

STRATEGIES FOR IMPROVING INSTRUCTOR-STUDENT COMMUNICATION IN
ONLINE EDUCATION

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ABSTRACT

This chapter identifies potential communication barriers between instructor and students in an online educational environment, and suggests ways to reduce or eliminate them. There are at least five such barriers – social distance; conceptual confusion; fear and mistrust; isolation and disconnectedness; and lost efficacy – which, when present, are likely to diminish the effectiveness of an online course. Several approaches to structuring online lecture notes and composing individual student messages are proposed that are hypothesized to increase the likelihood that student satisfaction and learning goals will be achieved. It is assumed that the application of these communication tactics will enhance the attractiveness of online courses, particularly among students who would not otherwise have access to higher education. Suggestions for future research are proposed.

KEYWORDS

Communication barriers, computer mediated communication, distance education, electronic communication, electronic interactions, instructor-student communication, online course, online education, online instruction, web-based courses

INTRODUCTION

Online education, also referred to as online instruction (Kearsley, 2000) or web-based instruction (Khan, 1997) is becoming an increasingly popular approach to delivering academic courses (Saba, 2000). Online education is a form of technology-facilitated distance education. It occurs in a computer-mediated environment where the teacher and

student are physically separated for some portion, if not all, of the instructional process (Turoff & Hiltz, 1995).

At one mid-size university in the northeast, for example, the number of students taking online courses has been increasing steadily over the past several years, as has the range of courses offered and the number of faculty participating. Between 1997 and 2002, the number of students rose from 410 to 5430, and the number of courses offered increased from 25 to 265. Given the growth of online courses, and the likelihood that this growth will continue as Internet use increases, it is important to understand how best to design and deliver Internet-based instructional material in ways that facilitate both student learning and satisfaction with the overall educational experience.

CHARACTERISTICS OF ONLINE EDUCATION

Online courses may use a cohort model, where students move through the course material in a paced group (Motiwalla & Tello, 2000), or they may be self-paced, allowing individual students to start and complete courses at their own pace. Regardless of the pacing, students typically have access to course materials 24 hours per day from any Internet access point (Hiltz & Wellman, 1997). Students access the course website using web browser software over an Internet connection (Kearsley, 2000; Motiwalla & Tello, 2000). Course lectures may be presented as text, as PowerPoint presentations, or as streaming audio/video presentations. Course demonstrations or labs may be presented using streaming audio/video or graphic simulation software. Simulation software often allows students to manipulate variables in the simulation, affecting the outcome of the demonstration. Student assignments and projects may be returned to the instructor as email attachments, through online web forms, or as student PowerPoint

presentations. Communication, questions and discussion between students and faculty and among students are facilitated through the use of asynchronous (delayed) and synchronous (real-time, simultaneous) communication tools (Collison, Elbaum, Havind & Tinker, 2000; Kearsley, 2000; Motiwalla & Tello, 2000; Salmon, 2000).

COMMUNICATION BARRIERS

Online education is defined by the technology used to facilitate the delivery of course content, and mediate interaction between student and teacher and among students.

Computer mediated communication (CMC) is a central characteristic of online education (Hiltz & Wellman, 1997; Kearsley, 2000; Turoff & Hiltz, 1995). CMC, in its various technologies and forms, supports one-to-one communication, one-to-many communication and many-to-many communication in both a synchronous and asynchronous format (Ljosa as cited in Holmberg, 1995; Moore & Kearsley, 1995).

These multiple approaches to communication support various methods of student access, pedagogical strategies, and forms of interaction with course content, the instructor and fellow students.

As in traditional face-to-face (FTF) classroom settings, good practice in online education requires frequent instructor-student communication (Chickering & Ehrmann, 1996). Communication, or interaction, between student and instructor is considered essential to the learning process in both FTF (Chickering & Gamson, 1987; Kuh & Hu, 2001; Pascarella & Terenzini, 1976) and online education (Garrison, 1987; Holmberg, 1995; Moore, 1989; Smith & Dillon, 1999). However, unlike the FTF classroom, communication in online courses takes place primarily electronically and in writing. This poses some unique problems regarding communication quality that online instructors

must overcome. For example, how can one communicate clearly and completely when there is no direct, face-to-face interaction? How does one know whether students received a message from the instructor as it was intended? How can students be involved in a course in which they rarely, if ever, meet anyone else in the class? What instructor communication style will increase the likelihood that students feel involved in the course, and believe that their educational needs are being met?

