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The Perceptions of Students toward Online Learning at a Midwestern University: What are Students Telling Us and What Are We Doing About It?

John A. Huss
Northern Kentucky University, hussj@nku.edu

Shannon Eastep
Northern Kentucky University, easteps1@nku.edu

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John A. Huss and Shannon Eastep
Northern Kentucky University, USA

Introduction

There is little argument that online education, once considered a novelty, or at best, an alternative delivery method aimed primarily toward an idiosyncratic population of students, has moved aggressively into the mainstream of higher education. For eight years (2003-2010), the Sloan Consortium conducted a nationwide survey that tracked the nature and growth of online learning. During the fall of 2009, 5.6 million students, representing 29% of the total college and university enrollment, took at least one online course. This percentage represented an increase of 21% over the previous year, the largest annual increase in the eight years of the survey. It is important to recognize that the large increase occurred when *overall* enrollment growth in higher education was less than 2% (Allen & Seaman, 2010). To further substantiate these findings, a 2011 study by the Babson Survey Research Group at Babson College in Wellesley, Massachusetts found that more than six million students—nearly a third of total enrollment at degree-granting postsecondary institutions—were taking at least one online course in 2010. That's an increase of 560,000 students over the prior year (Allen & Seaman, 2011).

A similar pattern of growth has taken place within our university as we have witnessed an expansion from 1,130 students taking at least one online course in 2005 to a total of 4,695 in the fall of 2012. The number of online courses offered has likewise burgeoned from 82 in 2005 to 481 in 2012 (Educational Outreach, 2013). We have had the opportunity to be a part of this web-based movement and have designed and taught foundational courses in education, at each of the undergraduate, graduate, and doctoral levels.

Admittedly, when our online education experience was in its infancy, much of our focus and preoccupation dealt with the efficiency of the technological platforms from which the course modules were stored and launched, the “mechanics” of actually creating the courses themselves, and the sheer logistics of dispensing the instruction. The advancement of technological tools, coupled with an increasing confidence in our practices, has served to ease these early procedural and structural entanglements. We are no longer concerned only with the simple act of getting the

course online and into cyberspace, but also with the manner by which we interact with students and create an environment for learning that is active, innovative, and challenging. With data provided by traditional student course evaluations being rather limited, we felt the need to more systematically examine the medium from the perspectives of those who actually *take* the courses. Without performance metrics and quality assurance to guide future course development and delivery, retention in online courses and programs becomes more problematic and uncertain, especially as universities—including our own—compete for new enrollments. Our classes must now be "sold" to students as commodities and we must cater directly to the consumer who requires the flexibility of web-based instruction. After all, institutions in higher education consider student satisfaction as one of the major elements in determining the quality of online programs in today's market (Yukselturk & Yildirim, 2008; Calli, Balcikanli, Calli, Cebeci, & Seymen, 2013).

The purpose of this study was to explore the attitudes and perceptions of students at a Midwestern university who were enrolled in at least one online-only course during the fall 2012 semester. We were committed to uncovering the concrete issues that are important to our students and using the explicit feedback to strengthen *our* course design and course delivery. We relied on the work of Argyris, Putnam, and Smith (1985), who emphasized the importance of moving from describing a phenomenon and determining what can be done about it to "action science" (p. 36), which involves *acting* in a real-life context to bring about needed change. Therefore, the study focused on student perspectives toward web-based instruction and what these students consider to be their expectations and experiences in the areas of course format, technological support, interaction with faculty and peers, course flexibility and pace, assessment and feedback, and overall communication.

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These characteristics were inspired by the Community of Inquiry (CoI) theoretical framework (Garrison & Cleveland-Innes, 2005), which was developed in the context of the literature on teaching and learning in higher education and is becoming increasingly influential for explaining and prescribing the effective conduct of online learning. The framework consists of three dynamic interdependent elements: teaching presence, cognitive presence, and social presence, all of which are of interest to us because they serve to define a successful learning climate in terms of open communication, cohesion, and inter-personal relationships. Indeed, the aforementioned components of CoI address such issues as instructor clarity, the creation of an online community, and the instructor's ability to provide information from a variety of sources (Arbaugh, 2008).

