

Students' Perceptions of Learning and Academic Dishonesty by Instructional Modalities: Are Perceptions of Online and Hybrid Modalities Improving?

Lucille Pointer

Lila Carden

Charles Smith*

Abstract

There has been an increase in enrollment of students in nontraditional instructional formats such as hybrids and online courses. Additionally, the level of academic dishonesty reported has increased. Thus, an understanding of students' evaluations of the nontraditional formats and academic dishonesty continues to be important topics at universities. The present study investigates students' perceptions of learning using different instructional modalities and as well as students' perceptions about academic dishonesty. More specifically, fewer students preferred the online instructional modality over face-to-face or hybrid. The students with a preference for online, rated this modality more favorable than the other students. The majority of the students felt that cheating occurred in the academic environment but the online students were less knowledgeable of cheating incidents. Students felt that those caught cheating should receive strong sanctions but few felt that they should be expelled. The study provides implications and recommendations for faculty and academic institutions.

Keywords: instructional modality, online education, distance education, hybrid, face-to-face, academic dishonesty, cheating

Introduction

The traditional instructional modality for many years has been face-to-face where an instructor delivered all the course content in class. Instructional modalities have expanded to include online and a blended or hybrid format which is supposed to incorporate the best of both the online and face-to-face methods. Recent data shows that online instructional method is starting to challenge the face -to-face instructional method for dominance. The number of learners enrolling in online courses has been increasing steadily. The overall enrollment in higher education decreased between 2012 and 2015, but during the same period, the enrollment in online courses increased almost 4 percentage (Lederman 2018; Online Course Report (OCR) 2016). Several national reports (National Center for Education Statistics (NCES) 2018; Seaman, Allen, and Seaman 2018) indicate that 30% of all undergraduate students were enrolled in one or more online class in 2016. NCES reported in fall 2016 that approximately 6.3 million students enrolled in one or more online courses and over 40% were enrolled exclusively in fully online courses. The majority of undergraduate students enrolled in online or distance education were enrolled at public and private not-for-profit educational institutions opposed to private for-profit institutions (Allen and Seaman 2016; Lederman 2018).

The mix of educational institutions offering online courses and degrees has also changed. The use of online offerings have expanded to higher ranked or leading universities across the world (Bailey, Barton and Mullen 2014; Lederman, 2018). The tradeoff between quality and convenience may not truly exist anymore as the quality and reputation of institutions offering online programs have surged. Not only has the number of courses and programs expanded but the sizes of classes and programs have also increased. Online courses generally range in size from small classes with 25 students or less to supersized classes with over 1000 students who are

enrolled in classes in the form of MOOCs (Online Course Report 2016). MOOC is the acronym for a massive open online course which offers unlimited enrollment and access through the internet. These classes may be hosted by for-profit or nonprofit institutions, and many provide free access to course material but most programs do not give academic credit for the classes. Many of the major changes in online education have been attributed to the development of MOOCs which pioneered the use of new material formats such as filmed lectures, interactive group work, forums to support teacher student interactions Online Course Report (OCR) 2016).

Hybrid or blended instructional models have increased as educational institutions try to find a middle ground between online and tradition. In this format, many different models exist but most are variations of the basic model which consists of delivering half of the course content in a typical class setting with an instructor and the other half delivered through various platforms. Studies show that wisely designed hybrid courses offer the best features of traditional in-class teaching with the best features of online learning (Riffell and Sibley 2005; Lin 2008; Yudko et al. 2008). The success of the blended class depends on structuring the right mix between the content delivered face-to-face and that delivered through the web (Trasler 2002) or televised from remote site thru TV technology. Several studies suggest that hybrid courses may achieve the same or superior learning outcomes in comparison to face-to-face courses. Twigg (2003) reported that hybrid courses may be a good alternative to face-to-face courses for lower income students. Additionally, social presence, which deals with students' perception of their ability to feel that they are part of a class, was identified as an important element for student satisfaction but was missing in online classes. Social presence is purportedly diminished with the blended or hybrid format (Gleason and Greensboro 2017). According to Baldwin-Evan (2006), an effective blended learning environment utilizes many different types of tools to empower the students with more opportunities to participate in both formal and informal learning activities. Similar to online classes, the hybrid course content is delivered using course management systems which can allow creative programs, videos and even game technology to engage students. Referring to the benefits of hybrid courses, Barker (2015) states that technology provides the means to override traditional instructional methods and expand the way students and faculty interact.

