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PERCEPTIONS OF FULLY ASYNCHRONOUS WEB-BASED COURSES: MARKETING IMPLICATIONS

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ABSTRACT

While there is a considerable body of literature addressing fully asynchronous online web-based teaching in institutions of higher education, none have delved into perceptions and expectations of online classes among those who have never experienced them first hand, either as students or as full-time faculty. As online courses have become ubiquitous, it has become imperative that academic institutions understand what faculty and students think about them. This study attempts to address this gap in extant literature. The similarities and differences in the perceptions about asynchronous online courses (1) among students and (2) between students and full-time faculty are addressed. Marketing recommendations are provided to increase the number of students who take online classes and to encourage more faculty to teach online.

INTRODUCTION

Web-based courses have become increasingly common. Given the current pushback against the high cost of higher education, institutions of higher learning are seeking ways to manage costs. Online education is one way to achieve cost savings by (1) significantly reducing the need to provide students with on-campus services (parking, dorms etc.) and (2) increasing the pool of students who can take the courses offered. An internet search of the plethora of Massive Open Online Courses (MOOCs) offered today further indicates that enrollments in these courses are significant, suggesting that the rapid diffusion of broad-band internet access globally has radically eased the ability of far-flung students to take online classes. Yet the move to higher education can only occur if professors are willing to teach online classes and students are willing to take them.

Currently, the Internet is the technological mode used to provide distance education courses in higher education (Beard and Harper, 2002; Yu, Digangi, Jannasch-Pennell and Kaprolet, C 2008). The Web is the fastest growing form of distance learning (Gao and Lehman, 2003) and "more and more courses are being delivered completely online" (Haung, 2002, p.5). A National Center for Education Statistics (2008) report indicates that online education availability, course offerings, and enrollments have been increasing rapidly since the 1990's to the point that 66% of 2-year and 4-year degree granting secondary institutions offer college-level distance education courses. In a more recent nationwide study, it was reported that the percentage of all higher education institutions offering online or blended-learning courses had increased to 81% (Allen and Seaman, 2010).

As the reach of technology in higher education expands and interest in asynchronous college/university web-based classes increases, it is important to understand what students and full-time faculty members believe about such classes. This study investigates the scarcely studied expectations and perceptions of asynchronous web-based classes held by students and faculty who have never engaged in online asynchronous classes. We use the commonly ascribed meaning of perception as "association" or "interpretation" of the environment or context by the subject. A literature review of the perceptions of students who have not taken, and faculty who have never taught, web-based classes as compared with the views of students who have taken, and full-time faculty who have taught, at least one web-based class failed to yield any study directly addressing these comparisons. This lack of knowledge has become more critical as web-based instruction proliferates. As identified by McCormick (2003), complex college enrollment patterns include behaviors such as trial enrollment and supplemental enrollment. Both of these behaviors are facilitated by online course delivery, making it particularly important for those involved in enrollment management to understand perceptions that students may have regarding web classes.

By understanding preconceived notions and experience-based perceptions about web-based classes from all of these groups, institutions offering such courses can change mistaken perceptions through effective marketing to foster realistic expectations while communicating information that addresses the concerns of students and faculty. Strategic marketing can benefit institutions by increasing student enrollment and satisfaction in online courses and fostering a greater eagerness among faculty members to teach web-based classes.

LITERATURE REVIEW

Students and Online Classes

Student perceptions and attitudes are critical to motivation and learning (Smart and Cappel, 2006), the underlying reason for this research study. However, many related studies involve students in only one class or discipline (Ali and Elfessi, 2004; Davies, 2003; Ferguson and Tryjankowski, 2009; Heuer and King, 2004; Stocks and Fredelino, 2000; Su, Bonk, Magjuka, Liu, and Lee, 2005). In a departure from the cited studies, this research contrasts the perceptions of two student groups, undergraduate students who have never taken an asynchronous web-based class and undergraduate students who have taken at least one asynchronous web-based class, utilizing a relatively large sample that is multidisciplinary in nature.

