Developing a "Sensitive" Online Psychology Course for Community College Students:
The Role of Asynchronous Discussion

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The psychological community, in recent years, has witnessed great strides in communication and learning technologies. With advances in tools to support both the sharing of electronic information (e.g., Internet) and electronic communication (e.g., e-mail, videoconferencing, electronic bulletin boards, "chat rooms"), there has been a resurgence of interest in distance education. Distance learners have become one of the fastest growing student populations (Barker, 1998; McIsaac & Gunawardena, 1996; Parrott, 1995; Roblyer, 1999), and distance learning settings have become increasingly technologically sophisticated. Distance education courses – which previously referred to courses conducted via correspondence, television, or other similar means – increasingly refer to those conducted entirely online, in which students never meet an instructor or classmates. Opportunities for learning in these settings are increasingly available and in demand (Barker, 1998; McIsaac & Gunawardena, 1996; Parrott, 1995; Roblyer, 1999).

While this learning setting offers greater flexibility, especially for learners for whom traditional education often has been inaccessible (e.g., older or working students), success in an online course depends on a greater ability to self-motivate and self-regulate than is required for traditional, classroom-based courses. These courses often are self-directed or independently paced, so successful online learners must generate their own motivation, regulate their learning, and know how to use effective strategies for managing their time and coping with procrastination (Beth, Corliss, Cho, Bera, Weinstein, & Palmer, 2002). Unsuccessful learners often report difficulty with these kinds of self-regulatory responsibilities (Carr, 2000; Cohen, 2000; Frew & Weber, 1995; Nesler, 1999; Simpson & Head, 2000).

Self-regulation becomes even more difficult, though, as distance learners must exercise these skills in a relatively isolated learning environment, one that affords less instructor feedback, and less social support from peers, than is typically the case in a traditional, classroom course. Students in online courses often are dissatisfied with the levels of interaction they experience with their instructors and other students. They report difficulty in establishing and maintaining relationships with those involved in their online courses and describe feelings of isolation with regard to the "nameless, faceless" medium through which they interact with these others. Similarly, both instructors and learners in these environments suggest that a major disadvantage of online learning concerns the absence of social and conversational cues (e.g., facial expressions, nods, body language) that typify the traditional classroom (e.g., Spears & Lea, 1992).

Given these problems, current research suggests that online courses suffer from dismal completion and retention rates (Carr, 2000; Cohen, 2000; Frew & Weber, 1995; Nesler, 1999; Simpson & Head, 2000). As this population continues to grow geometrically, it is imperative, both theoretically and practically, that research focuses on

ways to improve student satisfaction and learning outcomes in online learning environments.

Our research focuses on the role of online discussion in a hybrid instructional environment, one that is primarily classroom-based but that includes a distance component in the form of asynchronous discussion. We address the possible implications of student perceptions of online discussions in a hybrid course for the development of a version of the same course that will be offered entirely online. We suggest that an investigation of the role of asynchronous online discussion in a community college-level introductory psychology course is an important initial step in developing an online course that will be sensitive to these unique online learning issues. Finally, we address the larger theoretical and practical issues that instructors confront in developing effective online psychology courses.

The Present Research

Our research centers primarily on the role of asynchronous online discussion in a classroom-based, community college-level psychology course. We were interested, broadly, in examining the ways in which students experienced the asynchronous online discussions required for their course. Specifically, we asked:

- How psychologically engaged do community college students become in online discussions, and what contributes to greater or more frequent psychological engagement in this environment?
- How does their experience of engagement in online discussions differ from their experience of engagement in classroom discussions?
- When do they choose to participate in an online discussion, and what factors contribute to a decision *not* to participate?
- How useful do they think online discussions are to their learning?
- Do they feel they are viewed differently online than they are in class? If so, do they feel that one perception is more accurate than the other?
- Do they make different decisions with regard to asking questions during online discussions than they make with regard to posting statements?
- Are they more interested in the professor's posts than other students' posts in an online discussion?
- Are any of these factors influenced by anonymity (i.e., the use of pseudonyms in place of students' actual names in online discussions)?