Research regarding the broader field of distance education, of which online education is one method, offers some direction regarding these questions. Moore suggests the concept of distance “is not measured in miles or minutes” between the instructor and student but is a function of the dialog and the individualization available within any educational program (Moore, 1991, p. 56). By dialog, Moore is referring to essential two-way communication between student and instructor. Moore also introduces the term structure, which refers to the extent to which the objectives, teaching methods and procedures within an educational program can be adapted to meet the needs of individual students. Moore suggests that the distance experienced between student and teacher is a function of the level of dialog and structure within an education program. When dialog is high and structure is low, students and teacher experience less distance than when the converse occurs. Moore also suggests that an education program that supports high dialogue and low structure lends itself to a conversational approach between teacher and student, facilitating and encouraging communication between the two.

In his examination of print-based correspondence courses, Holmberg (1989) introduced the concept of guided, didactic conversation. Holmberg’s theory proposes that student motivation and success in distance education courses can be facilitated

through the development of course materials and instructor-student communication that is perceived as friendly and conversational in style (Mitchell, 1992). Holmberg suggests that distance education course materials should have the following characteristics: a) easy accessibility; b) explicit advice and suggestions to students; c) frequent invitations to students to communicate, question and exchange views; d) personal or professional relevance to students; f) an informal and conversational instructor communication style; and g) clear communications to students regarding changes in course themes and topics (Holmberg, 1983).

More recent research on the design and implementation of online courses has suggested a number of variables likely to influence course effectiveness. These include class size and prior experience with computer-mediated communication (Vrasidas & McIsaac, 1999); availability of technical and instructor support (Daughery, 1998); instructor attentiveness to student needs, and the extent to which there is synchronous, i.e. real-time, interaction (Lara, Howell, Dominquez & Navarro, 2001). Even with the greatest of care, however, courses do not always run smoothly. Hara and Kling (1999), for example, suggest that student frustration with web-based courses can result from insufficient instructor feedback and ambiguous instructions regarding course procedures and requirements, often producing feelings of isolation. On a more behavioral level, Tello (2002) found that positive student attitudes regarding instructor feedback and use of asynchronous discussion tools were highly correlated with student course persistence rates. In general, this research suggests that online course effectiveness is determined in part by the type, quality and frequency of communication that takes place between students and instructor. To the extent these electronic interactions are poorly designed

and managed, communication barriers are likely to arise that impede the achievement of course objectives (George & Jones, 2002, pp. 441-445).

The authors' experiences in the design, development and teaching of online courses suggest there are at least five types of barrier that can negatively affect student performance and satisfaction in an online course environment that must be overcome. These are: 1) the *barrier of social distance*, resulting from overly formalistic instructor communication that reinforces student-instructor status differences; 2) the *barrier of conceptual confusion*, resulting from poorly organized and presented course material; 3) the *barrier of fear and mistrust*, resulting from instructor communication that is perceived by students as non-supportive, indifferent to student needs or, in extreme cases, overtly hostile; 4) the *barrier of isolation and disconnectedness*, resulting from insufficient speed and frequency of instructor communication; and 5) *the barrier of lost efficacy*, due to instructor rigidity in applying course rules, procedures and policies. This paper explores ways to reduce many of these barriers, and improve the student-instructor communication process.

Communication in online courses takes place, in part, through (1) the posting of online lecture notes that typically accompany textbook reading assignments, and (2) electronic responses to individual student messages communicated in the form of emails or Discussion Board postings. This chapter explores how instructors can approach these two general methods of communication in ways that reduce the communication barriers suggested above, and increase the likelihood that student learning and satisfaction goals are achieved. These approaches are grouped into three strategy categories, each addressing one or more of these barriers.

Online Lecture Notes – Context

How can an online instructor create lecture notes in a way that, apart from lecture content, reduces the *barrier of social distance*, and facilitates student learning and course satisfaction? Consistent with Holmberg's (1989) concept of guided, didactic, conversation, it is suggested that an approach to electronic communication that simulates informal face-to-face interaction will more likely be experienced by students as *spoken* communication, and as more friendly and conversational (**Strategy 1**). This is likely to improve the perceived “readability” and value of online lecture material and, as a result, enhance student learning and course satisfaction.

