Online education holds great potential for rural states like South Dakota, which has been recognized for advances in distance education. To maximize the potential of online learning, design elements that students believe are needed for successful online learning experiences must be identified. In this study, we present the qualitative and quantitative results of a survey administered to students in 7 School of Education graduate courses at the University of South Dakota. Course coherence, clear goals, teacher voice, and extensive teacher feedback were the most important elements for learner success. Student-to-student communications ranked lower than expected in students' analysis of their experiences.

The market for distance education is growing and profitable, fueled by the potential of these approaches to provide access to higher education for an underserved group of individuals (Leasure, Davis, & Thievon, 2000). As this group values the asynchronous variety of online learning because of the flexibility it affords (Billings, Connors, & Skiba, 2001), many colleges and universities are racing to develop online learning in this “rapidly emerging cybereducation market” (Navarro & Shoemaker, 2000, p. 16). However, it is important to note that distance education is more than an issue of geography; it is an entirely new education environment in which learners and teachers are distanced from their typical expectations for the education process (Lally & Barrett, 1999). With appropriate modifications, many educators believe this mode of course delivery can be as effective as traditional approaches (Burch, 2001). Exactly what are these modifications and how can the content and processes of traditional education be effectively translated into the ecology of the internet setting?

Advocates emphasize the more efficient and individualized instruction that can be tailored to meet unique needs, with emphasis...
placed on individual responsibility and development of self-regulation (Navarro & Shoemaker, 2000). It offers valued opportunities for individual pacing and interaction with course materials when necessary and convenient for the learner (Perreault, Walman, & Zhao, 2002). The mode is flexible and dynamic, placing the student rather than the teacher in control of the timing and communication (Burch, 2001).

Ewing, Dowling, and Coutts (1998) in their analysis of the STARS Project, explained that online delivery provides opportunities to apply constructivist theory because it encourages individual meaning making. In their analysis, six constructivist premises—that learning is contextual, demands active engagement, is collaborative, incorporates autonomy and control, includes personally preferred modes of learning, and results in individually meaningful constructions—are potential processes in online learning systems (Ewing et al., 1998). Critics, however, point to the lack of genuine interactions, depersonalization, and mechanical pedagogy that can characterize online course delivery (Navarro & Shoemaker, 2000).

Because the movement toward online learning appears to be inevitable, it is essential that colleges and universities carefully consider how to meet the growing demand for this mode without compromising the quality of student learning, (Lindner, Dooley, & Murphy, 2001). Improvement of the quality of online learning experiences has been the focus of many studies, with emphasis on understanding the changing student population, student learning, student satisfaction, the role of learning preferences, and design issues including course organization, communication, and the role of the online learning community. Retention in online courses has also become a matter of concern. A brief summary of current research of each of the topics follows.

**CHANGING STUDENT POPULATION**

An increasing number of students in higher education have work and family responsibilities in addition to their academic work (Bunn, 2001) and are trying to balance these responsibilities with their education goals. Studies show that the participants in online classes are typically females with some computer experience who have limited access to traditional education because of these responsibilities (Lim, 2001). Online learning gives a more diverse group of students the opportunity to participate in higher education (Bickle & Carroll, 2003).

Advantages listed by participants in Web courses are often personal. Numerous studies indicate that convenience, time flexibility, lack of a commute to campus and the need to “sit through” a class, and opportunities to be independent learners are frequently given as reasons for participation in online education. (e.g. Bickle & Carroll, 2003; Billings et al., 2001; Cooper, 2001; Navarro & Shoemaker, 2000; Perreault et al., 2002).

In addition, those who choose online education describe themselves as self-directed learners (Garrison, 2003; Leasure et al., 2000). These individuals prefer to choose when and how to work, to be personally responsible for their learning, and to determine for themselves how much time they needed to spend on each task to be successful (Cooper, 2001).

Lindner et al. (2001) described three kinds of online learners: self-directed learners see program offerings as congruent with their own goals, motivated learners want to earn degrees, and personal learners simply relish the experience of learning. Navarro and Shoemaker (2000) found that online learners believe in an internal locus of control, in the efficacy of effort, and view themselves as independent learners.