We embraced the key components of action research as described by McCutheon and Jung (1990), which include systematic inquiry, reflexivity, and a focus on the practical. Our objective was to initiate a study that gathered as much information as possible about the diversity of the online phenomenon at our university so that we could seek improvement as online designers and professors and subsequently share our findings with other instructors on campus who teach students within the targeted population. We were deliberate about emphasizing the collaborative nature of action research as we drew on Shannon Eastep's expertise as Distance Learning

Coordinator and purposefully sought participation from prominent shareholders in Educational Outreach.

A Look at the Literature on Student Satisfaction

With the unremitting growth of web-based instruction as a significant form of content delivery in higher education, the body of existing literature is likewise moving from sporadic to steady, especially in the area of student satisfaction, which can be defined as, "the perception of enjoyment and accomplishment in the learning environment" (Sweeney & Ingram, 2001, p. 57), and the sum total of a student's behavioral beliefs and attitudes that result from aggregating all the benefits that a student receives from participating in the experience (Wu, Tennyson, & Hsia, 2010). Previously, the literature had converged narrowly on the differences in student achievement between traditional and online courses. As recently as 2006, Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw, and Liu reviewed 76 studies detailing online education and reported that few studies actually probed the teaching-learning experience in the online environment and what students *thought* of the online environment.

Student Characteristics and Student Satisfaction

A significant relationship was reported between the degree to which students feel comfortable using the Internet and their overall feeling of satisfaction with the online experience (Stokes, 2003). Specifically, Chu and Chu (2010) looked at adult learners over the age of 45 and found a positive correlation between Internet self-efficacy and satisfaction. Interestingly, Rodriquez-Robles (2006) conveyed that Internet self-efficacy is *not* a significant predictor of student satisfaction in a study involving undergraduates and graduates who attended a web-based distance education course from a university in the United States. Liaw (2008) found that self-efficacy in general is an important dimension of student satisfaction. According to Liaw (2008), an online student must believe in his/her capabilities to achieve the outcomes within a nontraditional delivery system.

Bolliger and Halupa (2012) focused on the anxiety levels of 84 students who were taking an inaugural online course in a health education doctoral program. An 18-item anxiety tool with domains in computer, Internet, and online learning was administered in the first and last weeks of an educational research course. A 24-item satisfaction tool with domains regarding the instructor, technology, setup, interaction, outcomes, and overall satisfaction was used at the end of the course. A significant negative correlation was discovered between anxiety and student self-satisfaction.

Instructor Characteristics and Student Satisfaction

In an early study, Arbaugh (2001) surveyed 25 web-based sections in an MBA program at the University of Wisconsin, Oshkosh, and reported that the instructor's use of immediacy behaviors, including use of humor or emoticons, referring to the student by name in written communication, prompt feedback, and sharing of personal examples, are better predictors of student satisfaction than an instructor's mastery of the online technology.

Herbert (2006) employed the Noel-Levitz Priorities Survey for Online Learners™ (PSOL) to inspect the quality of online instruction for undergraduates and graduates at a medium-sized Midwestern university and found that the most important variable in student satisfaction was responsiveness of the faculty to student needs. Hodges and Cowan (2012) captured 52 undergraduate pre-service teachers' views of instructor presence in online-only courses at a research university in the southeastern United States. The participants were enrolled in an online technology integration course consistent with their education specialization of early childhood, middle grades, special education, consumer science, or health and physical education. The largely asynchronous course design included weekly readings, discussions, and projects. Using a mixed- methods online survey approach that blended quantitative data with open-ended content analysis, the findings suggested that timely responses, clear instructions, instructor availability, and overall course design were the most telling factors. Sheridan and Kelly (2010) applied a cross-sectional survey design via a questionnaire administered online to 249 graduate and undergraduate students enrolled in several online courses offered by the education departments at either of two large universities in the Midwest. The prominent indicators deemed most important to students dealt with making course requirements clear and being responsive to students' needs. Students also valued the timeliness of information and instructor feedback. While students generally placed high value on communication and instructor's responsiveness, they did not place as much importance on synchronous or any face-to-face communication.