Method

Forty-seven students (28 female, 19 male) in two sections of an introductory psychology course at a large community college in the Southwest participated in the spring semester, 2002. The course, Introduction to Psychology, was offered only in a traditional, classroom-based format. Students were required, however, to participate in four of ten asynchronous online discussions using Blackboard course software. (Blackboard was chosen based on the ease with which students could use the software and the ease with which the instructor could maintain the course using the software.)

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Students were assigned to four topics for online discussion (e.g., animal research, brain chemicals and psychological disorders, alcohol abuse), and to different roles within those topics, in order to generate better discussion and to discourage students from simply posting responses to the prompt without reading posts from the other students. Specifically, students assigned the role of "commenter" were required to respond to the professor's prompt, and students assigned the role of "responder" were required to respond to commenters.

Both classes were provided the same prompts; the only difference in the two classes involved the use of pseudonyms in place of students' actual names in one class. Only the professor held information linking students' actual names with their online discussion pseudonyms.

All students were asked to make thoughtful contributions to the discussion that indicated their understanding of assigned course readings. The online discussion replaced a writing assignment from a previous version of the course that had been completely classroom-based (no online discussion). For this reason, students were graded on both their responses and the language mechanics (i.e., grammar, spelling) with which these responses were crafted.

For extra credit at the end of the semester, students completed both a Likert-type questionnaire on their perceptions of in-class and online discussions and an open-ended questionnaire that required them to elaborate on some of their answers to the quantitative questionnaire.

Results

Data were analyzed a number of ways. We first conducted a series of t-tests and Pearson chi-square to look for differences between the two classes in terms of the quantitative, self-report data. All statistically significant differences are noted below. For the most part, though, the classes were similar, so we collapsed data across classes and analyzed the two together whenever possible. We also analyzed the transcripts of students' actual discussions, looking at the length and number of comments, the frequency with which students read the professor's and other students' posts, and the tendency to reveal private information for each class. Finally, we examined students' responses to the open-ended questions, looking for themes consistent across students and classes, recording the frequency with which students mentioned each theme.

Psychological engagement. Students were asked, in an open-ended question, if they had ever become psychologically engaged or involved in an online discussion over the course of the semester. We defined this for the students as a time when "the discussion or topic was grabbing your attention or pulling you in." Sixty-five percent stated that they had become psychologically engaged at least once, while thirty-three percent stated that they had never become engaged in the online discussion at all. Several mentioned that they had only become engaged during their first online discussion because of the novelty of the experience.

Students most frequently mentioned that their engagement was dependent on the topic of the discussion (topic was mentioned 27 times in students' open-ended responses). Interestingly, one of the most engaging topics for students, food cravings, was

the topic the professor felt generated discussions that were only minimally related to a psychological principle, instead revolving around students' own food and restaurant preferences. Students also mentioned that they were more engaged when the topic had some individual relevance for them (mentioned 22 times), either because they had personal experience with the topic, a strong opinion about it, or it just "struck a chord." One student described the relationship between the topic and her level of psychological engagement: "My brain is very full and only has room and time to be attracted to very interesting topics."

Less frequently mentioned reasons for increased engagement included: reading about others' personal experiences (mentioned 6 times), general interest in psychology or its universal applications (mentioned 4 times), sharing personal experiences (mentioned 3 times), and feeling compelled to respond to someone who had posted an "ignorant" comment (mentioned 3 times). Reasons for increased engagement mentioned in students' open-ended responses just once or twice included: helpfulness of comments, reading comments that made the student consider an alternate viewpoint, receiving a grade for comments, prior knowledge, mood, "meeting" another student online, and feeling smarter for having been exposed to a variety of perspectives.

Students who stated that they did not become psychologically engaged during the online discussions most frequently suggested that computer illiteracy and access and technical problems were to blame (mentioned 4 times). They also mentioned lack of time (3 times). Other reasons for lack of engagement included: the need for another person to be present in order to become engaged, dislike of writing, irrelevant topics, dislike of Blackboard, discomfort posting personal experiences, having to wait for responses, and a lack of responses (each mentioned once).