**STUDENT LEARNING**

Although indications about the efficacy of electronically-delivered courses are mixed, most studies have found that there are no significant differences when learning outcomes of online students are compared with those of tra-
ditional students (Allen, Bourhis, Burrell, & Mabry, 2002; Leasure et al., 2000; Navarro & Shoemaker, 2000; Neuhauser, 2002; Thirunarayanan & Peres-Prado, 2001-2002). Characteristics such as gender, ethnic background, academic preparation, aptitude, or computer skills do not appear to influence success in online learning (Navarro & Shoemaker, 2000). However, Cooper (2001) found that one third of the students who were successful in an online course thought they would have learned more in a traditional setting.

STUDENT SATISFACTION

Learners consistently report satisfaction with online courses (e.g., Moore, 2002), which has been linked to course success (Sherry, Fulford, & Zhang, 1998). Researchers have discovered that the key factors related to learner satisfaction with this delivery mode include performance-based orientation, group work, collaborative strategies, clear instructor presence, opportunities for reflection, clear directions, a concentration on ideas rather than facts, and equal opportunities to participate (Moore, 2002). Computer self-efficacy plays a role in satisfaction (Lim, 2001), as does opportunity to ask questions (Cooper, 2001). Billings and colleagues (2001) found that older students tended to be more satisfied with online learning than were younger ones.

Although some studies have indicated that, overall, students prefer traditional delivery to distance format, measured satisfaction levels do not show significant differences (Allen et al., 2002). However, at least one study has shown that as more channels of information (such as video) are added, the less satisfied learners report they are (Allen et. al, 2002).

STUDENT PERCEPTIONS OF BARRIERS TO LEARNING

Muilenburg and Berge (2001) summarized three types of barriers that block students' success and persistence in online learning. These are: situational, including the individual's environment, responsibilities, and obligations; institutional, which include the procedures for access and use as determined by the offering institution; dispositional, including personal background, perceptions, attitudes, and self-regulation skills; and epistemological, comprised of sets of beliefs about the efficacy of the learning process via online delivery.

A critical area of difficulty for some learners is in the lack of face-to-face communication with professors and peers (Perreault et al., 2002) that they have typically relied on as an important component of learning. These learners cite isolation and lack of connectedness as detrimental to their learning; the more isolated they felt, the less satisfied they were (Billings et al., 2001).

Other problems (Perreault et al., 2002) have been in technical areas, particularly in communication with instructors and peers through Web resources. Course delivery issues sometimes result from course designs not adequately converted to the demands of the delivery system, inadequate course development, and students' occasional overestimation of their own technical skills.

LEARNING PREFERENCES

Common sense may imply that online education is more effective for students with some learning preferences, less so for others. Studies have not supported this position. No learning styles/preferences dimensions have been shown to make a difference in learning outcomes (Neuhauser, 2002), although it is possible that we simply have not identified the critical learning differences that have an impact (Dillon & Greene, 2003).

Allen and colleagues (2002) pointed out that students are inclined to self-select their preferred mode of learning. Those who recognize their need for face-to-face interactions do not enroll in online courses or opt out of them when they perceive that their learning will suffer in this mode.
DESIGN ISSUES

Two major issues frame recommendations for course designs. The first is course organization, accessibility, structure, and pedagogy, and the second is integrating online communications and interactions within the class structure.

Organization

Without exception, the many sets of recommendations for course design emphasize that content must be organized around goals (e.g., Billings et al., 2001; Hall, 2002). Courses must also be student centered, creating a customized environment that allows learners to make their own choices in pacing, activities, and time expenditure (Perreault et al., 2002). Important elements include multimedia lectures, threaded bulletin board discussions, online discussion groups, and immediate feedback assessment (Navarro & Shoemaker, 2000).

Palloff and Pratt (2001) identified supportive factors as good organization, clear procedure and expectations, clear timelines, understandable texts, helpful supplementary materials, and quickly accessible technical support.

Goldman, Williams, Sherwood, Hasselbring, and the Cognition and Technology Group at Vanderbilt (1999) University listed four principles for course design. Instruction should be: (1) organized around the solution of meaningful problems; (2) provide scaffolds for achieving meaningful learning; (3) provide opportunities for practice with feedback, revision and reflection; and (4) promote collaboration, sharing of expertise, and independent learning.

Studies also support the importance of understanding the shift in teacher role in order to create a design that works. Instructors provide materials, procedures, and activities, and give thorough feedback (Perreault et al., 2002). Online instructors should view the Web as more than just a way to deliver information. According to Hall (2002), it is a medium to support essential dialog among all participants through emphasis on discussion, interaction, adaptation, and reflection.

