

Minding the Verge: Moderating Webcasts and Chat

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Online instruction at institutions of higher education in the United States is burgeoning in the midst of a digital social media revolution. Since 2003, yearly reports from the Sloan Consortium (Sloan-C) have charted the rapid uptake and increasing acceptance of online instruction by students, faculty and administrators. The Sloan-C and others report the expansion of online instruction sweeping, in terms of administrative motivation, infrastructure investment, stakeholder acceptance, measures of success and delivery formats, occasionally via anecdotal examples of digital media applications used alone or in concert in specific educational contexts, but rarely in terms of the personal agency of instructors and students. A prevailing theme in these reports nevertheless reflects the current *zeitgeist* of what is alternately called the connected era, connected age or network society: increasingly accessible social and collaborative digital computing is changing the way people connect with one another and interact.

New ways of connecting affect, among other things, the nature of interactions in online learning environments, but the systematic study of how instructors and students manage new ways of connecting lags behind the increased adoption of online instruction. As the number of and enrollment in online courses grow, and as the facilitators of online courses – administrators, instructors and information technology support staff – employ established and emerging social software applications and devices in online courses, opportunities continually arise to study how digital sociality is affecting

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online learning. When course instructors bring into a learning environment the kinds of digital social media that they and students use for socializing in their personal lives, what happens? How do students and instructors perceive the effects of digital social media on learning, and how do students and instructors manage their interactions when they use digital social media for online courses?

These questions inspired a recent study of the use of combined webcasts and chat for instruction in an online course for undergraduates taught by graduate students at an iSchool.

Experience, conflict motivate study of interactions

My own experiences as an instructor in the online course motivated the study, which looked at interactions that occurred during interactive webcasts. The webcasts combined live video and audio streams with group chats to effect dynamic learning environments for an all-online undergraduate course. Students in the course, offered every semester in the school of information at a major U.S. public university, create personal websites while exploring emerging digital communication media and learning about Internet history, information security, information searching and retrieval, and intellectual property. Students come into the course from various stages in their college careers and from a variety of disciplines. In each fall and spring semester nearly 200 students enroll in four sections of the course. Most interaction among the students and instructors, including the undergraduate teaching assistants (UAs) and graduate teaching assistants (GAs), occurs via email for one-to-one asynchronous communication and instant messaging for one-to-one synchronous communication. The interactive webcasts, which allow students to see and hear their instructors and invited guests speak on topics

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related to the course, provide the only formalized opportunity for students in the course to interact with each other. Active participation in webcasts is one of two ways students can earn participation credit for the class; posting written reflections to online articles is the other.

After the initial webcast of my first semester as an instructor for the course, two of the experienced instructors questioned the efficacy of webcasting as an instructional strategy. Attendance at the webcast was not mandatory, but students in the chats acted in ways that detracted from the discussion in the webcast.

Instructors and staff had conducted interactive webcasts since 2003, but the combination of live, streaming audio and video with synchronous chat, used with so many students of such variety for a shared online experience, was still new relative to all other aspects of the course. The implementation of the webcasts had been as much a test of whether the combined technologies would work as it had been an instructional strategy, and it appeared that while the equipment functioned fine, the webcast as a learning environment did not. My senior instructors and I discussed whether the webcasts were worth the time and effort required of the instructors, information technology (IT) support staff and students to make them happen.

Rather than abandon the webcasts, the instructors employed methods for structuring the webcasts and for managing interactions with students in the chat rooms in order to decrease the frequency and duration of off-task behaviors. By suggesting some specific, initial ideas for structuring and managing the webcasts differently, I was fulfilling the role for which I was chosen as an instructor, that of experienced educator. I was the only instructor at that point with any professional teaching experience, and part of my job was to add some pedagogical soundness to the course. I added anticipatory pre-webcast activities to the instructions for how to join a webcast that we posted on the course home page before each webcast. I also added follow-up assignments that added a writing component to the webcasts in the form of reflections that students completed as blog posts. Other instructors implemented other means for managing interactions, including asking students not to type while a guest was speaking, asking direct questions of students, soliciting questions from students and instructing students to use

specific keystrokes to indicate specific responses to questions, such as typing a caret (^) to raise a hand or typing an “A” to agree or a “D” to disagree with a statement.

