

**Landscape without bearings: Instructors' first experiences
in Web-based synchronous environments****by Elizabeth Murphy and
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Abstract

This paper presents the accounts of eight instructors' metaphorical travels in landscapes without bearings. The instructors were part of a pilot project at a Canadian university involving the integration of a synchronous communication and collaboration environment into asynchronous distance education courses. To establish their bearings, the instructors need to be aware of their goals and combine them with strategies and techniques that effectively manage the affordances and constraints of the environment. That process may require a degree of risk-taking combined with a willingness to help students lead themselves. It requires developing a proficiency in the simultaneous use of multiple tools and recognizing the differences and similarities between Web-based synchronous environments and face-to-face or asynchronous environments. Above all, it requires an interest in and focus on pedagogy.

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Landscape without bearings

My interest is pedagogy and this is a tool which seems to be useful, but I'm sure there are probably people who know a lot more about Elluminate Live and could probably tell me something else you could do, and I'm certainly open to that. But my expertise is not in that at all. I just want to reach out to my students and this is a way of doing it and I'm sure that other people could do a lot better than I could. — (Thomas)

Thomas is new to Web-based synchronous environments. He is not new to asynchronous interaction with his distance education students. He is not new to teleconferencing. For the last twenty years, he has been teaching undergraduate and graduate courses. Pedagogy is his interest. Reaching out to his students is his

goal. Yet, he feels uncertain about teaching in this new environment and unsure about how to orient himself in such unfamiliar territory.

This metaphor of territory borrows from the geographic constructs of environments, landscapes and spaces. The Web-based "tool" Thomas refers to is, in fact, a virtual space for real-time collaboration and communication. That space features a variety of tools: two-way audio, instant or direct-text-based messaging, a whiteboard, application-sharing, polling and hand-raising features. Thomas is navigating a path through this virtual space. All he knows is that he is interested in how best to teach and how to "reach out to his students." In this "landscape without bearings" [1], how do Thomas and instructors like him find their way? What insights can we gain from their experiences?

This paper presents the accounts of the experiences of Thomas and seven other instructors participating in a pilot integration of Web-based, real-time communication and collaboration into asynchronous distance education courses at a Canadian university. We begin with an overview of the context of the pilot and of the interviews conducted with participating instructors. We then present the accounts of the eight instructors, highlight the paths they adopted and discuss how they find their bearings in the new landscape.

Studies of instructors' experiences

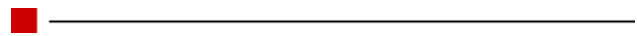
We know little about instructors' experiences with teaching in online environments. We know even less about their experiences with synchronous communication tools, particularly within asynchronous distance education courses. A lack of examples of effective teaching strategies that support student learning in synchronous environments is one of the major challenges distance educators now face (Schullo, *et al.*, 2005). Not surprisingly, instructors using online synchronous tools for the first time frequently have to rely on their own professional judgments and on "experimenting through trial and error" [2]. Joy (2004) observed that there has been little research conducted on instructors' experiences of teaching in online environments. She argues that such research is needed because these individuals are "in the best position to not only guide the rest of the instructors through the transition, but to develop a foundation for success ..." [3]. We briefly describe three studies to give some insight into instructors' experiences in synchronous environments.

Schullo *et al.* (2005) investigated the use of Web-based, audio-graphic synchronous software in a distance education course. They explored the instructors' goals for and reactions to the tools available within the synchronous environment. The authors found that six instructors in six different courses used a wide variety of tools and strategies carefully matched with a purpose. Some of these purposes included the desire to promote student-to-student and instructor-to-student interaction to enhance learning; to have discussions on content-related issues that were problematic for students in the past; to allow students in remote locations to come together and interact with the content and other group members; and, to give students a chance to work in groups.

Rieber (2004) described his own transition from teaching in a face-to-face to an online environment. In his distance course in Instructional Design, he combined asynchronous communication with a number of other media including synchronous audio-graphic software. He described the task of transferring the content to an online setting as "daunting" and compared it to "the idea of teaching driver education at a distance" [4]. Rieber's goal was to draw on the same constructivist principles that guided his practice in a regular classroom setting. He also wanted to develop pedagogical strategies to promote collaboration and student-centered learning. The synchronous software made it easier for him to compensate for the lack of opportunities normally available in a face-to-face context "to sit around a table and talk through a problem."

