

Online and Face-to-Face Students' Perceptions of Teacher-Learner Interactions A Preliminary Examination

Penelope Wong

For an Internet course, the interaction was pretty good, but I can't give it a 9 or 10 [on a Likert scale of 1-10, with "10" being superior] because I don't think that experience can ever be as good as that in a classroom setting.

—Brian, online student

INTRODUCTION

The above quotation reflects an aspect of classroom pedagogy of concern to all educators: how to maintain high quality

teacher-learner interaction, especially in an online classroom environment. For many educators, the student-teacher relationship is at the heart of the learning-teaching process, and while this relationship can manifest itself in a variety of ways, one significant dimension is the *interaction* between a teacher and his or her students. Thus, it would be safe to say that any teacher practice that threatened to undermine a potentially positive teacher-student relationship might be viewed with circumspection. This is the potential situation that teachers of online/distance education courses face. While it can be argued that distance learning can bring enormous benefits to many students, such as access to an education, this form of learning is not without potential pedagogical challenges.

One of the major concerns about distance learning is its potentially negative impact on the teacher-learner relationship, particularly

with respect to the quality and quantity of teacher-learner interaction (Berge 2002; Northrup, 2002; Phipps & Merisotis, 2000; Vansickle, 2003). This fear is a legitimate one (Shneiderman, 1998) because the educational process is fundamentally a relational and interactive one (Ayers, 2001; Noddings, 1992). Therefore, when technology, in the form of computer mediated classes, assumes a significant role in the educational process, what is the impact on the teacher-student relationship, in terms of interaction? Additionally, how does this interaction differ, if at all, from traditional face-to-face interaction? This is precisely the question that was raised when I first started teaching fully online WebCT sections of an introductory education course alongside traditional face-to-face sections of the same course. Because I (i.e., the author/researcher) was the instructor of all four sections of this course in this study, I also had the opportunity to respond to these questions.



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One significant dimension of this study is the fact that it involves preservice teachers who are going to be K-12 teachers. Therefore, learning about and experiencing positive interaction with their instructor is not only important in terms of their own experience as learners, but also as a learning experience they will draw on when they become teachers. Education is one of the fields most likely to offer college-level degrees or certificate programs entirely via distance learning, and as the use of this format for offering courses is likely to increase, a study such as this one is significant.

THE STUDY

The purpose of the study is to compare and contrast preservice teacher experiences and perceptions concerning teacher-learner interaction in traditional face-to-face sections and online asynchronous sections of an introductory education course. The research question guiding this preliminary study is: In what ways do face-to-face students and online students experience teacher-learner interaction?

METHODS

PARTICIPANTS

The participants in this study were 75 preservice teacher candidates enrolled in a fifth-year teacher education credentialing program in a public, midsized university. They were enrolled in either a fall fully online asynchronous Internet-based section ($n = 16$), a spring online section ($n = 18$), a fall traditional face-to-face section ($n = 22$), or spring face-to-face section ($n = 19$) of the same course. The same instructor, the researcher, taught all four sections of the course over the duration of one academic year.

Forty-one participants were female and 34 were male. The seemingly unexpectedly high number of male candidates reflects the fact that all the candidates in this study were potential secondary school educators. The students ranged in age from 22 to 59, with the vast majority ($n = 53$) being in their mid to late twenties; students were distributed evenly in terms of age across all the sections. In other words, younger and older students were distributed evenly in both online and face-to-face sections of the course. In terms of race and ethnicity, the subjects were overwhelmingly European-American ($n = 61$) with the remainder being Latino/a ($n = 14$). All of this demographic data pertaining to age, gender, and race/ethnicity were obtained from class records and rosters. It was not solicited via the surveys for fear of compromising confidentiality.

PROCEDURES AND THE SURVEY INSTRUMENT

Participants were administered a survey that had the following two items:

1. On a scale of "1" to "10" with "1" being poor and "10" being outstanding, rate the teacher-learner interaction in this course.
2. Explain why you gave the rating you did for the teacher-learner [interaction]. Include any other thoughts or ideas you have on the topic.