During the time I was adding what I thought was pedagogical soundness to the course, I recognized a tension developing from our attempts to manage the webcasts. We (instructors) recognized that constraining students’ behavior to keep the webcasts focused required a tacit deftness in order to keep the webcasts inviting places to be. Constrain too much and the students might prefer to do the alternate participation assignments, which was acceptable but which did not provide the dynamism that the webcasts provided. From their inception the interactive webcasts were environments for minimally directed learning, where the instructors would loosely outline objectives but then would allow the free exchange of ideas. The webcasts were to provide relief to the highly structured and static nature of the rest of the course. The participation elements of the course, including the webcasts, provided the means to add enrichment beyond the course objectives, which students met through the completion of the rest of the course requirements. The interactive webcasts were the only element of the course that enabled students, instructors, outside guests and other staff to come together and co-create something unique.

Consider a typical webcast: One of the four instructors for the course secures a guest or guests and decides on a format for a particular webcast. The responsibility rotates among the instructors, who are free to structure their 45 minutes of live webcast as they see fit. Rarely do two webcasts in a semester follow the same format. Some feature an instructor and guest engaged in conversation; some feature a panel of guests discussing a topic. Some guests address the participants directly through the webcast and ask for varying levels of interaction. In order to view the webcast, the participants choose one link from among three on the course home page to open the live, streaming webcast in a media player, either Real Player or Quicktime (usually). Often server overloads disrupt the streams, forcing participants to reconnect or choose a different stream. Participants also open a jabber chat client, usually Adium or Pidgin, in order to converse via text with each other, including their instructors and TAs, in their course sections. The instructor-host for the webcast manages the guest(s) while also managing

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the chat for one section, usually with the help of one or more TAs. The other instructors and TAs manage their own sections. The participants must attend to the video and audio stream in the media player window while they interact and respond to the webcast, if asked, in the chat window.

The previous chat exchange when contrasted with the subsequent chat exchange showed a more cohesive conversation. Perhaps the pedagogical practices helped to keep the participants more engaged with the subject of the webcast, or perhaps it was something else. Every webcast is a dynamic instance of communal interaction, subject to the tensions inherent within any group of people and to outside forces acting upon the group or upon individuals within the group.

Facilitating webcasts is not easy and requires the instructors and IT support staff to stay on campus late on webcast days. The emotional intensity of monitoring that many students was exhausting, particularly when we (the instructors) had no idea whether students were learning anything. We had not explicitly tied the webcasts to any learning objectives or outcomes, so we did not know what we expected students to learn from the experience. As a result, we had no means for measuring the success of any webcast, other than having students enter the chat rooms, stay and chat for most or all of the webcast and exit the chat rooms with some encouraging words, such as these:

“This was a lot better than writing a paper.”

“This was really fun.”

“Thanks, it’s been very insightful.”

Students’ remarks were not always so encouraging, though:

“Answer my damn questions teachers.”

“Can we go now?”

“If I wanted to, could I just sign on to the chat and then leave it on and go somewhere else next time or should I stay and watch or does it matter?”

Does it matter? That was what we instructors were asking ourselves about the use of interactive webcasting, and we did not know the answer. We wanted to answer that “yes, webcasts do matter,” but we could not say why. I was intrigued by the idea of a virtual learning environment in which more than 150 participants could see and hear some people talking about some matter of interest and simultaneously participate in a text-based

discussion. At that point I had many questions: How can we make interactive webcasts work better? How will we know if they are working, since we are not even sure what they are? What do our students expect from an interactive webcast? What do we expect? How and to what extent must we try to get students to behave differently in the webcast, and what would that look like? Do students come back to the webcasts because they earn points for them, or do students get something from the webcasts that we do not know about? What might that something be? Why do some students choose not to participate in the webcasts? My immediate sense, having just experienced the phenomenon of a webcast for the first time and then seeing my senior colleagues despair of any learning dividend to come from the webcasts, was to see an opportunity for research. In part my colleagues and I were lamenting the possible loss of something we could not describe, a feeling that the interactive webcasts offered students something they could not get elsewhere, something students found intrinsically valuable in the chaotic exchanges of a webcast that the instructors sensed but had not studied. To explicate this mixed-media format (webcast plus chat) as a useful online learning environment and to explore the tensions that the webcasts create among the participants required a formal study of the complex processes participants employ while managing their actions and interactions.