Students were also asked to describe how frequently they became psychologically engaged and whether their engagement was different during online than classroom discussions. Of the students who explicitly stated a preference, 81% said that they became psychologically engaged more frequently during classroom than online discussions, while 13% stated that they became engaged more frequently during online discussions. Six percent stated that the frequency with which they became engaged in discussions was no different online than it was in class.

Students' reasons for more frequent and deeper engagement in classroom discussions were remarkable. A number of students stated that they were more engaged in class because they enjoyed hearing about others' experiences and opinions, loved learning about psychology, and enjoyed learning new information. Interestingly, though, these students did not elaborate on why they felt they could not have the same kinds of experiences during online discussions! Students also mentioned that they missed human interaction, immediate feedback, and face-to-face communication cues during online discussions. They frequently mentioned that online discussions were impersonal. One student said that she did not become engaged at all online because "I don't feel like I am talking to anyone." Another suggested that students "censor" what they say during online discussions in order to receive an adequate grade. Perhaps one of the most interesting comments came from a student who stated that the online discussions simply did not *feel* as important as the classroom discussions.

Of the 4 students who felt more frequently and deeply engaged in online than classroom discussions, they frequently mentioned that they felt freer or more comfortable

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"typing behind a computer where no one can see me" than speaking face-to-face and risking "a chance for embarrassment." In addition, one student suggested that the online discussions made her think more deeply for a longer period of time than the classroom discussions.

Of the 2 students who reported no difference between their feelings of psychological engagement online and in class, neither explained their reasons.

One particularly poignant example of psychological engagement during online discussion came from one student who described how her interest in the discussion over eating disorders grew as she thought more about how the topic related personally to her:

> At first, when typing a response, I was uninterested. With further thought, I became more emotional and sensitive to the topic. Throughout my response, there is a sense of growing tension as feelings (from days when I was troubled with my weight) come to the surface.

This student also described the difficulty she experienced each time she sat down to contribute to the online discussion, but suggested "once I was actually online, I generally stayed online for several hours."

Participation. Students were required to participate in just four of ten online discussions, but all discussions were open to all students. Students were asked whether they participated in discussions outside those in which they were required to participate. Twenty-six percent reported that they did, while 70% reported that they did not.

Students most frequently mentioned that they participated when not required when they felt they had a different perspective, that they could add something new to the conversation (mentioned 6 times in students' open-ended responses). They also suggested that they were more likely to participate when they felt emotionally invested in a topic or held a strong opinion about a topic (mentioned 5 times). Students also talked about social interaction or support reasons for participating: One student mentioned that she participated because she knew other students in the class that had been assigned a particular topic and wanted to talk to them. Another said that she participated simply to agree with her classmates. She suggested that it just "makes you feel better" when someone agrees with you, so she assumed this role in the online discussions, even when she did not receive a grade. A male student suggested that he participated when he "felt there were no right or wrong answers, even among the students." Students' other reasons for increased participation included factors associated with being comfortable in online discussions (e.g., time to think through thoughts before writing, the comfort of being at home, anonymity).

Students' reasons for choosing not to participate were similar to the reasons they gave for failing to become psychologically engaged in online discussions. They mentioned access and technical problems; lower engagement; a dislike of writing; lack of grade credit, time, or immediate feedback; and the impersonal nature of electronic discussion. Of these, students most frequently mentioned a lack of time and the fact that participating in other topics was not required (each mentioned 8 times). In addition, they suggested that they were less likely to participate when they did not have a strong opinion

or prior knowledge about a topic. Three students indicated they did not participate because they felt the online discussions were a waste of time.

Six students in the non-anonymous class indicated that they regularly read discussion on the other topics but simply never posted. Interestingly, no students from the non-anonymous class indicated that they did this. Perhaps the ability to link classmates' names and faces with their comments generated greater interest in the online discussion in this class. This seems likely; one student in the non-anonymous class actually described searching for and reading other students' comments online after noticing that they had made interesting comments in class.