Hauck and Haezewindt (1999) examined their own experience with audio synchronous conferencing in their distance language courses. Their goal was to enhance student learning with speaking practice and collaboration. Depending on the nature of the task and on students' needs in any particular moment, the instructor had to take on a variety of roles. These roles included the confidant who discloses the rationale behind the project; a nervous parent who tolerates misuses of the system; a troubleshooter who provides

technical assistance; a student who learns from the group; or, a human being who provides opportunities for informal, social interaction.



Context

The pilot was an initiative of the university unit responsible for distance education. Instructors teaching in the Winter semester 2005 were invited to add a real-time, Web-based synchronous component to their asynchronous courses. Instructional design specialists were available to meet with them to help decide how to integrate these synchronous sessions. Before the semester began, a technical support person met individually with each instructor to explain and demonstrate the technology. Instructors and a technical support person conducted trial sessions. Each of the instructors also received a copy of the 70-page *Elluminate Live™* moderator's guide. Students were encouraged to log-in during the half-hour period before the session for microphone checks and for a demonstration by the technical support person.

At the end of the semester, we contacted the instructors involved in the pilot to invite them to participate in interviews about their experiences in a synchronous communication and collaboration environment. One instructor was not available for an interview, and the other instructor not interviewed was the principal investigator of this study. The eight instructors represented three academic departments: Education, Nursing and Social Work.

Interviews were conducted by the co-investigator in the study. The first category of interview questions focused on the context of the sessions or classes, *e.g.* "Was the course at the graduate or undergraduate level?" The second category focused on how synchronous communication was integrated, *e.g.* "What was the purpose of the sessions?" The third category of questions focused on the benefits and challenges of using the new technology and on how instructors might use it in the future, *e.g.* "What difference did it make to your course?" Individual semi-structured interviews were conducted in person over a two-month period. Each interview lasted approximately 30–45 minutes, was recorded and subsequently transcribed by a person who had not conducted the interviews. The co-investigator then verified all transcriptions against the recording. The next section features the accounts of each instructor's experience.



Accounts

Thomas

Once per week for 12 weeks, Thomas held a synchronous, Web-based class with the 13 students enrolled in his graduate course. Thomas hoped that "the real-time communication ... might make a better learning experience for the students." His goal was to "capture some of the spontaneity or the immediacy that one can have within a campus course [and] that kind of instant exchange ... you don't have in WebCT.;" He also wanted "to break down some of the kind of anonymity barriers that exist in distance courses." In terms of achieving his goals, Thomas believed he "developed a much closer ... sense of who these people were as opposed to just being names."

Each class began with "general chit chat" such as "Hello? How are you? and what's the weather like down there?" A discussion of course-related administrative issues followed the introduction. The remainder of the class focused primarily on student presentations using the Whiteboard. Thomas described how he guided students through this activity:

Because this was a new experience for the students, there was some hesitancy to accept

my invitation to become the moderator of the session and to do their own presentation through the Elluminate Live. So, as I always do, I modelled how this would work for the first couple of weeks Once the students started doing their own presentations, then I would just give the moderator status to them and they would have control and would respond if someone raised their hand to ask a question.

Thomas needed to explain to students that he was not really inviting them to do something new. He did this by referencing activity in a face-to-face context:

[W]hat I was trying to get them to understand is, just as in a classroom situation, if someone is doing a presentation, you know, you can interrupt them, you can stop them, you can raise your hand so the presenter can see if someone wants to ask a question.

To encourage interaction between students, he "put people into groups, put them into breakout rooms." At first, he "might kind of speak for a little bit" then "posed a number of questions." The students' task was to "discuss the questions, come to some kind of consensus, appoint a spokesperson so that when they came to the whole class that spokesperson would speak for the group." The approach was successful in terms of promoting participation: "I visited the rooms one after one. There was always a lively conversation going on and everybody taking part" Use of the breakout rooms proved so effective that, a little before the "officially scheduled time", students would ask to use the rooms "to discuss their assignments or things." As well, "sometimes, after class, some students would stick around in the room later on, to again go to a breakout room and to discuss some issues related to the work that they were doing."

Ann

Ann had only one synchronous class in her graduate distance course in Social Work with 16 students. In previous years, she used "conference calls," "video-conferencing," and "teleconferencing" for real-time classes with students. However, this was her "first and only time" using Web-based synchronous technology which she hoped would be "a bit more interactive." In terms of the purpose, the session was "an opportunity for the students to ask questions about the course, for them to make some introductory comments ... to meet each other."