A total of 291 undergraduate and graduate students from the disciplines of psychology, special education, instructional technology, and physical education responded to an online survey during the summer session at a Western university. The survey included questions on demographics, five predictor variables, and student satisfaction. The researchers concluded that both instructors and course designers need to pay critical attention to content design and organization, given that learner-content interaction contributes significantly to student satisfaction. Moreover, instructors must provide feedback to students in a timely fashion and encourage students to ask questions through different mechanisms (Kuo, Walker, Belland, and Schroder, 2013).

Shen, Hiltz, and Bieber (2006) presented results of a field experience of virtual teams that took online examinations. Using data from 485 students, Shen et al. explained that collaborative examinations enhance interactions and the sense of an online learning community, resulting in significantly higher levels of perceived learning and student satisfaction. These collaborative exams were facilitated through online asynchronous conferences in which anonymous students and the instructor discussed the exam design, questions, and grades.

Social Presence and Student Satisfaction

Richardson and Swan (2003) explored the notion of social presence in online courses and concluded that the construct of social presence affected student outcomes, student satisfaction, and possibly instructor satisfaction. In the same vein, Lowenthal and Dunlap (2011) explored students' perceptions of instructional strategies utilized to establish social presence in online learning environments. They found that simple strategies, such as one-on-one emails and detailed feedback, are more successful methods for creating social presence than more cutting-edge technology strategies. Song, Singleton, Hill, and Koh (2004) used a qualitative approach and

found that students in an online course were apprehensive about a lack of community in an e-learning environment.

Multiple Factors and Student Satisfaction

Based on 295 responses from students enrolled in 16 online learning courses at two public universities in Taiwan, Sun, Tsai, Finger, Chen, and Yeh (2007) identified seven critical factors that influence online learners' satisfaction instructor attitude, computer anxiety, course flexibility, perceived usefulness, course quality, perceived ease of use, and diversity of assessment. Sun et al. revealed that course quality is the most important concern and that technological design plays an important role in students' perceived usefulness of a course. Moreover, Sun et al. claimed that the assessment strategy of any online course should include peers and/or students in addition to the instructor's evaluations of student performance.

Lim, Morris, and Kurpitz (2007) compared the learning outcomes of online and blended learning delivery. A program evaluation course with 125 undergraduate students at the University of Tennessee completed a close-ended and open-ended questionnaire using terminology taught in the course. Among the 125 students, 59 were enrolled in an online course and 69 were enrolled in the same course taught in a hybrid modality. Data analysis revealed that the course format did not significantly affect students' learning application. However, within the two groups, various instructional activities were deemed more important than others. That is, learners seemed to value those learning activities wherein they could apply learned knowledge and skills to personal situations.

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Summary

Assessing student satisfaction can be valuable in terms of program and course improvement. As with any course, immediacy, comfort, strong interactions, and feedback are critical to student satisfaction. The majority of existing studies in the literature have been limited to small samples or confined to specific disciplines or courses. What makes this study particularly unique is that we sought to extend our investigation of student perceptions of online experiences to a larger sample size than in prior studies (as was recommended by many of the previous works). In addition to a large sample, this study included an entire university campus, comprising several distinct colleges and content areas.

Method

Participants and Procedure

The university at which this study was conducted services more than 16,000 students in a tri-state region. The university has 2,000 faculty and staff. The Associate Director of Educational Outreach for the university provided email addresses for the 4,695 students who were enrolled in at least one online course for the fall 2012 semester. The electronic survey was piloted with a

small sample of online students at a branch campus, as well as faculty within our college. The electronic survey and subsequent reminder email were then disseminated to each of the potential respondents during weeks 12 and 14 of the fall semester. Approximately 75% of the respondents were undergraduates. Table 1 displays the numbers of students who responded from the various colleges across the university.

Table 1

College Affiliation

College	**Response** (n = 1,085)
College of Arts and Sciences	255 (23.5%)
College of Health Professions	224 (20.6 %)
College of Informatics	200 (18.4%)
College of Education and Human Services	198 (18.2%)
College of Business	138 (12.7%)
College of Law	0 (0%)
Undecided	70 (6.5%)

Of the total number of students, 44% identified themselves as being 30 years of age or older, with 32% between 18 and 22 years-old, and approximately 24% between 23 and 29. Nearly 80% of the students who responded were female. Seventy percent had taken one or more online courses but also took face-to-face courses, while 30% identified themselves as "online-only."