The enrollment trend in online and hybrid courses is having an impact on many universities for several key reasons. For example, recruiting and retaining students have become more competitive. Also, students have a choice to take online courses from local universities or from national or international known schools. Distance or online education is theorized to provide universities with more economical options for educating the masses (Lanier 2006; Motii and Sanders 2014; Tsai 2016). Many schools feel that the only way to remain viable and solvent is to offer more online courses. In fact, a majority of schools feel that online educational courses are critical to their long-term survival (Allen and Seaman 2016).

As the enrollment in online and hybrid programs increased, the interest in students' perceptions of these instructional modalities has also increased. Since hybrid and online courses use the internet for dissemination of course material and exams, they share some of the same issues with academic dishonesty. Many individuals feel that academic dishonesty may compromise the quality of the learning (Ogilvie and Stewart 2010) and thus online tools and techniques are needed to mitigate online cheating. Students' perceptions of their college experiences and education processes are usually related to their satisfaction levels (Astin 1993; Bolliger and

Martindale, 2004). Online and hybrid courses provide a different educational experience compared to the traditional learning mode which is why it is important to consider the students' perceptions of the online learning process and the integrity associated with the modalities.

Although some studies have looked at students' perceptions of various forms of online education, there is still a need for additional research given the continued growth trajectory (Brooks 2003; Dobbs, Del Carmen and Waid-Lindberg 2017; Hannay et al. 2006; Smart and Cappel 2006; Motii and Sanders 2014). This present study contributes to the literature base by looking at students' perception of how they learn and their assessment of cheating based on their preference for course delivery modality- online, hybrid and face-to-face. In this paper, the authors include a literature review of online and hybrid learning and academic dishonesty, a discussion of the study method and study results, and conclude with discussions and implications for faculty and academic institutions.

Literature Review

Different course instructional modalities are now used to reach the student population including instruction of several courses as well as entire academic programs. The effectiveness of the current course delivery methods or modalities (face-to-face, online and hybrid) is documented in the literature (Coutrasn and Kousoulis 2015; Herman, Pollock, and Wilson 2012; Lovern and Lovern 2013; Smarth and Cappel, 2006; Gleason and Greenhow 2017). The face-to-face environment has been the main instructional delivery system at all levels of the educational spectrum including K-12, undergraduate and graduate levels (Hiatt et al. 2018). The online and hybrid systems are the newer instructional systems which have gained widespread usage especially at the undergraduate and graduate levels. The traditional course delivery methods face-to-face and non-traditional instructional (hybrid and online) have caused some variations in the ways in which instructors engage students and involve them in the learning process (Benek-Riveria and Mathews 2004; Lovern & Lovern 2013; Smart & Cappel 2006). The online instructional method is utilized by providing 100% of the course material on the internet often using a course management system like Blackboard or Moodle. The hybrid or blended course modality uses a combination of web-based technology with the in-class presence of an instructor to deliver a significant component of the course material (Hiatt et al. 2018; Gleason and Greenhow 2017). The face-to-face environment is reported to facilitate more social interactions within the classroom with peers (Chen et al. 2013) and instructors (Garrison and Vaughan, 2008). Maushart (2003) reported high student satisfaction was associated with the formal and informal relationships that students develop with their professors, as well as the relationships that students establish with their peers in the face-to-face classes (Danielson 1998). Research assessing student satisfaction with the three instructional modalities has been mixed because there are advantages and disadvantages with each one. Hybrid learning format shares some of the same issues as the online since it utilizes the internet to deliver a large percentage of course content. The focus of this literature review is to discuss the advantages and disadvantages of the non-traditional learning modalities (online and hybrid).

Advantages of Non-traditional Learning Modalities (Hybrid and Online)

Certain advantages inherent with non-traditional learning modalities, such as hybrid and online courses, are driving their growth. These include the cost-effectiveness (McDonald 1999; Nguyen 2015; Smart and Cappel, 2006), professional development offerings (Nguyen 2015),

easy access and schedule flexibility (Dobbs, del Carmen, and Waid-Lindberg 2017; Kirtman 2009; Nguyen 2015; Xu and Jaggars 2013), less distractions (Kirtman 2009), and no difference in student's perception of learning outcomes (Bowen et al. 2013; Finely, Desmet, and Evans 2004; Maki and Maki 2003).

