

Business Faculty and Undergraduate Students' Perceptions of Online Learning: A Comparative Study

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ABSTRACT

In this paper, the authors compare business faculty and undergraduate students' perceptions of online learning. Specifically, a survey was given to a convenience sample of 893 undergraduate students (of which 890 were usable) at two regional universities in the southern United States; a modified version of the survey was mailed to a random sample of 1,175 business faculty members throughout the United States. Comparison of the results from each group showed that a number of differences in perception exist, due, perhaps, to the heterogeneous points of view and motivations for online learning between faculty and students. Since many universities are still deciding the extent of their offerings of such courses, this information may be helpful to university administrators in deciding which types of courses at their universities might be offered online. Faculty who are considering teaching one or more online courses may find the results of this study helpful in structuring these online offerings. The results of this study should assist students in gaining a realistic expectation of what to anticipate from online learning courses based on information we have found and studies we have done. It is important that students have a realistic perception of the online learning experience.

Keywords: Online Learning, Distance Education, Faculty Perceptions, Student Perceptions

1. INTRODUCTION

The ever-increasing popularity of online programs may be due to the rising number of adults who, both for personal or professional reasons, wish to earn a college degree, but are unable to relinquish their full-time jobs and attend on-campus, daytime classes. Fortunately, the technological infrastructure needed to address the growing interest in online education is readily available, thus making the availability of online courses both economical and practical (Totaro et al., 2005). This study compares the perceptions of online learning by business faculty from various disciplines,

such as accounting, economics, finance, management, management information systems, and marketing, and the perceptions of online learning by undergraduate students.

The collective demographics of college students have changed considerably from college students of, say, twenty years ago, where the typical college student was between 18 and 22 years old. Colleges and universities are catering increasingly to the "non-traditional" college student, whose age tends to be 23 years or older, married with children, and employed full-time. Online learning appears to offer the "non-traditional" student a practical alternative to on-campus courses.

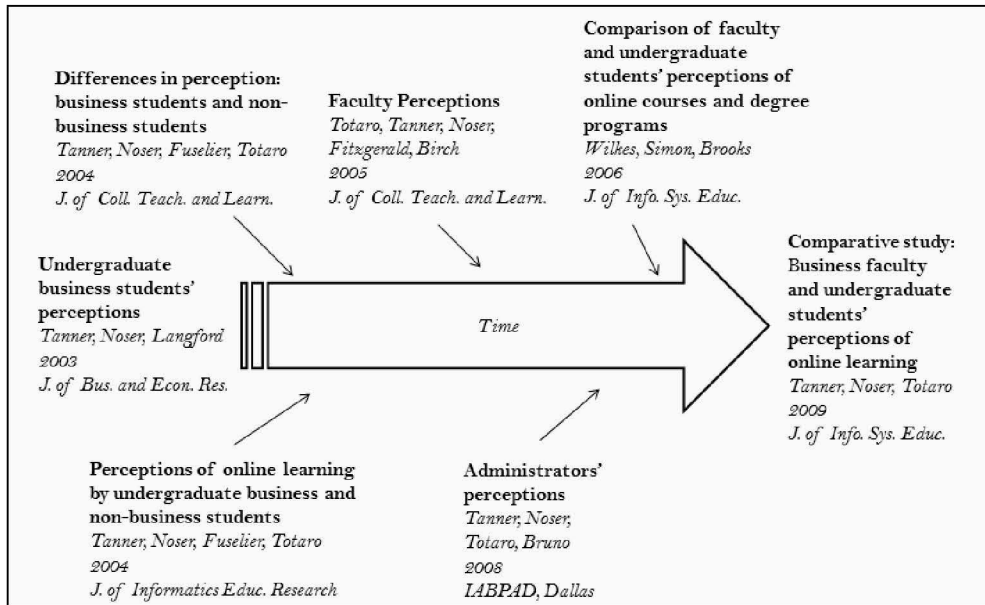


Figure 1. Research Progression

Online learning may be delivered either synchronously or asynchronously. In the case of synchronous delivery, time boundaries usually are imposed, since the instructor and students must be online simultaneously. An alternative mode to synchronous delivery of online learning is asynchronous delivery, where neither time- nor place-boundaries are of much concern.

The virtual removal of time and place boundaries by online learning presents a practical means by which the non-traditional student may earn college credit, or even earn a college degree. Thus, interest in developing new online education programs, as well as strengthening existing ones, continues to increase. Still, questions regarding the quality of online courses—particularly as they compare with their in-class counterparts—may be of both practical and intellectual interest to academics, practitioners, and students.

Concerns about the quality of online courses are not without merit. This may be due to a lack of consensus among online course participants (e.g., students, faculty, and administrators) about how the success (or failure) of online courses might be measured. Moreover, each participant group might conceivably hold differing opinions about, and perceptions of, what constitutes online course quality.

Because the delivery mechanism of online courses is substantially different from traditional in-class courses, common sense might suggest that attitudes and perceptions by participants—students, faculty, staff, and administrators—in online education are integral to the success (or failure) of online courses. Thus, insights about attitudes and perceptions of online learning participants may be useful to universities and colleges as they endeavor to design and deploy online courses at their institutions.