Instrument

The electronic survey was a researcher-generated instrument, which blended a quantitative component in the form of 23 fixed response items (five of which were demographic in nature) with a distinct qualitative element accomplished through two narrative response questions that encouraged detailed and personalized answers. The domains used within the survey were influenced by the typology of online interaction by Moore & Kearsley (2005) and therefore included: learner-content interaction, learner-instructor interaction, and learner-learner interaction. In addition, learner-technology interaction, as identified by Hanna, Dudka & Runlee (2000) and Palloff & Pratt (2001), was incorporated, along with overall satisfaction. These were the questions we felt would best inform our practices. A synopsis of the essential questions asked on the questionnaire (minus the demographic items) is displayed in the Appendix.

Design

The blended (concurrent collection) approach employed in this study favors the triangulation design described by Creswell (2013). Within the triangulative model, quantitative and qualitative data are gathered simultaneously and integrated in order to clarify and better understand student responses (Creswell & Plano, 2007). Despite the large population size, we believed that exclusivity was not advantageous to gathering the most comprehensive data pertaining to the attitudes and experiences of online students throughout our university. Variation in data collection can lead to greater understanding while answering questions from different perspectives, thereby eliminating potential gaps.

Data Analysis

Quantitative analysis was achieved through a simple description that condensed and refined the raw data. A technical analysis was not sought for the purposes of this action-centered study, which relied on nominal data. For the narrative responses, content analysis was the technique employed to compress many words of text into fewer content categories based on explicit rules of coding (Weber, 1990). The overall process was adapted from the procedures outlined in Haney, Russell, Gulek, and Fierros (1998), in which two people independently review the material and establish a set of features that form a checklist. We then compared notes and reconciled any differences that showed up on our initial checklists. Finally, we used a consolidated checklist to independently apply coding. Because this descriptive "snapshot" study utilized self-reporting and subsequently analyzed each item separately, a scale was not invoked, and therefore, internal consistency and inter-rater reliability ratings were not viable. Credibility and confirmability, or the capacity of a piece of research to provide a faithful description and interpretation of a human experience (Lincoln & Guba, 1985), were enhanced through independent corroboration from multiple informants. The use of quantitatively measured attributes served to demonstrate what Wolcott (1973) conceptualized as the typicality of a phenomenon, or the extent to which attributes may be compared and contrasted along relevant dimensions with other phenomena.

Results

A total of 1,085 students returned the questionnaire. However, the response numbers varied for individual survey items, with various students skipping particular questions.

Attitudes and Prior Experience with Online Education

Of the total number of participants, 68% rated their level of comfort with technology in the 8-10 range on a scale where 10 was the "most comfortable." Table 2 reports on the reasons as to why the students chose to take an online course.

Table 2

Reason for Taking Online Class

Reason	**Response** (n = 1,084)
Face-to-face did not fit schedule or was not an option	516 (47.6%)
Strictly convenience	399 (36.8%)
I learn best in online environment	83 (7.7%)
None of the above	86 (7.9%)

Learner-Instructor Interaction

The results in this section seek to present those elements of the online experience that involve communication with and from the course instructor. As depicted in Table 3, the students were asked to give their opinion as to the "promptness with which they believe an instructor of an online class should respond to an email."

Table 3

Promptness Responding to Email

Promptness	**Response** (n = 1,056)
Within 24 hours	446 (42.2%)
Within 12 hours	299 (28.3%)
Within a few hours	226 (21.4%)
Within 1-2 days	85 (8.0%)

In Table 4, students were asked to consider how often an instructor should communicate with an online class, beyond the initial communication necessary for making course content available. Such additional communication might, for example, include updates and reminders.

Table 4

Frequency of Instructor Communication

Frequency	**Response** (n = 1,054)
Several times a week	500 (47.4%)
Weekly	489 (46.4%)
Daily	65 (6.2%)

Table 5 displays the responses to the question, "With respect to class updates and announcements, how would students prefer to receive this information from their online instructor?"