Usefulness. Students were asked to rank, in order of usefulness to their learning, four sources (1="most useful," 4="least useful"): course readings, the professor's oral presentation of material, classroom discussions, and online discussions. With a mean rank of 1.38 (SD=.59), they rated the professor's oral presentation of material as most useful to their learning. Oral discussion ranked a close second (mean rank=1.88, SD=.65). Course readings and online discussion trailed behind, with mean ranks of 3.15 (SD=.93) and 3.53 (SD=.55), respectively.

Students were also asked to imagine, if 100% of their learning came from these sources, what proportion each source contributed. Again, students rated the professor's oral presentation of material as most important, with a mean of 42% (SD=20.7%). Oral discussion was rated second highest, with a mean of 31% (SD=20.6%). Course readings and online discussion had mean ratings of 18% (SD=16.2%) and 9% (SD=6.7%), respectively.

Students, then, viewed online discussions as the least useful, of the four sources, to their learning. In fact, no students gave the online discussions a rating of 1, and only one student rated the online discussions as second most useful. That student also gave online discussions the highest learning percentage rating, 25%.

Online versus classroom persona. We were interested in determining whether students felt they were viewed differently online than they were in class. To this end, we asked students to recall an extreme case. Specifically, students were asked, in an open-ended question, whether they had ever posted something during an online discussion that they felt might have given a strong impression of them, whether favorable or unfavorable.

In the anonymous class, only 27% could recall an instance when this happened, while 43% from the non-anonymous class could recall an example. A t-test determined that this difference, though, was not statistically significant (p=.13).

Students' examples were fascinating. Most students in the non-anonymous class spoke of feeling exposed when they discussed their private experiences online: "I had a strong voice in [the alcohol and depression topics] and let my guard down in speaking about my personal experiences with them. I think I felt a little vulnerable because of this." One student spoke of the more general concern she experienced any time she posted a comment online: "I was always a little worried that what I posted would be scoffed at or label me as something." Other students worried specifically about how others would relate to them after they posted something personal online. One student was concerned that she might have given "some people a bad impression of me as an ignorant

teenager" after she discussed frequently consuming alcohol on weekends, but added, "at least I was honest." Another student worried that other students would be uncomfortable around her after she posted a message about her personal experience with dealing an eating disorder: "I thought people would think I was stupid and wouldn't understand why I had it or how to talk to me because I had an eating disorder."

Students in the anonymous class provided fewer examples than those in the non-anonymous class. One student explained that she had worried at first that people might look at her differently after talking a great deal about her family problems in the online discussions, "but the professor was the only one who knew who I was and I knew the professor wouldn't judge me." Another added, "Considering we have fake names, you aren't worried of what people will think of you, because they don't know who you are."

For those students who could *not* recall a time when they felt they posted something that gave a strong impression of them, the most common reason given in the anonymous class was the use of pseudonyms (mentioned 67% of the time by students who provided a reason). The most common reason for not generating a strong impression in the non-anonymous class was proofreading (mentioned 75% of the time by students who provided a reason). Students in this class either mentioned that they proofread for spelling and grammar before posting in order not to "look bad," or that, if they started "saying something stupid or inappropriate," they would just "delete and type something else."

Students were also asked, in an open-ended question, how they felt they were viewed generally in online discussions. Both classes described similar experiences. An astonishing 50% reported that they were viewed as "quiet" or "shy," and 13% suggested that this perception of them was inaccurate or "not like I really am." In fact, a number of students were upset at the thought of being perceived as shy. One student, in particular, mentioned that she was seen as "quiet, which I hate – I'm not quiet, but I don't like to be judged because of my opinions!" Students who did not mention being perceived as shy also did not mention that they were perceived inaccurately.

Nine percent stated that they did not know how they were viewed online, usually elaborating that they did not get enough feedback in online discussions to know. Seventeen percent mentioned that they did not care how other people viewed them in the online discussions.