In practice, the authors have found several approaches that are hypothesized to facilitate this experience. These are:

- *Using contractions common in spoken language* (e.g., “It’s likely that...” versus “It is likely that...”). Spoken language uses contractions much, if not most, of the time. Communication, particularly when it is spontaneous and informal, would appear awkward and robot-like if it did not. One exception is when emphasis, forcefulness or the communication of a high degree of certainty is intended by the speaker (e.g., “It is a good idea to be flexible with rules...” versus “It’s a good idea...”). Using contractions is therefore likely to enhance the receiver’s sense that an electronic message “sounds” more like direct face-to-face interaction.
- *Using spoken expressions at the beginning of written sentences, to create a tone and feeling of informality* (e.g., “Well, what this means to me is that...”). Spoken communication is often filled with words and expressions that have little or no informational content. They are often referred to as “time fillers” (e.g., “well”;

“um”; “ya know”). When used too frequently, they can become distracting. When used occasionally, and in an intentional, targeted manner, they can facilitate the experience of talking rather than reading.

- *Writing in the first person, and in the active, rather than passive, voice.* For example, compare the following two sentences: (1) “What I’m saying is that if you reduce resistance, you’ll more easily change an employee’s behavior.” (2) “In general, if resistance is reduced, employee behavior will more easily be changed.” The first approach is no less precise or rigorous a statement than the second. It does, however, better reflect how people tend to speak, as compared to write.
- *Occasionally using what sound like incomplete sentences, as one often encounters in the dialogue of good novels* (e.g., “That’s a fact. Hard to believe, isn’t it?”). As the example suggests, this type of language does not necessarily contain ideas directly related to the content of the course. Rather, it can have the effect of reinforcing or emphasizing a previous statement in a way that is not appropriate when communicating in formal, written language.
- *Using “friendly” expressions that make it easier for students to perceive the instructor as approachable, and as someone with whom they can take intellectual risks* (e.g., “That’s a fact, folks. Hard to believe, isn’t it?”) (compare this statement to the example in the previous paragraph). Formal written language does not refer to the message’s audience as “folks.” In fact, it generally does not refer to the recipient of the message at all. Spoken language, in contrast, permits an instructor this “linguistic license,” and is therefore likely to enhance a student’s sense of face-to-face communication, and connection to the “speaker.”

- *Making consistent use of color, bold face and italics to communicate where emphasis of various kinds would be if a given statement were spoken, rather than written.* This may be thought of as a type of graphical, rather than text-based, tool that will be perceived and understood by students in the same way that a picture is perceived and understood differently than words. To apply this idea, one might, for example, use red and/or bold face to highlight important points in prose text, and italics to symbolize verbal emphasis (e.g., “*Now*, do you see the importance of **new information technology** as a key determinant of **organizational productivity?**”).

Online Lecture Notes – Content

Regarding the content and structure of lecture notes, it is hypothesized that the *barrier of conceptual confusion* can be reduced, and the understanding and perceived value of online lecture material enhanced, by visually structuring course material (**Strategy 2**) in the following ways:

- *Creating lecture material that, to an appropriate degree, complements or supplements the course textbook (if a text is being used) rather than “rehashes” it.*

This suggestion is self-explanatory, and often applies to traditional classroom settings as well as online courses. It may be more salient to students in an online environment, however, in that students in a traditional classroom are, in a sense, a “captive audience.” Online students, in contrast, can “leave the classroom” if they become bored, or consider a lecture to be “useless,” anytime they wish. If this happens too often, given that online courses tend to require more self-imposed discipline on the student’s part over the course of the semester (i.e., walking out of a classroom is probably more difficult to do than walking away from a computer

screen), the student is more likely to fall behind in an online course and encounter academic difficulty.

- *Drawing heavily on “real world” examples of course concepts, particularly if the students are practically-minded working adults (although the appropriateness of this depends considerably on the course subject). This suggestion may apply as readily to traditional courses as online classes. To the extent, however, that online students are more likely to be working adults who may be seeking a somewhat more direct correspondence between their academic courses and job applications, the regular use of practical examples can facilitate student understanding of, and satisfaction with, the content of an online course.*
- *Developing a bulleted outline or PowerPoint graphic for each lecture topic within each weekly lesson that reflects or summarizes the flow of lecture material, and gives students a “bigger picture” of how the details of lecture content “hang together.”*
For example, in a course in organizational behavior, there is usually at least one lecture that analyzes the types of power tactics available to managers who seek to influence others at work. The inclusion of an outline or graphic that bullets the types of tactics discussed in the lecture, and lists them in the order in which they are discussed, will highlight the key concepts for students. This could facilitate their ability to understand and systematically integrate lecture details. That is, it will help them distinguish “the forest from the trees.”
- *Systematically reducing font size as the outline moves from main title, to headings, to sub-headings, to bulleted points. This is merely a graphical way to visually symbolize for students the development of lecture concepts as they flow from general*

to specific. It is another way to help them distinguish the “big picture” from the details.