While students can benefit from online class delivery, student satisfaction with online courses appears to be mixed. As long ago as the early 90's, students perceived the Internet to be an appropriate course delivery method for higher education (Goodwin, 1993). Internet based instruction means that students spend less time in college classrooms, completing coursework at times and places that are convenient to them (Beard and Harper, 2002; Oakley, 2004). Huang (2002), in a small-scale study, reported finding strong relationships between positive student perceptions of an online course and perceiving that online courses are a good way to conduct distance education. Similarly,

Richardson and Swan (2003) found that students' perceptions of online social presence contributed to overall perceived learning. Lim, Kim, Chen and Ryder (2008), when comparing traditional instruction with online instruction, report that a majority of published research shows no difference in either student performance or student satisfaction.

However, some researchers (Rivera and McAlister, 2001) report negative effects of online education including lower levels of satisfaction with online instruction. In a course-specific comparison of web-based instruction and face-to-face instruction. Manochehri and Young (2006) found that undergraduate students in the face-to-face course were significantly more satisfied than those in the web-based course and liked the face-to-face course better. In a comparison of graduate students in education course sections, online students were outperformed by face-to-face students (Ferguson and Tryankowski, 2009).

Smart and Cappel (2006) studied another variable, elective course versus required course. They reported significantly higher satisfaction for a required online course compared to an elective course. Hornik, Saunders, Lie, Moskal, and Dzuiban (2008) concluded that information technology can be used more effectively for some courses than for others. It should be noted that the perceptions of web class experiences in these studies were not contrasted with expectations of those not taking web classes. This is a weakness in prior studies as in many instances students have choices between web-based and class-room based sections for the same courses and may self-select themselves out of the web classes.

A number of drawbacks of Internet based instruction have also been noted. The advantages may be offset by concerns regarding the quality of the educational experience as it relates to relationships and learning (Frey, Faul, and Yankelov, 2003). Many students learn best through direct interaction with professors and other students. Su *et al*, (2005) state, that interaction is "education at its most fundamental form." Research indicates that students do not feel a true sense of connection with online instructors (Korir Bore, 2008). More recently, in a teaching method comparison involving student self-assessments of learning, students in lecture and hybrid courses reported that personal connections with, and enthusiasm of, their live faculty were important in "connecting" with course content (O'Brien, Harshorne, Beattie, and Jordan, , 2011). Distance education often precludes such interactions, thereby making direct involvement less personal. Thus the socialization inherent in many traditional classroom settings is often lacking, especially if faculty fail to utilize available opportunities for student interaction through various online course software packages (Beard and Harper, 2002) or other available online interactive tools (Roberson and Klotz, 2002).

Sivo, Pan, and Hahs-Vaughn (2007) report that student attitude toward technology was a relevant factor in determining successful student performance in both web-enhanced and completely web-based courses. Hence, students who lack the technological skills or equipment required for online courses may fear taking those courses or may become very frustrated with their online course experiences. Piotrowski and Vodanovich (2000) also identified these types of technological concerns related to

web classes. Even when students who are comfortable with technology take online courses, their learning can be hindered by technical problems (Ali and Elfessi, 2004).

Other negative aspects of web classes noted in the literature include problems related to privacy issues and focusing on technology rather than content (Piotrowski and Vodanovich, 2000). The type of content best suited for web course delivery may also be debated. O'Connell (2002) reported that students in a virtual economics learning program fared far worse on examinations than did students who took the same course in live classrooms. He concludes that online courses are fine at teaching basic concepts but aren't effective at developing complex analytical skills. Conversely, Stocks and Freddolino (2000) found that computer-assisted instruction is at least as effective as a traditional lecture format for teaching a graduate social work research methods course.

Yellen (1997-98) noted that frustration with online educational experiences, regardless of the source, could lower student performance and produce poor attitudes toward learning. Therefore, it is crucial to assess the perceptions of online courses as seen from the students' point of view in addition to the expectations of students who have not taken web classes. This marketing-oriented view could prove to be helpful in modifying these perceptions.