The asynchronous feature of online courses provides students more flexibility to access and complete course material and is perhaps the foremost reason contributing to the major growth in online courses (Dobbs, del Carmen and Waid-Lindberg 2017; Hannay and Newvine 2006; Yeboah and Smith, 2016).

The growing demand for online education has been facilitated by numerous factors but one of the biggest is the cost savings for individuals and institutions (McDonald 1999; Nguyen 2015; Smart and Cappel 2006;). From a consumer perspective, costs related to accommodations, transportation, and publication of course materials are eliminated in online learning. From the institution's point of view, cost minimization is realized regarding infrastructure and human capital that includes standardized processes to deliver learning content (McDonald 1999; Nguyen 2015;). For instance, university administrations do not have to provide additional facilities to accommodate the increasing number of students. Online and hybrid courses enable academic institutions to educate students from remote locations at a lower cost (Lanier 2006; Smart and Cappel 2006).

Online and hybrid learning have grown rapidly because of the easy access and flexibility of use for the students (Bowen et al. 2014; Nguyen 2015; Xu and Jaggars 2015). Students are able to access content from online classes despite their tight schedules and multiple roles and duties (Xu and Jaggars 2015). For example, students access course content via the internet and engage in interactive learning anytime and anywhere (Nguyen 2015; Bowen et al. 2014) without being physically at the universities. Hybrid or blended is proposed to help minimize the issue with social presence where students feel less connected to faculty and others in the learning process (Gleason and Greenhow 2017).

Non-traditional learning environments include fewer distractions as compared to face-to-face learning. In a study conducted by Kirtman (2009), 68% of online students stated that their education was positively impacted by web-based classes as their concentration was focused on their studies. For examples, students are able to concentration on course content and not on other non-academic related issues such as traffic, parking, and transportation costs (Kirtman 2009). Additionally, Finalay, Desmet, and Evans (2004) noted that the success of the online learning environment was related to the teaching styles including technology to allow for a more informal and democratic classroom style. The informal relationships that students cultivate with professors (Maushart 2003) as well as their peers (Danielson 1998) are very important to the success of the online instructional modality.

Studies have reported student satisfaction with the learning that occurred in all three instructional formats whether it was online, hybrid, or face-to-face classes (Bowen et al. 2013; Finely, Desmet, and Evans 2004; Maki and Maki 2003). Bowen, Chingos, Lack and Nygren (2013) reported good student performance in the hybrid format and the mode of content delivery did not affect students' pass or fail rate or overall course assessment (Stack 2015). Motti and Sanders

(2014) reported that learning outcomes for online students were lower relative to face-to-face but no significant difference was found in the overall semester grade averages between those taking the course online versus the traditional modality. Dobb, del Carmen and Waid-Lindberg (2017) found that overall 44% of the students felt that they learned about the same regardless of the teaching method but level of experience was a major factor in student perceptions. In this study, those who had taken more online courses (5 + courses), were more positive regarding the questions that asked whether students learn more in online classes, perception of the quality of online courses, and their ability to earn a good grade. The environment in which the content delivery has been most successful usually involves a student-centered interactive component in the course delivery (Bowen, et al. 2014). Cechova et al. (2018) reported that blended courses allow universities to teach a larger number of students much more efficiently, while at the same time increasing students' technological literacy and confidence with technologies. Hybrid courses provide more access to education because commuter students can incorporate learning when it's most convenient for them (Newbold, Mehta, & Forbes, 2011). In a longitudinal study tracking junior college students over five years, Xu and Jaggars (2011) found that students were more likely to fail or withdraw from online courses than from face-to-face courses, but in contrast students were just as likely to complete a hybrid course as a face to face course. Students in blended or hybrid classes are reported to have improved critical thinking skills, higher motivation and involvement, and commitment to learning (Donnelly, 2010, Twigg, 2003; Woltering et al. 2009; Gould 2003).