The two groups of this study are students and faculty. Because students in online courses are the direct recipients of online courses, and because faculty are the direct contributors to such courses, developing insights about the attitudes and perceptions of participants should begin with

these two groups. The roles assumed by the members of each group are presumably heterogeneous; this suggests that there may be differences in attitudes and perceptions between them. We intend to investigate these potential differences by way of analysis of survey results.

2. RESEARCH QUESTIONS

From the foregoing discussion, we pose the following two research questions, both of which we address in our study:

1. How do attitudes and perceptions about online learning by business faculty members and undergraduate students compare with one another?
2. What are the implications of the similarities and differences of attitudes and perceptions toward online learning by business faculty members and undergraduate students?

As shown in Figure 1, our two research questions are part of a larger inquiry into participants' perceptions of online learning.

3. MOTIVATION FOR STUDY

In response to the ever-increasing demand for online courses, traditional universities have responded by offering more courses online. To be sure, the mode of delivery is markedly different for online courses as compared with their traditional counterparts; however, it may very well be that expectations by faculty and students differ. In order for online programs to proliferate, faculty and student expectations of the online learning experience should be understood; thus, faculty and student attitudes toward online course offerings should be assessed.

For the institution, online learning programs can initially be expensive and time consuming. Indeed, some institutions have found it necessary to abandon online programs, precisely because of unexpected costs associated with

implementing such programs (Smith and Mitry, 2008). For the instructor, the first crucial step is choosing a type of instruction that is designed for the new paradigm of online learning. This is then followed by the transformation of traditional education techniques to the new methodology. Students must also change their focus when engaged in online education. The students not only need traditional printed material, such as textbooks or other reading material, but also must have access to and a working knowledge of web-based technology, including the Internet, e-mail, chat rooms and bulletin boards. Online learning courses offer significant differences from the classic classroom environment. There is no face-to-face contact, no context clues, and no opportunity for immediate dyadic communication. In the first few weeks of the course, students usually feel high anxiety due to the uncertainty of what the professor really wants and, as a result, the professor is bombarded with e-mails. When both the professor and the student get comfortable with this new environment, real learning can take place.

The extent to which professor and student are comfortable with online learning is directly impacted by their attitudes toward and perceptions of online learning. Indeed, if professor or student (or both) perceives little or no benefit from online learning, the result could very well be possession of a negative perception about online learning. Prior research has focused **separately** on *student attitudes* (Tanner, Noser, and Langford, 2003; Tanner et al., 2004-1; Tanner et al., 2004-2; Tanner et al., 2006) and on *faculty attitudes* (Totaro et al., 2005). The present study attempts to bridge the two by comparing attitudes about and perceptions of online learning between students and faculty.

The results of this study should be of interest to university administrators, faculty members, and students who plan to offer, teach, or take online courses in the future. Since many universities are still deciding the extent of their offerings of such courses, this information may be helpful to university administrators in deciding which types of courses at their universities might be offered online. Faculty who are considering teaching one or more online courses may find the results of this study helpful in structuring these online offerings. The results of this study should assist students in gaining a realistic expectation of what to anticipate from online learning courses based on information we have found and studies we have done. It is important that students have a realistic perception of the online learning experience.

4. REVIEW OF THE LITERATURE

The increasing demand by students to acquire an education at times and locations that are convenient, given their busy schedules and personal commitments, makes online learning attractive to working students (Roberts, 1998). Technological advances have made the availability of online learning both economical and practical. The economic advantages of distributing scarce resources, geographically and temporally, to students in remote locations provide a broader market for online education.

In traditional education, "brick and mortar" limit enrollments. Such limitations cannot easily be corrected in the short run. However, with online learning and the appropriate technology, it is technically possible for an

institution located in one locale to have many of its students located in remote locations hundreds of miles away (Daniel, 1997; Lewis, Alexander and Farris, 1997).

While technological advances have made online education more readily available, concerns remain. Barriers to widespread acceptance of online learning were identified by Allen and Seaman (2006), as part of a report published by The Sloan Consortium (Sloan-C). The two most cited issues in this report are: (1) Students must possess greater discipline in order to succeed in an online course; and (2) Considerably greater time and effort are required of faculty who teach online courses. Neither issue seems intractable; however, removing these barriers may require the development of novel incentives for both student and instructor groups.

The issue of student self-discipline as a requirement for success in an online course (see issue number 1 in the preceding paragraph) was addressed by Daymont and Blau (2008). Specifically, their empirical study compared undergraduate students' performance in online and traditional sections of a management course. Results of their study suggest that undergraduate students in online and traditional sections of a course perform equally well.

The online learning debate usually focuses on issues related to student learning and outcomes and student attitudes as compared to traditional classroom-based settings (Phillips, 1998; Webster and Hackley, 1997). For instance, one study, through the application of expectancy theory, identified that, on average, students consider improving competence in performing course work as the most attractive outcome of an online learning class (Chen, Lou, and Luo, 2001). Using a meta-analysis approach, a group of researchers found considerable support for the premise that online learning does not diminish the level of student satisfaction when compared to methods of instruction that use the more traditional face-to-face approach (Allen et al., 2002).

One survey found that most first year information technology majors and financial information systems majors perceived learning to be more fun and of better quality within a technology-enhanced online learning environment (Parker, 2003). A supporting theme is indicated in a study done by Hannay and Newvine (2006), the results of which suggest that students who take online courses perceive a higher-level of quality in their educational endeavors. The results of yet another study reveal that self-management, self-reliance, and accurate expectations of learner responsibilities are significant attributes for a successful online learning experience (Howland and Moore, 2002).