INTERACTIONS

There have been ongoing efforts to create the benefits of an online learning community in a virtual classroom (e.g., Rovai, 2001). Moore and Thompson (1997) distinguished between three types of interactions that are critical to successful online learning: learner-instructor, learner-learner, and learner-content interactions. These must be carefully built into course designs to enhance meaning making, move learners to critical thinking skills, aid processing of content, and support motivation (Navarro & Shoemaker, 2000; Rovai, 2001). These are not easy tasks; they require a balance of academic and social discussion, effective use of time, academic focus, clear procedures that support and enable full student participation, and careful structuring of learning events (Lally & Barrett, 1999). Students consistently emphasize the role of instructor feedback in guiding their online learning, but also value an accessible course design in which directions for participation are clear and allow them to proceed independently (Billings et al., 2001).

RETENTION

In spite of the extensive research on components of successful online courses, course design principles, and positive information about student learning and satisfaction, the dropout rate in online learning remains a significant problem (Chyung, 2001; Lim, 2001, Navarro & Shoemaker, 2000). National trends reveal that as many as 50% of enrolled online students fail to complete their courses (King, 2002), indicating that problems exist in electronic delivery that impair students' management of courses delivered in this mode (Carr, 2000). Reasons for this dropout rate are not clearly understood (Berge & Mrozowski,
The Problem

It is important to understand who participates in these courses, why they chose to participate in this mode of delivery, and what they need in order to be successful online learners. Online course designers must take into account these situational needs, as they influence the online environment and their perceptions of the most effective roles for all participants (Berge & Mrozowski, 2001). We also need a clear picture of the nature of students’ experiences online in order to maximize learning potential and mitigate limitations inherent in the delivery medium (Lim, 2001). In other words, we need a better sense of what works and what does not to facilitate students’ learning in online settings (Perreault et al., 2002).

Methods

The Case

Because South Dakota is a rural state, there is a real need to offer a variety of distance courses (Christensen, 2001). In the last decade, the state has been recognized nationally for the extensive development of distance learning systems of all types and has been used as a model for development of a comprehensive distance education system (Simonson, 2001). State-led programs for wiring public schools and development of interactive video systems throughout the state began in 1994. These efforts continue to be supported by state programs and funding throughout all levels of education.

At the university level, these technological initiatives also include creation of Governor’s Electronic Classrooms at each of the six state universities, which provide technologically sophisticated classrooms for distance delivery. A variety of programs are also intended to enhance faculty development (Simonson & Sparks, 2001). Since 1995, faculty members in the state systems have been eligible to apply for grants to develop technological applications in their courses, as appropriate. A funded proposal releases the faculty member from summer teaching responsibilities by supporting 3 months of technology research and development. Grant proposals have addressed many dimensions of teaching with technology, ranging from development of specific distance delivery skills to creation of entire classes that are Web based.

As a result of these opportunities to concentrate on creating and refining courses for distance delivery, the state universities have developed numerous courses that are delivered entirely online, using Web Course Tools (WebCT). Accordingly, the University of South Dakota has made a commitment to electronic course delivery and has dedicated extensive resources to meeting the needs of students who are unable to travel to campus for traditional classes. Systematic course design and standards for offering these courses are in place, increasing the likelihood that the Web courses delivered through the university meet rigorous standards.

The School of Education at USD has been a leader in development of these online courses. The school offers more than 30 courses that are entirely online, and three degrees can be earned completely through this medium. More than 300 different students have enrolled in the online courses since 2001, drawn from across the United States. Student evaluations, completed through the state’s Electronic University Consortium (EUC), rate the electronic courses provided by the School of Education at
USD very highly. According to Statewide Education Services at the university, discounting students who enroll and drop before courses begin, approximately 95% of our students complete their online courses.

Research Questions

Although we were confident that the online courses we offered met statewide needs, we were interested in gathering specific information about our individual courses and the online program as a whole in order to improve them and to continue with the effective elements. More accurate group descriptions and understanding of the experiences and perceptions of the viability of the courses were needed if we were to appropriately address these goals. We wanted to know:

1. Who takes these courses and why?
2. What course characteristics and factors support online learning?
3. What makes learning more difficult?
4. What course resources are most helpful/effective learning online? How frequently are they used?
5. How do students assess their learning, their teachers, the technical support, and their own skills in electronic learning?

