



# PART IV

## **DELIVERY, QUALITY CONTROL, AND STUDENT SUPPORT OF ONLINE COURSES**





## CHAPTER 14

# TEACHING IN AN ONLINE LEARNING CONTEXT

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### INTRODUCTION

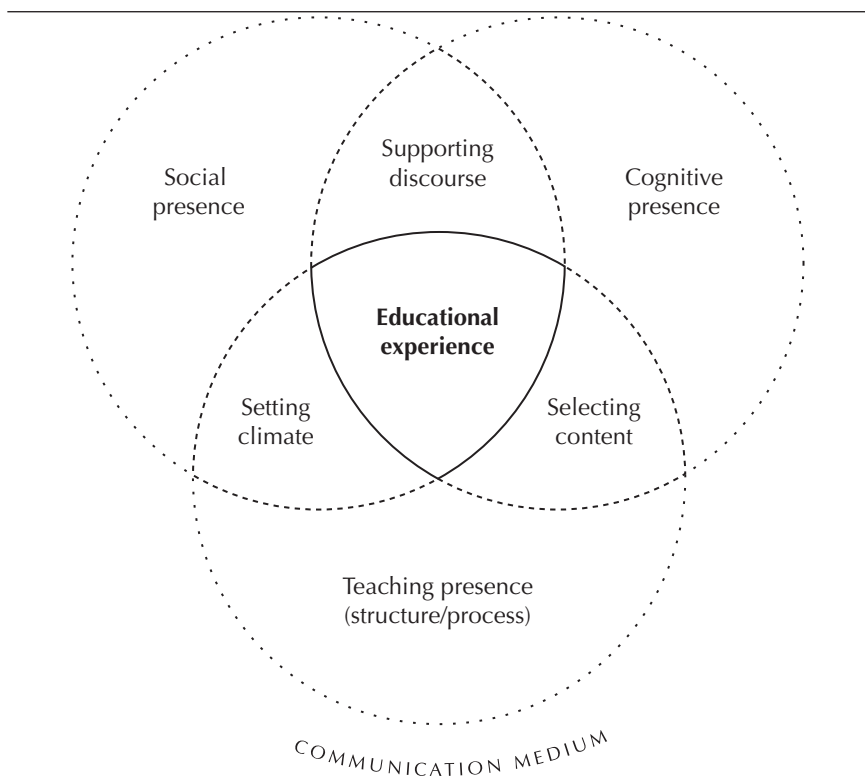
This chapter focuses on the role of the teacher or tutor in an online learning context. It uses the theoretical model developed by Garrison, Anderson, and Archer (2000) that views the creation of an effective online educational community as involving three critical components: cognitive presence, social presence, and teaching presence. This model was developed and validated through content analysis and by other qualitative and quantitative measures. The work has been referenced by hundreds of scholars and is arguably the most popular model used for both the research and practice of online learning (Arbaugh, 2007). The original papers describing and validating the model, as well as links to more current work, are available at <http://www.atl.ualberta.ca/cmc>.

In many ways, learning and teaching in an online environment are much like teaching and learning in any other formal educational context: learners' needs are assessed, content is negotiated or prescribed,

learning activities are orchestrated, and learning is assessed. The pervasive effect of the online medium, however, creates a unique environment for teaching and learning. The most compelling feature of this context is the capacity for shifting the time and place of the educational interaction. Next comes the ability to support content encapsulated in many formats, including multimedia, immersive environments, video, and text, which gives access to learning content that exploits all media attributes. Third, the capacity of the Net to access huge repositories of content on every conceivable subject – including content created by the teacher and fellow students – creates learning and study resources previously available only in the largest research libraries, but now accessible in almost every home and workplace. Finally, the capacity to support human and machine interaction in a variety of formats (i.e., text, speech, video, and so on), in both asynchronous and synchronous modalities, creates a communications-rich learning context.

