A Comparison of Student, Faculty, and Administrator Impressions of the Efficacy of Online Versus Face-to-Face Classes in Accounting

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Students, faculty, and administrators from north Texas public colleges and universities were posed questions about online and face-to-face classes in accounting. Results indicate that none believe that online classes are as effective or provide the quality of communication as do face-to-face classes in accounting. Yet, unlike students and faculty, administrators consider online classes essential to compete for student numbers needed for funding.

INTRODUCTION

Initial research commissioned by the U.S. federal government in the 1960s, funding by the National Science Foundation Network in the 1980s, and private funding for commercial purposes led to today's Internet, amazingly connecting the whole world in real time (Stewart, 2000). Networks of networks form the Worldwide Web, linking billions of devices and allowing for an unparalleled ability to communicate. Many institutions began taking advantage of the Internet to fulfill their missions. Business led the way but education was not far behind with the Internet classroom.

The rise of the online universities began in earnest in the 1980s. Likely the best known, the University of Phoenix (Phoenix) began in 1976 with eight students. Thirteen years later, Phoenix launched the online class platform (Hansen, 2014), and by 2010 Phoenix reported serving over 600,000 students worldwide (Hanford, 2016). In 2015, the federal government stopped allowing Phoenix to recruit on military bases and no longer provided Phoenix funding for educating members of the U.S. military, but under protest of several U.S. senators, the suspension was lifted in early 2016. Phoenix still reports over 150,000 students in its programs (Apollo, 2016).

Prior to online learning, state regulating boards designated the specific programs and majors that state universities could offer. This created niche programs for certain colleges. If there were two state universities in one area, one might host a medical school while the other offered a nursing program, but neither offered both. Today's online college classroom, however, makes it possible for students anywhere in the world to attend a class most anywhere. This creates two problematic issues for current colleges and universities: 1) students have more choices about which college or university to attend, and 2) supply of classroom space—due to the online classroom—exceeds demand. As a matter of fact, the online classroom creates a situation where supply likely will always be far in excess of demand. Elementary economics teaches us that an oversupply of any product or service leads to concessions from sellers deemed necessary to compel the decision maker to choose the product or service. For most postsecondary institutions, loss of students equals loss of needed funds. Therefore, online classes may provide a means

to compete for students that might have never considered attending a particular college or university, and concessions to students may be considered that might never have been before.

Today many students register online, never see a classroom, never physically meet a classmate or professor, and never communicate with another human at the college or university in person. One result of this change is that concerns have been raised about social skills, development of teamwork, and the inability to develop proper emotional intelligence (Goleman, 2007). Although convenient for students and less expensive for colleges and universities, Waldman (2015) warns us that we should only adopt technologies that support our mission and should avoid or abandon those that oppose our goals.

LITERATURE REVIEW

The Online Class

Huh, Jin, Lee, and Yoo (2010) find that GPA and gender predict differences in performances for students in traditional classes versus online classes. Online learning may be limited to the motivational level of the students in the online classroom (Castillo-Merino and Serradell-Lopez (2013), but others argue that it is success that creates motivation, not the opposite (Baker, 2016. Students rate traditional classes better on all four dimensions: overall evaluation, perceived competence, perceived communication, and perceived challenge (Ganesh et al, 2015). Some students who that students in online learning formats show better grades than those receiving face-to-face instruction (Means, et al., 2010; Dutton, 2010, Mirakian, 2007; Jaggers, 2012), but others show the opposite (Xu, 2013; However, these classes do not require proctored exams. Some researchers note a higher dropout rate for online classes (Spooner, 1999; Baker and Baker, 2016) especially at the community college level (Xu, 2011). Online courses with a large class size may lead to more instructor support and better organization of online classes (Drago and Peltier, 2004). Still, Harbin and Humphrey (2012) argue that online exams do not test what students know; they only test what students can look up.