The Instrument

We created an extensive survey, based on a review of the literature and our own experiences as online teachers. The instrument was available for online completion and consisted of 94 items, including demographic information. The survey was divided into sections with specific purposes, all scored by Likert scales with various descriptors appropriate to the nature of the questions, with space for comments included after each section. Open-ended questions were included at the end of the survey.

Seven online teachers in the program volunteered to have their students complete the online survey, with a total of 59 students. Six were educational administration courses, and one was a research methods course. All classes were required in the program for a master's degree in educational administration, although students were not drawn exclusively from that group.

FINDINGS

Demographic Information

This group of students was very similar to those described in other research. They were 73% female, 27% male. Twenty-nine percent ranged in age from 25-35, 27% were 36-44, and 27% were 45-55. Almost three quarters (73%) were currently enrolled in a graduate program. Although 7% were taking three online courses at the same time, 68% were taking only one, and 22% were handling two.

Students were asked to describe their situations in terms of work, family responsibilities, and study focus. Seventeen percent described themselves as full-time graduate students; 3% selected part-time graduate student, part-time work; 3% chose part-time graduate student with family responsibilities, another 3% were full-time graduate students with family responsibilities, and 7% marked part-time graduate student, part-time work, family responsibilities. The largest group (64%) described themselves as part-time graduate students with full-time work.

Seventy-five percent of the students lived more than 50 miles from campus, and almost all students worked on computers in the home or work setting. The students who took these classes were grateful for access. Comments included “Thank you for offering so many classes over the Internet. I would be unable to work toward my degree if you did not have classes online.” “I really like the convenience of online courses. Because I ... have a family to care for, this allows the freedom to work on the course material when I can and not have to drive to campus several times a week.” A traditional experience for these students was “not an option!”
Important Components for Online Learning

Our initial questions asked students to consider the importance of particular course features, specifically as they apply to online learning. Four survey items addressed students' perceptions of the importance of course organization: 95% believed that the structure and coherence of the course was very or somewhat important, and that expectations had to be explicit. Clear course procedures were equally important to 91% of the learners, and 89% indicated that the selected text needed to be understandable. The courses also include various online resources, some of which are linked to the course structure and some that have been uploaded into the course itself. Ninety-six percent of the students found these resources helpful. Interestingly, only 74% of the students indicated that technology assistance was important; their comments indicated that few technological problems were encountered during these courses.

Course Design

In addition to comments on the importance of coherence overall, we asked students to evaluate the framework of the specific courses they took. We were interested in understanding some basic elements of effective course design—expectations, coherence and organization, text choice, and effectiveness of included online materials. Once again, 98% strongly agreed or agreed that the expectations of the course they took were reasonable and 100% saw that course as coherent and well-organized. The text was rated as well chosen and accessible by 93%, whereas supplementary materials aided the learning of 88%. Students commented on the thoroughness of the courses they took. “I enjoy [this instructor’s] willingness to master the electronic domain ... a wonderful learning opportunity.”

The structure and coherence of the courses defused a good deal of student anxiety. “I was pretty worried at the beginning of the course since this is my first online class. But it was very organized and I turned out to really like it,” said one. Students also made it very clear that they appreciated the coherent presentation of the courses. “The instructor was very organized, knowledgeable, and clear in expectations, and seemed to really want everyone to learn the material.” Another first-time online student said “Thanks to [this instructor] I will definitely take more courses online ... well organized ... obvious that [this instructor] has carefully thought through the curriculum and presentation of the course.”

Resources

Students were asked to evaluate the resources included in the courses from two perspectives. First, they were asked how important the resources were for them and, second, how frequently they used them. For all courses, the required text was viewed as the most important and frequently-used source of information, with 93% of students indicating it was a critical or important component, frequently or often used.

Because our courses make use of different resources within the WebCT format, it is somewhat misleading to assess overall importance by the percentages that follow. What is of interest, however, is the comparison between importance and frequency of use for each resource. Students consistently reported that they wanted these resources available, even though they did not make extensive use of them. However, illuminated by student comments, these data offer some important insights.