Internet course provides rich history, context

The course discussed here teaches basic skills for using the Internet as a medium for everyday information use, research and communication. The course covers electronic mail (email), file transfer (ftp), file compression and the World Wide Web, specifically the use of search engines and web publishing. The course also introduces the concepts and histories of Internet governance and ethics. The course began in 1996 as a face-to-face course in a computer lab setting with seating for 12 students. By spring 1998 instructors were accommodating 24 students in the same 12-seat lab. As the course was becoming increasingly popular, IT staff began devising new ways of serving increasing numbers of students virtually, outside the lab’s physical space. In summer 1998 students could access streaming media tutorials through the school’s network; by fall 1998 students could interact with course materials

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online via the web, but students no longer interacted with each other as part of the course. By fall 2003 the school's IT staff had scaled the course up to serve nearly 200 students in four sections, and they had re-introduced social interaction to the course via interactive webcasts.

The school's IT staff had three objectives in serving so many students. First, school administrators wanted to attract undergraduate students in the course, who represented nearly every undergraduate major on campus, to the school's graduate program in information. Second, doctoral students wanted a large pool of students that could participate in research studies. Third, the school wanted an instructor training program for doctoral students. As instructors for the course, doctoral students helped IT staff create the course materials, which the instructors shared equally among the four sections via the web. The course materials remained mostly static during a semester; i.e., every student in every section had access to all the same materials for the course, and no single instructor offered course materials that differed from what every other instructor offered. The only opportunities that instructors had to personalize instruction were through one-to-one contact with students via email or instant messaging or through their roles as hosts for the webcasts or moderators in the webcast chats. When I began as an instructor, any understanding of what an interactive webcast should be or do as far as I could discern was tacit knowledge.

That we (instructors and IT staff) as a group, with no shared understanding of how they worked, continued to produce interactive webcasts

FIGURE 1. Moderator viewing a flat-screen monitor to moderate multiple chat rooms simultaneously in the course webcast studio.

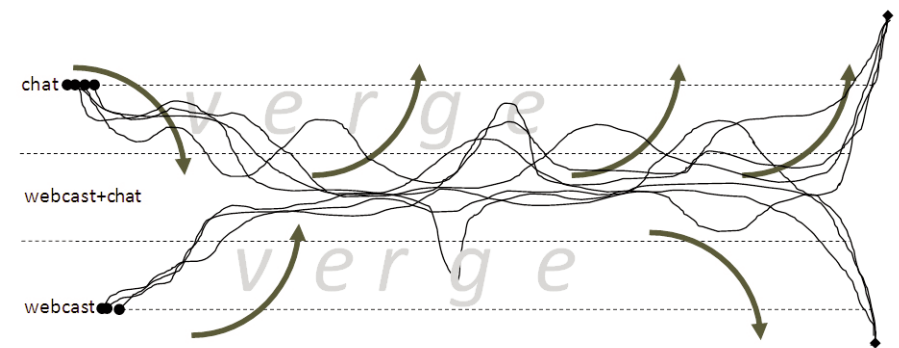


was for me a situation worth studying. To clarify, there was shared understanding of how the webcasts worked in the sense of how the hardware and software produced images, sound and discussion fora, but there was no shared understanding of how the interactions among such a diverse group of participants produced something that was, for lack of a better term, worthwhile. As instructors took turns hosting webcasts, we were free to try out whatever format or methods we thought might produce a worthwhile webcast, but we had only our sometimes mutual and sometimes competing opinions about what was worthwhile. To say that as chat moderators we grappled for ways to make the chats work is a visually-apt metaphor for what became the phenomenon central to the investigation: moderating interactions in webcasts plus chat (Figure 1).