- *Using one text color, background or font for lecture outlines and another for lecture notes.* Visually distinguishing outlines and lecture material in this way can potentially reduce the “monotony” of what might otherwise be perceived by students as a “boring” monochromatic presentation. Of course, the use of color should be judicious, keeping in mind that not all students perceive color contrasts or color. The use of color should be combined with another distinguishing marker such as size, font or underlining.
- *Dividing a large lecture into several smaller “pieces” that give students a sense of making progress when they reach closure on a “piece of the pie” (i.e., part of the online lecture), even though they may still have a lot further to go before the “pie” is fully “consumed.”* Long online lectures can be experienced by students as tedious and difficult to read. Organizing a lecture into many smaller subtopics is similar to dividing a long novel into many smaller chapters. It provides the reader with natural break-points at which to “call it a day,” and thus prevents arbitrary breaks in the continuity and flow of ideas. It also permits students to feel like they are making progress as they move toward completion of the lesson.
- *Using italics and boldface consistently to highlight key concepts and ideas.* This is another graphical technique to assist students in identifying what the instructor considers to be the most important points in a lesson. It is a way to communicate what is the “wheat” and what is the “chaff.” Italics and boldface can be used

separately for different purposes, or together to indicate the strongest possible emphasis.

Individual Student Messages

The *barriers of fear, mistrust, disconnectedness and lost efficacy* may be reduced through more personalized, supportive, complete and timely communication with students (**Strategy 3**). It is important to recognize that online students are customers who are often “buying” more than just course content. They are often time-constrained, working adults who are also seeking flexibility and responsiveness from both the instructor and educational institution.

There are several ways in which instructors can convey to students that they are respected; their unique concerns, uncertainties and pressures are understood; and that the instructor is willing to work with them as individuals to solve both anticipated and unexpected problems (e.g., an unforeseen business trip) that arise over the course of a semester. These more subtle, often indirect, messages from instructor to student may be conveyed through the exchange of emails, and possibly Discussion Board postings. They form the “between the lines,” or “context,” message embedded within instructor communications about such issues as course administration; student performance; Internet access problems; student requests for “special treatment” due to unavoidable job constraints; and so on.

It is suggested that supportive context messages will be communicated to students when instructors directly or indirectly exhibit *flexibility and responsiveness* in their online communications. Instructors may send these messages in the following ways:

- *If a student asks that a particular email be re-sent because the student “never received it,” send the message out again “with a smile” (e.g., “sure, I’ll send it right out.”).* It is easy for instructors to communicate to students “between the lines” that they are annoyed at having to do this. Instructor disapproval might even be sent inadvertently. If this type of negative message is communicated, the student will most likely “pick it up,” and begin to perceive the student-instructor relationship as hostile and defensive, rather than friendly and supportive.
- *If a student cannot take an examination, or finish an assignment, at the scheduled time (e.g., due to temporary job overload or child care difficulties), permit the student to complete it at a different time, if the explanation for the requested delay appears reasonable and honestly communicated.* Always be aware that the goal of the instructor is to evaluate what students have learned, rather than how they respond to time pressure and other non-academic constraints.
- *If a student does poorly on an examination, and asks for help, give as much help as is reasonable and possible, without communicating annoyance “between the lines”* (e.g., “Sure, <<student’s first name>>, what would you like some help with?” versus “O.K., but you’re really expected to learn this material on your own.”). This, of course, should not be done in a way that “spoon feeds” students, creates a “non-level playing field” for the rest of the class, or reduces academic standards.
- *Begin each email to a student with “Hi <<first name>>, or “Hello <<first name>>.”* This will tend to personalize, and “de-formalize” an electronic message. If the message is an unpleasant one (e.g., to report a poor grade to a student), “hello” rather than “hi” might be an approach that is more congruent with message content.

Also, the instructor should consider using his or her first as well as last name in all communications to reduce “social distance.”