Online resources. Online resources were considered important by 83%, and regularly used by 81%. Those who made use of the resources were positive in their comments: “All the support materials for the course were excellent ... the instructor created introductions were excellent supplements to the book ... the student work examples [were] very helpful.” Students viewed the supplementary materials as another connection with the teacher: “Thank you for taking the time to provide the supplemental materials. They helped to make sense of the more technical terms and
ideas.” Although 42% thought that the technical assistance provided was very important or critical, only 8% used it frequently or often. The availability of university library reserves was considered important by 51% of the students, but regularly used by 34%.

Communications. Virtual Office Hours (VOH), teacher availability in a chat room at a predetermined time to address student questions, were considered important by 69% of the students, and were often used by 36%. Peer chats were highly valued by 41% and frequently used by 25%, and e-mail was important to 85% and regularly used by 73%.

Some students responded very positively to these opportunities—“I loved the interaction components!” said one. Some recognized that the Virtual Office Hours held by instructors and the opportunities to interact in an online discussion format were critical to their learning and listed these resources as vital to course success. These students insisted that it was important to attend VOH, to ask questions, to contact the teacher immediately if they felt frustrated or confused, and to chat frequently with their partners. “Attend VOH,” one student advised future course members, “even if you just ‘listen in’ because often things come up that you can use. Ask questions if you have any—the instructor is very willing to help steer you in the right direction.” Others emphasized that the online chats with instructors and students made the course they took more interesting. One said “I found myself logging on several times a day to see how the threaded discussion was going and to check supplemental material.” One said she found herself “wishing for more group discussion.” Some who did not make use of the communication options later recognized that they might have made the task easier for themselves if they had done so. “I learned that too late,” said one.

Teacher Competence

The personas of the course teachers were critical for the success of student learning. Level of knowledge and helpfulness was rated as very important or somewhat important by 98%, teacher accessibility at 95%, and clear teacher-established timelines at 97%. Peer interaction, which takes different forms in these courses, was perceived to be important by 90% of the participants. Responses to questions dealing with teacher competence were strongly positive. Teachers were judged to be knowledgeable (100%), helpful (98%), and accessible (98%). Students saw their online exchanges with the teacher as helpful (97%) and response time as reasonable (92%).

Student comments suggested that the teacher was a most important factor in the course. They valued the effort it took to create an online course and recognized the person behind the effort. “Thank you for all your efforts. I really appreciate all the work you put into making this an excellent course. Prior to taking this course I was terrified of online classes, but know I have new courage and would actually take another course ... I leaned [sic] a great deal.” They also appreciated the nature of the interactions they had with the teacher, which they perceived as “organized, supportive and helpful.” For example, “You are very knowledgeable and easy to talk to, you didn’t make me feel uneasy or uneducated at any time. I came into this class knowing very little and you made me feel adequate in the subject area by provoking good thoughtful questions that required me to think.” Although students thought they had excellent feedback from their instructors—“I felt that my assignments were read carefully and your responses were detailed and specific,” they wanted even more than they got. “[The instructor] was very helpful when connected but it would have been nice to hear more often,” said another from the same class.

Assessment of Learning and Effort

Three items were aimed at understanding students’ assessment of their own learning in the various courses. We wanted to know if they felt they had learned, if they felt the
course content was important, and if they were confident that they understood the material.

All of the students—100%—agreed that they had “learned a good deal” in the class they took. Ninety-three percent believed that the content was important for them to know, and 95% were confident that they understood the course content.

We also asked questions specifically aimed at comparison of the course they took to traditional delivery of the same content. Asked if they had learned as much in this mode as they would have in a traditional class, 71% agreed. Approximately 10% disagreed. These students commented that the learning was “comparable” and “maybe even more.” Other strongly believed that “[t]here is no way ... to replace that face-to-face interaction between students and instructor ... that is where the quality is for me.” “Teacher’s explanation [in a face-to-face setting] and examples are very valuable.” This sentiment seemed to be especially strong when the course material was considered difficult. “I got a great deal out of [the course]. But a live course would have helped.”

Students perceived that more effort was required in an online class than in a traditional course because they “couldn’t rely on classmates or the teacher for immediate answers to questions” and because “working independently always takes more effort.” The effort was also “more concentrated” and “dedicated.” One student pointed out that there was “more effort expended in actual learning that was relevant, compared to busy work” (presumably in contrast to the busywork found in traditional learning settings). Another stated, “In the online course, I covered exactly what was expected, maybe not much more than that, but I learned it very well because I was worried that I wouldn’t know what I was supposed to. I feel that I worked harder to understand the material, probably better than I would have in a live course because there I could have waited to see if things would come up during class or in discussion. That was less of an option here.”