Faculty and Online Classes

While the majority of research on web-based classes has focused on students, they are not the only group of interested stakeholders. There is little published information on instructor satisfaction with internet-based education (Hall, Corman, Drab, Meyer, and Smith, 2009). Oakley (2004) argues that teaching web-based courses gives value not only to the students and the institution, but also to the faculty members who teach them. One major benefit realized by teachers of online courses comes as a result of having to learn how to teach online. Oakley found that online teachers spent more time learning about online teaching, which translated into improvements in both classroom teaching and student evaluations. Electronic course components can increase instructor efficiency while enriching student learning. Institutions and full-time faculty members can benefit from the usage of technology in course delivery since it may prevent subcontracting courses to poorly trained personnel and can stem the tide of unmanageably large sections (Schwartzman and Tuttle, 2002). Hall *et al,* (2009) found that the ability to customize course materials to the instructors' needs led to high levels of satisfaction with a web course. However, little research has focused on preparing faculty to deliver online courses effectively (Terantino and Agbehonou, 2012). In fact, faculty members may spend an inordinate amount of time attempting to correct technological problems.

Several studies have noted the extra time required of faculty members teaching online courses (Gonzalez, 2009; Lazarus, 2003; Parthasarathy and Smith 2009). These researchers studied this aspect in the health sciences, special education, and MBA contexts. However, few studies have compared actual experiences from those who have taught web-based classes with perceptions of those who have yet to teach such a course.

McQuiggan (2006) studied the five influencers of diffusion of technology - relative advantage, compatibility, complexity, trialability, and observability - with regards to web-based course management systems (CMS), an online technology used to aid the teaching of classes. She found significant differences in these five constructs between those who intend to adopt sooner compared to those who intend to adopt later or who do not intend to adopt at all. Therefore, there is reason to believe that significant differences in perception held by users and non-users found by McQuiggan could also apply to the adoption of online instruction. By studying such similarities and differences between the two faculty groups, institutions can be better prepared to persuade those faculty members who have yet to teach web-based courses to adopt contemporary online teaching tools.

METHOD

A questionnaire was designed to elicit descriptive data from students and full-time faculty regarding their attitudes and perceptions about web-based courses. Data collection was completed at a medium-sized Mid-western public university. Three hundred and forty students participated in this study, including 53 who had taken at least one web class. Fourteen of the 54 full-time faculty members surveyed for this study had previously taught at least one web-based class.

Student respondents were in randomly selected undergraduate classes on the same days and times to insure that no student was surveyed more than once. As shown in Table 0, undergraduate students from all four colleges at the institution participated in this study. Business students accounted for nearly half of the total sample. Having a large proportion of business students in this sample is to be expected since business students frequently enroll in distance education courses according to the National Center for Educational Statistics (2008).

Faculty data were collected using two methods. First, the full-time faculty members teaching the classes that were randomly selected for student data were also surveyed at that time. In addition, other surveys were administered to full-time faculty members on the campus who had office-hours at the time of data collection. While faculty members from all four colleges at the institution were surveyed, relatively few Fine Arts and Humanities faculty members participated.

On the questionnaire, respondents were presented with statements, after which they were asked to respond with their level of agreement or disagreement on a Likert scale (5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree, 0 = Don't Know). "Don't Know" responses were excluded from subsequent analyses, resulting in varying number of respondents for specific items. Therefore only respondents who believed they had at least some knowledge about asynchronous web-based classes were

TABLE 0[1]
NUMBER OF RESPONDENTS BY COLLEGE MAJOR

College	Number of Students	Number of Faculty
Business and Technology	155	12
Fine Arts and Humanities	19	3
Natural and Social Sciences	64	28
Education	58	11
Undecided	44	NA
Total	340	54

represented in the results.

RESULTS

Four Comparisons

As depicted in Figure 1 through 4, four comparisons were included in this study: (1) web students who have taken at least one asynchronous web-based class versus non-web students who have never taken an asynchronous web-based class, (2) full-time faculty who have taught at least one asynchronous web-based class versus full-time faculty who have never taught an asynchronous web-based class, (3) web students who have taken at least one asynchronous web-based class versus full-time faculty who have taught at least one asynchronous web-based class, and (4) non-web students who have never taken an asynchronous web-based class versus full-time faculty who have never taught an asynchronous web-based class.

Comparison 1 — Web Students vs. Non-Web Students

FIGURE 1
COMPARISON 1 SHADED

	Students	Faculty
Web	n=53	n=14
Non-Web	n=253	n=40

[1] Beginning table numbering with zero rather than one is intentional.