She found the hand-raising tool "really helpful" because it gave her and the students "the ability to see who needed to speak." In a tele-conference, students "don't know whether they should interrupt or not, or whether somebody else wants to speak." The tool made turn-taking easier, as everyone could see when "there was a line up of people wanting to speak." Ann believes that this feature helped increase interaction between her and students. Although she saw the value of the whiteboard, she didn't use it because, as she explained "at the time for me, it was new and ... I was trying to keep it as simple as possible." She plans, however, to use the whiteboard in the future to "reference things on screen as we talk."

Some of the challenges she experienced included the need to divide attention among a variety of activities taking place simultaneously. At the same time, she had to "track the hands-up, the written text messages that were coming in because students were not able to get on ... as well as moderate the discussion."

Students' use of the direct messaging tool became "distracting". In the future, she plans to "have different rules set out in the beginning for how we use text messaging."

John

John incorporated three synchronous sessions into his undergraduate Education course with 35 students. Like Ann, in the past, he relied on teleconferencing "to have some kind of method of communication that was verbal" in his distance courses. He wanted to be able to communicate with the students synchronously because, in a strictly asynchronous distance course, he got "tired of reading the screen hour after hour after hour." The first session was designed "[to try] out the equipment to see if everybody can log on, see if it worked ... if we could hear them." The second one was "pretty much just open discussion" to fill in gaps in information: "I would wait to see if [the students] have any administrative questions first ... and then if they have any questions about the content." For the final session, he "invited a graduate student in to give a presentation"

John decided to use Elluminate Live as a result of the university's transition to Web-based technologies for synchronous communication:

... I've gone from having 12 or 13
teleconferences per course, dropped that by
pressure from the University to 3 or 4, with
pressure to eliminate them, and then this
was the last pressure to take this instead of
teleconference.

John is an experienced distance educator used to correspondence and asynchronous Web-based courses, as well as teleconferencing. In spite of this experience, he admitted: "After teaching so many distance courses over the years, I still prefer the face-to-face contact." The lack of visual cues and the fact that "you can't see them" [the students] is one reason he prefers face-to-face teaching. The need to be constantly learning about new tools is another reason for his preference. As he remarked, "Just about the time you learn a system then another one comes along. And that's not unusual but they are coming along faster than I'm used to." He admits, he is "still not used to it" [Elluminate Live].

Jim and Kelly

Jim and Kelly held three, two-hour sessions in a graduate Education course which they taught conjointly. The sessions served as a "communication device" to "more or less help with logistics," "to give information and talk about deadlines, process and expectations." None of the sessions involved actual lectures because the course "doesn't have the content [and] every student is working on different things." The sessions provided "a chance to answer administrative questions and to make sure students were doing what they were supposed to be doing."

Compared to teaching entirely asynchronously, Jim appreciated that "you can't put a face to the person but at least [you can] put a voice to the person." Giving them a voice meant that "if students had concerns it would be a great opportunity for them to air them or at least ask about them." Compared to teleconferencing, the Web-based character of the communication represented "a wonderful asset" because "you can pick it up anywhere."

Jim and Kelly hoped that talking to the students in real time would support a "more intimate conversation about the kinds of issues the students were having." However, this type of intimate conversation didn't occur. Instead, the sessions were "used more for administrative kinds of functions as opposed to actually helping students with their papers or discussing particular topics" With 44 students and two instructors, instead of an "opportunity for input," they spent most of the time "trying to pass on information." In particular, the "problem solving" exercise became "much more one-sided" than the other two sessions. As Jim explained, "we had a lot of things we wanted to make sure the students were doing." In the future, Jim wants to explore the system's "potential to be much more interactive." This might be accomplished by dividing students into groups and having "a bit of an in-depth discussion about the content of the course."

Frank

Frank held one synchronous session each week of his 13-week graduate Education course with eight students. The purpose of the sessions was to “just take the place of a lecture” and involved “students doing presentations.” Frank also wanted to “reduce the amount of messages” he had to read in the asynchronous component of his course. As he remarked “I’m not going to read a hundred postings anymore.” He began by modeling use of the technology by giving his own presentation using the whiteboard. Students were encouraged to ask questions throughout each presentation to ensure that it “simply wasn’t an e-lecture.” They also peer-assessed each other. In addition, Frank evaluated them on the basis of their participation: “I looked at all the sessions ... and I downloaded the text versions of the sessions as well. And I looked at how many times they had contributed and the quality of those contributions.”