These two survey items enabled both a qualitative and quantitative interpretation of the results. The surveys were administered at the end of each semester, and students completed them anonymously. In the face-to-face classes, a student administered all the surveys and returned them to the instructor's

office. In the online classes, it was possible to track the Internet-based students' responses, so anonymity was ensured by printing out any survey received and blacking out the name before reading it. Online students also had the option of downloading the survey, filling it out, and then mailing it to the instructor. Because of the brevity and ease of answering the questions, the return rate was high. Thirty-one of 34 online students returned completed surveys, for a return rate of 91%. Forty out of 41 face-to-face students returned completed surveys, for a return rate of 98%. Responses were grouped into two categories according to course formats (i.e., online and face-to-face course formats). Both sections of online courses were collapsed into one group, as were both sections of the face-to-face courses, to ensure a larger sample group for each course format. Because the survey did *not* ask the participants to indicate age, race/ethnicity, and gender, the data could not be disaggregated and analyzed along these variables.

The quantitative data, the response to survey item 1, was calculated by simply averaging all the Likert-scale responses of the online participants and face-to-face participants. The qualitative data were analyzed in the following manner: all of the surveys were read holistically two times to get an overall feel for the themes that were present. Then, during a third and subsequent readings, the data were manually coded for themes.

RESULTS

Online students rated their teacher-learner interaction as a group at 9.6 while their face-to-face peers gave a rating of 9.3. It is clear from these quantitative results that there is no statistical difference between the groups' results. There

was, however, a significant experiential difference between the groups as revealed by the qualitative comments. In examining their responses and coding them according to reoccurring ideas and themes, both face-to-face and online students value high-quality and high-quantity interaction with the professor; they just define such interaction differently.

The themes of face-to-face students' responses fall into two main categories with a smaller third category: (1) teacher-learner interaction on an individual level ($n = 30$), (2) teacher-learner interaction in a group setting ($n = 15$), and (3) approachability ($n = 8$). For online students, the three themes that categorize their comments are (1) availability ($n = 30$), (2) feedback as a function of caring ($n = 26$), and (3) "good teacher-learner interaction but will never be a 10" ($n = 4$).

DISCUSSION

The mean ratings of the teacher-learner interaction of 9.6 by online students and 9.3 by face-to-face students yield some intriguing results. First, it seems that the online students are generally more satisfied with their online teacher-learner interaction than their face-to-face peers. Second, this result is in opposition to generally assumed perceptions that face-to-face courses provide higher (and better) levels of interaction than do online courses (Havice, Havice, & Isbell, 2000). While this is not a statistically significant result, it is, nevertheless, for a course instructor engaging in online (as well as face-to-face) instruction, an educationally significant one. It suggests that effective teacher-learner interaction can, in fact, occur in an online environment. The ratings give a snapshot of how the pre-service teachers were generally satisfied with the teacher-learner interaction they experi-

enced. Their comments, however, gave insight into *why* they were generally satisfied. In the following discussion, the comments of the face-to-face students will be discussed first and then those of the online students.

FACE-TO-FACE STUDENTS' PERCEPTIONS OF TEACHER-LEARNER INTERACTION ON AN INDIVIDUAL LEVEL

It was not surprising that face-to-face students characterized teacher-learner interaction as the feedback they received on assignments, since this was the most common and direct way of communicating with the instructor. As one student noted:

I think there was quite a bit of teacher-learner interaction. I feel you gave great feedback whether it be in a discussion or written comments on our work. Also all your comments were positive and offered ways of improving. (Sarah, face-to-face student)

As more and more students discussed their views on the feedback, it soon became clear that many of them appreciated the one-to-one attention from the instructor.

The teacher has always provided students with an ample supply of comments and information on how to improve written assignments. The ability to adjust, rewrite, or add to class assignments allowing students to monitor their improvements helped immensely in [my] development as a future teacher. (Carly, face-to-face student)

Because much of the teacher feedback provided to students was individualized, such as comments on papers and other assignments, students tended to regard the feedback as a springboard to personal

improvement in their work and journey toward becoming a teacher.

