

Improving online learning: student perceptions of useful and challenging character...

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Internet and Higher Education 7 (2004) 59 – 70 Improving online learning: Student perceptions of useful and challenging characteristics Liyan Song *, Ernise S. Singleton, Janette R. Hill, Myung Hwa Koh University of Georgia, 604 Aderhold Hall, Athens, GA 30602, USA Received 4 September 2003; received in revised form 3 November 2003; accepted 4 November 2003 Abstract Online courses and programs continue to grow in higher education settings. Students are increasingly demanding online access, and universities and colleges are working to meet the demands.

Yet many questions remain re: the viability and veracity of online learning, particularly from the learner perspective. The purpose of this study was to gain insights into learners' perceptions of online learning. Seventy-six (76) graduate students were surveyed to identify helpful components and perceived challenges based on their online learning experiences. Results of the study indicated that most learners agreed that course design, learner motivation, time management, and comfortableness with online technologies impact the success of an online learning experience.

Participants indicated that technical problems, a perceived lack of sense of community, time constraints, and the difficulty in understanding the objectives of the online courses as challenges. Suggestions for addressing the challenges are provided. D 2004 Elsevier Inc. All rights reserved.

Keywords: Student perceptions; Online learning; Implication strategies 1.

Introduction What makes a learner successful in an online environment? What creates barriers or challenges?

Answers to these questions, among others, gain increasing importance as Internet technologies become more readily available and accessible, in formal and informal contexts (Hofmann, 2002). By the year 1997, there were more than 762 institutions in the United States alone that offered courses at a distance (Gubernick and Ebeling, 1997, as cited in Cereijo, Young, & Wilhelm, 1999). The Making the Virtual * Corresponding author. Tel. : +1-706-542-3810; fax: +1-706-542-4032. E-mail address:uga.edu (L. Song). 1096-7516/\$ – see front matter D 2004 Elsevier Inc. All rights reserved. doi: 10. 1016/j. iheduc. 2003. 1. 003 60 L. Song et al. / Internet and Higher Education 7 (2004) 59–70 Classroom a Reality (MVCR) online program at the University of Illinois alone had admitted over 1000 individuals from various states and foreign countries by December 2002 (Santovec, 2003). Some of the top institutions in the United States (e. g. , MIT, Indiana University, Pennsylvania State University) are offering entire degree programs on line, ranging from business to education, criminal justice to nursing. In addition to programs and courses, most universities now require access to basic course information on line (Leonard & Guha, 2001).

This includes information such as the syllabus, resource lists, and office hours for the instructor. At University of California at Los Angeles (UCLA), for example, all arts and science courses are required to have course Web sites (Noble, 1998). Even when it is not required, educators are increasingly developing an online presence for their courses via the Internet (Brown, Kirkpatrick, & Wrisley, 2003). The increasing online access to programs, courses, and course information is exciting. Initial research exploring the potential of online learning has provided some overall insights (e. g. Cereijo <https://assignbuster.com/improving-online-learning-student-perceptions-of-useful-and-challenging-characteristics-assignment/>

et al. , 1999; Conrad, 2002; Hartley & Bendixen, 2001; Hill, 2002). For example, some sources indicate that online learning enables institutions and/or instructors to reach new learners at a distance, increases convenience, and expands educational opportunities (Bourne, McMaster, Rieger, & Campbell, 1997; Hara & Kling, 1999, 2001; Hill, 2002; Hofmann, 2002; Owston, 1997; Rourke, 2001; Schrum, 2000). Yet, the movement toward online learning is not grounded in compelling empirical evidence that it is effective and/or beneficial for learning (Hannafin, Hill, Oliver, Glazer, & Sharma, 2003).

Many of the studies in online learning remain rather " anecdotal" (Hara & Kling, 1999), coming from the point of view of the faculty member teaching the course or the instructional technologist designing and/or developing the course (Berge, 1997; Bourne et al. , 1997). While the overall perspectives and facultybased studies are important for understanding the potential value of online learning, few studies have detailed the learners' perspectives of online learning (Hara & Kling, 1999).

There is a need for continuing research studies related to specific areas (e. g. , pedagogical strategies to promote learners' online learning experience, the impact of learner characteristics on learner's Web-based learning experience), as well as overall perceptions (Cereijo et al. , 1999; Hara & Kling, 1999, 2001; Hartley & Bendixen, 2001). The constant growth of the Web influences and changes how online courses are designed and implemented. This, in turn, may also change the students' perceptions of their online experience.