Disadvantages of Non-traditional (Online and Hybrid) Learning Modalities

Online and Hybrid learning have also been associated with disadvantages related to student learning. These disadvantages include less instructor presence (Brooks, 2003) that may lower performance levels (Kirtman 2009; Xu & Jaggars, 2013); more time required for communication clarifications (Brooks 2003; Lovern and Lovern 2013); more independent work (Smart and Cappel 2006); more technical issues related to the online and hybrid learning environments (Lovern and Lovern 2013), and less student motivation (Lei and Gupta 2010)

Xu and Jaggars (2013) and Brooks (2003) suggested that there is a need to lessen the distance between teachers and students because distance impacts student performance. More specifically, Xu and Jaggars (2013) used an instrumental technique to identify the impact of online versus face-to-face learning modality on the students' grades. The results showed a negative impact on learning performance for the use of online modality. Kirtman (2009) further noted that lack of teacher presence negatively impacted learning capabilities of online students and that a few online students commented that they missed the learning experience that can be gained from peer interactions. Bolliger and Martin (2004) indicated that the most important factors to student satisfaction with online courses were related to instructor-related variables such as communication, feedback, content knowledge and accessibility. Jung et al. (2002) also noted that collaborative and social interactions were important for successful online learning environments.

Lovern and Lovern (2013) reported that the face-to-face modality required less time for content clarification than online and hybrid and that there were more technical issues for online courses. Brooks (2003) further noted that the administration is responsible for the retention of students in online courses and suggests that course designers, faculty, and students need to work in tandem to effectively implement and manage courses. Additionally, online and hybrid learning may be

hard for some students to navigate because they are not prepared. Many students are not independent learners and consequently struggle with time management and the ability to know how to focus their effort on the most important concepts. Online or hybrid courses are designed for students who are independent learners and who can work at their own pace (Smart and Cappel 2006).

Xu and Jaggar (2011) reported that students taking online courses early in their program matriculation or who took a higher percentage of credits online were significantly less likely to attain a degree or transfer to a four-year institution. Lei and Gupta (2010) indicated students are likely to perceive that online courses have more assignments than face-to-face classes and they are likely to have more fear or apprehension regarding the technical aspects of the modality. They further stated that faculty is uneasy with teaching online because they fear the possibility of getting more negative student evaluations compared to those from their face-to-face classes.

Academic Dishonesty

Malesky et al. (2016) stated that academic dishonesty is pervasive in higher education. In online and hybrid courses, there are more opportunities for cheating due to the inherent nature associated with course design and technology used to deliver course content in comparison to face-to-face courses (Lanier, 2006; Moten et al. 2013; Stack 2015; Tsai 2016). Watson and Sottile (2010) reported no significant difference in students admitting to various forms of academic cheating between students taking face-to-face and online classes. However, in the same study, a significant number of students indicated that they would be more likely to cheat in online classes versus a face-to-face class. An even higher percentage of students (61%) felt that their peers would be more likely cheat in online class vs. a face to face class.

Lanier (2006) studied the self-reporting of cheating of online students compared to students in traditional courses. The author reported that females are less likely to report cheating than males; white students are more likely to cheat in online classes in comparison to face-to-face courses; and upper level students are more likely to cheat than incoming students. Age was found to be related to online cheating. Miller et al. (2008) and Miller and Young-Jones (2012) found that younger students were more likely to cheat than older students.

Tsia (2010) reported no significant difference between the final scores for students taking exams in an online environment versus a traditional proctored environment. This situation may not accurately capture the academic environment because it was for a course for which the grade was not counted in a student's GPA (Pass or Fail) and the course could be repeated multiple times without penalty. One study reported that a higher percentage of students cheated in online courses if they were taking a combination of online classes and face-to-face classes opposed to students taking just online courses (Miller and Young-Jones 2012). Moten, et al. (2013) noted that cheating practices in online and hybrid classes consisted of waiting for answers; reporting fraudulent error messages; collaboration with peers; plagiarism by not citing the work of others; and purchasing answers.

The opportunities for cheating have increased as an entire online industry has developed to support academic fraud for a fee as reported in the Online Course Report (2017). Malesky et al. (2016) demonstrated how severe and morally reprehensive online cheating can be when students

elicited the use of companies that specialize in aiding cheating. In this study, they used an internet-based company whose primary business was to fraudulently pose as students in online classes. In this experiment they created a fictitious student and employed the online company to complete the class assignments. The fictitious student subsequently earned an “A” based on the quality of the work the internet company submitted. Students have been reported to use online cheating companies to prepare assignments even in courses in which they received no academic credit (Young 2012).