Table 5

Preference for Receiving Class Updates

Preference	**Response** (n = 1,055)
Email	751 (71.2%)
Announcements in course management system	221 (20.9%)
Text	42 (4.0%)
Audio messages	10 (0.9%)
Other	31 (2.9%)

A simple email was also the preferred method of communication when students were asked how they would like to receive a response from the instructor in the event of a technical difficulty with a component of the online course. They selected an email response (79%) over a phone call, audio explanation, or video tutorial, even if the latter were sent via email. When asked if seeing a video message or hearing an audio message from the instructor helped the student feel more

connected to the online professor, 62% of 1,055 students indicated that it did, 23% expressed that it did not, while 15% noted that he/she had never experienced such messages.

Table 6 displays the student responses to "What type of feedback would you like to receive on your work from your online instructor?"

Table 6

Type of Feedback Preferred

Feedback Preference	**Response** (n = 1,055)
Score and written overall feedback on the assignment	519 (49.2%)
Score and written specific feedback on individual items	422 (40.0%)
Just a grade/score is enough	72 (6.8%)
Score and audio/video feedback on the assignment, items missed	42 (4.0%)

Close to 50% of 1,053 students expected assignments to be graded within 4-7 days after submission, with 46% expecting a grade to be returned within 1-3 days.

Learner-Content

The results in this section report on the aspects of online education that are associated with the course elements and course delivery most preferred by students. From the students' perspective, what should be included in a typical online module? Their reactions comprise Table 7.

Table 7

Contents of an Online Module

Content	**Response** (n = 1,053)
Content, audio and visual messages from instructor	611 (58.0%)
Content only	255 (24.2%)
Content and audio messages	187 (17.8%)

When considering the use of tutorials (voice-narrated "how-to" videos), 59% of 1,052 respondents expressed that such tools helped them better understand the technology or content being taught in the modules. Students were asked about the pacing of an online course and felt strongly (78%) that new content should be made available at the beginning of a week, but not multiple times throughout the week. In addition, 75% of students indicated that they would like the option of working ahead past the current week of material.

Table 8 exhibits the type of devices used regularly by students.

Table 8

Devices Used on Regular Basis

Device	Response (n = 1,055)
Laptop	968 (91.8%)
Desktop computer	516 (48.8%)
Smart phone	395 (37.4%)
Tablets	244 (23.1%)
Other	14 (1.3%)

Note. Students could select more than one item.

Several students clarified "Other" by including devices such as Kindle e-readers, iPod Touch, and Chromebook.

When students were asked if they would prefer that more components of an online course be designed for smart phones and tablets, a mixed reaction was drawn. Approximately 45% of the aforementioned students acknowledged that they would indeed like to work on other devices in addition to traditional laptops or computers, yet 44% stated that they prefer to work on a laptop or desktop. The remaining students were unsure. When it came to the use of more cutting-edge technology throughout an online course, 66% of 1,050 students considered such innovation to be only "somewhat important." Only 28% of the respondents wanted to see technology used to its fullest, while 6% did not consider the use of cutting edge technology to be important at all.

Learner-Learner Interaction

The results in this section report on the dimension of online courses. Student attitudes toward the importance of regular interaction with classmates within an online course revealed that 50% of the students considered it "not very important" to interact with others in the class, with 40% indicating it was "somewhat important." A mere 10% of respondents expressed that regular interaction with classmates in an online course was "very important." As presented in Table 9, students were then asked to indicate the type of interaction they do prefer with other members of their online class.

Table 9

Type of Interaction with Classmates Preferred

Type of Interaction	Response (n = 1,050)
Small group discussion board	722 (68.8%)
Large class discussion board	596 (56.8%)
Small group projects	281 (26.8%)
Voice-generated discussions	109 (10.4%)
Real-time video interaction	86 (8.2%)
Video-generated discussions	38 (3.6%)
Other	120 (11.4%)

Note. Students could select more than one item.

Narrative Responses

Students were asked to describe one aspect of a very successful online class, and conversely, one aspect of a very unsuccessful online class they had experienced. A total of 748 of the survey respondents provided such narrative commentary. The "successful" and "unsuccessful" aspects can be organized into several distinct categories:

Positive student feedback related to technology usage. The respondents described several technological features of their online courses they felt were particularly helpful. These included: tutorials, audio and video lectures, wimba, Tegrity, Voice Thread, and tools that addressed multiple learning styles. For instance, one student remarked, "There were instructional videos with audio lectures and PowerPoint slides. These are important to me as an audio/visual-learner." Another was supportive of "recorded lectures with a professor's voice that can be listened to at my own leisure." A student pointed out how the professor "used video messages to make my first online experience more humanizing; it was almost like being in class on campus."