We also asked students if they would have preferred to take the course in a traditional setting. In this case, 41% indicated that they would have preferred a traditional setting. In one student’s words, “I like the flexibility and using the technology. However, I do not feel the quality of my experience was what it could be because of the lack of face-to-face interaction with other students and the instructor.” It was noted that the education field is person centered, and it was problematic to lose that dimension of learning.

This set of findings is particularly interesting. Although the survey indicated they were overwhelmingly positive about the quality of the course, the teaching they experienced, and the WebCT format, a large group indicated that they would have preferred a traditional setting, a quarter of the students were neutral to the mode of delivery, leaving roughly a quarter who would have chosen electronic delivery over a traditional class setting. The perspectives of the hefty proportion of students who would have preferred traditional delivery had it been available to them, but still valued the online experience, can be summarized in the following student’s comments: “I don’t think that anything can make up for the learning involved in the classroom. However, the materials presented were clear and if I had a question, it was answered as soon as was possible. I think that although a traditional classroom may be better, this one worked very well for me.”

**Self-assessment**

Items designed to allow the students to assess their own course processes, including time management and keeping up with the work, revealed that 88% of the students agreed that they learned well in an independent setting. Most (92%) believed that they had managed their time effectively and had kept up with the work. Those who did not think they were particularly effective were neutral rather than negative. Ninety-eight percent were satisfied with their skills in the WebCT electronic format; 86% believed that they had learned to handle the electronic medium by participating.
Most students credited some of their success in the course to their own willingness to put forth the necessary effort and to manage their time well, with being “self-motivated and independent learners.” They saw the need to take a “proactive role” and be “committed to meeting the requirements” and relied on user-friendly course structure to ensure their learning. “I relied heavily on the calendar, syllabus and chapter intros to keep on top of the due dates and for explanations on the assignments,” one student said, but added, “It also helped that I knew [and had face-to-face access to] someone that was taking the course and could talk to her when I had some questions.”

Students recommended that future participants make use of all the resources. “Work on the course regularly, and utilize all the supplementary materials and communication tools. Don’t be afraid to ask questions, both to the instructor and to other students.” Many emphasized the amount of time online classes take and recommended that future students be aware of the pitfalls of poor time management. The major point was “Don’t fall behind.... Set up a schedule and stick to it!” Procrastination was seen as leading to certain failure. “This is not a weasy [sic] way out of a class!”

**Enjoyment**

Two students said they did not enjoy taking a course in this medium but, overall, students were positive; 88% of them found this an enjoyable way to learn. They liked the WebCT format. Some students apparently preferred online learning because of the independence and flexibility it afforded. Typical comments included “I enjoy learning independently, so I prefer this method.” “I enjoyed this course because I could do it on my own time and was not confined to a classroom.”

Frequently, comments about enjoyment were specifically addressed to the teacher—“Great job helping me get through this and actually enjoying it .... I never would have thought I would like this [course subject] but it definitely has my interest.” “Great experience. Thank you.” “[This] was my first experience with online courses of which I took two. It was so convenient, but also very thorough and I don’t feel I missed anything in delivery.” “I have the highest regard for the instructor and the course materials. I thought it was great.” “Thanks for your help—I enjoyed this course much more than I expected!”

**BARRIERS TO LEARNING**

Various factors made progress through these online courses more difficult for some. Based on the literature and our experiences, we had identified technical difficulties, availability of materials, and personal time management as potential problems. However, only two students reported any important difficulty with their hardware and three identified their software or connections to the university server as problematic. Seventy-four percent indicated that technology assistance was important as they progressed through the course. According to this survey, no student had difficulties managing the technology within the WebCT system, 97% thought the technology was manageable, and 58% thought that the support they received for technology applications was good. However, 15 participants selected “did not use/did not apply” option for tech support. We can reasonably conclude that these students had no technology problems and no need to make use of support systems, which would further emphasize the accessibility of the WebCT format from a student perspective. Likewise, with a few exceptions due to late enrollment, books and materials were sent in a timely manner and students had necessary resources to work on the course.