To provide a mental schema for thinking about learning and teaching in this context, Garrison, Anderson, and Archer (2000) developed a conceptual model of online learning that they refer to as a “community of inquiry” model. This model (see Figure 1) postulates that deep and meaningful learning results when there are sufficient levels of three component “presences.” The first is providing a sufficient degree of *cognitive presence*, such that serious learning can take place in an environment that supports the development and growth of critical thinking skills. Cognitive presence is grounded in and defined by the study of a particular content; thus, it works within the epistemological, cultural, and social expression of the content in an approach that supports the development of critical thinking skills (McPeck, 1990; Garrison, 1991). The second, *social presence*, relates to establishing a supportive environment such that students feel the necessary degree of comfort and safety to express their ideas in a collaborative context, and to present themselves as real and functional human beings. The absence of social presence leads to students’ inability to express disagreements, share viewpoints, explore differences, and accept support and confirmation from peers and teachers. Finally, in formal education, as opposed to informal learning opportunities, *teaching presence* is critical, for a variety of reasons that create the rationale for this chapter.

Anderson, Rourke, Archer, and Garrison (2001) delineate three critical roles that a teacher performs in the process of creating an effective teaching presence. First, teachers design and organize the learning experience that takes place, both before the establishment of the



**FIGURE 1.** Community of Inquiry

learning community and during its operation. Second, teaching involves devising and implementing activities to encourage discourse between and among students, between the teacher and the student, and between individual students, groups of students, and content resources (Anderson, 2003b). Third, the teaching role goes beyond moderating the learning experiences when the teacher adds subject-matter expertise through a variety of forms of direct instruction. The creation of teaching presence is not always the sole task of the formal teacher. In many contexts, especially when teaching at senior levels, teaching presence is delegated to or assumed by students as they contribute their own skills and knowledge to the developing learning community.

In addition to these tasks, in formal education the institution and its teacher employees are usually fulfilling a critical credentialing role that involves the assessment and certification of student learning. This

chapter focuses on these component parts of teaching presence, by defining and illustrating techniques to enhance this presence and providing suggestions for effective teacher practice in an online learning context.

## DESIGNING AND ORGANIZING THE ONLINE LEARNING CONTEXT

The design and construction of the course content, learning activities, and assessment framework constitute the first opportunity for teachers to develop their teacher presence. The role the teacher plays in creating and maintaining the course contents varies from a tutor working with materials and an instructional design created by others, to a “lone ranger” or teacher who creates all of the content. Regardless of the formal role of the teacher, online learning creates an opportunity for flexibility and revision of content *in situ* that was not provided by older forms of mediated teaching and learning. The vast educational and content resources of the Net, and its capacity to support many different forms of interaction, allow for negotiation of content and activity, and a corresponding increase in autonomy and control (Garrison & Baynton, 1987). Teachers are no longer confined to the construction of monolithic packages that cannot be easily modified in response to students’ needs. Rather, the design and organization of activities within the learning community can proceed while the course is in progress. Of course, such flexibility is not without cost, as customization of any product is more expensive than mass production of a standardized product. Thus, the effective online learning teacher makes provision for negotiation of activities, or even content, to satisfy unique learning needs. As they become more informed participants and consumers of formal education, learners are also demanding increased input into the control of their learning (Dron, 2007). Within this flexibility and negotiation of control, however, the need to stimulate, guide, and support learning remains. These tasks include the design of a series of learning activities that encourage independent study and community building, that deeply explore content knowledge, that provide frequent and diverse forms of formative assessment, and that respond to common and unique student needs and aspirations (see Anderson, “Towards a Theory of Online Learning,” in this volume).

The design of e-learning courses is covered in greater detail in earlier chapters of this book, but this process provides opportunities for teachers to instill their own teaching presence by establishing a

personalized tone within the course content. This presence is created by allowing students to see the personal excitement and appeal that inspires the teacher's interest in the subject. Borge Holmberg (1989) first wrote about a style of expression, "guided didactic interaction," that presents content in a conversational – as opposed to academic – style. This writing style helps the learner to identify, in a personalized way, with the teacher. Techniques, such as illustration of content issues with personal reflections, anecdotes, and discussions of the teacher's own struggles and successes as they have gained mastery of the content, have been inspirational and motivating to students.

