. At this time of year in our neck of the woods, pancakes and more importantly maple syrup are in. They are certainly well situated in a profile of our community. When the students were cooking pictures were taken. The plan is to use these photos to make a Kid Pix slide show. Tomorrow morning, the grade one teacher and I will be working with the students to scan their photos (they've each chosen one) and insert them into Kid Pix files - quite a straight forward process. The next step will be to create a slide from each file. Students will record their info with the slide - they will have practices what they want to say. And I guess we'll need to have someone make a cover slide. We will be working again on Monday afternoon - hope Grad student A might make it then - but I have a feeling that it might take a little longer than that. Depends how it goes - we will play it by ear - first time we've tried this.
Grad Student C was mentioning about professional development sessions. For this activity we had a hands on session one afternoon last week and ran into some technical problems so I don't feel it was as productive as it could have been. Little glitches take up a lot of time. None the less we keep at it and try again. I just feel that it is discouraging for people who are just getting started with technology. That's when I want everything to work perfectly.
Will let you know how it goes.

(Teacher from School Team B, January, 1999)

Our web page is up and running. Check it out.
(Newsgroup, April 99)