Positive student feedback related to the instructor. Student commentary concerning their online professor generated praise in three specific areas: organization, promptness, and communication. Said one respondent, "I think it's important for the instructor to outline the expectations we should have of him/her regarding feedback, forms of contact, and grading." Another summed it up by stating, "A professor's organizational skills, to me, are the most important aspect of a successful online class." Another student shared, "I appreciated having my assignments graded in a timely fashion so I could always gauge how I was doing in the class." Other students commented: "The professor sent out emails at the beginning of every week to remind us of our assignments," and "I think regular communication from the professor is important; it lets me know he/she is there to help us."

Positive student feedback related to miscellaneous factors. Students contributed many general, positive comments regarding their online classes that ranged from course consistency and detailed syllabi to flexibility and well-structured modules. Said one, "I like it when course content is posted the same day every week and all assignments are due on the same day each week." Other students concurred: "I had one assignment due each week, on the same day and at the same time. It allowed me to get into a routine" and "I like it when the classes are easily laid out in week-to-week folders." Others appreciated the convenience: "I live over 50 miles from campus; these courses allow me to continue my education," and "I can study when I want, and at the pace I want."

Negative student feedback related to technology. Many students were definitive in their criticism of certain technological aspects of their online courses. Some complaints dealt with the "mechanisms" of the class, such as difficulty opening files, compatibility issues with Macs, inconsistencies with various browsers, and confusion with the course management system. Other complaints, however, were focused on how the technology was utilized by the instructor: "The professor never used audio or video presentations—just .pdf files to explain difficult concepts." "My professor used videos, but simply read the PowerPoint in a dry, monotonous voice; the videos were not helpful at all," and "the only technology used was regular PowerPoints and links to resources. It was a very boring class. I was teaching myself."

Negative student feedback related to the instructor. As was the case in their praise of instructors, students were likewise critical of professors in the categories of organization, promptness, and communication. According to one student, "Not only was the professor just generally unorganized, but he did not grade any assignments during the first three weeks of class." Another was equally frustrated by "professors who don't respond to emails and don't post grades until weeks later." One student claimed, "We didn't know our grades until the class was almost over." Other students provided unfavorable comments concerning professors who were "totally uninvolved in the course." According to one, "I felt completely disconnected from the instructor," and "the instructor could have been anybody. She did not react to our posts and contributed nothing beyond uploading the material once a week."

Negative student feedback related to miscellaneous factors. A sampling of negative student comments uncovered numerous areas of concern. Many dealt with the use of group work: "Group projects should never be done in an online class." "Group projects are a disaster in an online format." "One class put us in groups of 4 or 5—really bad idea for an online course. Most people take online classes for scheduling reasons." In other matters, a student commented that "the entire class grade was based on tests—no discussion, no assignments, and no feedback from the professor," while another said, "The class was vague and confusing, everything from how the assignments were explained to the excessive number of tabs in Blackboard."

While other "successes" and "non-successes" were provided by the students, the critical themes that emerged clearly spoke to the necessity for clear instructions, timely responses, instructor availability, and a course design that integrates appropriate, not overpowering, technology.

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Discussion and Implications

The results, both numerical and narrative, from the students who were enrolled in at least one online-only course provided candid feedback that we can use for many purposes. It can inform our own practices as we design and deliver web-based instruction to better meet the expectations of students while, at the same time, providing a substantive academic experience.

Preparedness

The initial implication gleaned from the research bears upon the preparedness of students (and instructors) for an online experience. Beginning with the motive for choosing an online course in the first place, the largest percentage of respondents indicated they took an online course because a face-to-face option was not available or did not fit their desired schedule. The second reason was "strictly convenience." Only a little more than 7% of students selected an online course because they believed they learn best in that environment. As instructors, we need to be ever aware that students often populate online courses for reasons other than "educational" or

scholastic ones. Put simply, a student who selected an online class because it was a last or only resort, or was intrigued merely by the expediency of not having to drive to campus, may be quite unprepared for the format, the technology, and the self-reliant nature of an online course. Consequently, dropout rates in online courses are extremely high (Dietz-Uhler, Fisher, & Han, 2008).