Activities in this category of teaching presence include building curriculum materials. The cost of creating high quality, interactive learning resources has led to renewed interest in reusing content which is encapsulated and formally described using metadata and often referred to as "learning objects" (Wiley, 2000; McGreal, 2004). These resources are then made accessible in repositories such as the Multimedia Educational Resource for Learning and Online Teaching (MERLOT: see <http://www.merlot.org/merlot/index.htm>), or retrieved from the open Internet through the use of search engines. We have also seen an explosion in the availability of whole courses, a phenomenon that was ignited by the Massachusetts Institute of Technology (MIT), which with support from two large foundations, made a commitment to put components from all of that institution's courses online by 2008, freely available for download by anyone in the world. This challenge has led to the establishment of numerous open courseware sites and indices, linking and providing search services across institutional courseware repositories (see <http://www.ocwconsortium.org/>).

Creating or "repurposing" materials, such as lecture notes, to provide online teacher commentaries, mini-lectures, personal insights, and other customized views of course content, is another common activity that we assign to the category of teaching presence. We anticipate that work on educational standards for describing, storing, and sequencing of educational content, and for formally modelling the way in which learning activities are designed, will significantly change the design role of many teachers from content creation to customization, application, and contextualization of learning sequences (Koper, 2004). Finally, this design category of teaching presence also includes the processes through which the instructor negotiates timelines for group activities and student project work, a critical coordinating and motivating function of formal

online course design and development, and a primary means of setting and maintaining teaching presence.

## GETTING THE MIX RIGHT

The modern Web supports a number of media, each of which can be incorporated into the design of an online learning course. Getting the mix right between opportunities for synchronous and asynchronous interaction and group and independent study activities remains a challenge, however (Daniel & Marquis, 1988; Anderson, 2003a). There are two competing models of online learning, each of which has strong adherents and a growing body of research and theoretical rationales for its effective application. The first, the *community of learning model*, uses real-time synchronous or asynchronous communication technologies to create virtual classrooms that are often modelled, both pedagogically and structurally, on the campus classroom. This model evolved from telephone-based audio (and later video and web) conferencing. Its evolution to the Net has allowed for delivery directly to the learner's office and home, bypassing expensive remote learning centres that were a feature of the older virtual classroom models.

Web-based computer conferencing systems allow for asynchronous collaboration among and between student and teachers. The synchronous virtual classroom model has advantages, in that it is a familiar educational model with a great deal of similarity to teaching and learning in campus-based classrooms. It provides increased access by spanning geographic distance; however, it constrains participants in terms of a single time that learners and teachers must be present. This problem is compounded when a class spans many time zones. The asynchronous version of the virtual classroom overcomes the temporal limitations, but can result in a shortage of coordination and reduce opportunities for students to feel "in sync" with the class (Burge & Howard, 1994). Designing effective online courses will increasingly involve judicious selection of combinations of media and formats that balance the differential capacities of media to support the creation of social and cognitive presence with the educational need for variety, the special communications characteristics demanded of particular content, and the cost, access, and training requirements of the media.

The second model of online learning involves independent learners who work by themselves and at their own pace through the

course of instruction. This model maximizes flexibility, but challenges the institution's and teacher's capacity to facilitate group, social, or collaborative learning activities. The *independent study model* is almost always selected in online learning models to allow for continuous enrolment or "just-in-time" access to educational content. It is very challenging to create collaborative learning or social activities when students are at very different places in the curriculum. The recent development of social software (Bryant, 2006; Dalsgaard, 2006), however, has inspired some us to begin thinking of ways in which "unpaced" learners can find each other, engage in short-term cooperative projects, and otherwise develop supportive networks and study-buddy relationships, even when their formal programming is unpaced (Anderson, 2005).

Fortunately, it is possible to combine synchronous, asynchronous, and independent study activities in a single course. In my own discussions with online students over the years, I have noticed a deep division between those who yearn for the immediacy of real-time communication, and those who are adamant that they have chosen online learning alternatives to avoid the time constraints imposed by synchronous or paced learning activities. Thus, many institutions, including Athabasca University, are developing both paced and unpaced models of delivery to accommodate student learning preferences and needs. Within a single class, it is possible to offer optional synchronous activities, and I usually build real-time Net-based audio-graphic sessions into the beginning section of my classes. These sessions allow me to quickly get to know the students from both a personal and professional viewpoint, explore their aspirations for the course, outline my own interests in the subject, discuss assessment activities, and provide an opportunity for students to ask pressing questions. Synchronous activities are also useful for guest interviews, for special activities such as debates and presentations, and of course, for holding the end-of-class social gathering – parties held in asynchronous time never seem to work! However, these activities can be "canned" and streamed for viewing by students in independent study mode.