The only class difference in students' reports of how they were perceived online involved their mention of being seen as "knowledgeable." Twelve percent of the students in the non-anonymous class reported that they were viewed as knowledgeable because of their personal experiences, while no students from the anonymous class mentioned being perceived as knowledgeable. Several explanations could account for this discrepancy. Perhaps students in the anonymous class who felt that they were seen as knowledgeable in online discussions did not integrate this into their *own* online identities (i.e., the way they viewed *themselves* online), since none of the other participants in the discussion knew who had posted their comments. Or, perhaps students in the non-anonymous class assumed that the way they were perceived online depended, at least in part, on the way they were viewed in class. If they shared personal experiences in class, and then spoke more about them online, students from the non-anonymous class might expect these perceptions to seep into the online discussions. In fact, one student mentioned this effect when she suggested that, "perceptions from class carried over to online." She suggested

that perceptions differed, though, with students who were quiet in class, as the online discussions allowed her to form impressions of them.

Finally, students were asked whether the perception of them in online discussions was different than the way they were viewed in class. The two classes answered this question slightly differently. Sixty-one percent of the students in the non-anonymous class who stated an explicit answer to this question suggested that they were viewed differently online than they were in class, while just 41% of those in the anonymous class thought they were viewed differently. In the non-anonymous class, 28% stated that they were not viewed differently, as did 24% of the anonymous class. Eleven percent in the non-anonymous class stated that they were not sure whether there was a difference in the way they were perceived online and in class, while 35% in the anonymous class were unsure.

The outstanding contrast here is found in the proportions of students in each class who thought there was a difference and those who were unsure. In the anonymous class, a much higher percentage of students stated that they did not know whether they were viewed differently online than they were in class. This makes sense. It is unlikely that the anonymous class simply provided less feedback, as the discussions in this class were more emotional and personal. Instead, it may be that students in the anonymous class were less likely to *incorporate* feedback with regard to perceptions of them online, since they knew that none of the other students knew who they were. Further investigation is necessary to determine the reason for this discrepancy.

When students stated that there was a difference in the ways they were perceived online and in class, they most frequently mentioned that this occurred because they were more outspoken online (20% mentioned this). One student elaborated, "I definitely had more to say on the online discussion because I didn't have to speak." Another student, though, did not feel at all empowered by the online discussions. She suggested that she was quiet and shy in class, "pretty much non-existent," and that, because she did not contribute much to the online discussions either, she was "sure I'm even more non-existent there." Her comment sharply contrasted the prevailing feeling, though, that online discussions included everyone and allowed "those who are quiet in class a chance to be heard."

Seven percent mentioned that they were viewed as more thoughtful because they gave more thought to what they posted in the online discussions than they gave to what they said in class. Four percent mentioned that they were viewed as more intelligent online. One student even suggested that she was viewed as more intelligent online precisely *because* she gave more thought to what she posted. She mentioned that, in class, she frequently blurted out things that "came out wrong." Another student thought that she was viewed as more intelligent online and that this perception of her was more accurate than the way students perceived her in class. She stated that, in class,

> …they got me all wrong. They saw me as a quiet person who kept to herself. In reality I work full time and go to school full time, I pay my rent and bills on time and am usually to [sic] tired to talk a lot. They never got a chance to see where I've been and what I've been through.

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Only one class difference was noted in the ways students mentioned being perceived differently online. Fourteen percent of students in the anonymous class mentioned that they felt that others in the online discussions either did not know them or did not care about them. None of the students in the non-anonymous class mentioned this. This result is particularly interesting, given that online discussions in the anonymous class were more personal. Once again, it seems that students who were anonymous in the online discussions may have been less likely to connect their experiences online with their own larger perceptions of themselves in the class. A student in the non-anonymous class, though, expressed this feeling differently. Speaking about himself, he suggested, "people don't connect Brian online with Brian in class." Students in both classes, then, experienced different aspects of this feeling of disconnection in the online discussions.

Students made fascinating comments about the ways they were perceived differently online than in class. One student said that online discussions "draw out your inner self more," especially for students who do not participate in class. Referring to the difference between online and classroom personae, he said, "for some, it is like two different people."

Several students mentioned the ability of online discussions to mask appearances. A student in the non-anonymous class mentioned that, "Most students also probably stereotype me because of my appearance, thinking that I barely pass any of my classes," but that, online, people thought he had "some things to say and had some intelligence." Another student stated that, in face-to-face discussions, she thinks that some people consider her physical appearance "when determining an opinion of me and how smart I am," but that online discussions "give others a chance to determine my worth (as far as 'smarts,' education, and capability) without interference from my physical appearance."