As the findings from this study demonstrated, 68% of the respondents rated their comfort level with technology at the highest end of the scale. Frequently, however, such ratings are delusions of grandeur as students are quick to equate "social media" comfort with technological prowess in general. Also, despite growing up with access to thousands of online sources, students still tend to search only in the most familiar and accessible locations, such as Google or Wikipedia (Bair & Bair, 2011). Instructional videos and tutorials received substantial positive feedback from students and were considered indispensable for assisting students in maneuvering through a web-based course. Otherwise, students may begin an online class and suddenly discover they are overwhelmed by the course management system, the assignment submission process, the email login, and the discussion board. A comment like "I am *not* technologically savvy; they assume we are" was offered by a large number of respondents. To help counteract these deficits, we created an "Introduction to Online Learning" tutorial that leads students through the entire process, including necessary peripherals, such as printers, speakers, microphones, and so forth.

As noted earlier, students depend primarily upon laptop and desktop computers and exuded only mild interest in seeing more components of their online classes designed for tablets and smart phones. So, while they rate their technology comfort as high, they are not advocating for their instructors to push the technological envelope at this particular time.

Communication

The importance of communication is the next essential finding drawn from the student feedback. With students expecting prompt responses to email, audio or video messages, and multiple correspondences within a given week, we need to be sure we are communicating clearly and often with our students. While it is true that many students select an online option because it affords them a large degree of self-reliance and autonomy, they also expect concise directions for accessing course materials, completing and submitting their assignments, and receiving and interpreting their assessments and feedback. Such an expectation is arguably a paradox, because in many ways, the students are relying on the instructor to manage their time for them and remind them of due dates, while simultaneously asking for more freedom (Bair & Bair, 2011). Moreover, students insist that "communication" involve more than "technical" and dispassionate instructions. Many students pointed out that their professor was "missing" from the educational conversation. The ability, or willingness, of instructors to communicate online was perceived to be a crucial component of online learning. Failure to be explicit when the course begins can lead to much misinterpretation and disgruntlement on the part of students who may equate ambiguity with incompetence or indifference. We immediately sought to counteract such a perceived lack of communication on our part by specifically addressing in our syllabi our general methods of procedure for responding, grading, and making ourselves accessible. Also, as a direct response to the students' desire for increased communication, we decided to send out a weekly review of the course content each Thursday, which emphasizes the "Take-Aways of the Week" and collaborated on an open source digital file program to provide succinct, informative audio

introductions to each course module. *Remind 101*, another open source tool, is now utilized to send text messages to students in our classes to provide updates and additional "human" contact.

Other Findings

The very attributes of an online course that some students rated as positive and successful were the same components rated by others as negative, unwanted, and unsuccessful. The two most glaring examples involved the use of discussion boards and the requirement of group work or group projects. A sprinkling of comments found discussion and other such assignments involving their classmates to be valuable, yet more than 50% of the respondents revealed that it was not very important to them to interact with classmates on a regular basis. Traditional discussion boards, in particular, drew negative responses by the students as they described many discussion activities as "busy work," "of no value," and "time consuming." Small group discussions, while still disparaged by many students, were considered preferable to the large or whole group format.

Students were frequently adamant about the disdain for group projects, with respondents pointing out that scheduling and availability are common limitations for online students and that group requirements are not consistent with that consideration. Respondents expressed that it is "easier to work alone," "I'm taking an online course because I don't have time for interaction with classmates. It should never be a requirement," and the not so subtle "I HATE group work!" Such findings would challenge aspects of the existing literature that suggest students are seeking "community" and interaction with peers.

Both of these findings have led us to incorporate programs such as Voice Thread (a totally web-based application that allows students to have conversations and to make comments using any mix of text, a microphone, a web cam, a telephone, or uploaded audio file) into our online courses in lieu of traditional discussion formats. We have also limited group discussions to small-group only.

Limitations and Future Research

The response rate for the questionnaire was approximately 23%, yet, because of the large population to which it was sent, we would argue that data from more than 1,000 students is reasonable for recognizing useful trends and patterns. As we instigated this study, we were aware that low response rates are not atypical for surveys with large invitation lists (Hamilton, 2009).