Lanier (2006) recommended the need for academic institutions to employ technical methods to deter cheating. These technical methods include timely log-in codes and passwords as well as tracking of students via their Internet Protocol (IP) addresses. Another suggestion by Lanier (2006) was to engage other students in reporting unethical behavior.

Data Collection and Method

The participants in the study attended a medium-size, four-year urban university which is known for its very diverse student population. Students taking a combination of upper level face-to-face, hybrid and online business classes were surveyed using a questionnaire used in a previous study (Smith, McDermott, and Hoderic 2019). A total of 312 usable questionnaires were collected. Based on those reporting gender, there appeared to an even split between male (47%) and female (47%) respondents. A small percentage of students did not report gender (6%). Data were analyzed using the statistical package for social Sciences (IBM SPSS Statistics Version 25). Descriptive statistics were summarized and crosstabs were used to evaluate the findings.

Study Findings

In this study, as noted in Table 1, females’ (52.4%) preference for online and hybrid courses were slightly higher than males (48.9%). In Table 2, the face-to-face modality was preferred more by younger students and the online modality was preferred more by slightly older students. Also noted in Table 2, hours worked was not a distinguishing factor in the selection of an instructional modality because most of the students in this study worked an average of 40 hours a week.

Table 1. Descriptive Statistics by Sex and Modality

Modality	Online	Hybrid	Face 2 Face	Other	Total
Sex: Male	32 (21.7%)	40 (27.2%)	75 (51.0%)		147 (47.1%)
Female	28 (19.3%)	48(33.1%)	69 (47.%)		145 (46.5%)
Other					20 (6.4%) \$
Total	60 (19.2%)	88 (28.2%)	144 (46.2%)	20 (.003%)	312 (100%)

\$ - Indicates no gender designation.

Table 2: Age and Hours worked by Modality

Course Modality	Average Age	Average hours worked per week
Online	24-30 years	Over 40 hours
Hybrid	21-26 years	Over 40 hours
Face to Face	21-26 years	Over 40 hours

As noted in Table 3, there was a good representation of students who indicated preferences for each of the three instructional modalities, but the online instructional modality was clearly the least favored by the students. The most preferred teaching modality was face-to-face (46%) followed by hybrid (28%) and lastly online (19%). Also noted in Table 3, the students reported that they usually take face-to-face courses (49%) more than online (21%) and hybrid (22%).

Table 3: Students’ Preferences for Learning Modalities

Question	Online (%)	Hybrid(%)	F2F(%)	Other(%)	Total
Which class delivery method do you prefer	60 (19.2%)	88 (28.2%)	144 (46.2%)	20 (6.4%)	312 (100%)
What type of class do you usually take	67 (21.5%)	70 (22.4%)	153(49.0%)	22(7.1%)	312 (100%)

As noted in Table 4, students’ preferences based on key metrics indicates that over 70% of the students felt that they either retained the most information or learned the most in face-to-face classes. Conversely, approximately 10% of all students felt that they learned the most or retained the most in online courses. Students’ perception of the hybrid classes were only slightly better than online with between 15.1-19.5% of students indicating that they retain the most information or learn the most. When asked which classes were more challenging, 64.4% of the students indicated the online instructional method. When asked specific questions regarding faculty engagement, approximately 73% of the student reported that faculty was most helpful in the face-to-face courses that online (8.3%) and hybrid (14.7%). Furthermore, a significantly number of students (81.8%) reported that communications with faculty was the most difficulty with online classes compared to hybrid (9.6%) or face-to-face (6.7%) classes. Furthermore, the students’ felt there was more course loads in online (49.4) than hybrid (19.9%) and face-to-face (26.9%).

Table 4: Students’ Perception of Modality by Key Learning Metrics

Question	Online	Hybrid	F2F	Other *	Total
Retain the most Information	31(10.1%)	60 (19.5%)	215 (70.0%)	1 (.33%)	307 (99.9%)
Learn the most	34 (10.9%)	47 (15.1%)	228 (73.1%)	3 (1.0%)	312 (100%)
Class most challenging	201 (64.4%)	51 (16.3%)	57 (18.3%)	3 (1.0%)	312 (100%)
Faculty most helpful	26 (8.3%)	46 (14.7%)	228 (73.1%)	12 (3.8%)	312 (99.9%)
Communication with faculty the most difficulty	255 (81.8)	30 (9.6%)	21(6.7%)	6 (1.9%)	312 (100%)
Most course load	154 (49.4%)	62 (19.9%)	84 (26.9%)	12 (3.8%)	312 (100%)

*- Indicates no response or response not consistent with question.