A stark contrast to the three aforementioned studies suggests that a lack of interaction (the capacity to pose questions, share opinions, and engage in dialogue) or presence (a sense of belonging to a group) or both may result in differences in perception by students about how well they may or may not have performed in an online class (Picciano, 2002; Song et al., 2004). Indeed, the issue of "social presence" and how it might impact students' perceptions of online courses and their instructors was examined by Richardson and Swan (2003). The results of their study suggested a positive correlation between the degree of social presence and perceived learning and perceived quality of the instructor.

Perceptions by students concerning the integration of online learning modules as part of traditional, in-class instruction were evaluated by Smart and Cappel (2006). Unlike many of the studies cited above, their study focused on so-called “blended learning,” where delivery was done both in-class and online. The results of their study highlight the importance of course planning, course content, and student characteristics.

One study, which compared student persistence and performance in online and classroom business statistics courses, suggests that, while significant differences exist between the two groups in terms of persistence, the learning objectives, as evidenced by the final grade in the courses for those students who persist, is not dependent on the mode of instruction (McLaren, 2004).

Perceptions by students about their instructors and online course content were examined by Johnson et al. (2000). Specifically, they compared learner satisfaction between students enrolled in an online graduate course and students enrolled in an equivalent, in-class graduate course. The comparison metrics included: student ratings of the instructor; quality of the course; evaluation of course structure, support, and interaction; and course grades. The results of their study showed slightly more positive perceptions by graduate students enrolled in the in-class course as compared with their counterparts in the online course.

The increasing emphasis on developing a better understanding of the role of the instructor in online learning, as it might be similar to or different from traditional instruction, is one that continues to draw interest by those in the academic community. In one study (Easton, 2003), interactions among lead faculty, online mentors, and their students were explored. The conclusions of the Easton (2003) study are twofold: (1) online courses are highly labor-intensive, both for students and instructor; and (2) clarification of roles is very important.

Faculty may exhibit differing opinions about online learning and its effectiveness for the student. One interesting study involved interviews with five experts in online learning (Bisoux, 2007). Although the perspectives gleaned from these experts were varied, the common thread among them for educators was that online learning must engage the student, provide relevant experience, and deliver educational value.

Myers et al. (2004) examined the motivation by faculty to teach online learning classes. The results of their study suggest that faculty are interested in teaching online learning classes, mostly for purposes of updating their curriculum vitae and for learning new teaching skills. Additionally, younger and less experienced faculty members are more likely to embrace online learning than their older and more experienced counterparts.

Another study, which compared the attitudes of (non-business) instructors and students at several community colleges, revealed an interesting dichotomy in terms of points-of-view (Inman, Kerwin, and Mayes, 1999). Specifically, in this study, the instructors rated the quality of their online courses as equal to or lower than their traditional counterparts, whereas the students felt deeply satisfied with their online experiences. The same study also examined

student and instructor attitudes, an objective of which was to develop a regression equation that might be used to predict three dependent variables: instructor ratings, course ratings, and amount learned by students. In contrast to the study done by Inman Kerwin, and Mayes (1999), our study compares the attitudes of both students and faculty toward online learning, with the objective of identifying similarities and differences between them.

As indicated in the motivation section, prior research has focused separately on student attitudes (Tanner, Noser, Langford, 2003; Tanner et al., 2004-1; Tanner et al., 2004-2; Tanner et al., 2006) and on faculty attitudes (Totaro et al., 2005). Because the present study compares attitudes about online learning between two groups—students and faculty—it may prove useful to elaborate somewhat on the results of this prior research.

Results from a study done by Tanner, Noser, and Langford (2003) suggest that factors such as age and gender do not play a significant part in undergraduate business students’ perceptions of online learning. However, significant differences in perception by these students seem to exist between those who had previous online experience as compared with those students who had no prior online experience. Specifically, students with prior online experience appeared to view online courses more favorably than students who had no prior online experience.

Two studies of undergraduate students—business and non-business—were undertaken by Tanner et al. (2004-1; 2004-2), which focused on students’ perceptions of online learning courses. In contrast to the aforementioned study by Tanner, Noser, and Langford (2003), both gender and age appear to impact these students’ perceptions of online learning. Moreover, numerous differences in perceptions were found between business majors and their non-business counterparts. Specifically, students who were twenty-one years or older, or who had taken at least one online course, seem to have a more favorable perception of online learning. Similarly, business students appear to favor online courses more so than do their non-business counterparts. The latter point might also suggest that business faculty have more exposure to online learning course delivery than non-business faculty.

Business faculty perceptions of online education were the focus of a study done by Totaro et al. (2005). The results of this study suggest that business faculty view undergraduate business students as finding online learning very desirable. An interesting contrast, however, is that these faculty perceive online learning as having numerous shortcomings; these include: the lack of instructor-student/student-student interaction; no structured classroom environment; students tend to teach themselves the course material; the difficulty of teaching quantitative courses online; and the challenges associated with administering exams online.

A study that compares perceptions of 2001-2002 undergraduate students toward online courses with the attitudes and perceptions of students matriculating in 2005 was done by Tanner et al. (2006), the results of which suggest that students continue to express concerns about the overall appeal of online courses.