Continued studies of learners' perspectives of online learning environments are needed in order to build more effective Web-based instruction that can optimize the learning experience within this ever-changing landscape. The purpose of this paper is to describe a study exploring the learners' perspectives of online learning. Specifically, the researchers sought to explore learners' perceptions of useful and challenging components in learning on line. The discussion of the study begins with a review of the literature related to online learning. Next, the background of the research followed by the results of the study is described.

Finally, implications and suggestions for further research are presented. 2.

Literature review The literature related to online learning has expanded considerably in the last 5 years. The review that follows focuses on literature related to the learner's experience, particularly the learners' perspectives of strengths and weaknesses related to online learning. L. Song et al. / Internet and Higher Education 7 (2004) 59–70 61 2. 1. Students' perceived strengths of online learning A few studies have explored learners' perspectives of online learning particularly in terms of perceived strengths and weaknesses.

In a qualitative study, Petrides (2002) interviewed learners to obtain their perspectives on Web-based learning. The research context was a one-semester regularly scheduled class in a higher education setting using Web-based technology (LearningSpace) as a supplement. When interviewed, some participants indicated that they tended to think more deeply about the subject areas when responding in writing as compared to giving verbal responses. They explained that they were able to continually reflect upon

each other's reflections because of the public and permanent display of the discussion postings on the Web.

As stated by one participant: " There is something that forces you to think more deeply about subject areas when you have to respond in writing" (Petrides, 2002, p. 72). Another participant reiterated this sentiment, indicating that the online technology allowed more reflection than what might occur for some individuals in face-to-face classroom discussions. In Vonderwell's (2003) study, the author interviewed 22 students in regards to their perceptions of their asynchronous online learning experiences.

Some participants expressed that the asynchronous environment allowed them to write carefully about their ideas. For example, one participant stated: " the discussion questions were not just for writing the answers; they required reflection" (p. 86). Other research studies reported similar findings to those of Petrides' (2002) and Vonderwell's (2003), reporting participants' perspectives that thoughtful and responsible comments are fostered by asynchronous online technologies. Chizmar and Walbert (1999) found that the public display of online discussions made learners more careful in posting their comments.

Participants indicated there were several reasons for the careful posting, with one of the primary factors being that they knew it was there for the entire class, and indeed the world, to read (Chizmar & Walbert, 1999).

Flexibility is another reported strength of online learning (Petrides, 2002; Schrum, 2002). Petrides (2002) stated that participants reported it was easier to work in collaborative groups in an online course without

rearranging everyone's schedule as one might do in a traditional face-to-face course. In addition to flexibility with time, choices related to the learning experience were also reported as positive.

Participants in the Chizmar and Walbert (1999) study indicated that the ability to freely pick and choose from the menu of diverse learning experiences enabled them to find the approaches that best fit the way they learn. Convenience is another advantage identified in the online learning literature. For example, in Poole's (2000) study of student participation in a discussion-oriented online course, the results indicated that students participated in online discussions at times most convenient to them, such as on Saturdays.

Poole also found that students mostly accessed course materials from their home computers, the place most convenient to them. Murphy and Collins (1997) found similar results in their study of communication conventions in instructional electronic chats. Participants indicated they read and responded to comments in online discussions at times convenient to them (e. g. , early morning, late evening). 2. 2. Students' perceived weaknesses of online learning Several weaknesses related to online learning were also described in the literature. Delay in responses is one reported weakness.

In Petrides' (2002) study, some participants reported they felt a lack of immediacy in responses in the online context in comparison to what could typically occur in a structured face-to-face class discussion. This appears to be especially obvious in asynchronous online discussions when students have to wait for

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others to read and respond back to their bulletin board postings or e-mail messages. Participants in Hara and Kling's (1999) qualitative case study of a Web-based distance education course at a major U.

S. university also reported lack of immediacy in getting responses back from the instructor, and as a result they felt frustrated. Recent studies indicate similar results. For example, in Vonderwell's (2003) study, one reported disadvantage of an online course was the delay of immediate feedback from the instructor. One participant in the study stated that when he emailed a question to the instructor, " it might take hours, maybe a day or so before you get an answer back for the question" (Vonderwell, 2003, p. 84).

Perceived level of expertise is another weakness identified in online learning studies. Participants in Petrides' (2002) study reported skepticism of their peers' supposed expertise. In contrast, the participants indicated they felt comfortable relying on the instructor's expertise. Lack of a sense of community and/or feelings of isolation were other challenges learners reported in their online learning experiences. Vonderwell (2003) reported that online learning participants indicated a lack of connection with the instructor, especially " one-on-one" relationship with the instructor.