- *Anticipate what is going to confuse or create uncertainty for students, and address these issues as early in the semester as possible, preferably at the beginning of the course* (e.g., “I can’t attend your Chat hour because of a conflict with another class. Will this hurt my grade?”). One approach would be to create a series of email messages clarifying these anticipated student difficulties, and stagger their distribution over the first week or two of the semester. Since students do not always read all of their emails, or might forget over time what they were told very early in the semester, it might even be appropriate to send some of these messages more than once.
- *Respond quickly to emails and other messages from students.* Until the instructor responds, online students with questions or problems, particularly ones that are not relevant to other students in the class, will have no idea what to assume or expect regarding the issue in question. If the instructor does not, or cannot, respond quickly, the instructor should apologize when he or she does respond (e.g., “Sorry for the late response...”), and tell the student why the response was later than it should have been, if appropriate. In addition to reducing the *barrier of self-efficacy*, this type of instructor response is also likely to reduce the *barrier of isolation and disconnectedness* by creating a “classroom climate” in which students will feel informed, secure, and able to cope with the constraints in their lives that affect their ability to succeed academically .

CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

For any relationship to be productive and satisfying to participants, the parties must possess the interpersonal, or “people,” skills needed to foster an environment that stimulates trust, spontaneity, risk-taking, and creativity. When these conditions are present, the parties will more likely be motivated to continue their relationship, and achieve desired goals. In general, these skills are reflected in the verbal and non-verbal behaviors each party directs toward the other. When instructor-student interaction takes place in an online environment, the challenge therefore is to identify how electronic communication tools can be used to approximate the positive experience students have when they are interacting face-to-face with an interpersonally competent instructor.

This chapter suggests three strategies for achieving this goal. The *first* is to reduce the barrier of social distance between student and instructor by writing in ways that approximate the characteristics of spoken language. Some approaches are to use contractions; include expressions used in spoken communication; and write in the first person, active voice. Instructors can also use “friendly” expressions; use color, boldface and italics to communicate verbal emphasis; and occasionally use incomplete sentences as is often done in everyday speech.

A *second* strategy for facilitating student trust, spontaneity, risk-taking, and creativity is to reduce the barriers of fear, mistrust, disconnectedness and lost efficacy. This is likely to be achieved when an online instructor provides information and responds to student messages quickly; personalizes a message by beginning it with “Hi” or “Hello” and addresses students by their first names; communicates support for them “between the lines” rather than indifference; and is flexible with class rules and policies;

A *third* strategy is to reduce the barrier of conceptual confusion by visually structuring course-related information in ways that facilitate easier comprehension. Specific techniques include making extensive use of bulleted outlines and graphics; using color and font size to differentiate outlines from lecture text, and different levels of abstraction within outlines; using italics and boldface to highlight key ideas; and dividing long lectures into many self-contained shorter presentations.

Anecdotal experience suggests that the ideas presented in this chapter can attenuate the emergence of student-instructor communication barriers, and enhance student learning and satisfaction with the online course experience. Future research is required, however, to investigate the extent to which they have these positive effects.

One of the more general questions requiring empirical investigation is the extent to which the proposed taxonomy of communication barriers in online education is complete, and conceptually sound. It was proposed above that these potential barriers may be classified into five types – social distance, conceptual confusion, fear and mistrust, isolation and disconnectedness, and lost efficacy. Do online students in fact experience these barriers and, if so, under what conditions do they arise? Are there other barriers that are yet to be identified?

A related question is the extent to which these barriers are conceptually distinct, or overlap to some degree. If they are distinct, which specific behaviors lead to the emergence of which barrier? If they overlap, which ones tend to “hang together” and emerge as a result of the same instructor behaviors? It would be useful to determine whether the same instructor behavior can cause more than one barrier to arise. For example, if an instructor fails to address important course-related issues early in the

semester that are likely to create uncertainty for students later on, might this create not only a feeling of lost efficacy, but also conceptual confusion and a sense of greater social distance? Likewise, an instructor who uses contractions and spoken expressions in written communications might not only reduce the barrier of social distance, but also the barriers of fear and mistrust.

Finally, do some communication barriers have a more salient effect on students than others, and might the importance of a particular barrier be mediated by student characteristics? For example, do older, more mature students who have had considerable work experience and go to school part-time exhibit less concern about the barrier of social distance than younger, less mature students who are attending school full-time and still live with their parents? Another question is whether students who have had considerable online course experience have fewer difficulties with an instructor who communicates poorly than students who are studying online for the first time.

An effective online instructor recognizes the unique problems that can arise in an online teaching, as compared to traditional classroom, environment, and finds ways to electronically simulate the positive aspects of direct face-to-face interaction with students. These issues are particularly relevant in settings where courses and programs are being provided to students who would not otherwise have access to higher education. It is our hypothesis that student learning and satisfaction with the overall online experience will be enhanced by creating a “virtual classroom” in which instructors are creative in the presentation of course content, flexible with the “rules” and responsive to student needs.

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