Finally, we compare and contrast our current study (as elaborated upon in this paper) with a similar study done by Wilkes, Simon, and Brooks (2006). Both studies focus on perceptions of online learning by undergraduate business students and faculty. Moreover, comparisons between the two groups are examined. Differentiating factors between our current study and the study done by Wilkes, Simon, and Brooks (2006) are as follows:

- The instrument developed by Wilkes, Simon, and Brooks (2006) was administered to 179 undergraduate business students at a large urban university. In contrast, our instrument was administered to 893 (890 usable) undergraduate students – business and non-business – at two regional state universities located in the southern United States.
- The faculty version of the instrument developed by Wilkes, Simon, and Brooks (2006) was administered to 80 business college faculty members at the same institution with which the students in the study were affiliated. The faculty version of our instrument was mailed to a random sample of 1,175 business faculty members throughout the United States (approximately an equal number in each of the following areas: accounting, economics, finance, management, management information systems, and marketing).

Despite the aforementioned differences in research design, results of our study are similar to those indicated by Wilkes, Simon, and Brooks (2006); most notably, in both our study and theirs, faculty perceptions toward online learning are significantly less favorable than students' perceptions toward online learning. We shall, of course, expand discussion of our research findings later in this paper. Finally, it is important to note that our study does not distinguish between "pure" online courses and "blended" (or "hybrid") online learning.

5. METHODOLOGY

A questionnaire was developed to determine the attitudes of students toward online courses. The instrument was pilot-tested on a sample of twenty business students at a medium-sized southern university; following this, further refinements were made. The questionnaire was then given to a convenience sample of eight hundred ninety-three (893) undergraduate students (of which 890 were usable) at two regional state universities located in the southern United States, composed of one hundred ninety (190) who had taken courses online, and seven hundred (700) who had not taken any courses online, and three (3) non-respondents. In addition to demographic questions on gender, age, grade-point average, enrollment status, classification, and whether or not the student had ever taken an online course, there were also sixteen (16) Likert-type questions concerning online courses and related statements with which the students could express various levels of agreement or disagreement (1=Strongly Agree; 2=Agree; 3=Neither Agree nor Disagree; 4=Disagree; 5=Strongly Disagree).

In order to assess the perceptions of business faculty toward online courses, the above-mentioned instrument was modified further and mailed to a random sample of 1,175 business faculty members throughout the United States

(approximately an equal number in each of the following areas: accounting, economics, finance, management, management information systems, and marketing). The decision to use a random sample of faculty members throughout the United States as opposed to using only one or two institutions was to gain insight from a diversity of attitudes and perceptions from many different faculty members and many different institutions. Moreover, in order to assure anonymity, no effort was made to group respondents by respondent or by their institutions. This modified instrument contained demographic questions on gender, rank, years of teaching experience, employment status, tenure status, and whether or not the faculty member had ever taught an online course. There also were eighteen (18) Likert-type questions concerning online courses and related statements to which the faculty member could express various levels of agreement or disagreement. Usable questionnaires were returned by 200 respondents, representing a response rate of slightly more than 17 percent, which is within the acceptable response rate according to a widely-cited source on survey research (Alreck and Settle, 2004). Of the Likert-type questions on both instruments, fourteen (14) were common to both groups (that is, certain questions on the student instrument were not used on the faculty instrument, and vice versa). In an effort to ensure anonymity, no attempt was made to identify the name or discipline of the faculty respondents.

6. RESULTS

Table 1 gives a demographic profile of all student respondents, as well as those who had and had not taken courses online. As shown in the table, the entire group consisted of more females than males, with the majority aged 21 years old or less. The mean grade-point average was 3.051, and almost all the respondents were full-time students, with sixty four percent classified as juniors or seniors. Greater than sixty percent of students were majoring in some area of business, while the remaining thirty-nine percent were non-business majors. Regarding online course experience, over twenty-one percent of the respondents had taken an online course prior to completing this questionnaire.

Table 2 presents the demographic characteristics of faculty respondents. As can be seen from the table, more than three-fourths of these respondents were males, with slightly less than 80 percent holding an academic rank of associate or full professor. Nearly 96 percent were full-time faculty, and more than 76 percent were tenured. The average number of years of college teaching experience for all faculty respondents was 18.6 years.

When asked if they had ever taught an online course, slightly less than 31 percent of the faculty respondents answered in the affirmative. Of this group, the top two disciplines which had been taught online were accounting and finance, closely followed by marketing. Of those respondents who had online experience, 19.2 percent had taught accounting, 19.2 percent had taught finance, while 18 percent had taught marketing online. None of the faculty respondents had ever taught online courses in business law or production management, and only slightly more than 6 percent had ever taught statistics or management science

Demographic Variables	Percent of Respondents (n=890)
Gender:	
Males	46.6%
Females	53.4%
Age Groups:	
21 or less	67.3%
Over 21	32.7%
Mean Grade-point Average:	3.051
Enrollment Status:	
Part-time	3.2%
Full-time	96.8%
Classification:	
Freshman	9.8%
Sophomore	26.0%
Junior	32.7%
Senior	31.5%
Major:	
College of Business Major	60.2%
Non-College of Business Major	39.8%
Have You Taken an Online Course Before?	
Yes	21.3%
No	78.7%

Table 1. Demographic Profiles of Student Respondents (n=890)

courses online, which may allude to the difficulties associated with offering quantitative courses in an online learning environment. Thus, it would appear that the offering of online courses in business is still in the early or developmental stages, and yet it seems that business faculty have more exposure to online learning technology than their non-business counterparts (Tanner et al., 2004-2). A final observation from Table 2 is that, when asked what their maximum enrollment for an online course was, responses ranged from 0 to 100 students, with a mean slightly more than 30 students.