As stated by one participant in the study, " I still feel like I know a little bit about my instructor, but not the same way that I would if I was in a class. I don't know much about her personality at all" (p. 83). Other studies found similar results. For example, Woods' (2002) reported that online learners reported feeling isolated from faculty as well as other learners in the online courses they had taken.

3. Research design The purpose of this study was to

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investigate the components of the online learning environments that learners recognize as helpful in the learning process and those that learners identify as challenging.

Two primary research questions guided this research: 1. What are the components of online learning environments that learners recognize as helpful in the learning process? 2. What are the components of online learning environments that learners identify as challenging? 3. 1.

Participants The study participants were graduate students at a large research university in the South. All participants in the study have taken at least one course that is primarily online (i. e. , there may be some face-to-face interactions, particularly at the beginning and end of the term).

Seventy-six learners participated in the survey and 14 participants agreed to participate in a follow-up interview. Fifty-four (54–71%) of the participants had taken more than one online course and 22 (22 –29%) of the participants were first-time online learners. Seventy-one of the participants were aged from 20 to 50 and the remaining five participants were over 50 years old. There were 67 (88%) females and 9 (12%) males (see the summary in Table 1). All learners in the study were contacted face to face by the researchers and asked to voluntarily participate in this study.

Participants signed an informed consent form when the questionnaire was L. Song et al. / Internet and Higher Education 7 (2004) 59–70 Table 1

Demographics Number of learners (N= 76) Gender Male Female Age 20 – 29 30 – 39 40 – 49 Over 50 Area Education Business Social sciences Status Full time Full time Full time Part time Part time 9 67 63 Percent 12 88 26 21 24 5

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34 27 32 7 72 3 1 95 4 1 employee/part time learner learner with assistantship learner without assistantship learner/part time employee learner 54 2 10 6 2 71 1 12 9 4 On-line course experience More than one course online First time on-line learners 4 22 71 29 distributed. The questionnaire also asked learners to provide additional contact information if they were willing to participate in an interview. Fourteen participants volunteered to participate in the follow-up interview. The researchers interviewed participants on an individual basis to gather more in-depth information.

3. 2. Assumption and limitations Assumptions associated with this research included that all learners who volunteered to participate would have completed at least one course primarily on line (i. e. , 13 out of 16 sessions in a term meeting online). It was also assumed hat each participant would be honest in recording a response. Further assumptions were that the participants were representative of learners at the institution where the research was conducted and that they were generally representative of the learner population involved in an online learning environment at the postsecondary level. There were a few limitations associated with the research. One limitation was that the participants were determined by using purposeful sampling, with a focus on graduate students in instructional technology. Generalizability should not be expected or assumed.

Another limitation relates to the validity and reliability of the survey. While the survey is based on previous research and was tested prior to wide distribution, formal validity and reliability tests were not performed. 64 L. Song et al. / Internet and Higher Education 7 (2004) 59–70 3. 3. Data collection The study adopted mixed research methodology using both

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quantitative (predominately closed response questionnaire) and qualitative (interview) data collection methods. By using multiple sources for data collection, the researchers were able to use different data sources to validate and crosscheck findings (Patton, 1990).

The questionnaire, completed around midterm in the 2002 fall semester, was comprised of a set of 20 questions including learner characteristics (e. g. , demographics, enrollment status, the place they usually accessed the Internet for the online course), perceived challenges, and helpful components in their online experiences. Multiple researchers designed the questionnaire items based on insights gained from review of the literature individually and then compared the questionnaire in a group in order to validate the initial research questions.

The survey was also tested on a small sample of learners. Revisions were made based on the feedback from the sample prior to full implementation. The researchers interviewed 9 of the 14 participants who volunteered to participate in a follow-up interview (5 were not interviewed due to scheduling conflicts). Interviews were conducted to obtain more in-depth information in regard to learner perceptions of online learning and to solicit any advice they may have for new online learners and online instructors (see Appendix A for the interview protocol list of questions).

To ensure credibility and trustworthiness of the interview responses, two researchers conducted the interviews. Data from the interviews were used to substantiate and extend results from the questionnaire. The data collection process ended in the 2003 spring semester. 3. 4. Data analysis Analysis of <https://assignbuster.com/improving-online-learning-student-perceptions-of-useful-and-challenging-characteristics-assignment/>

the data focused on the two areas addressed in the research questions: learners' perceived helpful components in online learning and learners' perceived challenges in online learning. Organization and analysis of the questionnaire data were completed by using SPSS.