Three barriers to learning were clear: time, personal need for the immediacy of face-to-face interactions, and the student-to-student interactions built into each course.

**Time management.** Twenty-seven percent of the participants reported that they were not prepared for the amount of time an online
What Works
course took, and 25% had a difficult time completing the tasks on time. "This class took a lot of my time, far more than any other class that I took," one said. The comments directed to future students emphasized the need to manage time, meet deadlines, and avoid procrastination. Personal life factors also influenced available time to dedicate to learning. "My life was chaotic," said another, "but with the professor's flexibility and understanding it was not an issue. The professor wanted quality over just turning it in on time."

Need for face-to-face interactions. Although students indicated that their instructors were readily available, and they appreciated the feedback they received, some still voiced difficulty with the nature of the connection to the instructor. "I think that I would have been able to ask more questions and get more direct answers in a traditional classroom setting—what I needed in order to understand this material better." The statements can be summarized by this student's comment: "Sometimes it would be nice to have the instructor right there to answer questions, but you can't complain when you're able to take a class online and live far away from campus." Students typically accepted the limitations of the interaction with the teacher in a distance mode, particularly when they connected through extensive feedback on course work.

Student-to-student interactions. We have all made serious efforts to involve our students in online communications, believing that the dialog that occurs between students and between students and teachers are essential for learning. So we were somewhat surprised to find the lower value that a large group of students apparently had for the interactive components built into the courses. Comments indicated that whether they used chat partners or bulletin board postings for threaded discussions, some found these course expectations less important for their learning. Technology glitches played a small role in their reactions—only two stated that they were not able to access the chat rooms. Others indicated that their chat partners were not very helpful for building understanding or that they did not contribute much in partner discussions themselves. Some participants recognized the potential of partner interaction, but felt limited by the delay in exchanges, especially when there were more than two in the chat room. "Chatting is easier for me with just one other person maybe because I haven't really participated in chats previously... lack of interest and time. Also it was difficult to make times set up for whatever reasons. Life in general."

Threaded discussions were perceived as initially valuable, but the learners who commented negatively thought the energy died quickly. "The original postings of the class members were helpful. I did not find the responses to members' responses helpful ... just rehash of the original point." Another said "What peer interaction there was was mechanical in nature because most of the interaction was not in real-time."

Student Recommendation
In spite of the unexpected time demands and communication difficulties, 95% of the students said they would be interested in taking another online course from USD, and 93% would be interested in taking another course from the same teacher. The courses would be recommended to others by 93% of these participants. Students wrote that they had recommended the medium, the courses, and the USD online programs overall to friends. One student wrote "I am taking course from [two other universities]. I think USD is way ahead of the others." Another stated "This is my first course online and I will judge all other courses by the quality of this one. It was extremely well organized, online materials were very clear and helpful, the instructor is positive and supportive. I hope to take other classes from this instructor. A wonderful experience!" "Awesome!," said another, "This online course fit my current situation very well!"
DISCUSSION

Our study led to a number of conclusions that are supported by the literature. First, participants in these courses represented the same group that has been nationally noted as online course participants—young, professional, female, part-time students with family responsibilities (Bunn, 2001; Lim, 2001). This group was most strongly represented in spite of the proportion of educational administration courses, which generally include more males.

Also, our group members gave the same reasons for enrolling in online courses, as did those in other studies—accessibility, convenience, and flexibility. Participant comments indicated that, for some, distance education was the only possibility for pursuing a graduate degree (Bickle & Carroll, 2003; Billings et al., 2001; Cooper, 2001; Navarro & Shoemaker, 2000; Perreault et al., 2002).

Although we expected technological difficulties to be a source of frustration for at least some participants, few had difficulties in that area. The technical support offered was what they needed. The WebCT architecture was workable and intuitive, for even first-time online students. We may also conclude that the technological sophistication of learners was sufficient for the task at hand, even when they expressed concern with this issue when they began the class (Lim, 2001).

Also in accordance with the literature, our students were satisfied with their experiences in online learning. They believed they learned the content well and were confident in most cases that they had learned as much taking a course thorough WebCT as they would have through traditional means, although many would have preferred a traditional class if it had been available to them. These responses also are congruent with other research (Allen, Bourhis, Burrell, & Mabry, 2002; Neuhauser, 2002).