Online Accounting Classes

Existing research tends to favor the use of traditional classrooms in teaching accounting classes. Rich and Dereshiwshy (2011) found that online undergraduate Intermediate Accounting students performed just as well on exams in the online accounting format as in the face-to-face format; however, the online accounting students were not given proctored exams. Moreover, even fewer have the means to determine if the students taking the class are actually the students doing the work for the online class. Students taking face-to-face accounting courses show higher confidence in accounting concepts than those taking online accounting courses (Connor, 2010). (Bernard, Abrami and Borokhovski, 2004), and very little research has been reported about hybrid accounting courses, those that combine classroom meetings with online instruction (Young, 2002; Aycock, Garnham, and Kaleta, 2002; Waddoups and Howell, 2002). In comparing online, traditional on-site and hybrid courses, Robertson and Clark (2007) found that accounting students who attended the section that met in a traditional, face-to-face class had the highest proctored test scores versus students in online or hybrid classes. Waters and Robertson (2009) found that the use of recorded lectures is effective for students taking online accounting classes. Baker and Irving (2016) show that students who take online Principles of Accounting I classes test 20% lower than those taking in-class Principles I classes. Baker and Baker (2016) find that students who take Principles of Accounting I and II classes online are significantly more likely to fail or drop the course than students who take the face-to-face Principles of Accounting I or II classes. Chen, Jones, and Moreland (2013) find that in upper-level accounting courses the outcomes examined were significantly favored traditional classroom environments over online courses. Lack of student participation in the introductory accounting courses is widely documented even in on-site courses, and involvement is lower in online classes (Baker & Baker, 2016).

Administrators and Online Classes

From 2003 to 2012 Sloan Foundation survey consistently found a growing majority of chief academic officers rate the learning outcomes for online education "as good as or better" than those for face-to-face instruction (Allen & Seaman, 2014). Harbin and Humphrey (2012) argue that students, faculty, higher education administrators, legislatures, parents and student support groups, and for-profit institutions all turn a blind eye to massive cheating in online classes (Harbin and Humphrey, 2012). Over 80% of administrators surveyed said online classes were offered to increase enrollment (Parsad & Lewis, 2008).

Preferences in Hiring

Certified Public Accountants (CPAs) surveyed prefer to hire candidates that earn the necessary classes for CPA designation in a traditional classroom environment and would prefer to hire candidates who earn accounting degrees in the traditional classroom (Grossman & Johnson, 2016). However, recruiters view MBAs from online universities no differently when presenting candidates to potential employers (Metrejean and Noland, 2011). These conflicting results leave many questions unanswered about the effectiveness and perceived value of online classes in accounting. Accounting majors report a strong preference for face-to-face accounting classes (Baker 2014).

METHODOLOGY

A review of the varied findings about online versus face-to-face college classes shows that students perform better in face-to-face classes and show a preference for the traditional classroom. However, little is known about the perceptions of faculty and administrators and if they are in agreement with students. This paper is the result of in-class student surveys, faculty surveys, and discussions with administrators and faculty from 2015 to May 2016 in four colleges and universities in the north Texas area. The purpose of the study is to determine preferences in the format of accounting classes by inquiries about the effectiveness of learning and communication and if faculty, students, and administrators have differing opinions about online classes. Moreover, open-ended comments by all three groups add value to understanding the prevalence of online accounting classes.

Each participant responded to the four statements shown below using a Likert scale where:

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

1. Students learn accounting effectively in online accounting classes.
2. Students learn accounting effectively in face-to-face classes.
3. Communication is effective in online accounting classes.
4. Communication is effective in face-to-face accounting classes.

Three sets of hypotheses were tested as shown below:

Hypothesis 1: Perceived Effectiveness in Learning.

HA_{1a}: Faculty will rate online accounting classes to be more effective for learning than face-to-face accounting classes.

HA_{1b}: Students will rate online accounting classes to be more effective for learning than face-to-face accounting classes.

HA_{1c}: Administrators will rate online accounting classes to be more effective for learning than face-to-face accounting classes.

Hypothesis 2: Perceived Effectiveness in Communication.

HA_{2b}: Faculty will rate communication in online accounting classes to be more effective than communication in face-to-face accounting classes.

HA_{2b}: Students will rate communication in online accounting classes to be more effective than communication in face-to-face accounting classes.

HA_{2c}: Administrators will rate communication in online accounting classes to be more effective than communication in face-to-face accounting classes.

Hypothesis 3: Differences in Perception.

HA_{3a}: There will be no differences in the perception of the effectiveness of online classes in accounting between faculty and students.

HA_{3b}: There will be no differences in perception of the effectiveness of online classes in accounting between students and administrators.

HA_{3c}: There will be no differences in perception of the effectiveness of online classes in accounting between faculty and administrators.

RESULTS

Hypothesis 1

All three groups report that learning is more effective in face-to-face accounting classes as compared to online classes. However, student and faculty report a stronger preference for face-to-face classes than administrators.