Even if one's course design or the available technology precludes synchronous interaction, there are still opportunities to inject more than text-based lectures and discussions into the course. Online learning provides an opportunity for the teacher to build in video or audio presentations of themselves to enhance their presence to distributed learners. I have created two five-minute video productions that I link to my courses. The first provides an introduction to me and focuses on my

professional growth within the discipline that I teach. The second discusses my own research agenda, and not only helps establish my academic credentials, but also, I hope, conveys my excitement for the research process within my discipline.

Thus, the challenge for teachers designing and organizing the online learning context is to create a mix of learning activities that are appropriate to student needs, teacher skills and style, learning objectives of the program of study, and institutional technical capacity. Doing so within the ever-present financial constraints of formal education systems is a challenge that will direct online learning design and implementation for the foreseeable future.

## FACILITATING DISCOURSE

The second component of teacher presence is the critical task of facilitating discourse. We use the term *discourse* rather than discussion, as it conveys the meaning of relating to the “the process or power of reasoning” (Pickett, et al., 2007), rather than the more social connotation of conversation. Discourse not only facilitates the creation of the community of inquiry, but also the means by which learners develop their own thought processes, through the necessity of articulating their ideas to others. Discourse also helps students to uncover misconceptions in their own thinking, or disagreements with the teacher or other students. Such conflict provides opportunity for exposure to cognitive dissonance which, from a “Piagetian” perspective, is critical to intellectual growth. In fulfilling this component of teaching presence, the teacher regularly reads and responds to student contributions and concerns, and constantly searches for ways to support understanding in the individual student, and the development of the learning community as a whole.

The first task for the e-learning teacher is to develop a sense of trust and safety within the electronic community. In the absence of this trust, learners will feel uncomfortable and constrained in posting their thoughts and comments. We usually facilitate this “trust formation” by having students post a series of introductory comments about themselves. It is useful to request specific information, and to model an answer to the response request yourself. For example, the e-teacher may request that students articulate their reasons for enrolling in the course or their interest in the subject matter. I have seen this technique successfully extended at the beginning of regular online synchronous sessions by

asking each student to respond spontaneously to a content-related “question of the week” that sets the tone for the growth of both social and cognitive presence. Other ideas for stimulating development of social presence, such as “icebreakers” (Dixon, Crooks, & Henry, 2007) and other activities borrowed from face-to-face adult education and training activities, can be very effective in breaking down inhibitors to free and open discourse.

Many online courses rely extensively on a model of discourse where the teacher posts questions or discussion items relevant to the readings or the other forms of content dissemination. I have found that overreliance on this form of discourse soon becomes boring, and allows much of the learning to be focused on responding to teacher-initiated items, rather than challenging students to formulate their own questions and comments about course content. We have seen much greater levels of participation, motivation, and student satisfaction when discussion groups are led by student moderators (Rourke & Anderson, 2002). It cannot be assumed, however, that students have the necessary skills to undertake successful moderation of class discussion, so role modelling by the teacher for the initial discussions is usually helpful. Finally, in an insightful critique of discourse in asynchronous computer conferencing, Rourke and Kanuka (2007) note the barriers felt by learners in developing critical discourse and recommend the need for “well-structured learning activities with clearly defined roles for teachers and students, and a method of assessing students’ participation that reflects the time and effort required to engage in critical discourse” (p. 105).

Since the first issue of this text, a variety of social software tools have been demonstrated in both blended and online courses. Perhaps most popular has been “web logs” or “blogs” (Richardson, 2006). While it is unclear to what degree these new tools will hold advantages over older, threaded discussion groups that dominated the early forms of e-learning, there is little doubt that these new blog forms of discourse have generated renewed interest in reflective forms of writing to support learning (Cameron & Anderson, 2006).

## ASSESSMENT IN ONLINE LEARNING

No element of course design concerns students in a formal educational context more assessment. Effective teaching presence demands explicit and detailed discussion of the criteria by which student learning will be

assessed. A teacher who cultivates a presence of flexibility, concern, and empathy will reflect these characteristics in the style and format of assessment. In an earlier work (Garrison & Anderson, 2003), my colleague Randy Garrison and I discuss assessment in online learning in greater detail. Here, I summarize the main features of assessment, and provide two examples of frameworks for the challenging task of assessing contributions to the online learning community.