Students also emphasized the importance of self-directed learning and personal responsibility for success in online learning. They recognized the different expectations and procedures necessary for online learning, which encouraged them to rely on themselves rather than on the teacher or fellow students. Time management and personal engagement were consistently mentioned as critical factors for successful learning, all of which were discovered in previous studies (Cooper, 2001; Leasure et al., 2000; Navarro & Shoemaker, 2000).

Two major factors that contributed to successful online course design and were vivid in this study have also been supported by other research. The first was coherent course design—organization, clear expectations, ease of navigation, and clear procedures for using the various courses (Hall, 2002; Moore, 2002). Our students were less impressed with bells and whistles than they were with clarity, usability, and coherence (Billings et al., 2001).

The second major insight, also supported by previous research, was the impact of the personal preference of the teacher in online learning (Moore, 2002; Tu & Melsaak, 2002). Although participants did not necessarily visit frequently with the teacher online or in chat rooms, or send an inordinate number of emails to the instructor, it was obvious that the teacher’s voice in the course design was critical. The more often students had the opportunity to sense teachers’ personalities in the course materials, the more connected they felt to the class. Posted information such as teacher-created unit introductions that made use of conversational style, personal examples, and responses to frequently asked questions, FAQs, in personal language were highly valued. Extensive and personalized feedback on assignments was critical and also contributed to connections with the instructors. Also important was a link to the instructor’s homepage and vita. We have often been surprised at how well our online students feel they know us through interaction with these materials and how appreciative they are of the efforts of the person they perceive behind the technology.

In short, in accordance with Moore and Thompson’s (1997) interactions, this group found the relationships of student-course and
student-teacher to be critical. We were, however, surprised to find the relatively low value many students had for their interactions with their peers. This perspective is contrary to much of the current literature that deals with the significance of creating an online learning community (e.g., Carabajal, LaPointe, & Gunawardena, 2003; Goldman et al., 1999; Hall 2002; Rovai, 2001).

All of us have required some kind of peer interaction online, as we have a commitment to building a learning community as close as possible to that available in a traditional class. Perhaps we have not yet found a way to make these exchanges meaningful enough for the learner. Perhaps the perspectives of this small group were contrary to the majority of online learners in this respect and are therefore contrary to the bulk of current research.

Another possibility, however, is that the goals of online learners are different to begin with, and that their preferred mode of learning content online has less to do with the dynamic of a learning community than it does with learning course content well on their own. The idea that “nothing can replace” the dynamic of the traditional learning community seems to place the online experience in a different category—with a different set of expectations. Considering the groups who often enroll in graduate online classes—part-time students with both work and family responsibilities—the extra effort demanded to participate in an online community, whether through threaded discussions or online chats—may represent more time and group commitment than these learners value. The self-directed dimension of such classes is highly valued; perhaps the participation in a learning community, for some, is not an important dimension for learning.

This possibility poses a philosophical and pedagogical conflict for many of us who emphasize the learning potential of the dynamic and interactive environment of the traditional class. If we believe that the community itself enhances learning, can we accept a categorically different kind of learning online? It may be that the effects of technology in computer-mediated communication so drastically change the nature of the group interactions that other ways need to be found to define a learning community (Carabajal et al., 2003).

Further research is needed to better understand not only the mechanics for creating a meaningful online learning community, but also for addressing the needs and preferences of those who do not need this community to learn well. To what extent is the learning community fundamental to good online learning? Is it worthwhile to insist on development of this component of traditional learning settings within the online environment, in spite of differences in mode of delivery? Should we recognize that distance education might be fundamentally different education rather than impose expectations for a traditional learning community in an online environment? The issue is philosophical as well as pedagogical. Further research may be able to address some of these questions, but perhaps we also need to rethink some of our approaches to online learning and consider the environment, goals, and responsibilities of an online learner.

In this study, we sought to better understand our students and what they need for success in online learning. This group indicated that course coherence including clear expectations for learning and course navigation, and a vital voice of a teacher behind the technology were essential. The technology itself was effective and user-friendly, and our students were satisfied with their experience and their learning. Use of quantitative and qualitative data allowed us to develop a better understanding of not only what our students experienced, but also how they interpreted their experience and why. We are left with questions about the benefits of establishing an online learning community and to what extent student-to-student interactions contribute to student learning in this environment.

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