The entire data set was entered into the program. Subsequent analysis of the data occurred by identification of specific survey questions and further analysis in SPSS. Qualitative data analysis consisted of coding the interview transcripts. Seven indicators from the interview protocol were identified to assist with coding. Multiple researchers coded the interview transcripts. Coding was first completed individually. The researchers then compared the coding in a group in order to reconcile differences and identify themes in the interviews.

Members of the research group analyzed the quantitative and qualitative data to identify overall themes and patterns. Themes and patterns were then compiled according to the research questions. Results from the analysis are discussed in the following sections. 4. Results Results indicate several trends in overall components perceived as useful and challenges that confront learners in online learning contexts. The overall research questions have been used to organize the presentation of the data. L. Song et al. / Internet and Higher Education 7 (2004) 59–70 65 4. 1.

What makes a learner successful in an online environment? Results of the study indicate that the majority of the participants identify the following components as helpful in their online learning: design of the course, comfort with online technologies, and time management (for a summary of the

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questionnaire data, see Table 2). Participants who were equally satisfied with online learning as compared to traditional classroom learning felt that design of the course (82%), comfort with online technologies (82%), and time management (80%) were influencing factors in the success of an online course.

Participants who were more satisfied with online learning felt that design of the course (87%) made for a successful online learning environment. Many of the participants also reported that comfort with online technology (75%), motivation of the learner (62%), and time management of the learner (62%) impacted their success of online learning. The majority of the participants who were less satisfied with online learning as compared to traditional classroom learning also agreed that design of the course (89%), motivation of the learner (82%), and comfort with online technologies (82%) made for a successful course.

Across all areas of satisfaction, it appears that the design of the course is the most important factor (83%), followed by being comfortable with the technology (76%). Motivation (74%) and time management (71%) were ranked third and fourth in terms of level of importance in what makes a learner successful in an online course. Additional strengths and helpful factors were identified in the interviews. Convenience was one of the strengths of online learning indicated in the interview data. Participants reported that it was helpful not to have to travel to the campus (which was up to a 60-minute drive for some).

The ability to complete assignments and tasks at anytime was another reported strength. Although most of the participants liked the flexibility of completing tasks at anytime in the asynchronous courses, some participants had experienced synchronous online courses as well. Some participants indicated that meeting at a specific time on line each week also had strengths. By meeting each week at a set time, the participants indicated they were able to form connections with the instructor and other classmates.

Participants indicated that the connections formed among the learners and the instructor were important in that they assisted with the formation of a community within the online learning environment. Participants were also asked to comment on the perceived usefulness of specific technologies used in their online courses. Tools such as chat, e-mail, and bulletin boards were the primary forms of communication in the online courses taken by the interviewees. Reviews of the helpfulness of the Table 2 Components that reate successful on-line learning environments Level of satisfaction More satisfied with on-line learning Equally satisfied with on-line learning and face-to-face learning Less satisfied with on-line learning Overall Components Design of course (87%), comfort with on-line technology motivation, and time management (62%) Design of course (82%), comfort with on-line technology time management (80%), and motivation (77%) Design of course (89%), comfort with on-line technology motivation (82%), and time management (75%) Design of course (83%), comfort with on-line technology motivation (76%), and time management (75%) (75%), (82%), (82%), (78%), 6 L. Song et al. / Internet and Higher Education 7 (2004) 59-70 technologies were mixed by interview participants. Betsy felt that chat " was pretty

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dynamic and it was good. " She suggested that chat was good even though the conversation may have moved on, stating, " I didn't feel it was a handicap because invariably, somebody would read what I wrote. Even though it was a little lag, they would respond to my thoughts. So I didn't feel that was too big a problem. " On the other hand, Eliza felt the exact opposite about the chat room. She stated, It takes a while to think about it and it takes a while to type it.

By that time the moment had passed and it was onto something else. So that was really frustrating about it. . . I think you need a moderator. . . you were kind of having all the parts of the conversation at the same time. So it was difficult. . . the chat screen was pretty short, so the stuff said before would disappear on the top. You can't remember what you are responding to. It is hard to hold in your head so much information. . . I think it is harder to remember all the points just it does go by so quickly. Eliza preferred communicating through the bulletin board feature.