Frank preferred Web-based synchronous communication over teleconferencing because of its convenience which means that students “could be in their pajamas” while participating. The ability to participate from home, he believes, added to the technology’s potential to maintain students’ engagement in the discussion: “[F]rom my point of view ... I didn’t feel that people were ... having a long discussion with the microphone off, where I did in the teleconference.” He also preferred it to the asynchronous presentations that students normally gave. That approach involved HTML files and making text-based comments and questions in the discussion forum. In general, Frank found the technology “advantageous in terms of ... instructional efficiency” and concluded: “I prefer it to everything.” In the future, he plans to have students present in pairs, not individually. He also plans to make the sessions “more thematic.”

Heather

Heather conducted three, ninety-minute sessions in her graduate-level distance course in Nursing with 20 students broken into two groups of 10. Her goal was to focus on those students “who like to talk and interact” and who “just enjoyed hearing another voice.” She wanted to support their “feeling they were a part of the group.” The course required students to develop a program and the sessions were designed “to help people work through their program.”

For Heather, voice communication “is actually adding a piece that was missing” in her asynchronous courses. One characteristic of those courses was poorer quality of students’ work, as compared with a face-to-face classroom. Despite the text-based discussions about their work, students “didn’t really understand the depth to which they were supposed to analyze things.” Heather believes that the scope of their work could not be accurately captured in a few paragraphs. Their lack of understanding of what was required of them “became evident in the actual quality of the programs.” In this case, real-time discussions with students helped improve the quality of their work. The programs Heather received from them were “incredibly good.”

When she taught courses asynchronously, Heather received a lot of phone calls from students. Web-based voice communication allowed her to reduce the number of these calls. While the number of phone calls may have declined, her workload did not change significantly. Despite the real-time meetings, the amount of e-mail she receives from students is still “really phenomenal.” As a result, Heather feels like she is “continuously teaching.” Although the real-time sessions were “an add-on” to this already heavy workload, Heather plans to continue to use the technology in the future. The voice communication “allows choice” which is beneficial for “people who like to talk and there are a lot of them in nursing.”

Andrew

Andrew had a total of 18 synchronous sessions in his undergraduate level course in Education with 39 students. His goals were to “open up a dialogue,” “to hear the voice and get that spontaneous interaction.” He also wanted students to “feel comfortable” since “it’s one of their first courses ... in the program and there is a lot of fear about the idea of going into the classroom.” The sessions were “like holding classes at the coffee shop” or “office hours” for discussing issues students “were concerned about.” Some of the discussion focused on “minor housekeeping chores.” In other cases, it focused on “concerns with fear and what’s going on in the classroom.” Sometimes, Andrew interacted with the whole group. On other occasions, he talked privately with individuals “after everybody else was gone.” Whether the conversation with students was private or public, Andrew concluded that he “reached a fairly reasonable level of security with them.” The real-time communication allowed him to create “a safe place” for his students.

During sessions, students had the freedom to experiment with all tools available in the synchronous environment. They frequently used the drawing tool to create “a community doodle” on the whiteboard. Andrew explained why he thought this was necessary: “I don’t doodle while I talk, but I know that a lot of people do. So I let the community doodle go ahead.” Students also shared images with the rest of the group using the whiteboard. These activities served “as a little distraction” and he “didn’t stop that from going on.”

In general, Andrew was satisfied with the real-time sessions “in terms of format and the actual content.” The only aspect he was disappointed about was the low participation levels. Three factors contributed to this low participation: some students had limited access to technology; some “believed that they didn’t have the technical knowledge;” and others were discouraged after a few unsuccessful attempts. In the future, Andrew hopes he will be able to resolve these problems to encourage more participation.



Reference points

Thomas is looking for a “closer sense” of who his students are and wants to break down the barriers of anonymity that he perceives exist in the asynchronous environment. His students are hesitant but he reassures and guides them by referencing behaviours from the “classroom situation”. Anne wants to promote interaction between students but is more cautious than Thomas as this is her one and only experience in the online synchronous environment. John is reluctant about having to learn how to use yet another new tool. Jim and Kelly are hoping for an intimate conversation with students. Andrew wants to use the tools in the new environment for office hours to discuss concerns or fears. Heather wants real-time discussions with students to improve the quality of their work. Frank is interested in having students give live presentations to other students.