Being a webcast/chat moderator means minding the verge

I studied the records – logged chat transcripts, archived video and audio and students' written reflections – of a semester's worth of webcasts and interviewed people who participated in them in order to answer the following question: What does it mean to be a moderator in an interactive webcast? I summarize what emerged from the study in a simple answer to the question before explaining the answer more fully. Moderating a webcast means *minding the verge* (Figure 2).

FIGURE 2. Idealized depiction of the verge.



A webcast consists of two main loci of interactions for which I can produce graphical records: webcasts and chats. Both have temporality, which I can trace in their records. I can say of both that they start at a specific time, persist and stop at a specific time. Both have human actors without whom they would not exist. That webcasts and chats occur simultaneously is of little concern except in the ways they connect. When a webcast and chat connect, a third locus of interactions comes to be, an interactive webcast or a webcast+chat for which there are no graphical records. I cannot trace the temporality of a webcast+chat in an extant log or other medium. I must try to create some graphical conceptualization of it to explain the nature and extent of the connections in it.

If we situate a webcast+chat within the totality of human social activity, we can depict it as a *realm* within a larger sphere of sociality. Realm connotes regimen, a set course of actions. In order to enter the realm of a webcast+chat, one must have presence in a chat, which requires a set course of actions in order to effect. One must have an account, be at an Internet-connected computer and have logged in to a chat room. One must also have opened a media player and navigated to a URL for access to a streaming web-based broadcast or webcast. Some enter the realm as students, some as guests and some as moderators. Guests and moderators enter the realm for the benefit of students, without whom a webcast+chat would be pointless. Some moderators occupy chats with students, some moderators occupy webcasts with guests and some occupy both

In order for there to be a webcast+chat, human actors move through three conditions of interaction: converging, attending and diverging. In converging, one moves from the larger sphere of sociality into a chat or into a webcast or into both. In attending, one creates and maintains a connection between a webcast and a chat. In diverging, one disconnects from the webcast or chat and either maintains presence in one or the other or moves back out into the larger sphere of sociality, out of the realm of the webcast+chat. Chats occupy a periphery between the larger sphere and the webcast+chat, and webcasts occupy a periphery between the larger sphere and the webcast+chat. These peripheries are the verge.

Students and moderators converge in a chat through bonding, orienting

and guiding; attend through guiding and tending; and diverge through branching. Moderators and guests do the same in a webcast. We can depict the actions of students and moderators as they move temporally through the chat as lines of actions that follow irregular, semi-sinusoidal patterns through the verge that borders the webcast+chat. We can depict the actions of moderators and guests in a webcast similarly. The areas of relative convergence, attendance and divergence create the verge and the webcast+chat. For summary please see the sidebar, Analytic Categories in Three Tiers.

Minding the verge alters perceptions of power

Discovering the concept of *minding the verge* revealed some surprising results that betrayed preconceptions that many members of the instructional team had concerning their own moderating behaviors, particularly of their perceptions of control and power. The teaching assistants I interviewed placed power outside themselves. Jing (UA), who had been a student in the course and was a UA at the time of the interview, said that guests had the power. Moderators ranked low in power: “Very little of what I contribute is original to myself,” Jing said, referring to her role as a moderator. “Guests manipulate the topic, the flow of the conversation and define how good the webcast will be.” When I asked her how she knew if a webcast were good or not, she said she recognized “the subjective nature of good” but could list the best webcasts, knew what they were and knew they were good because of the guest, not because of great questions from the host or great insights from the students. “The best ones were with the best guests; the worst ones were with the most confusing guests.”

Heike, a GA, believed instructors in the chat had the most control. To Heike, whoever was in control had the power: “If (assistant instructor) Masumi’s in the chat, he has control. If he’s not, no one’s in control.” With no one in control, Heike said, the webcast was guided by the presenter, either positively, as in the case of (webcast guest) Boma, who was “interesting and engaging,” or negatively, “if the presenter is boring.”