TABLE 1.1 PANEL A:
STATEMENT RESPONSE DIFFERENCES BETWEEN WEB STUDENTS AND NON-WEB STUDENTS

Statement	Web Students	Non-Web Students	t-value	Degrees of Freedom	Standard Error	p-value
"I think there are more tests in a traditional class than in a web-based class."	2.85	3.22	2.62	78	0.142	0.010
"Students have to write more papers in a web-based class than in a traditional class."	3.34	2.99	-2.13	78	0.164	0.036
"Students can expect to learn more in a traditional class than a web based class."	3.20	3.61	2.04	65	0.203	0.045

TABLE 1.1 PANEL B:
STATEMENT RESPONSE SIMILARITIES BETWEEN WEB STUDENTS AND NON-WEB STUDENTS

Statement	Web Students	Non-Web Students	t-value	Degrees of Freedom	Standard Error	p-value
"I have positive views of web-based classes."	3.39	3.22	-0.90	63	0.185	0.370
"It is easier to get better grades in a web-based class than in a traditional class."	2.80	2.95	0.88	66	0.170	0.381
"Web-based classes can save me time."	3.74	3.63	-0.69	74	0.157	0.490
"I think there is more work for students in a web-based class than a traditional class."	3.16	3.04	-0.81	76	0.152	0.419
"Web-based classes have fewer group projects than traditional classes."	3.73	3.71	-0.08	66	0.176	0.935
"I would take a web-based class (again)."	3.68	3.51	-0.85	66	0.202	0.401
"I believe teacher/student interaction in the class is important for performance in the class"	3.87	4.05	1.19	64	0.154	0.237

The results from the first comparison tested are shown in Table 1.1. The table contains the mean responses of those students who have taken at least one web-based class compared to those students who have not taken any asynchronous web-based classes. T-test analyses indicated significant differences in the responses between the two groups to three of the ten items of interest, assuming unequal variances in the two groups when revealed by Levene's tests for homogeneity of variances (Levene, 1960).

Students who had never taken an asynchronous web-based course believed that there are more tests in a traditional class. Students who have taken at least one web-based class, however, disagree with that statement. Students who have taken an asynchronous web-based class agree to a greater extent than students who have never taken such a class that there are more papers to write in asynchronous web-based classes compared to traditional classes. Finally, students who have yet to take an asynchronous web-based class agree more strongly that students can expect to learn more in a traditional class, while both student groups agreed that teacher/student interaction is important for class performance (3.87 – 4.05 on the 5 point scale).

In order to more fully understand the perceptions of the students who have taken at least one web-based class, they were also asked to respond to several additional statements. The statements and mean responses are presented in Table 1.2.

TABLE 1.2
STATEMENT RESPONSES — WEB STUDENTS ONLY

Statement	Web Students
"The reason I choose web-based class(es) is because my time is very valuable."	3.71
"Taking web-based class(es) allows me to be employed for more hours a week."	3.60
"I have enjoyed my web-based class(es)."	3.24
"My choosing to take web-based class(es) was a wise one."	3.22
"I am not happy with web-based class(es)."	2.58
"Web-based class(es) fulfill my needs."	3.23
"I am pleased with the web-based class(es) I took."	3.37

Mean responses from the web students to these statements about web-based classes fell between neutral and agree, with the statement about the students' time being valuable having the highest level of agreement at 3.71. The mean response to the sole negative statement ("I am not happy...") fell between neutral and disagree, indicating a relative disagreement with the negative statement, which corroborates the relative agreement to the positive statements.

Comparison 2 — Web Faculty vs. Non-Web Faculty

Results from the second comparison, web faculty vs. non-web faculty, are presented in Table 2.1. Of the several statements tested, two comparisons were significant at the .05 level. It must be noted that while 14 is a small sample size, it represents a sizable proportion of the population. Of the total full-time faculty teaching at this institution, 21 have taught asynchronous web-based classes. This sample size, therefore, represents 67 percent of the full-time web faculty population who have taught an asynchronous web-based class, and therefore the sample can be considered representative of the population.

FIGURE 2
COMPARISON 2 SHADED

	Students	Faculty
Web	n=53	n=14
Non-Web	n=253	n=40

The faculty shared similar responses to several of the statements. For example, both web faculty and non-web faculty seem to agree that students write more papers and have fewer group projects in an asynchronous web-based class with values of 3.29 vs. 3.44 and 3.43 vs. 3.59 respectively. Similarly, both groups agree that the amount of testing is about the same in asynchronous web-classes compared to face-to-face traditional classes (agreement scores of 2.54 vs. 2.28). The two groups also strongly agree that teacher/student interaction is important (agreement scores of 4.50 vs. 4.56).