Because our inquiry sought knowledge that could be applied directly to our own teaching context, statistical generalizability was not a goal. However, we are in agreement with Williams (2000) who used the term "moderatum generalization" to illustrate how "aspects of a particular case can be seen to be instances of a broader recognizable set of features" (p. 131). While our study was conducted to improve our *own* practices, many of our findings are consistent with the published literature. In this way, instructors on and beyond our campus may find this student feedback functional and practical for their own online endeavors. Therefore, they may transfer knowledge to their situation if they make a reasoned decision that the students from whom we collected data do not differ substantially from others to whom they might wish to generalize. To this end, we have shared our discoveries within our own department and college as well as to a consortium of regional universities.

When considering future research to compliment this inquiry, it could be beneficial for us to devise a methodology in which various content areas are, in fact, isolated so as to determine if certain disciplines appear to lend themselves better (or worse) to the online medium. We are already making preparations to repeat this study at our university because we recognize that student dynamics are fluid and we wish to reassess student experiences to determine if positive changes have occurred as a result of the interventions we have introduced.

Conclusion

In total, this study confirmed and expanded upon the findings from much of the previous research that suggested students have definite perceptions about online education and what they believe to be the necessary components for their success in this environment. Closing the gap between those perceptions and the realities they actually encounter within various online classes will be instrumental in helping us (and perhaps many of our colleagues) develop courses that provide the flexibility students desire while maintaining a necessary sense of "connectedness" with our institution and our faculty. Students did not directly express anxiety or apprehension about online education in general, but chose rather to emphasize course design, course organization, and instructor presence as the "make or break" aspects of distance education. These will determine if the escalation in online learning at our university continues to manifest, or if structural inadequacies ultimately send students back to the hallowed lecture halls.

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Dr. John Huss is an associate professor of education at Northern Kentucky University where he teaches foundations of education and action research courses. His interests include middle level education, pedagogy of humor in teaching, and online learning.

Shannon Eastep is an instructional designer, instructor, and distance learning coordinator for the College of Education and Human Services at Northern Kentucky University. Her role is to design and support online and hybrid classes for the college. She has been working in the field of instructional design and technology for 11 years.

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Appendix

A Copy of the Essential Questions Asked of Students

What is your reason for taking an online class? Face-to-face did not fit my schedule or was not an option Strictly convenience I learn best in an online environment None of the above	When taking an online class, how quickly should a professor respond to emails? Within 24 hours Within 12 hours Within a few hours Within 1-2 days	Outside of making course content available, how often should a professor communicate with an online class (class reminders, updates, etc.)? Several times a week Weekly Daily
For class updates, how would you most like to hear from your online professor? Email Announcement in Course Management System Text Audio Message Other	When having a technical difficulty with a component of your online course, how would you like your professor to respond to your question? Email Phone call Audio message Video tutorial sent by email	Does seeing a video message or hearing an audio message from your instructor make you feel more connected to your online professor? Yes No I have never experienced a video or audio message from a professor
What type of feedback would you like to receive on your work from your online instructor? Score and written overall feedback on the assignment Score and written specific feedback on individual items Just a grade/score is enough Score and audio/video feedback on the assignment and items missed	How quickly should assignments/exams be graded and scores posted back to students? Within 4-7 days Within 1-3 days	What should be included in an online learning module? Content/audio and video messages from instructor Content only Content and audio messages
In terms of pacing an online course, how often should new content be available? More than once per week Weekly Every 2 weeks	As an online student, would you like the option to work ahead past the current week of material? Yes No	What devices do you use on a regular basis for course work? Laptop Desktop Smart phone Tablet Other
Are you interested in more components of an online course being designed for tablets and smart phones? Yes No	How important is it to you that your online course use cutting edge technology? Very important Somewhat important Not very important Not important at all	How important is it to you to have regular interaction with classmates? Very important Somewhat important Not very important Not important at all
In an online class, what kind of interaction do you prefer with classmates? Small group discussion board Large class discussion board Small group projects Voice generated discussions Video generated discussions Other	Describe for us one aspect of a very successful online class that you have experienced.	Describe for us one aspect of an unsuccessful online class that you have experienced.