Posting questions versus statements. Students were asked how they handled both questions and comments during online discussions. Specifically, they were asked to indicate, with a checklist on the quantitative questionnaire, any of nine actions they took: (1) ask the question or express the comment online, (2) wait to ask or talk to the professor in class, (3) wait to ask or talk to another student in class, (4) wait to ask or talk to the professor during office hours, (5) ask or talk to the professor via e-mail, (6) consult an outside source (this option was only on the checklist that asked which actions students took with regard to *questions*), (7) wait for someone else to ask or express a similar question or comment, (8) let it go or forget about it, and (9) other.

Several class differences were noted. First, students in the non-anonymous class were much more likely, when they had a question during an online discussion, to just let it go or forget about it. Forty-eight percent in the non-anonymous class stated that they did this, while just 20% in the anonymous class did. A t-test indicated that this difference was statistically significant (p=.048). This difference is intuitive. Students whose names were associated with their comments were less likely to ask a question when they had one, possibly for fear of appearing unknowledgeable.

Second, when students had a comment or example they wanted to share in an online discussion, those in the non-anonymous class were more likely to wait to talk to another student in class than students in the anonymous class. Fifteen percent of students in the non-anonymous class reported that they did do this, while no one in the anonymous

class did. A t-test revealed that, while this difference was not significant, it approached statistical significance (p=.069).

In terms of their decisions to post questions or comments during online discussions, a series of t-tests determined several statistically significant differences, all in the direction one would expect. First, students were much more likely to express a comment or example, when they had one during an online discussion, than they were to ask a question (p<.0001). They were also more likely to wait to ask the professor a question in class than they were to wait to share a comment or example with the professor in class (p<.01) and more likely to ask the professor a question via e-mail than to share a comment or example with the professor via e-mail (p<.01). Finally, the non-anonymous class was much more likely to let a question go unasked than they were to let a comment or example go unexpressed (p<.01). This difference was not present in the anonymous class.

Interest in the professor. We were interested in determining whether students were more curious about the professor's questions and comments during online discussions than they were about other students' questions and comments. To this end, students responded to a set of Likert-type items geared at determining (1) their levels of interest in what the professor and other students thought about their questions and comments and (2) their levels of engagement when the professor and other students related personal anecdotes online.

A t-test revealed a statistically significant difference in students' interest in what the professor thought of their questions or comments and what other students thought. Students were much more likely to post questions or comments because they were interested in what the professor thought of what they had to say than they were to post questions or comments because they were interested in what other students thought (p<.01).

A second t-test revealed that students were also more interested in the professor's anecdotes than other students' (p<.01). On a 9-point Likert scale, where 1="irritated and uncomfortable" and 9="interested and involved," students' ratings of psychological involvement in other students' anecdotes ranged from 2 to 9, while the range of students' ratings of involvement in the professor's anecdotes was much more restricted, from just 5 to 9. Interestingly, though, when we consulted the Blackboard log data regarding the frequency of times each comment was read, no significant difference was found between the number of times students actually *read* the professor's comments and the number of times they read other students' comments.

Anonymity. We have noted class differences for each of the factors discussed above, whenever applicable. As there were no other differences in the classes (e.g., the content and assignments were the same), we presume that class differences with the above factors were related to the use of pseudonyms in place of students' actual names in one of the classes. With anonymity, though, we were also interested in differences in the actual conversations in the two classes and in students' perceptions of the role of anonymity in their online discussions.

We determined that, while the length and number of comments in the two classes' discussions were comparable, students in the non-anonymous class read both the

professor's and other students' comments much more frequently than students in the anonymous class read either set of comments. The association of students' actual names with their comments, then, seemed to increase student interest in the online discussions overall. This idea is supported by students' own open-ended comments: "I found appreciation for certain quiet classmates online and was able to seek out people's topics who I found had good things to say in class."