The two groups, however, also diverged in their perceptions on several other items. While not all differences were statistically significant at the .05 level, practical differences exist. For example, when asked if students could expect to learn more in a traditional class, both groups' responses fell between neutral and agree. However, while the web

TABLE 2.1 PANEL A:
STATEMENT RESPONSE DIFFERENCES BETWEEN WEB FACULTY AND NON-WEB FACULTY

Statement	Web Faculty	Non-Web Faculty	t-value	Degrees of Freedom	Standard Error	p-value
"Administering a web-based class is more time consuming."	4.50	3.94	-2.12	48	0.263	0.040
"I would want to teach web-based class."	3.50	2.30	-3.16	52	0.380	0.003

TABLE 2.1 PANEL B:
STATEMENT RESPONSE SIMILARITIES BETWEEN WEB FACULTY AND NON-WEB FACULTY

Statement	Web Faculty	Non-Web Faculty	t-value	Degrees of Freedom	Standard Error	p-value
"In general I have positive views of web-based classes."	3.50	3.08	-1.18	49	0.354	0.242
"300/400 level classes are easier to teach as web-based classes than are 100/200 classes."	3.00	2.50	-0.95	35	0.525	0.347
"Students believe web-based classes require more of their effort."	3.07	2.71	-1.14	40	0.313	0.261
"I need to test more often in a traditional class than in a web-based class."	2.54	2.28	-0.82	40	0.321	0.418
"Students must write more papers in a web-based class than in a traditional class."	3.29	3.44	0.41	18	0.383	0.684
"I will have to asign fewer group projects in a web-based class than in a traditional class."	3.43	3.59	0.43	46	0.368	0.666
"Students can expect to learn more in a traditional class than a web based class."	3.50	3.97	1.22	17	0.386	0.238
"I believe teacher/student interaction in the class is important for performance in the class."	4.50	4.56	0.34	51	0.191	0.738

faculty fell directly between the two with a value of 3.50, the non-web faculty's response fell just short of agree with a value of 3.97.

While both groups agree that administering a web-based class is more time consuming, it is those who have taught at least one asynchronous web-based class who more strongly agree. Those who have yet to teach a web-based class indicate that they would not want to teach one, while those full-time faculty who already have taught at least one web-based course would want to teach another. This difference is also evidenced in the statement seen in Table 2.1 regarding general positive views of web-based classes. While the difference is not statistically significant, the web faculty (who are willing to teach more) have generally positive views of web-based classes, while the non-web faculty (who do not want to teach web-based classes) have more neutral views of those classes.

To more fully understand the full-time web faculty, they were also asked to respond to several additional statements. Table 2.2 shows the mean responses to statements given to faculty who had taught at least one web-based class. Although the web faculty disagreed that web-based classes fulfill their needs with a value of 2.23, they also responded that they enjoyed teaching web classes (3.50) and that choosing to do so was wise (3.43). However, since mean responses to both of these items fall between neutral and agree, these results may be viewed only as moderately positive.

TABLE 2.2
STATEMENT RESPONSES — WEB FACULTY ONLY

Statement	Web Faculty
"Web-based classes allow for more frequent interaction with my students."	2.14
"Teaching web-based class(es) takes up too much of my time."	3.29
"I have enjoyed teaching my web-based class(es)."	3.50
"My choosing to teach web-based class(es) was a wise one."	3.43
"Teaching web-based class(es) gives me no satisfaction."	1.86
"Web-based class(es) fulfill my needs."	2.23
"I have enjoyed the web-based class(es) I taught."	3.43

Comparison 3 — Web Students vs. Web Faculty

The results from the third comparison tested are shown in Table 3.1. The table contains the mean responses on variables of interest from students who have taken at least one asynchronous web-based class and from full-time faculty members who have taught at least one asynchronous web-based class. Where corresponding survey statements differed between the two groups, both statements were given next to each other in the table, and shaded to indicate that they cover the same issue.