Table 3 shows the results of significance tests between student and faculty respondents to the fourteen Likert-type statements. As the table shows, several significant differences were found. While both groups agreed that an advantage of taking an online class is the flexibility of class times, faculty respondents exhibited a significantly higher level of agreement than did the student respondents (Statement #1). In contrast, student respondents agreed more than did faculty respondents with the statement that no structured class meeting times were appealing to them; the latter group, in fact, disagreed with this statement (see Statement #7). Note that our respondents differ significantly in age: 67% of the student respondents were below 22 years of age, while the average years of teaching experience for the faculty respondents was 18.6 years. Perhaps younger participants are not bothered or worried about a lack of structure, while older ones have grown accustomed to and appreciate structure.

Faculty respondents showed a significantly higher level of agreement than did student respondents with the statement that meeting with other students and/or the professor outside the classroom was important to them (Statement #6). Similarly, faculty respondents showed a significantly higher level of agreement with the statement that they would miss the student-to-student or student-to-professor interactions when they take/teach online classes (Statement #9). Again, given the differences in the ages of our respondents, for

Demographic Characteristic	Percent of Respondents (n=200)
Gender:	
Male	75.8%
Female	24.2%
Rank:	
Instructor/Adjunct	4.5%
Assistant Professor	15.7%
Associate Professor	33.3%
Full Professor	46.5%
Employment Status:	
Full-time	95.9%
Part-time	4.1%
Years of College Teaching Experience:	
Range	From 1 year to 42 years
Mean/Standard Deviation	Mean=18.6/Std. Dev.=8.94
Tenure Status:	
Tenured	76.1%
Non-tenured	23.9%
Have you ever taught an online course?	
Yes	30.7%
No	69.3%
If you have taught an online course before, in what discipline was it?	
Accounting	19.2%
Business Law	0.0%
Economics	12.8%
Finance	19.2%
Management	10.3%
Management Information Systems	14.1%
Marketing	18.0%
Production/Operations Management	0.0%
Statistics/Management Science	6.4%
Maximum enrollment for an online class:	
Range	From 0 to 100 students
Mean/Standard Deviation	Mean=30.43/Std. Dev.=17.44

Table 2. Demographic Profiles of Faculty Respondents (n=200)

faculty, “meeting and interacting with students” (Statements #6 and #9) essentially is a face-to-face experience. For students, more familiar with text messaging and instant messaging, “interaction” may not necessarily involve face-to-face contact.

Student respondents showed a slight level of agreement with the statement that tests were more difficult in an online class, while faculty respondents disagreed with this statement (Statement #11). Additionally, while both groups of respondents agreed that online classes basically require students to teach themselves the material, faculty respondents showed a significantly higher level of agreement (Statement #12). However, when presented with the statement that online classes require students to be more self-disciplined, the students showed a significantly higher level of agreement than did faculty respondents (Statement #14). Faculty respondents disagreed that the technology required to take online classes increases the value of the experience, while the student respondents agreed (Statement #13). This may be one of the more important findings. A possible explanation for the difference in faculty vs. student attitudes could be in the respective group’s perception of the term “experience.” For faculty, perhaps the value of the course is found in the content of the material disseminated, while the method (online or in the traditional classroom) is of lesser importance. For faculty, then, “the value of the experience” for a particular course is tied to the students’ grasp of the material presented. For the student, the learning

Likert Statements	Mean Responses*		Standard Deviations		t-stat	p-value
	Students	Faculty	Students	Faculty		
1. One of the advantages of taking a course online is that class times are flexible.	1.88	1.62	1.02	1.09	3.177	.002**
2. The interaction and/or lectures with the instructor are greater in a regular classroom setting than in an online class.	2.12	2.24	1.15	1.37	-1.237	.216
3. Math and other quantitative courses are among the most difficult for college students.	2.56	2.42	1.37	1.21	1.242	.214
4. I believe taking a course online allows studying at your own pace.	2.23	2.38	1.03	1.21	-1.852	.064
5. In my opinion, non-quantitative business courses should not be offered online.	3.10	2.98	1.03	1.22	1.343	.179
6. Meeting with other students or the professor outside of class is important to me.	2.82	2.00	1.13	1.21	9.042	.000**
7. The fact that in an online class there is no structured classroom-type environment appeals to me.	2.79	3.78	1.04	1.07	-11.921	.000**
8. In the future, I will take/teach as many courses as possible online.	3.13	4.19	1.15	1.14	-11.622	.000**
9. I would miss the student-to-student or student-to-professor interaction in an online class.	2.63	1.83	1.17	1.18	8.675	.000**
10. The textbook is more important in an online class.	2.38	2.34	1.08	1.06	0.488	.626
11. Tests in an online class are more difficult.	2.95	3.15	0.74	0.90	-3.290	.001**
12. Online classes require the students to teach themselves the material.	2.21	2.01	0.98	0.97	2.538	.011**
13. The technology required to take an online course increases the value of the experience.	2.66	3.18	0.95	1.15	-6.585	.000**
14. Online classes require the student to be self-disciplined.	1.76	1.99	1.04	1.14	-2.784	.005**