FACE-TO-FACE STUDENTS' PERCEPTIONS OF TEACHER-LEARNER INTERACTION IN A GROUP SETTING

The second most frequently cited form of teacher-learner interaction was that of group dynamics: the way in which the teacher interacted with the class as a group and the ways in which the students interacted with one another. For the students, this dimension of teacher-learner interaction manifested itself as the "creation of a comfortable classroom environment" and touched on a number of topics, such as "communication," "a comfortable class atmosphere," and "discussion of relevant topics" within the context of facilitating class discussions. It was an interesting theme, because it was not only teacher-learner interaction, per se, that was the focus, but also the teacher's ability to create a whole-class environment that was safe and caring for all students. This situation, in turn, enabled students to interact with each other in an atmosphere of safety and trust.

There were so many "teachable moments" in which we had open class/teacher discussions. In my experience of college—in the teacher credential program—I never saw as much quality discussion and positive interaction. Students are encouraged and challenged on a daily basis. (Jay, face-to-face student)

In the previously discussed theme, individual students' interactions with the instructor were based mainly on feedback from the teacher and were evaluative in nature. In this theme of teacher-learner interaction in a group context, students were focusing on a very different dimension of teacher-

learner interaction: classroom climate. Students were concerned with the instructor's ability to create a safe and trusting classroom environment because of the implications it held for them as a group and their *interactions with each other*. If there were not a climate of trust, an atmosphere of open inquiry would not be possible; through the students' positive interactions with the teacher as a group, they saw the ways that they could interact comfortably with one another. The classroom environment of respect and trust allowed for "an atmosphere of free and open expression," as one student expressed.

Two ways of communication were always open ... [and] the teacher always presented multiple points of view without bias in order to facilitate teacher-learner thinking. The atmosphere was open for free expression on subject content by anyone and also the details of how the class was run. Student input was obviously valued. (Lee, face-to-face student)

FACE-TO-FACE STUDENTS' PERCEPTIONS OF TEACHER-LEARNER INTERACTION AS APPROACHABILITY

A third group of responses centered on approachability. Face-to-face students were less concerned with the instructor's *availability* than with her *approachability*. Because the students could count on seeing the instructor at least twice a week, physical accessibility to the instructor was not an issue. However, availability is not the same as approachability. Face-to-face students seemed concerned with their being able to approach the instructor comfortably and feel safe talking to her. One student commented:

I often observed her interaction with my classmates. She was always approachable and ready to

answer any questions. I don't believe I ever saw her alone. There was always a classmate by her side asking her something before class, after class, in her office, or walking to her office and I hear via email. (Billy, face-to-face student)

Face-to-face students knew the instructor was available if they wanted to see her, and this was certainly important to them; they were more concerned with how safe and comfortable they would feel during the interaction. In a group setting, face-to-face students were concerned with the interpersonal dynamics of human interaction. This was not a surprising finding, given that most individuals do not like unpleasant face-to-face interactions.

Online students shared many of the same perceptions about the qualities of teacher-learner interaction as their face-to-face peers. The three themes that categorized their comments were (1) availability ($n = 30$), (2) caring in teacher-learner interaction ($n = 26$), and (3) "good interaction but will never be a 10" ($n = 4$).

ONLINE STUDENTS' PERCEPTIONS OF TEACHER-LEARNER INTERACTION AS AVAILABILITY

Not surprisingly, almost all the online students commented on instructor availability as a dimension of teacher-learner interaction. This was not an entirely surprising result because, unlike their face-to-face peers, there was not a regularly set time of day that they could count on communicating with the instructor unless something was arranged beforehand, such as a chat. Very simply put, the instructor has to be "present" in some way for interaction with students to occur. The online students rated the

teacher-learner interaction highly because of the perception that the instructor interacted with them on a regular and predictable basis. As one student put it, "you were always easy to get a hold of online and you responded quickly and clearly" (Doug, online student). E-mail was the main way that the instructor interacted with the students. While they could contact the instructor by phone, only one student in both semesters availed herself of this option, and this was due to some extensive computer problems.

Knowing where to reach the instructor and being able to predictably count on a fairly prompt response to queries was only part of the "availability" issue for some online students. Eight students mentioned instructor participation in chats, which were originally set up to increase learner-learner interaction. The instructor participated in the first chat to facilitate discussion, but students wanted the instructor to participate more.