We know from research on assessment that timely and detailed feedback provided throughout, and as near in time as possible to the performance of the assessed behaviour, is the most effective in providing motivation, shaping behaviour, and developing mental constructs (Shepard, 2000). For this reason, machine evaluations, such as those provided in online multiple-choice test questions or in simulations, can be very effective learning devices (Prensky, 2001). Most models of online learning, however, also stress the capacity for direct communication and feedback from the teacher to the student (Laurillard, 1997). This feedback is an integral part of the online teacher's function of facilitating discourse.

A commonly used component of student assessment in formal online education is to require students to post comments. The usefulness and efficacy of this practice, however, has been hotly debated on discussion lists about online learning. Jiang and Ting (2000) report that college students studying online perceived that learning was significantly correlated to the percentage of grade weight assigned to participation and their resulting participation in discussion. For some, however, the practice of marking for participation seems only to recall the onerous practice of attendance marking that rewards the quantity, and not the quality, of participation (Campbell, 2002). Others counter that in the absence of incentive for participation, a community will not be created. For instance, Palloff and Pratt (1999) argue that, given the emphasis on the process of learning in a social context that defines much constructivist-based learning design, participation in the process must be evaluated and appropriately rewarded. Most online students are practical adults facing much competition for their time; thus, they are less likely to participate in activities that are marginalized or viewed as supplemental to the course goals and assessment schema. Many courses I have reviewed have assessed participation in online activities as a component of the final mark, usually with a weighting of between ten and twenty-five percent.

Student assessment of any kind requires that the teacher be explicit, fair, consistent, and as objective as possible. The following examples illustrate how two experienced online learning teachers assess participation and thereby enhance their own teaching presence.

## ASSESSMENT FRAMEWORKS

Susan Levine (2002) has developed a very clear set of instructions that she has used in graduate-level education courses to describe her expectations for student contributions to asynchronous online learning courses. She posts the following message to her students:

1. The instructor will start each discussion by posting one or more questions at the beginning of each week (Sunday or Monday). The discussion will continue until the following Sunday night, at which time the discussion board will close for that week.
2. Please focus on the questions posted. But do bring in related thoughts and material, other readings, or questions that occur to you from the ongoing discussion.
3. You are expected to post at least two substantive messages for each discussion question. Your postings should reflect an understanding of the course material.
4. Your postings should advance the group's negotiation of ideas and meanings about the material; that is, your contributions should go beyond a "ditto." Some ways you can further the discussion include
  - expressing opinions or observations. These should be offered in depth and supported by more than personal opinion;
  - making a connection between the current discussion and previous discussions, a personal experience, or concepts from the readings;
  - commenting on or asking for clarification of another student's statement;
  - synthesizing other students' responses; or
  - posing a substantive question aimed at furthering the group's understanding. (Levine, 2002)

Notice how Levine's instructions guide students on both the quantity ("two substantive postings" per discussion question) and the quality of contributions expected. Levine then goes on to describe

qualitative aspects of a substantive posting. Notice also that from this posting of requirements, Levine reveals her teaching presence as structured and explicit, yet appreciative of qualitative outcomes associated with deep learning and critical thinking.

Nada Dabbagh (2000), from George Mason University, offers a slightly more prescriptive set of recommendations for posting:

- Postings should be evenly distributed during the discussion period (not concentrated all on one day or at the beginning and/or end of the period).
- Postings should be a minimum of one short paragraph and a maximum of two paragraphs.
- Avoid postings that are limited to “I agree” or “great idea,” etc. If you agree (or disagree) with a posting then say why you agree by supporting your statement with concepts from the readings or by bringing in a related example or experience
- Address the questions as much as possible (don’t let the discussion stray)
- Try to use quotes from the articles that support your postings. Include page numbers when you do that
- Build on others’ responses to create threads
- Bring in related prior knowledge (work experience, prior coursework, readings, etc.)
- Use proper etiquette (proper language, typing, etc.)