*1 = Strongly Agree; 2 = Agree; 3 = Neither Agree nor Disagree; 4 = Disagree; 5 = Strongly Disagree **Significant at .05 or less level

Table 3. Results of Comparisons of Attitudes of Students vs. Faculty Respondents toward Online Course Offerings and related Statements

“experience” involves not only the course material (be it Shakespeare or Statistics), but also the evolving technology by which it is delivered. The final statement for which there was a significant difference between student respondents and faculty respondents occurred when both groups were asked if they would take/teach as many online classes as possible in the future (Statement #8)—the faculty respondents showed a significantly stronger level of disagreement with this than did the student respondents, whose level of disagreement was slight. Again, faculty may view the course content as being of prime concern, and the method of delivery as secondary. Given the additional effort involved, especially in the initial stages, in designing and teaching an online course, it is not surprising that faculty generally may not be enamored with the pedagogy.

With regard to statements for which there were no significant differences, both groups exhibited about the same level of agreement that the degree of interaction/lecture is greater in a regular classroom setting than in an online class (Statement #2). Additionally, both groups had about the same level of agreement that online courses allow students to study at their own pace (Statement #4). Likewise, both groups of respondents agreed that the textbook takes on a greater level of importance in an online class (Statement #10). With respect to course types, both groups showed about the same level of agreement with the statement that math and other quantitative courses are among the most difficult for college students (Statement #3). Finally, both groups felt about the same regarding the statement that non-quantitative business courses should not be offered online (Statement #5); both groups were essentially neutral on this question.

In order to explore these differences even further, significance tests were run between two groups of inter-stakeholders, including faculty vs. students who had

taught/taken online classes before, and subsequently, faculty vs. students who had not taught/taken online classes before.

When tests of significance were run between the first group of inter-stakeholders—that is, those who had taught or taken online classes before—significant differences were found on five of the Likert-type statements. These differences are shown in Table 4.

As the table shows, the fact that an online class lacked a structured environment appealed to students, but not to faculty (Statement #7). Faculty who had taught online courses before felt that meeting with students outside the classroom was significantly more important than students who had taken online courses before (Statement #6). This difference could be because some students, even those with previous online experience, tend to take online courses because of the very fact that they do not have to interact with the professor as much, and thus do not see such interactions as being important. This might also be indicative of why students exhibited significantly more agreement with the statement that they would take as many online classes as possible in the future, while the faculty members in fact disagreed (Statement #8).

Along these same lines, faculty respondents with previous online experience agreed much more strongly that they would miss the face-to-face interaction between students and professors than did the students with previous online experience (Statement #9). This again would seem to indicate that students do not wish to have such interaction, or that they do not realize, in spite of their previous online experiences, that this interaction is needed just as much, if not more, in an online class. Lastly, student respondents showed significantly more agreement that the technology required to take online classes enhances the educational value of the course than did the faculty with previous online experience (in fact, the faculty members were neutral in their responses (Statement #13)). This could indicate that perhaps

Likert Statements	Mean Responses*		Standard Deviations		t-stat	p-value
	Students	Faculty	Students	Faculty		
6. Meeting with students/faculty outside of class is important to me.	2.86	2.25	1.17	1.35	3.397	.001**
7. The fact that in an online class there is no structured classroom-type environment appeals to me.	2.71	3.83	1.05	1.08	-7.073	.000**
8. In the future, I will teach/take as many courses as possible online.	3.09	3.98	1.16	1.18	-5.188	.000**
9. I would miss the student-to-student or student-to-professor interaction in an online class.	2.69	1.92	1.18	1.14	4.260	.000**
13. The technology required to take an online course increases the value of the experience.	2.68	3.00	1.15	0.88	-2.297	.022**

*1 = Strongly Agree; 2 = Agree; 3 = Neither Agree nor Disagree; 4 = Disagree; 5 = Strongly Disagree **Significant at .05 or less level

Table 4. Likert Statements for Which There Was a Significant Difference between the Attitudes of Faculty Members and Students Who Had Taught/Taken Online Classes Before

Likert Statements	Mean Responses*		Standard Deviations		t-stat	p-value
	Students	Faculty	Students	Faculty		
1. One of the advantages, for students, of taking a course online is that class times are flexible.	1.87	1.60	1.02	1.01	2.788	.005**
6. Meeting with students/faculty outside of class is important to me.	2.81	1.87	1.13	1.11	8.680	.000**
7. The fact that in an online class there is no structured classroom-type environment appeals to me.	2.81	3.81	1.04	1.02	-9.998	.000**
8. In the future, I will teach/take as many courses as possible online..	3.14	4.36	1.15	1.04	11.134	.000**
9. I would miss the student-to-student or student-to-professor interaction in an online class.	2.61	1.75	1.17	1.16	7.712	.000**
11. Tests in an online class are more difficult.	2.97	3.18	0.74	0.72	2.830	.005**
12. Online classes require the students to teach themselves the material.	2.20	2.01	0.99	0.88	2.059	.040**
13. The technology required to take an online course increases the value of the experience.	2.66	3.31	0.97	1.13	-6.722	.000**
14. Online classes require the student to be self-disciplined.	1.75	2.07	1.03	1.15	-3.207	.001**

*1 = Strongly Agree; 2 = Agree; 3 = Neither Agree nor Disagree; 4 = Disagree; 5 = Strongly Disagree **Significant at .05 or less level

Table 5. Likert Statements for Which There Was a Significant Difference between the Attitudes of Faculty Members and Students Who Had Not Taught/Taken Online Classes Before

the students are more involved with the technology side of the course than are many faculty members, so the students would naturally feel that the experience was heightened by the technology.