I only chatted with you one time during the course in a group chat. The interaction was good; I just wish there had been more. Most of the teacher-learner interaction was through webmail and that was done in a timely fashion. (Dave, online student)

While only eight students mentioned chats, it is significant to note that the chats, due to the real-time element, offer a qualitatively different kind of teacher-learner interaction than does e-mail or discussion postings. Even if mediated by a computer, chats more closely approximate a face-to-face conversation with an individual, and thus give the impression of the speaker, in this case the teacher, being not quite so distant. The desire for more instructor participation in the chats might also be an unexpressed wish for the direct human connection

that was missing from the teacher-learner interaction and was available to the face-to-face students.

It is interesting that the online students mentioned "availability" specifically and really confined their comments to this logistical aspect of the teacher-learner interaction (i.e., how and where to reach her), while their face-to-face peers were more concerned with the approachability of the instructor because availability was assumed. This result suggests that if online students can be put at ease about the logistical aspects of availability of their instructor, they might focus more on the approachability of the instructor.

TEACHER FEEDBACK AS A DIMENSION OF TEACHER-LEARNER INTERACTION

Like their face-to-face peers, online students also regarded teacher feedback as a critical dimension of teacher-learner interaction. Because teacher feedback on student work was overwhelmingly the most common form of teacher-learner interaction, it was not surprising it was mentioned by 18 of the 34 students. It was through teacher feedback that the online students commented on aspects of teacher-learner interaction similar to that of their face-to-face peers, such as approachability and the creation of a safe classroom environment.

As one might imagine, creating an online learning teacher-learner relationship characterized by safety and trust is not an easy task; all the traditional nonverbal cues that mediate communication, such as body language, are not present in an online environment. Therefore, the instructor doesn't really know how messages, in the form of feedback, are being interpreted. Interestingly, in the absence of any kind of face-to-face or real-time interaction

(except through chats), students perceived the quantity and quality of feedback provided on assignments as a measurement of the instructor's "caring" or taking an interest in them.

I felt it was really helpful when the instructor emailed me and let me have feedback. I felt closer to her and that she really cared about my work. I also felt the instructor was very understanding. We are dealing with technology and things can go wrong from time to time. (Heather, online student)

Other students simply relied on how often they interacted with the instructor as the main measure of the quality of the teacher-learner interaction. Presumably, the more interaction, the more attentive and caring the teacher.

I emailed you a lot and felt like I got more personal interaction with you than I get with many professors on campus. (Mary, online student)

An interesting subtheme that emerged among the online students' comments was how many of them were actually surprised at the amount of feedback and its quality. One noted, "it was apparent that a lot of time went into grading assignments." Another noted, "I do not get this much feedback in actual courses offered on campus." These last comments suggest the possibility that students might enter online courses with lower expectations concerning teacher-learner interactions than when they enter face-to-face courses.

ONLINE STUDENTS' PERCEPTIONS OF TEACHER-LEARNER INTERACTION AS

"GOOD INTERACTION FOR AN ONLINE COURSE"

One of the most significant and interesting themes to emerge from this study was one that was exclusive to the online students. This theme is best characterized as "good interaction for an online course, but it will never be better than in a face-to-face course." Two students' comments capture this sentiment well.

I feel the interaction was okay. I think it was a little strange for me to have class and not see the teacher unless I came to visit. I don't think this could ever be a category that scores a 10. (Lori, online student)

The above-mentioned student is basically saying that no matter how satisfying the teacher-learner interaction might be, it would never merit a "10" rating because it couldn't possibly be comparable to the kind of learner-student interaction found in face-to-face courses. A second student who rated the teacher-learner interaction as 7.5/10 had this to say:

For an Internet course, the interaction was pretty good, but I can't give it a 9 or a 10 because I don't think that the experience can be as good as that in a classroom setting. (Brian, online student)

Both comments suggest that some online students have a completely different set of expectations about teacher-learner interaction when taking an online course than when taking a traditional face-to-face course. While this result might be understandable, it is also problematic, because it appears to equate different with "lesser" or "not as good." Interestingly, some students were quite cognizant of this double standard when it came to evaluating teacher-learner interaction. One online student, who rated teacher-

learner interaction as a “9,” qualified his response this way.

I am answering this [item] as a student in an ONLINE course, understanding that there is no face-to-face interaction but interaction nonetheless. (Dave, online student)

Unlike the other students, this student did not rate his interaction with the teacher lower solely because it was in an online class. However, like the other two students, he is expressing the idea that teacher-learner interaction in a face-to-face class is qualitatively different than that of an Internet course.