FIGURE 3
COMPARISON 3 SHADED

	Students	Faculty
Web	n=53	n=14
Non-Web	n=253	n=40

T-test analyses indicated significant differences in the responses between the two groups to three of the twelve items tested, assuming unequal variances in the two groups based on Levene's tests for homogeneity of variances. Some response values were different between the groups, although not statistically significant. For example, web faculty disagreed more strongly that more tests are given in a traditional class with a value of 2.54, while the response from web students was closer to neutral with a value of 2.85. While both fall between neutral and agree, web students agree more strongly that web-based classes have fewer group projects, responding with a value of 3.73, while the Web Faculty responded closer to neutral with a value of 3.43.

Some statements were responded to similarly (within 0.20) by those with prior involvement in web-based classes. For example, both web students and web faculty slightly agree that more papers are written in web-based classes, with values of 3.34 and 3.29 respectively. Similarly, both groups had near neutral responses to the statement regarding there being more work for students in an asynchronous web-based class with web students responding with a value of 3.16 and web faculty responding with a value of 3.07.

While both groups agree that teacher/student interaction is important for performance, web faculty more strongly agree with the value of 4.50 falling between agree

TABLE 3.1 PANEL A:
STATEMENT RESPONSE DIFFERENCES BETWEEN WEB STUDENTS AND WEB FACULTY

Statement	Web Students	Web Faculty	t-value	Degrees of Freedom	Standard Error	p-value
"I believe teacher/student interaction in the class is important for performance in the class."	3.87	4.50	-3.16	44	0.201	0.003
"I am not happy with web-based class(es)."	2.58	NA	2.23	31	0.323	0.033
"Teaching web-based class(es) gives me no satisfaction."	NA	1.86				
"Web-based class(es) fulfill my needs."	3.23	2.23	2.62	63	0.382	0.011

This area left blank intentionally.

TABLE 3.1 PANEL B:
STATEMENT RESPONSE SIMILARITIES BETWEEN WEB STUDENTS AND WEB FACULTY

Statement	Web Students	Web Faculty	t-value	Degrees of Freedom	Standard Error	p-value
"I have positive views of web-based classes."	3.39	NA	-0.28	63	0.379	0.777
"In general I have positive views of web-based classes."	NA	3.50				
"I think there is more work for students in a web-based class than a traditional class."	3.16	NA	0.31	62	0.286	0.758
"Students believe web-based classes require more of their effort."	NA	3.07				
"I think there are more tests in a traditional class than in a web-based class."	2.85	NA	1.07	63	0.287	0.288
"I need to test more often in a traditional class than in a web-based class."	NA	2.54				
"Students have to write more papers in a web-based class than in a traditional class."	3.34	NA	0.16	62	0.331	0.870
"Students must write more papers in a web-based class than in a traditional class."	NA	3.29				
"Web-based classes have fewer group projects than traditional classes."	3.73	NA	0.82	63	0.364	0.417
"I will have to assign fewer group projects in a web-based class than a traditional class."	NA	3.43				
"Students can expect to learn more in a traditional class than a web based class."	3.20	3.50	-0.74	63	0.409	0.460
"I have enjoyed my web-based class(es)."	3.24	NA	-0.67	62	0.389	0.506
"I have enjoyed teaching my web-based class(es)."	NA	3.50				
"My choosing to take web-based class(es) was a wise one."	3.22	NA	-0.53	62	0.395	0.600
"My choosing to teach web-based class(es) was a wise one."	NA	3.43				

and strongly agree; the web student response of 3.87 falls between agree and neutral. Web students disagreed that they were unhappy with web-based classes (2.58) as did web faculty who responded to "teaching web-based class(es) gives me no satisfaction" with a value of 1.86, indicating stronger disagreement with the statement. Regarding web-based classes fulfilling their needs, web faculty disagreed with a value of 2.23, while web students slightly agreed with a value of 3.23. It appears that web faculty sacrifice the fulfillment of their needs to meet perceived student needs, something students only slightly agree satisfies their own needs.

Comparison 4 — Non-Web Students vs. Non-Web Faculty

FIGURE 4
COMPARISON 4 SHADED

	Students	Faculty
Web	n=53	n=14
Non-Web	n=253	n=40

The results from the final comparison are shown in Table 4.1. The table contains the mean responses of those students and faculty who have had no experience with web-based classes. Where corresponding survey statements differed between the two groups, both statements are given in the table.