She felt it was quite interesting to get people talking about a particular topic and seeing their thoughts. The ability to post, read, and respond to the thoughts of others at any given time was plus for Eliza. While Betsy was positive about the chat, she also felt that the bulletin board was more useful than chatting. It had more impact and required more involvement. Jennifer liked the bulletin board because she was able to get feedback about an idea: . . . when you post online you have an idea and you ask for people's feedback. And then that was really more of where you could see the little trail.

Of people replying and you would reply back and have sort of a one-on-one conversation with that person. Overall, participants indicated that participation in the bulletin board should be driven by the instructor in order to facilitate communication and the building of a community. 4. 2. What creates barriers or challenges? Many participants in this research study reported that lack of community, difficulty understanding instructional goals, and technical problems were challenges in their online learning experiences (for a summary from the questionnaire data, see Table 3).

Participants who were less satisfied with online learning as compared to traditional classroom learning felt that a lack of community (71%) within the online environment was a challenge in online courses. Sixty percent of the participants reported having difficulty understanding the goals/objectives of the course and fifty percent indicated technical problems as a barrier. The concern over a lack of community was also expressed in the interviews. Interview participants indicated that they felt the formation of a community in an online course could occur if the instructor facilitated this notion.

Several participants indicated that having a face-to-face meeting at the beginning of the course would encourage this process. Paula said, " if you can get face-to-face [they] are good. . . a kick-off one [meeting] I think is very helpful. . . it puts faces to people. " Will also commented on the value of an initial face-to-face meeting. He commented that in one of his online courses, the instructor took a picture of each of the learners and posted them online. This appears to have assisted with the community formation. As stated by Will, L. Song et al. *Internet and Higher Education* 7 (2004) 59-70

Table 3 Components that create barriers in on-line learning environments

Level of satisfaction More satisfied with on-line learning Equally satisfied with on-line learning and face-to-face learning Less satisfied with on-line learning

Overall Components Technical problem (75%) Technical problem (54%) 67

Lack of community (71%), difficult the goals/ objectives (60%), and technical problem (50%) Technical problem (58%) and lack of community (50%) . . .

the first night of class, we were actually here and we had photo taken. Dr.

James set up a Web page with everybody's photo in it. Actually it looks like a mug shot because you had to hold your name. But everybody had a picture with their name. It took me a while to associate who is who. I click back to that page, and see, oh yeah that is who it is. The biggest challenge reported by study participants were technical problems (58%). Technical problems were a challenge to participants who were more satisfied with online learning (75%) and those that were equally satisfied with online learning (54%) as compared to traditional classroom learning.

The concern over technical problems was also reflected across all of the interviews. Will commented on the technical problems, stating that learners need to " be prepared that there are times when you have technical difficulties and you can't really do anything about that. " Technical problems were more significant for some participants than others. Carmen felt that the numerous technological problems in her online course took up too much of the class she had in one semester. She stated that there were " so many technical things. . . hat [it] seemed to take up the whole focus [of the course]. " 5. Discussion This study focused on the learners' perceptions of

helpful components and challenges in online learning environments. The components participants identified as helpful in this study are similar to what has been identified in previous research. Instructional design was one of the primary factors identified as helpful for online learning. Instructional designers have devoted decades of research and development to create models and processes to assist with the design and creation of instruction (e.g., Dick, Carey, & Carey, 2000; Smith and Ragan, 2000). It is not overly surprising that this element would rank in the top three, regardless of the mode of delivery. As stated by Dempsey and Van Eck (2002), it takes a good design to make good online instruction. There exist several models upon which to base the designs of effective online environments. The challenge that remains is one of examining the current models and processes that exist for face-to-face instruction and see how well they work for online instruction (and/or how they might be adapted).

Time management was another factor identified as useful for online learning. This study reinforces the importance of time management strategies for assisting with the online learning process. Hill's (2002) research indicates that implementing strategies such as working at the same time and in the same space can have an impact on the success of the online learning process. She also suggests that a regular schedule be established for engaging in the dialogue that occurs in an online context. According to Hill, 68 L. Song et al. / *Internet and Higher Education* 7 (2004) 59–70 by putting into place basic time management strategies, learners can improve their overall online learning experience. Other issues that were highlighted as useful in this study related to technology experience and comfort level. In

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this study, experience with the technology influenced the participants' perspectives of how useful the technologies were for online learning. Concerns associated with comfort in using the technologies are not insignificant. Researchers in the area of technology integration have long understood this to be a key element in the successful use of technology for learning (e. . , Hooper & Rieber, 1995). Indeed, previous research related to Web-based learning has also indicated the importance of this factor (e. g. , Hill, 2002). How to best facilitate the building of skills and comfort remains a challenge for facilitators and learners. Several components were identified as challenging for online learning. Lack of community is not a new criticism voiced by learners, nor is it a new challenge in the literature. Research studies have shown the importance of sense of community in students' learning experiences.