Table 1 shows Dabbagh’s sample framework for assessing messages on a weekly basis. Note that one of the protocols is the use of proper etiquette, including language, typing, and, I assume, spelling. The imposition of a requirement to adhere to particular protocols or standards is a hotly contested question among e-learning teachers. Some suggest that new forms of expression, grammar, and even spelling are arising in this medium, and that the lack of common tools (such as spell checkers) that plague many conferencing systems should allow for a much more relaxed form of expression. Others argue that requiring a high standard of written communication helps students learn to communicate effectively in the online learning academic context. Given my own problems with spelling and the growing number of online learning students whose first language is not their language of instruction, I tend to be much more tolerant of language informalities in postings than I do when marking formal academic papers for term assignments.

Notice how Dabbagh requires more frequent postings than Levine, and further stipulates that the messages should be spread through the

CRITERION	EXCELLENT	GOOD	AVERAGE	POOR
Timely discussion contributions	5-6 postings well distributed throughout the week	4-6 postings distributed throughout the week	3-6 postings somewhat distributed	2-6 not distributed throughout the week
Responsiveness to discussion and demonstration of knowledge and understanding gained from assigned reading	very clear that readings were understood and incorporated well into responses	readings were understood and incorporated into responses	postings have questionable relationship to reading material	not evident that readings were understood and/or not incorporated into discussion
Adherence to online protocols	all online protocols followed	1 online protocol not adhered to	2-3 online protocols not adhered to	4 or more online protocols not adhered to
Points	9-10	8	6-7	5 or less

**TABLE 1.** Evaluation Criteria for Facilitating an Online/Class Discussion (Dabbagh, 2000)

week. The second set of criteria (responsiveness and demonstration of understanding) illustrates the way the online discussion is used to motivate students to complete the weekly readings. Finally, compelling the learners' adherence to a list of online protocol categories links their grading explicitly to quantitatively measurable behaviours.

Both of the above instruction and marking schemes provide extremely valuable guidance to learners, and make clear and explicit the requirements of the teacher. But what are the costs of such evaluation? Assuming 20-30 students participate in an online learning class, the weekly assessment proscribed by Dabbagh could be a very time consuming activity. The amount of time required for assessment depends, in part, on the tools available to the online teacher. A good online learning system facilitates the display of the weekly postings by each student. An exemplary system would incorporate a number of active teacher agents that would

- scan the postings for spelling and grammatical errors.
- total the number of words.
- allow the display of preceding or subsequent postings and the location of the posting in its thread to help assess "responsiveness."

- graph the posting dates to allow quick visual identification of the timeliness of each contribution.
- present a grade book for easy entry of weekly scores.
- when appropriate, provide assistance for the teacher to create and automatically mark a variety of multiple-choice, matching, and fill-in-the-blank-type questions for student self-assessment.
- automatically alert students when a grade has been posted or altered.

Finally, it should be noted that creating teaching presence is a challenging and rewarding task – but should not be a life-consuming one! Research on assessment in distance education shows that rapid feedback is important for both understanding and motivation to complete courses (Rekkedal, 1983). The instantaneous nature of online learning, however, can lead to an unrealistic expectation by learners that teachers will provide instant feedback and assessment on submitted assignments. The virtual teacher has to lead a real life, so setting and adhering to appropriate timelines helps students to hold realistic expectations and relieves teachers of the unrealistic expectation of providing instantaneous, 24/7 feedback. In addition, online teachers must become ruthless time managers, guarding against the tendency to check online activity constantly, and to do everything to support the learners that can be done, rather than everything that can reasonably be done within the constraints of a busy professional and personal life.

Some online teachers, especially those teaching at graduate levels, may be uncomfortable with the prescriptive nature of the guidelines presented above. These teachers are often more comfortable with subjective assessments of students' contributions to the online community and with demonstrations of their individual learning. This type of assessment presents challenges to both students and teachers, due to the subjective nature of the assessment and the time required to review all contributions made during a course before assigning a grade. For these reasons, a number of authors have written about ways in which the students' own postings can be used as the basis for student assessment (Davie, 1989; Paulsen, 1995). Typically, these self-reflective assessments require students at the end of the course to illustrate both their contributions and evidence of learning by composing a "reflection piece," in which they quote from their own posting to the course. They should be given guidance to help them extract quotations that illustrate their contributions. Obviously, students who have not participated will not be able to provide any transcript references from their previous postings, and

thus will generally receive lower evaluation scores on this project. Alternatively, a vicariously participating student (i.e., a lurker) may still be able to show learning by selective extraction of relevant postings from other students.