Students Perceptions of Cheating Occurrences

In addition to getting students perceptions and preference for instructional modes, the survey investigated students’ perception of cheating given the technology enhanced learning environments. Overall, about 53% of all students, regardless of the instructional modality type, felt that cheating occurred in the academic environment. When asked specifically about the cheating occurrence in the online classes, more face-to-face students (55.3%) reported that cheating occurred in the online environment than those who identified as being an online (21.1%) or hybrid student (23.7%) as shown in Table 5.

Table 5: Perception of Cheating in Online Courses by Modality

Class normally taken	Do you think cheating occurs in online classes		
	Yes	NO	Total
Online	24 (16.3%)	39 (25.8%)	63 (21.3%)
Hybrid	43 (29.2)	46 (30.5%)	89 (30.2%)
F2F	80 (54.4)	66 (43.7%)	146 (49.4%)
Total	147 (49.8%)	151 (51.2%)	295 (100%)

Approximately 48.1% of all students were aware of specific class cheating incidents as reported in Table 6. A higher percentage of face-to-face students (56.2%) students knew of specific cheating incidents than online students (21.2%) and hybrid students (22.6%). This could be explained by the students’ ability to physically interact. Online students have less physical contact with fellow students than those in the face-to-face or hybrid environments so they may be less likely to feel comfortable engaging in academic dishonesty.

Table 6: Perception of Cheating - Have Your Known of Cheating by Modality

Class normally taken	Perception of cheating Have you known of cheating in class		
	Yes	NO	Total
Online	21(15%)	41 (26.5%)	62 (21.0%)
Hybrid	39 (27.9%)	51 (33%)	90 (30.5%)
F2F	80 (57.1%)	63 (41%)	143 (48.5)
Total	140 (47.5%)	155 (52.5%)	295 (100%)

One of the primary tools used to prevent cheating on exams which are delivered fully online is Response Lockdown Browser which is a special browser used in the school’s learning management platform (Blackboard)s. When asked about the effectiveness of Lockdown browser as mechanism to prevent cheating, 67.4 % of all the students indicated that it was either excellent or good as reported in Table 7. However, online students (45.1%) rated its effectiveness as excellent or good which was much lower than students who identified as face-to-face (93.3%) or hybrid (61.8%).

Table 7: How Effective is Lowdown Browser for preventing online cheating

Class type	1	2	3	4	5	Total
	Excellent	Good	Average	Not good	Not At All	
Online	34 (30.0%)	13 (15.1%)	11 (18.3%)	1 (4.2%)	4 (7.7%)	63 (21.2%)
Hybrid	36 (31.6%)	26 (30.2%)	16 (26.7%)	7 (29.2%)	6 (46.2%)	91 (30.6%)
F2F	44 (38.6%)	47 (54.7%)	33 (55%)	16 (66.7%)	3 (7.7%)	143 (48.1%)
Other						
Total	114 (38.4)	86 (29%)	60 (20.2%)	24 (8.0%)	13 (4.4%)	297 (100%)

Table 8 includes the survey participants’ recommendations for punishment when caught cheating. Close to 90% (81.2%) of the students felt that those caught cheating should be penalized by either academic suspension (14.9%), failure of the class (22.3%), or zero on the assignment (44%). When asked whether students caught cheating should receive the ultimate punishment (expulsion from university), only a small percentage (2.5%) felt this should be the punishment. This percentage may indicate that students feel that guilty students should be punished yet given another opportunity to redeem themselves.

Table 8: Recommendation for punishment for those caught cheating in a college course.