For example, in Rovai's (2002) study, the author studied 314 students who were enrolled in 26 graduate education and leadership online courses taught via Blackboard. com e-learning system. The results of the study indicated a significant relationship between students' perceived sense of community and perceived cognitive learning. The stronger the online learners' sense of community, the less isolated they felt. Given that sense of community continues to be an issue indicated as important in this study, such warrants further exploration as well as the creation of processes to enable the connections to occur.

The issues associated with lack of understanding goals and objectives link back to what learners stated as helpful: good instructional design. Data from

this study indicate that it is important to have goals and/ or objectives clearly stated so that learners will have a better understanding of what is expected. Again, there are many models and processes that can be used to assist with the creation of goals and objectives, particularly as they link into a larger course infrastructure (Dick, Carey, & Carey, 1999). What also appears to be important is the ability to clarify perceptions of goals and objectives.

Providing mechanisms where learners can ask questions to improve their understanding of expectations can assist with this effort. Technical problems have long created challenges with the use of technology for learning. Indeed, it is important to minimize the issues as much as possible from the beginning of the learning experience. This can be accomplished in a variety of ways, including providing overviews of the tools used for the course and/or hands-on workshops with the technology that will be used in the online learning experience.

It is also equally important to help learners understand that problems are going to occur—and most likely at the most inconvenient time (Hill, 2002). Facilitators can help ease the stress by letting learners know at the beginning of the course that they understand problems will occur. Learners can help ease their own stress by recognizing that problems can occur and making back-up plans and back-up copies to help facilitate their work. In addition to discussing specific challenges and useful components, interviewees provided several suggestions for faculty members teaching online courses and for prospective online learners.

A factor that emerged for both faculty and learners was organization. Organization on the part of the instructor should include establishing goals from the beginning of the course, providing explicit directions, providing examples of the end products, and establishing deadlines for deliverables. Students should also work to maintain organization by setting a schedule and making the course Web site a part of their daily activities. Frances states, " I would say make it a daily thing. . . if you think of a time that works for you, then choose that. ' That point was reiterated several times through the various interviews. L. Song et al. / Internet and Higher Education 7 (2004) 59-70 69 6. Conclusion The current study offers several implications for practice and research. First, there is a need for effective instructional design for online courses. The design should focus not only on the technological aspects of the course, but also on the goals, objectives, and expectations for the learners. Continuing to explore design models that are most effective for online learning will also help facilitate this activity.

Second, there is a need to work with learners to assist them in the development of time management strategies. Online courses are dynamic on multiple levels: information is received in a variety of formats and at different times. When learners are accustomed to learning in more static, real-time contexts, this can create significant time management issues. Assisting learners in establishing strategies for managing their time may prove to be useful. Finally, there is a need to work with learners to assist them with establishing community or feelings of connection in online contexts.

Integrating strategies for community building into the design of the course may assist with this effort. Continued research related to community building strategies in a variety of contexts is also needed to enable the advancement of best practices in the dynamic context of the Web. The growth of the Internet and online learning will continue, and as indicated in this study, it will come with challenges. Individuals engaged in an online course may have different qualities for a successful online environment or elements that are challenging. Each experience will be unique to the individual.

As educators and students become more comfortable and adept at communicating and learning at a distance, it will remain imperative that the best practices associated with these learning environments continue to be explored. Appendix A. Interview protocol 1. Tell us about an online course you have taken. . . 2. What do you think are the strengths and weaknesses of online courses? 3. We would like for you to think about those strengths and weaknesses. . . and then think about face-to-face courses you have taken. What do you miss about face-to-face courses when you are in an online course?

What do you miss about an online course when you are in a face-to-face course? 4. One of the issues raised in the surveys related to the notion of community or feeling like you have connections with others when you are in class together. First, do you think that this is an important aspect in a class? Can you talk to us about your sense of connections with others in a face-to-face course versus an online course? 5. You have experience with taking courses online. What suggestions would you give to a student who is taking

an online course for the first time? What suggestions would you give to faculty teaching online courses?

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