The increasing use of blog forms of discourse has resulted in the production of new rubrics for assessment. Bowling Green State University (n.d.), for example, provides links to 16 examples of such rubrics at <http://facultydevelopmentbgsu.blogspot.com/2005/11/rubrics-to-evaluate-classroom-blogging.html>. They are similar to the rubrics above, but perhaps pay greater attention to the reflective nature of learning that defined blogs from their origin as online diaries.

In summary, giving directions for modelling effective online discourse is a critical component of creating effective teaching presence. Assigning a portion of the assessment for class participation is a common practice in online learning courses. If participation is a formal and assessed requirement of the course, then developing and implementing an explicit assessment framework is an essential, but potentially time-consuming, teaching task. Some online learning teachers make this assessment into a more reflective exercise by assigning students the task of using their postings in the class conference, or their blogs, as evidence of their understanding the content concepts and their intellectual growth during the class. This type of assessed learning activity forces students to make quality contributions and then to reflect on them. Such a strategy moves the locus of responsibility from the teacher to the student, a solution that can save teacher time while contributing to students' understanding and metacognition.

## PROVISION OF DIRECT INSTRUCTION

In this final category, teachers provide intellectual and scholarly leadership, and share their subject matter knowledge with students. The online teacher must be able to set and communicate the intellectual climate of the course, and model the qualities of a scholar, including sensitivity, integrity, and commitment to the unrelenting pursuit of truth. The students and the teacher often have expectations that the teacher will communicate content information directly. Ideally, this knowledge is enhanced by the teacher's personal interest, excitement, and in-depth understanding of the content and its application, in the context of formal study. The cognitive apprenticeship model espoused by Collins,

Brown, and Newman (1989), Rogoff's (1990) model of "apprenticeship in thinking," and Vygotsky's (1978) scaffolding analogies illustrate a helping role for teachers, from their position of greater content knowledge, in providing instructional support to students. Although many authors recommend a "guide-on-the-side" approach to teaching in e-learning settings, this type of laissez-faire approach diminishes a fundamental component of teaching and learning in formal education. A key feature of social cognition and constructivist learning models is the participation of an adult, expert, or more skilled peer who, in turn, "scaffolds" a novice's learning. This direct instruction makes use of the subject matter and pedagogical expertise of the teacher. Some theorists argue that online teaching is unlike classroom-based teaching, in that "the teacher must adopt the role of facilitator, not content provider" (Mason & Romiszowski, 1996, p. 447). This arbitrary distinction between facilitator and content provider is troublesome. Garrison (1998), in a lively exchange, focuses on differentiating so-called teacher-centred and student-centred instruction, and makes the point that "the self-directed assumption of andragogy suggests a high degree of independence that is often inappropriate from a support perspective and which also ignores issues of what is worthwhile or what qualifies as an educational experience" (p. 124).

Gilly Salmon (2000) describes the role and functions of an "e-moderator." In this model, the teacher's role in online conferencing is to facilitate learning. Her description suggests that the e-moderator does not require extensive subject matter expertise; instead, she writes, "they need a qualification at least at the same level and in the same topic as the course for which they are moderating" (p. 41). Such minimal subject-level competency seems to be less than that expected by learners and peers in higher education settings, however. Anderson, Garrison, Archer, and Rourke (2001) write:

We believe that there are many fields of knowledge, as well as attitudes and skills, that are best learned in forms of higher education that require the active participation of a subject matter expert in the critical discourse. This subject matter expert is expected to provide direct instruction by interjecting comments, referring students to information resources, and organizing activities that allow the students to construct the content in their own minds and personal contexts.

Often, students hold misconceptions that impair their capacity to build more correct conceptions and mental schemata. The design of effective learning activities leads to opportunities for students themselves to uncover these misconceptions, but the teacher's comments and questions as direct instruction are also invaluable.