Instructional method	Expulsion	Academic suspension	Failure (retake class)	Zero on Assignment	Warning	Total
Online	2	7	11	29	12	61
Hybrid	0	12	17	33	18	80
F2F	5	23	35	62	16	141
Total	7 (2.5%)	42 (14.9%)	63 (22.3%)	124 (44%)	46 (16.3%)	282 (100%)

Discussion

The findings of this research have implications for both the academic institutions as well as the faculty when offering courses online and the hybrid modalities. More specifically, these implications are related to the tools and techniques used to implement the courses as well as the access to resources to support the learning environment. Although the statistics show that the number of online courses are growing and fully online programs are increasing (National Center for Education Statistics (NCES) 2018; Seaman, Allen, and Seaman 2018), it appears that many students still do not prefer this modality. As noted in this study, the face-to-face instructional modality is still the most preferred method and is perceived as being the best modality to help students retain information. A significant number of students reported that face-to-face courses facilitated communication with the instructor much better than online or hybrid courses. Similarly, they reported faculty was more helpful and that the amount of course material was less in the F2F format. Conversely, online instructional modality appears more problematic to students because of communication problems and perception that faculty is less helpful. These findings are similar to those reported by Bollinger and Martindale (2004) that the most important drivers of student satisfaction in online course are communication, feedback, content knowledge and accessibility.

As noted in this study, academic institutions may want to present the hybrid modality as an option for students that prefer some personal contact with faculty while also having the flexibility of learning at remote locations. Similar to the face-to-face students, a very small number of hybrid students in this study, reported that communication with faculty was difficult and that faculty was least helpful. This finding is similar to another study by Bryant (2014) in which 85% of all students felt it was very important that faculty be available after class and during office hours. Because communication is an important metric for students, faculty teaching online courses need to develop effective methods to reach and engage students. These communication methods include online (virtual) office hours and discussion boards in which students are able to post questions and receive answers from faculty. Additionally, faculty need to consider using personalized taped video lecturers and real time lecturers thru media sessions to augment the online presence.

Academic institutions need to ensure that the technological tools and techniques are available but are not utilized in dishonest ways. This recommendation is based on the finding that students perceive there is more cheating in the online modality and as such tools are needed to mitigate cheating. Respondus Lockdown Browser, per this study, is perceived as an effective tool to minimize cheating when exams are administered online. Additionally, Lanier (2006) recommended timely log-in codes and passwords as well as tracking students via their IP addresses as techniques to mitigate student academic dishonesty.

The internet is one of the primary ways that students cheat either by eliciting information from online cheating companies (Malesky et al. 2016) or dissemination of instructor course materials. Moten, et al. (2013) noted that cheating practices in online and hybrid classes consisted of students waiting for answers online and students collaborating with other students about assignments and assessments. Mobile devices are widely used to aid in student collaboration as student's text course content to classmates in real time (Campbell 2006). Therefore, faculty must be cognizant of other communication tools that students use to post academic information for wide-spread use.

Institutions and faculty need to consider ways to better prepare students for the online learning environments. Access to course resources for online and hybrid students should include material on time management, sessions promote the development of independent learning skills, and effective study strategies using technology (Hensley, Kirkpatrick, and Burgoon 2013; Smart and Cappel 2006;). In order to ensure access to more beneficial learning tools, faculty and students need to collaborate to identify the tools and techniques that will facilitate the learning experience. For example, faculty can provide multiple forms of assessments (Hensley, Kirkpatrick, and Burgoon 2013) such as weekly quizzes to assess the accuracy of study strategies and whether independent learning skills have been developed. Faculty also needs to ensure that course assignments are relevant and useful. There is a balancing act between assigning too much and too little course work. Most of the students in this study felt that online classes have more course assignments than either of the other two instructional modalities.

Limitations of the Study

This study is limited to data collected in one medium size, four-year urban university which has a very high percentage of transfer students. Thus, the generalizability of the sample participants may be limited. This study is a self-report of the students' perceptions related to their own learning experiences. These learning experiences may also be different based on the discipline studied. For example, McCabe and Trevino (1997) reported that science students are more infrequent cheaters than students in other disciplines. This study included students who were primarily business majors. Additionally, this study was limited to academic dishonesty related to only online and hybrid courses and did not include other forms of cheating such as plagiarism, students taking exams for other students, and the use of internet-based services that support cheating.

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Authors

Lucille Pointer

Professor, Marilyn Davis College of Business, University of Houston-Downtown, One Main Street, Houston, Texas 77002, pointerl@uhd.edu

Lila Carden

Assistant Professor, College of Technology, University of Houston, lcarden@central.uh.edu

Charles Smith*

Professor, Marilyn Davis College of Business, University of Houston-Downtown, One Main Street, Houston, Texas 77002, 713-417-3368 (cell), smithc@uhd.edu

*corresponding author