Hypothesis 1 - Efficacy of Learning		Mean	Variance
Students	Students learn more accounting effectively in online accounting classes.	1.535	0.786
	Students learn accounting more effectively in face-to-face classes.	4.326	0.415
		Mean	**Variance**
Faculty	Students learn more accounting effectively in online accounting classes.	1.860	0.361
	Students learn accounting more effectively in face-to-face classes.	4.093	0.324
		Mean	**Variance**
Administrators	Students learn more accounting effectively in online accounting classes.	2.619	0.865
	Students learn accounting more effectively in face-to-face classes.	3.857	0.656

Hypothesis 2

Again, all three groups report better communication in the face-to-face classroom, but administrators' ratings are not as strong as that of students and faculty and show a greater variance.

Hypothesis 2 - Efficacy of Communication		Mean	Variance
Students	Communication is more effective in online accounting classes.	1.581	0.487
	Students learn accounting more effectively in face-to-face classes.	4.442	0.395
		Mean	**Variance**
Faculty	Communication is more effective in online accounting classes.	2.230	0.357
	Students learn accounting more effectively in face-to-face classes.	4.000	0.238
		Mean	**Variance**
Administrators	Communication is more effective in online accounting classes.	2.524	0.625
	Students learn accounting more effectively in face-to-face classes.	2.905	0.790

Hypothesis 3

Students and faculty have common perceptions about the effectiveness of online versus face-to-face accounting classes. Based on a simple T-test to check for differences between the means, the students and faculty results are not significantly different ($p < 0.15$). Therefore, we accept the alternative hypothesis and acknowledge that students and faculty appear to share the same opinions.

Both the difference between the students and administration ($p < 0.01$) and the difference between faculty and administration are statistically significant ($p < 0.01$). Therefore we accept the alternative in H3a and H3b, indicating that there are statistically significant differences between the perceptions students and administration and between faculty and administration regarding online accounting class efficacy. It should be noted, however, that the administrators interviewed indicated that they do not believe online classes are as effective. Differences may be present because administrators have different problems that they face, such as funding.

Open-Ended Comments

Qualitative comments were collected and are summarized below omitting duplications. The comments help us to better understand the reasons behind the preferences and perceptions of all three groups.

Students:

- I thought I wanted an online accounting class until I took an online accounting class, dropped the class, and registered for a face-to-face class.
- I prefer traditional face-to-face classes, but hybrid classes might be OK.
- I hate online classes in accounting, but I don't mind taking online classes in other subjects.
- I'm trying to become a CPA, and I really want to learn this stuff. I need face-to-face classes for most accounting classes.
- I understand better in face-to-face classes.
- I need to be able to talk to the professor more.
- Being able to talk to and work with my classmates in the classroom really helps.
- I think that my graduate Accounting Research class was a good online class, but it was mainly a writing class. I wouldn't want other online accounting classes.

Faculty:

- Communication is much more difficult in online classes. I find myself answering the same question 50 times.
- I got into teaching because I love working with and getting to know the students. Online classes just make me sad.

- I hear over and over from my administrators that we need to put our classes online to attract more students.
- Hybrid classes can be a good compromise between online and face-to-face classes.
- I don't believe that online classes are about giving a good education.
- With proctored exams in upper-level accounting classes, online classes might be improved.
- We simply don't know who is doing the work in online classes.
- My students admit that they cheat in online classes.
- Feedback is essential to good student learning. We need very small classes online to give the same level of feedback we can give in face-to-face classes.

Administrators:

- Online classes are a fact in today's educational environment that we must embrace to compete with our peer institutions.
- It is important to offer online classes whenever possible in order to provide convenience for the students.
- Working, non-traditional students need online classes.
- It is important to maintain student numbers in order to provide the services that our students need.
- Online classes increase demand for our classes.
- We depend upon the demand for business classes to help us fund classes in other disciplines.

DISCUSSION

Efficacy of Online Versus Face-to-Face Accounting Courses

Although limited in scope, the results of this study suggest that students and faculty have different ideas than administrators about the value of online accounting classes. Administrators may consider these classes essential for filling class spaces and providing important funding because they are more focused on these issues. This does not mean that administrators do not want quality education, but it does mean that they work every day to keep all the doors open and all services necessary for students operative. It is fairly well known that business programs provide resources that fund other programs in colleges and universities. The administration may work to balance quality with funding needs.