Although teaching presence is most commonly set in synchronous or asynchronous activities of the virtual classroom, it can also be set through fixed formats such as access to frequently-asked-questions databases or audio-, video-, or text-based presentations. Direct instruction can also be provided through an instructor's annotations of the scholarly work of others, including reviews of articles, textbooks, or web sites. These annotations can easily be shared by the class (and optionally by the whole Net) through social bookmarking tools such as Del.icio.us (see <http://del.icio.us/>) and Diigo (<http://www.diigo.com/>). Finally, the teacher may be asked to provide direct instruction on technical questions about access to net-based resources, manipulation of the networking software, operation of other tools or resources, and other technical concerns related to effective use of subject related resources.

## THE PROCESS OF BUILDING TEACHING PRESENCE

Salmon (2000) has developed a model for e-moderators that demarcates the progression of tasks which the online teacher moves through in the process of effectively moderating an online course. The process begins by providing students with access and motivation. In this stage, any technical or social issues that inhibit participation are addressed, and students are encouraged to share information about themselves to create a virtual presence, as described above. In the second stage, Salmon suggests that the e-moderator continue to develop online socialization by "building bridges between cultural, social, and learning environments" (p. 26). In the third stage, the "information exchange," Salmon suggests that the teaching task moves to facilitating learning tasks, moderating content-based discussions, and bringing to light student misconceptions and misunderstandings. In the fourth stage, "knowledge construction," students focus on creating knowledge artefacts and projects that collaboratively and individually illustrate their understanding of course content and approaches. In the final "development" stage, learners become responsible for their own and their group's learning by creating final

projects, working on summative assignments, and demonstrating the achievement of learning outcomes.

Salmon's model provides a useful guide and planning tool for online learning teachers; however, it should not be considered prescriptive. For example, students may be entering the online class with a great deal of technical and social experience with the online learning environment. In such cases, technical and social issues may have been resolved some time ago. Alternatively, a heterogeneous group may have some very sophisticated net-savvy students and some novices new to the online learning environment. Busy adult students may be anxious to avoid what they perceive as unproductive icebreakers associated with Stages 1 and 2, and desire to proceed to the more content-rich and potentially more meaningful learning activities associated with later stages. Thus, Salmon's model must be customized to the unique needs of each online learning community.

## QUALITIES OF THE E-TEACHER

This chapter concludes with a discussion of the three sets of qualities that define an excellent e-teacher. First and primarily, an excellent e-teacher is an excellent teacher. Excellent teachers like dealing with learners; they have sufficient knowledge of their subject domain; they can convey enthusiasm both for the subject and for their task as a learning motivator; they are equipped with a pedagogical (or andragogical) understanding of the learning process, and have a set of learning activities at their disposal by which to orchestrate, motivate, and assess effective learning.

Beyond these generic teaching skills is a second set of technical skills. One does not have to be a technical expert to be an effective online teacher. One must, however, have sufficient technical skill to navigate and contribute effectively within the online learning context, have access to necessary hardware, and have sufficient Internet efficacy (Eastin & LaRose, 2000) to function within the inevitable technical challenges of these new environments. Internet efficacy is a personal sense of competence and comfort in the environment, such that the need for basic troubleshooting skills does not send the teacher into terror-filled incapacity. Finally, during this period of creation and adoption of new learning contexts and tools, the effective online learning teacher must have the type of resilience, innovativeness, and perseverance typical of all pioneers in unfamiliar terrain.

## CONCLUSION

This chapter has outlined the three major components of teacher presence, and provided suggestions and guidelines for maximizing the effectiveness of the teaching function in online learning. I have not provided a lengthy list of “do’s and don’ts” for online teaching in a cookbook fashion; rather, I have attempted to provide a broad theoretical model, focusing on the three main tasks of the online teacher.

The context of online learning is still very much in a fluid and changing state. The Web itself, and the technologies that underlie it, are evolving rapidly to create a second web – the “Semantic Web” (Berners-Lee, 1999), and a social web which is often called “Web 2.0” (O’Reilly, 2005). The development of teacher and student agents, the structuring of content into learning objects (Wiley, 2000), the social construction and annotation of content by learners, teachers, and practitioners, and the formal expression of learning interactions (Koper, 2001) are creating a second-generation web that provides new capabilities and challenges for online teachers and learners. As yet, we are at the early stages in the technological and pedagogical development of online learning. The fundamental characteristics of teaching and learning, however, and the three critical components of teaching presence – design and organization, facilitating discourse, and direct instruction – will continue to be critical components of teaching effectiveness in both online learning and classroom instruction.

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