Significance tests were then conducted between the second group of inter-stake holders, students and faculty who had not taken/taught online courses previously. Nine significant differences were found and are shown in Table 5.

Faculty respondents without prior online teaching experience exhibited significantly more agreement with the statement that an advantage to students is the flexible class times associated with online classes—students with no prior online experience also agreed, but the faculty agreement level was significantly higher (Statement #1). Likewise, faculty respondents in this category felt a stronger level of agreement that meeting outside the classroom was important to them than did the students (Statement #6). Also, faculty seem to miss the face-to-face interactions more than the students (Statement #9).

However, faculty respondents strongly disagreed that they would try to teach as many online classes as possible in the future, and this disagreement was significantly stronger than the students’ attitudes about taking online classes in the future (Statement #8). It is likely that, had this faculty wanted to teach such a class, they already would have, and they probably have decided that they do not ever wish to do so.

Students without online experience feel more strongly than faculty without such experience that tests in online classes are more difficult for students (Statement #11). This could be a part of the reason why these students have never taken an online class to date. Both groups of respondents felt

that online classes require the student to teach themselves (Statement #12) and to be more disciplined than in a traditional class (Statement #14). Faculty respondents showed a significantly higher level of agreement that online classes require students to teach themselves (Statement #12), while student respondents more strongly agreed that online classes require greater self-discipline on the part of the student (Statement #14). Finally, when asked if they thought the technology required for an online class increased the educational experience, even though they had no prior online class experience, the students showed a stronger level of agreement than the faculty with no experience, who in fact disagreed slightly (Statement #13).

7. CONCLUSIONS

Results of this study suggest strongly that differences in perception about online learning persist between faculty and students. Moreover, our findings are consistent with the findings of earlier studies as discussed in our review of the literature. Although not measured by our analysis, it is worth mentioning that at least one reason for differences in perception about online learning between faculty and students may be due to the heterogeneous points of view and motivations for online learning between faculty and students. As already indicated, students have come to expect the availability of online courses, though this expectation does not in any way assure a “buy in” by faculty.

As indicated in our review of the literature, results of our study are similar to those indicated by Wilkes, Simon, and Brooks (2006) in that faculty perceptions toward online

learning are significantly less favorable than students' perceptions toward online learning. However, in contrast to their study, our study does not distinguish between "pure" online courses and "blended" (or "hybrid") online learning. Differentiating factors between our study and the study done by Wilkes, Simon, and Brooks (2006) are as follows:

- The instrument developed by Wilkes, Simon, and Brooks (2006) was administered to 179 undergraduate business students at a large urban university. In contrast, our instrument was administered to 893 (890 usable) undergraduate students – business and non-business – at two regional state universities located in the southern United States.
- The faculty version of the instrument developed by Wilkes, Simon, and Brooks (2006) was administered to 80 business college faculty members at the same institution with which the students in the study were affiliated. The faculty version of our instrument was mailed to a random sample of 1,175 business faculty members throughout the United States (approximately an equal number in each of the following areas: accounting, economics, finance, management, management information systems, and marketing).

Both the differences and similarities in perception of online learning suggested by our results should be considered by administrators and faculty prior to making online courses available. Administrators need to be aware of the perceptions, concerns, and indeed, the anxieties of both students and faculty in order to enhance the likelihood that online courses will be viewed as valuable, and valued by, both constituencies. If administrators can effectively communicate the benefits perceived by students and faculty, while belaying the concerns of these groups regarding student-faculty interaction, access, and the quality of the experience, then the probability of a successful outcome will be enhanced. Online learning may not be for everyone – including both students and faculty – but a clearer grasp of student and faculty perceptions by administrators may go a long way in contributing to making the online experience a positive one for all who pursue it.

8. LIMITATIONS AND FUTURE WORK

Because of the difficulties/impossibilities of selecting a random sample of students throughout the United States, a convenience sample of 890 students was taken (of which 890 were usable), and this was compared to a national random sample of 1175 faculty. The challenge from this is the difficulty of combining and comparing views and opinions from two different sample types. It is worth noting, however, that faculty respondents represented a full range of business disciplines, and student respondents represented the same business disciplines, as well as a wide array of non-business programs of study.

Alternative data collection and analysis tools are available, which could perhaps provide more detailed and meaningful results and comparisons between faculty and students. Given that this study represents an opening attempt to gather information, our decision to employ a rather brief survey instrument was based primarily on the desire to obtain a response rate adequate to facilitate analysis. As noted earlier, the faculty response rate is within the

acceptable range according to a widely cited source in survey research (Alreck and Settle, 2004).