T-test analyses indicated significant differences in the responses between the two groups to four of the seven items tested, assuming unequal variances in the two groups when justified by Levene's tests for homogeneity of variances. These tests measure the difference in the perceptions of the two groups whose views do not come from experience. In general, both groups indicated a slightly positive view of web-based classes, with values of 3.22 for non-web students and 3.08 for non-web faculty. Two of the statistically significant comparisons deal with course requirements; non-web students slightly believe (3.22) that there are more tests in a traditional class, while non-web faculty disagree (2.28); non-web faculty believe that students write more papers in web-based classes with a value of 3.44, while non-web students are nearly neutral with a mean response of 2.99.

The other two items with statistically significant differences come from situations where both groups agree, but the Non-Web Faculty more strongly agree. Table 4.1 shows

TABLE 4.1 PANEL A:
STATEMENT RESPONSE DIFFERENCES BETWEEN NON-WEB STUDENTS AND NON-WEB FACULTY

Statement	Non-Web Students	Non-Web Faculty	t-value	Degrees of Freedom	Standard Error	p-value
"I think there are more tests in a traditional class than in a web-based class."	3.22	NA	4.98	35	0.189	0.000
"I need to test more often in a traditional class than in a web-based class."	NA	2.28				
"Students have to write more papers in a web-based class than in a traditional class."	2.99	NA	-2.75	56	0.165	0.008
"Students must write more papers in a web-based class than in a traditional class."	NA	3.44				
"Students can expect to learn more in a traditional class than a web based class."	3.61	3.97	-2.14	206	0.169	0.034
"I believe teacher/student interaction in the class is important for performance in the class."	4.05	4.56	-3.85	281	0.134	0.000

TABLE 4.1 PANEL B:
STATEMENT RESPONSE SIMILARITIES BETWEEN NON-WEB STUDENTS AND NON-WEB FACULTY

Statement	Non-Web Students	Non-Web Faculty	t-value	Degrees of Freedom	Standard Error	p-value
“I have positive views of web-based classes.”	3.22	NA	0.78	45	0.185	0.442
"In general I have positive views of web-based classes."	NA	3.08				
"I think there is more work for students in a web-based class than a traditional class."	3.04	NA	1.64	35	0.197	0.110
"Students believe web-based classes require more of their effort."	NA	2.71				
"Web-based classes have fewer group projects than traditional classes."	3.71	NA	0.63	41	0.196	0.533
"I will have to assign fewer group projects in a web-based class than a traditional class."	NA	3.59				

that non-web students agree (3.61) that they can expect to learn more in a traditional class, whereas non-web faculty more strongly agree with a value of 3.97. Both groups perceive that learning in asynchronous web classes is lower than in traditional face-to-face classes. While the response from non-web students in reference to the importance of interaction is slightly above agree (4.05), non-web faculty agree more strongly with a value of 4.56 which may be the reason for not being actively engaged in web-based courses.

DISCUSSION OF RESULTS

While both groups have positive views of web-based courses and are willing to take (or continue to take) web-based classes, both groups agree that teacher/student interaction is important, and that web-based courses have fewer group projects and can save them time..

While the groups of students agreed on those points, there were several significant differences in perceptions of web-based classes. While non-web students agreed that there are more tests in a traditional class, the Web students disagreed. Web students agreed that they had to write more papers in web-based courses, while non-web students were neutral on the issue. And finally, while web students agreed that they could expect to learn more in a traditional class, the non-web students more strongly agree.

Web students strongly indicated that the reason they chose online classes was because their time is very valuable (Table 1.2). Online classes offer excellent time and place utilities. Students can work and take classes concurrently. While allowing an increase in work hours versus time spent on school may not always be a desirable outcome, the ability to work more hours each week may allow students to reduce the need for loans (decreasing debt) and to build stronger experiential portfolios which could enhance placement rates upon graduation.

The full-time faculty members share several similar viewpoints of web-based classes. Both web and non-web groups of faculty agreed that teacher/student interaction is important and that students can expect to learn more in traditional classes (the mean responses being slightly higher for non-web faculty, yet not statistically significant). In fact, all four groups perceive that learning is greater in face-to-face classes than in asynchronous web-based classes.