In spite of these differences between goals and purposes, the accounts have in common the adoption of reference points with which to situate the experiences in Web-based synchronous environments. Compared to the asynchronous, the synchronous environment affords voice. Compared to teleconferencing, it’s more convenient and supports easier interactivity. Compared to the face-to-face classroom, it’s constrained by lack of visual and physical presence. Compared to text-based modes of interacting, it offers immediacy, spontaneity and intimacy. The instructors can’t orient themselves as if they were in a face-to-face classroom because individuals in these environments share the same time and space. However, in a Web-based synchronous environment, they share time but not space. They can’t orient themselves as if they were in an asynchronous environment. There, neither time nor space is shared.


The accounts also have in common an expression of longing for the quality of interactions and communications belonging to the familiar face-to-face classroom. Those interactions involve hearing a voice, meeting each other, feeling part of a group and experiencing intimacy and instant, spontaneous exchanges. Instructors’ early experiences in Web-based synchronous environments reflect a nostalgia for the real as opposed to the virtual, the connected as opposed to the distributed, for voice as opposed to text. The accounts portray text-based interaction as inefficient, cumbersome, time-consuming, anonymous, non-spontaneous and isolating. In contrast, voice is associated with spontaneous and intimate interaction. The experiences in Web-based synchronous learning environments are portrayed as a substitute for face-to-face. The substitute is not as desirable as the real thing but it represents an improvement over asynchronous distance learning.

Thomas’ experiences illustrate a successful attempt at promoting opportunities for hearing the voice and for spontaneous and intimate exchanges between students. Holding sessions once per week allowed him to build momentum in terms of gradually guiding the students in the direction he intended. There were enough sessions for the students to become comfortable meeting in smaller groups where they could take control of the microphone. Using the breakout rooms with one microphone per room supported multiple conversations. Thomas concluded from his visits to the rooms, that there was “always a lively conversation going on and everybody taking part”.

Thomas’ emphasis on modeling and moderating highlights effective strategies for taking advantage of the tools within this type of Web-based learning environment. He overcomes the constraint of half-duplex, two-way audio by using multiple rooms with a microphone in each in order to support multiple conversations.

Instead of a broadcast, multicasts take place. The breakout rooms are an important affordance of the environment for multiple conversations. The multiple conversations afford hearing the voice, promoting intimacy, spontaneity and instant exchanges, meeting others and being part of a group.

Thomas' account illustrates how he succeeded in creating "a better learning experience" for his students using real-time communication. He was constrained by the provision of only one microphone for the entire class. He also had to contend with students' own lack of confidence in this type of environment. He took advantage of the breakout rooms to avail of more microphones. He maximized that affordance by adopting a cooperative learning strategy in which students are knowledge sharing in small groups. To build students' confidence he modeled the paths they should take. He oriented his students, leading them by example and referring them to the familiar. Thomas adopted the role of leader and guide in the new landscape by promoting students' independence and collaboration. His approach illustrates how he found his bearings and developed a level of expertise in teaching in this type of context.

To establish their bearings in new online environments, instructors need to be aware of their goals and combine them with strategies and techniques that effectively manage the affordances and constraints of the environment. That process may require a degree of risk-taking combined with a willingness to help students lead themselves. It will require developing a proficiency in the use of multiple tools at one time. It will require less reading than in the asynchronous environment but tighter, more explicit and planned management and coordination of the voices than in a face-to-face environment. Above all, it may require what Thomas referred to in his opening quote as an interest in pedagogy. The focus on pedagogy provides the common bearing for navigating in all teaching and learning environments be they face-to-face, asynchronous or synchronous. 

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Elizabeth Murphy is an Associate Professor of educational technology and second-language learning at Memorial University of Newfoundland, Canada. She is presently funded by the Social Sciences and Humanities Research Council of Canada to study the instructor in the virtual classroom. She served as external evaluator for MusicGrid and the Telesat Satellite Multimedia Trials for schools. Both of these projects involved use of online synchronous communication.

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Notes

- [1.](#) Kagan, 1992, p. 80.
- [2.](#) Farahani, 2003, p. 6.
- [3.](#) Joy, 2004, p. 8.
- [4.](#) Rieber, 2004, p. 5.

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Editorial history

Paper received 9 January 2006; accepted 10 February 2006.