This paper did not attempt to address administrators' perceptions of online learning. Because the role of the university administrator in decisions about online course offerings is crucial, however, an understanding of their perceptions of online learning should prove useful. Accordingly, we have begun the process of garnering and analyzing such information by way of a survey instrument similar to the instruments used for this study. A thorough analysis of administrators' perceptions of online learning is underway. Additionally, comparisons of perceptions between administrators and faculty, as well as comparisons of perceptions between administrators and students, will be made which may recast the online learning debate in a completely different way from what has been done thus far.

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Information Systems, Journal of Informatics Education Research, Journal of Applied Business Research, International Business & Economics Research Journal, Review of Business Information Systems, Review of Accounting Information Systems, Human Systems Management, and Educational Research Quarterly.

APPENDIX 1. SURVEY INSTRUMENTS
Faculty Online Course Questionnaire

Gender: Male Female
 Employment Status: Full Time Part Time
 Rank: Instructor Assistant Professor Associate Professor Professor
 Years of College Teaching Experience: _____ Tenured: Yes No
 Have you taught an online course before? Yes No
 If Yes, what area(s)? (Check all that apply):
 Accounting Finance Mgmt Info Systems
 Business Law Management Prod. & Op. Management
 Economics Marketing Statistics/Management Science

What is your maximum enrollment for an online class? _____

Please indicate your level of agreement or disagreement with the following statements, using the following numbering system:
 1 = Strongly Agree 2 = Agree 3 = Neither Agree nor Disagree 4 = Disagree 5 = Strongly Disagree

- | | |
|---|-----------|
| 1. One of the advantages, for the student, of taking an online course is that “class times” are flexible | 1 2 3 4 5 |
| 2. One of the advantages, for the instructor, of teaching an online course is that “class times” are flexible | 1 2 3 4 5 |
| 3. The interaction/lectures with the instructor is more frequent in a regular classroom setting than in an online class | 1 2 3 4 5 |
| 4. Quantitative courses in an online setting are among the most difficult for college students | 1 2 3 4 5 |
| 5. The online course format allows students to study at their own pace | 1 2 3 4 5 |
| 6. Non-quantitative business courses should be offered online..... | 1 2 3 4 5 |
| 7. Meeting face-to-face with students outside the classroom is important to me | 1 2 3 4 5 |
| 8. The fact that an online course has no structured classroom type environment appeals to me | 1 2 3 4 5 |
| 9. Online courses appeal to students because there is no required classroom setting | 1 2 3 4 5 |
| 10. In the future, I will teach as many online classes as possible..... | 1 2 3 4 5 |

- | | |
|--|-----------|
| 11. I would miss the face-to-face interaction with students in an online class | 1 2 3 4 5 |
| 12. The lack of student-to-student interaction in an online class would hinder their learning experience | 1 2 3 4 5 |
| 13. The textbook is more crucial in an online class than in a traditional class | 1 2 3 4 5 |
| 14. Tests in an online course are more difficult for students..... | 1 2 3 4 5 |
| 15. Tests in an online course are more difficult to administer..... | 1 2 3 4 5 |
| 16. Online courses require the students to teach themselves the material more so than in a "traditional" in-class course | 1 2 3 4 5 |
| 17. The technology required to take an online course increases the educational value of the experience | 1 2 3 4 5 |
| 18. Online courses require the student to be more self-disciplined than in traditional courses | 1 2 3 4 5 |

Online Course Questionnaire (Undergraduate Students)

Gender: Male Female Age: _____ G.P.A _____
 Enrollment Status (please check one): Part Time Full Time
 Class: Freshman Sophomore Junior Senior Graduate Student Major: _____
 Have you taken an online course before? Yes No
 If yes, what course? _____

Please indicate your level of agreement or disagreement with the following statements by placing the appropriate number next to the statement. Please use the following numbering system:

1 = Strongly Agree 2 = Agree 3 = Neither Agree nor Disagree 4 = Disagree 5 = Strongly Disagree

- | | |
|--|-----------|
| 1. One of the advantages of taking this course online is the fact that class times were flexible | 1 2 3 4 5 |
| 2. I believe that a class in liberal arts, such as history, psychology, sociology, etc., would work well if offered online | 1 2 3 4 5 |
| 3. The interaction/lectures with the instructor is greater in a regular classroom setting than in an online class | 1 2 3 4 5 |
| 4. Math and other quantitative courses are among the most difficult of all my college courses | 1 2 3 4 5 |
| 5. I believe taking a course online allows studying at your own pace | 1 2 3 4 5 |
| 6. In my opinion, management courses should not be offered online | 1 2 3 4 5 |
| 7. Meeting with other students outside of class is important to me | 1 2 3 4 5 |
| 8. I would take a statistics or other quantitative class online if it was offered | 1 2 3 4 5 |
| 9. The fact that this course had no structured classroom-type environment appeals to me | 1 2 3 4 5 |
| 10. In the future, I will take as many courses as possible online..... | 1 2 3 4 5 |
| 11. I would miss the interaction with other students in an online class | 1 2 3 4 5 |
| 12. The textbook is more important in an online class..... | 1 2 3 4 5 |
| 13. Tests in an online class are more difficult..... | 1 2 3 4 5 |
| 14. Online classes require the students to teach themselves the material | 1 2 3 4 5 |
| 15. The technology required to take an online course increases the value of the experience | 1 2 3 4 5 |
| 16. Online classes require the student to be self-disciplined..... | 1 2 3 4 5 |



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