Students and faculty in this study, however, indicate that online accounting classes are not as effective for learning accounting or in communicating with professors or peers. These two groups likely focus on education quality. Typical accounting majors are genuinely interested in learning. They want to prepare for the CPA Exam and need to understand a great number of accounting classes, business communication, strategic management, management information systems, and more.

This opinion is not a new one. At the June 2016 Eastern and Western National Association of State Boards of Accountancy (NASBA) Conferences in Ashville, North Carolina, and Denver, Colorado, students were asked about their experiences in online versus face-to-face accounting classes. All students in attendance strongly argued that NASBA should stress the importance of online classes (NASBA 2016) to the various state boards of accountancy around the country. These students were unanimous in stating that they do not want online accounting classes. Faculty in attendance shared their opinions.

Communication in Online Versus Face-to-Face Accounting Courses

Many studies show that communication online or by writing has inherent weaknesses as compared to face-to-face communication (Hunter, 2016). Jarrow (2016) gives five reasons by face-to-face communication is better and important: 1) Body language plays an essential part of effective communication; 2) Face-to-face communication better ensures engagement of both parties; 3) Face-to-face communication allows for immediate clarification; 4) In-person discussions better drives real participation, and 5) Face-to-face discussions are more efficient. This may better explain why students

find communication to be more effective in traditional classrooms as opposed to online classrooms, and better communication may be an important reason why in-class classes are perceived as more effective.

As humans who need human interaction, the online classroom—along with all manner of other technology that separates us—may be more undesirable that we know. Hunter (2016) argues that the Internet is decreasing the social community. Perhaps the differences between online and face-to-face classes become more profound in math-related classes such as accounting. Oliver, Kellogg and Patel (2013) found that math students were learning less online, were less likely to recommend online learning to peers, and needed better and more communication from both professor and peers.

Differences in Faculty and Student and Administrator Responses

While all three groups indicate that traditional classes are better for student learning and communication between professor and student, administrators show statistically significant differences in rating. Likely this is because administrators have different problems that they must address and different supervisors to whom they must answer. Funding for postsecondary education is an ongoing problem as costs continue to rise. Interestingly, a major factor driving increasing costs is the constant expansion of university administration (Campos, 2015). Ironically, according to the Department of Education, administrative positions at colleges and universities grew by 60 percent between 1993 and 2009 alone--10 times the rate of growth of tenured faculty positions (Bloomberg, 2012). At one notable California university, total full-time faculty members grew by three percent between 1975 and 2008 while total administrators grew by 221 percent with many administrator salaries in six and seven figures (Shapiro, 2011).

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Samples used in this study are the result of convenience sampling from postsecondary schools in the north Texas area. Moreover, a limited number of chairs, directors, deans, and other administrators were interviewed in the study. Therefore, the results cannot be generalized with assurance to the entire population of accounting students, faculty, and administrators. More research should be done with random samples of all three groups.

In future studies, researchers should determine if differences exist between graduate and undergraduate students, traditional and nontraditional students, and in level of student preparation by average SAT/ACT scores for the students, faculty and administrators of the educational institution included. Many top schools may offer some classes online or may actually have students listen to massive open online class (MOOC) lectures by world-renowned academics, but these schools have not embraced online classes as a major part of their offerings.

CONCLUSION

Technology provides amazing tools that should be embraced to the full extent as long as that technology provides real benefits. Educational institutions should find ways to use all tools that support their mission of providing a great education to students. However, if technology is a detriment to mission, there is a strong argument against the use of technology.

As new technology evolves, there may be ways to improve online classes to provide what is missing. Communication in online classes requires big efforts on the part of the faculty and patience on the part of the students who want answers as quickly as possible. Yet, the lack of audio, video, and body language no doubt diminishes the quality of communication and, therefore, reduces the effectiveness of feedback.

In 1858, Cardinal John Henry Newman described a university as “a place for the communication and circulation of thought, by means of personal intercourse.” Newman warned that without the personal touch, higher education could become “an icebound, petrified, cast-iron university” (Newman, 1858). The importance of personal interactions between faculty and student and student with peer should not be trivialized. Human interactions will always be an important part of who we are and an essential part of

our learning experiences. Universities must be wary of weakening quality by losing important personal discourse as concession due to excess supply of classroom space and competition for revenue. Legislators should take a hard look at rising administration costs and find ways to use technology to minimize unnecessary costs. Only then can educational quality take first place over the competition for revenue.

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