“If people aren’t engaged, then side conversations are in greater abundance,” Heike said. When I asked about the moderator role, Heike said it changes from webcast to webcast depending on how engaging the

presentation is. For example, with Boma, because he was interesting and interactive, the students needed less control and more “informational support.” With a less engaging presentation, there were more side conversations and “off-task behavior.”

The instructors placed power with the host moderator, a role they both had played multiple times. Masumi explained his view on power:

The instructor on video has the most, then the person being interviewed, because they’re usually saying the most. But they have no power over whether anyone’s listening to them, and they’re often people unfamiliar with the setup, so they’re not quite sure how to deal with a group of invisible students. Instructors must always keep in their heads how this is affecting the students. The other staff are random police officers that go around and ensure decent behavior. Students don’t really think about them being there that much.

Amari, an assistant instructor, also said that the on-camera moderator had the most power. The host moderator determines how the discussions and chats go, “creates an optimal setup or not,” manages guests, builds in elements of interactivity, something to “pull students in,” such as “Q&A, visual aids, an activity.” Like the teaching assistants, the instructors placed power wherever there was an actor manipulating, controlling or making people do something.

To the students goes the power

The individuals who led webcasts with the most attending and the least diverging both placed power with the students. Sol, a veteran webcast guest who liked that I asked the question, made this comment:

I will give you a strange answer. The instructors have a lot of power, but the students have a lot of power to make a successful webcast. It’s the interaction part that makes it worthwhile, and it’s the thing that keeps them engaged and interested in the subject. Students have a lot of power over that [interaction] in aggregate.

I asked Sol how he knew if a webcast were “worthwhile.” He said when the students were engaged and learning something. When I asked how he knew if students were learning anything, he said “from the questions they ask” or from

follow-up questions to his answers or when they made “lots of comments.”

Webcast guest Millie also said students had the power, “by sheer numbers and the fact that they’re in their own space.” At first I thought she meant “their space” as the virtual world, our having appropriated chat, for instance, as a teaching “space,” but she meant where they were physically: “Without sharing physical space, students receive no physical cues from their instructors.”

Instructor Amari spoke at length about physicality, describing how managing multiple things in a webcast differed from managing multiple things in a physical classroom:

There is a proximity thing that goes on, because you can feel the air, the anxiety level in a classroom go up. It’s a real intuitive kind of thing. Unlike in chat, you can hear voice inflections, so you can figure out, are they getting too anxious to complete this correctly, are they getting silly, do I need to pound down on this at this point, or is this just something I can let pass? All those cues are missing in a chat system, so you’re trying to extrapolate from just words on a screen while you’re trying to attend to two other, at least a minimum of two other things, you’re trying to extrapolate how this is going with the students. I also found, and I find it completely across the board in this course, that one of the biggest things I’m missing is being able to tune into the emotional aspects of my students. It’s a huge problem for me.

Amari’s description revealed a conflict that is central to assuming the role of a moderator in the webcasts, a conflict between holding or relinquishing agency or power in a learning environment, between controlling experience or allowing unparalleled experience to unfold.

For a moderator in an interactive webcast, minding the verge means being organized yet impromptu, structured but fluid, focused but flexible. It means coordinating connectivity and interactivity and finding strategies that work in a highly dynamic environment. Minding the verge means engaging students with information and questions that are relevant and responsive to them, their questions and their experience. When moderators recognize that they are powerless to make anything happen, that students have the power

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to create something meaningful out of the event if they are engaged, the verge decreases as more students attend to the event. When moderators assume the power to make something meaningful happen, the verge increases as more students diverge from the event, exercising power and seeking meaning outside the managed event.

What does it mean to mind the verge?

Students, moderators and guests come together to create a webcast+chat, sometimes with no expectations, but often with preconceptions that the webcast+chat experience challenges. Moderators assist students with bonding

and orientating during convergence and then with guiding into attending to the webcast+chat, but once students increase their comfort with the experience, once they figure it out, they exercise increasing power in the realm. Moderators find themselves in a micro-dynamic environment that places great demands on their attention and “stretches their abilities” (as one of the instructors depicted it) as they perform their roles with students who are in various conditions of converging, attending and diverging. The extent to which moderators are attentive to the various conditions of interactions in a webcast+chat determines how successfully they mind the verge.