In an effort to determine whether the two classes' discussions differed in terms of disclosure of private information, comments were coded as "private" when a student discussed something that one typically would not reveal to a stranger. For example, if a student said, "my sister has bulimia," this would be coded as private, whereas a student's disclosure, "I have a friend who has bulimia" would *not* be coded as private. A Pearson chi-square revealed a statistically significant difference between the two classes in the direction one would expect (df=1, alpha=.035): students in the anonymous class revealed more private information with their comments than students in the non-anonymous class.

In order to more directly assess students' perceptions of the role of anonymity in their online discussions, we asked students in the anonymous class (1) if they thought they would have been less comfortable had the discussion not been anonymous and (2) whether they thought anonymity made a difference in their messages or in their level of comfort posting them. Half of the students in this class said that they would have been less comfortable had the discussions not been anonymous, while the other half said that they would not have been less comfortable. Thirty-three percent of the students in this class said that the ability to post messages anonymously made a difference, either in their messages or in their comfort posting them.

Of those in the anonymous class who explained that they would have been uncomfortable having their names associated with their messages, 70% suggested that they would not have posted some of the personal information they posted had the discussions not been anonymous. One student called the online discussions a "nice getaway" and said that she would not have written half of what she wrote if she had not been using a pseudonym. She further suggested that anonymity helped people who have problems discussing in class by allowing them to talk freely without having to have their faces linked with their names in class. In contrast, another student stated, "I don't see why anyone would be ashamed to say what they want. It would take a real insecure person to only speak when they know nobody will know it's them."

Similarly, we asked students in the non-anonymous class (1) whether they were uncomfortable having their names associated with the messages they posted and (2) if they thought that the ability to post messages anonymously would have made a difference, either in their messages themselves or in their level of comfort posting them. Of those who stated a preference, only 23% said that they were uncomfortable having their names associated with their messages, while 76% said that they were comfortable. Only two students mentioned that it limited them from saying what they would have said had the discussions been anonymous, while several others mentioned that they actually *preferred* that their names be associated with their comments. One student related, "If I had something to say, I want everyone to know who said it." Another said that having her name linked with her comments was the "only way most of my classmates know me, due to my shyness in person."

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Fifty-seven percent of those who stated an explicit answer with regard to whether anonymous posting would have made a difference suggested that anonymity would have made a difference in the messages they posted or in their level of comfort posting them. Of these students, 64% stated that posting anonymously might have made it easier for shy students to open up, and 14% recognized that students might have been more honest or more willing to reveal private information. Twenty-eight percent expressed the hesitation that students might have made inappropriate comments or not been held accountable for their opinions if they were allowed to post anonymously. Interestingly, these students' comments mirrored concerns in the literature on the role of anonymity in computer-mediated discussions (e.g., Lea, O'Shea, Fung, & Spears, 1992).

Discussion

With the advancement of a variety of communication and learning technologies, distance education has become increasingly popular, and distance courses are frequently offered entirely online. Developing a course that is sensitive to the special self-regulation and social interaction and support issues of online learning, though, is an arduous task. To design an effective online course, one cannot simply "translate" a classroom-based course to an online format. Instead, the effective online course designer should be sensitive to issues of self-regulation and social interaction by building in course features that provide for the learner opportunities to manage his or her learning effectively and that support collaboration and communication among instructors and students as much as possible. Weedman (1999), for example, suggests that students may use electronic conferencing to build community and create a sense of "intellectual proximity."

Specifically, research suggests that course design should provide for interactivity (i.e., two-way communication, whether synchronous or asynchronous) and independence (i.e., control of learning location and pace) (Roblyer, 1999; Smith & Dillon, 1999). Asynchronous online discussion is both interactive and independent… but what makes for *good* asynchronous discussions? Based on our research, course designers and instructors should focus on a number of key issues when planning online discussions, whether these discussions are in a course offered entirely online or in part of a hybrid, primarily classroom-based course:

- *Introducing the Discussion Component* – A number of students mentioned that the online discussions felt like a waste of time or, at least, were less important than classroom discussions. One way to minimize this feeling might be to introduce the online discussion component by explaining why it is a part of the course, how it works, and what research shows about its advantages (and disadvantages).
- *Topics* – Topics should be selected for their individual relevance to the students. Controversial topics and those that students had personal experience with were more likely to be psychologically engaging for them.
- *Access and Technical Problems* – As much as possible, students should have free access to computers and the Internet and should be comfortable using both. Students who had limited access (e.g., students who could only log on at school)

or who experienced technical problems were less likely to become psychologically engaged.