Moreover, both groups share similar perceptions of student requirements. They both agree that web-based courses will have fewer group projects and more papers than traditional classes, but disagree that they have to test more in traditional classes.

The primary significant difference in perceptions between web and non-web full-time faculty members arises in the administration of the courses. While both groups agree that teaching web-based courses is more time consuming, web faculty agree more strongly. Interestingly, while the web faculty are willing to continue to do so, the non-web faculty are not willing to teach web-based courses suggesting a strong resistance among non-web faculty to teach asynchronous web-based classes.

Faculty who have taught asynchronous online classes indicated that web-based classes do not allow for frequent interactions with students (Table 2.2) which they consider very important for student performance (Table 2.1). Similar to relationship marketing in business-to-consumer marketing contexts, online communication should allow for efficient and frequent communications. Quite possibly faculty define interaction in a unique way or do not use the capabilities of technology to their fullest extent. Perhaps faculty need to be trained on the variety of ways they can enhance their interactions with students in the online environment.

Also, web-faculty indicated that teaching online classes does not fulfill their needs. This suggests the necessity for further investigation to discern what their needs are and which of their needs are not being fulfilled in teaching an online class.

Since learning should be the fundamental goal it is surprising that both web-students and web-faculty slightly agree that students should expect to learn more in a traditional face-to-face class (Table 4.1). This perception is only partially supported by literature and should be addressed when promoting web classes to both groups. Further, non-web students and non-web faculty, not surprisingly, hold similar views albeit to a greater degree.

CONCLUSIONS AND RECOMMENDATIONS

Similar to other recent studies including Boston, Ice and Burgess (2012) and Terantino and Agbehonou (2012), the results of this study may be particular to a specific university setting and environment but the findings can enhance the growing body of knowledge regarding online courses, specifically adding the novice/experienced comparisons both within and between student and faculty groups.

Considering the many significant differences in responses between students who have taken at least one web class and those who have not, it appears that students who have not taken a web class do not have realistic expectations of what their experiences in a web course would entail. As more students encounter a growing number of web-based offerings, it will become increasingly important for their success and satisfaction that they have realistic expectations of learning through web courses. Based upon diffusion of innovation theory, institutions can narrow this gap by offering increased trialability for students by conducting short workshops, 1 credit hour classes, MOOCs, or similar activities online. This will increase the possibility of students registering for online classes by attenuating unfounded perceptions.

This is important from a faculty member perspective as well as from the student perspective. What faculty member enjoys dealing with students who have certain expectations yet the faculty member is offering something quite different? Much as consumers in general may quickly become dissatisfied with products whose performance aspects do not meet expectations, it can be expected that considerable dissatisfaction would result if web-based class experiences do not match students' expectations. Results of this study show that expectations often do not match experiences when it comes to web

courses, not unlike in other marketing domains. Some higher education institutions have implemented training programs to aid faculty who will teach online courses. We recommend that marketing online courses to reluctant faculty include a module on common student perceptions regarding web classes and how to manage their expectations, particularly for novice web class students. This strategy will potentially increase the likelihood of perseverance, satisfaction, and success for online students.

Given the resistance among non-web faculty to teach online, it would be beneficial to communicate the relative advantages, counter perceived complexity beliefs, show that leaning is not always better in traditional classes (observability), develop ways to let faculty 'try-out' web classes (triability), and emphasize compatibility of learning outcomes with face-to-face modes. Furthermore, formal mentoring of inexperienced faculty by experienced faculty could help allay fears of challenges in teaching asynchronous web-based classes. For example, such mentoring can take the form of team teaching a web-based course. Mentors can also familiarize mentees with the literature that indicates the efficacy of online delivery of courses in certain learning environments. Mentees could be awarded professional development acknowledgement in their annual performance reviews when 'job-shadowing' the experienced faculty as they learn the 'trade' while the mentors are acknowledged for this institutional service activity.

Faculty members and those who market higher education institutions' web-based classes would do well to continue emphasizing the positive aspects of web classes while realistically acknowledging negative aspects and striving to improve those areas. Therefore perceptions should be managed so that potential web class students and faculty members have positive views of asynchronous web course offerings.

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