Suggestions for substantive changes in the way the instructional staff

ANALYTIC CATEGORIES IN THREE TIERS

Three interaction categories: *chat*, *webcast* and *webcast+chat*

1. **Chat** interactions take place in the chat rooms
2. **Webcast** interactions take place “on camera” or in the studio
3. **Webcast+chat** interactions occur in the in-between space when actions in the chat and actions in the webcast show connectivity and interactivity, such as when webcasters ask a question on camera and get responses from students in the chats

Three condition categories: *converging*, *attending* and *diverging*

1. **Converging** describes moving from a larger social reality outside the webcast+chat into either a chat or a webcast or both, such as when people log in and get situated before a webcast begins
2. **Attending** describes collaborating to create a webcast+chat, such as when webcasters and students create a dialog around a topic or topics
3. **Diverging** describes moving away from the webcast+chat, either intentionally or unintentionally, such as when a participant distracts another or other participants in side conversations or back-channel chatter that is related to some degree or unrelated to what is happening in the webcast+chat; diverging also describes exiting from the webcast+chat at its end and moving back into the larger social reality, such as when participants say goodbye and log out of a chat room

Five moderating categories: *bonding*, *orientating*, *guiding*, *tending*, *validating* and *branching*

1. **Bonding** refers to processes whereby moderators and students get acquainted, ready themselves – in ways that are minimally committal – for further communication and practice social etiquette, e.g., connecting, smalltalking, greeting, farewelling, thanking, cheering
2. **Orientating** refers to processes whereby moderators help students get acquainted with the webcast situation or chat environment in order to complete the convergence into the social sphere of the webcast+chat, e.g., orienting, clarifying, questioning, tech talking, advising, checking, explaining, helping, suggesting
3. **Guiding** refers to processes whereby moderators interact with students in order to coax; them into a condition of attending to the webcast and chat and maintaining that condition; these processes generally help students complete convergence and prevent students from diverging, e.g., incentivizing, coordinating, directing, reinforcing, redirecting, sanctioning
4. **Tending** refers to interactions among students and moderators who are all fully attending to the webcast+chat, e.g., commenting
5. **Branching** refers to processes whereby moderators enact divergence on their own or in reaction to students. Often moderators seize opportunities in the webcast+chat to spark discussion among the students that diverts attention from the webcast+chat for something moderators might justify as a valuable learning outcome; just as often, though, moderators stray from the webcast+chat for many of the same reasons students do, e.g., initiating a tangent, following a tangent, extending a tangent, joking.

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plan and manage webcasts+chat emerged from the study. One suggestion is to provide a better description or depiction of how the webcast works, as far as what equipment students need, whom they should expect to see or not see when they attend the webcast and how their presence in and contributions to the chat affect how instructors assess them. Instructors do some of this pre-engagement work already, but, if instructors make the expectations for the webcast and evaluation more explicit, students may be able to move to a condition of attending faster and more easily.

Another suggestion is to pause occasionally for re-convergence. Actually say, “Okay, now we are going to pause the webcast for 30 seconds to allow everyone in the group to get back on the same page. Please signify your presence with an asterisk, Shift-8.” Or something to that effect. In one webcast, assistant instructor Masumi did something similar to gauge how his students were doing:

19:37:42

Masumi

meta question: how are we doing in here? i know there's a lot of different conversations going on and it's a bit hard to discuss and follow the rapid talk on the webcast, but i think you all are doing a wonderful job

Periodic group re-convergence would help shrink the verge and expand the webcast+chat.

A final suggestion is to design every webcast+chat with the successful format of constantly keeping students engaged by asking open-ended questions about topics that students will find relevant and will want to ask questions about. Keep students engaged by talking about course-related topics that will lead to students asking questions in return. Stay focused, talk and type fast, answer every question and skip joking and sarcasm. Such a design works because it promotes a student-focused and -centered approach to designing learning environments. ■