- *Human Interaction* – Most students reported that they missed human interaction and the immediate feedback and conversational cues that accompany face-to-face discussions. Course designers and instructors should try, as much as possible, to make discussions feel more personal to students. They also should maintain an awareness of technological and software advances, so that, as new products become available, they may be better able to "humanize" online discussions.

- *Diversity as a Resource* – Students were more likely to participate when they felt they had a differing perspective or when they felt they could add something new to the discussion. Course designers should use student diversity as a resource when planning courses, and instructors should emphasize the important role of diversity in student discussions.

- *"Classroom" Community* – Students were more likely to participate when they felt like they were part of a community, when they knew the other students and felt psychologically safe discussing personal experiences with them. Course designers and instructors should strive to create a community of learners, whether in a physical classroom or a virtual one, and should encourage students to communicate with and support each other outside of the online discussions.

- *Prior Knowledge* – Students were more likely to participate when they had prior knowledge of the topic. Course designers should plan for online discussions to occur after students have first been introduced to the topic of discussion.

- *Required Participation* – A number of students reported that they would not have participated in the online discussions if they had not been required to. While requiring student participation might seem to lower students' intrinsic motivation to do so, discussions will not be as rich (and may not happen at all) without the participation of all students.

- *Grading* – Students in our study were graded on the quality of both the ideas and language mechanics (e.g., grammar, spelling) of their responses. The style with which they wrote, though, seemed limited by the fact that their grades were partially dependent on English language usage. If students will be graded on their responses, it may be better not to grade for language mechanics, in order to encourage a more genuine conversational quality in discussions.

- *Questions* – Students were much less likely to post questions than comments, especially if their actual names were associated with their posts. Course designers and instructors should encourage students to ask questions, perhaps requiring all students to include a question in each post.

- *Role of Instructor* – Students were highly interested in the professor's feedback and in the personal examples she shared in online discussions. Course instructors should provide frequent feedback (perhaps more frequent than they might give in a traditional, classroom-based course) and should assume a facilitative role in discussion. They should be invested in the discussions and willing to share personal examples.

- *Anonymity* – Anonymity definitely offers both advantages and disadvantages. Students were more willing to share personal information and more likely to ask questions when they were anonymous. They showed less interest, however, in the

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conversation overall and report feeling disconnected from it. One option might be to assign students pseudonyms that they may use at their discretion. This way, most students' comments would be associated with their names most of the time, but they could feel free to use a pseudonym when posting something that they would not otherwise post or when asking a question they are embarrassed to ask.

We have focused on the role of asynchronous online discussion in a community college-level, introductory psychology course. While we think our investigation is an important first step in developing a course that will be sensitive to unique online learning issues with regard to self-regulation and social interaction and support, this study is limited in a number of ways. First, we examined the role of asynchronous online discussion in a course that was primarily classroom-based. Online discussions may play a very different role in courses conducted entirely online. This possibility requires future research. Our focus is also limited to *asynchronous* online discussions; students may experience synchronous discussions very differently. In addition, most of the data we have concerned ourselves with here are qualitative in nature. More empirical research is needed to investigate the ways in which constructs like psychological engagement and persona operate in the context of asynchronous online discussions. Moreover, we did not elaborate on the role of asynchronous discussion in promoting self-regulatory behaviors. Whereas self-regulation and social interaction and support are related, their relationship requires further research. We do not suggest that our findings directly implicate students' use of self-regulatory or self-motivating strategies. Finally, our study is limited to community college students. While we think the community college population is particularly important in terms of distance education, our results are obviously limited to this population, since community college students are, many times, non-traditional students or students who otherwise might not be comparable to students in either high schools, four-year colleges, or other educational institutions.

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