While these three students felt the teacher-learner interaction was qualitatively different between face-to-face and online courses, they did not explain *how* it was different. And while one can only speculate, it is probably the real-time, direct face-to-face interchange that the students missed, as suggested by the following student’s comment: “we [students] lost the element of human expression and personal interaction in taking an online course” (John, online student).

In short, it seems that no matter how satisfied they were with the teacher-learner interaction, the online students always felt the absence of the direct, face-to-face, or “human” connection. While this situation presents a constant challenge for online instructors, it is not insurmountable. The results of this study indicate that online students can experience satisfying and teacher-learner interactions if this issue is carefully attended to by instructors.

CONCLUSION

Clearly, a positive teacher-learner relationship is critical to any educational situation, but for preservice teachers the situation is especially critical because they will one day be

working with K-12 students. Additionally, it is especially important that preservice teachers experience and have some understanding of a positive teacher-learner relationship online because they might one day be teaching online courses themselves.

Perhaps not surprisingly, both online and face-to-face preservice teachers were concerned about the same issues with respect to teacher-learner interaction. Both groups of students wanted a direct human connection to their teacher and were able to define how such an interaction could be achieved (i.e., through availability, quality feedback, and creation of a safe classroom environment). Because the online students did not have a face-to-face human connection, however, they seemed to have preconceived notions that online teacher-learner interactions could never be as “good” as those in a face-to-face class. In other words, they had lower expectations in online courses than in face-to-face courses on this issue. While the results of this study suggest that such an expectation did not seem to adversely impact online pre-service teachers’ overall satisfaction and their perception of efficacy of the teacher-learner interaction, it is an issue that needs to be addressed.

RECOMMENDATIONS

The following suggestions, which might be found in a face-to-face course, are offered as possible solutions in mitigating the absence of the missing “human connection” in online courses and thereby improving teacher-learner interaction.

- Hold virtual office hours when students can phone me or talk to me in a chat room, so they feel a more direct human presence

- Conduct more chat sessions with them, so they have more real-time interaction with me.
- Include more autobiographical activities in course work, so students can feel like they know me.
- Possibly post student and instructor photos on the class Website, so students can “put a face to a name.”
- Call all the online students at the beginning and/or during the middle of the term and at the end, so they feel they have a “human” connection with me.
- Let students know what the interaction will be like (i.e., how many times I check e-mail, my expectations of them, etc.), so they know what to expect.
- Take advantage of all kinds of Web-based communication besides e-mail (i.e., chat rooms, bulletin boards, etc.), so there are varied kinds of teacher-learner interaction.
- Through interaction with students, particularly when providing feedback, encourage students to be independent, self-regulated learners, so students do not have to feel so dependent on an instructor.
- Hold 2-3 face-to-face meetings if possible; one at the beginning, the middle, and end of the semester, so the students not only get to know the instructor but also other students.
- Consider a video link to the course, so they can see and interact with me in real-time.

AREAS FOR FURTHER RESEARCH

The results of this preliminary study demonstrated that students can articulate characteristics of satisfying teacher-learner interactions, and that such experiences can be associated with online instruction. As this issue was examined, however, many other avenues of inquiry were raised. For example, how do

gender, age, and/or race/ethnicity of online participants impact teacher-learner interaction? Do women perceive an effective teacher-learner interaction differently from men? Does the gender of the instructor make a difference? Other areas for further research might include students' comfort levels in using computers and/or relative lack of knowledge or expertise in using computers. Do students who are at ease with using computers perceive teacher-learner interactions differently than their peers who are intimidated by computers? These are just a few of the questions this very preliminary study raised and, hopefully, some of them will be addressed as more and more courses are delivered in an online

format and more research is devoted to this topic.

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"ONE OF THE MAJOR CONCERNS ABOUT DISTANCE LEARNING IS ITS POTENTIALLY NEGATIVE IMPACT ON THE TEACHER-LEARNER RELATIONSHIP, PARTICULARLY WITH RESPECT TO THE QUALITY AND QUANTITY OF TEACHER-LEARNER INTERACTION."

—PENELOPE WONG

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