Online teaching vs Face to face

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Cheating

  With the assistance of the Internet and related technologies, students today have many more ways to be academically dishonest than students a generation ago. With more and more Internet based course offerings, the concern is whether cheating will increase as students work and take tests away from the eyes of instructors. Students often prefer online courses for the freedom it provides in being able to do coursework around their own schedules and in reducing the cost of travel. With the advent of web-based assessments the opportunity to use illegitimate means to improve grades is a great concern.

Integrity

Academic integrity refers to the honesty with which students do all their academic work and live their academic lives—from their studies to doing their own work to taking their own exams and to following through on their lab work. The validity of a particular domain field relies heavily on the professionalism of its practitioners and their ethical work. Reports of academic dishonesty are not uncommon in higher education in many places around the world. A number of studies have suggested that online learning may be at higher risk of academic integrity abuses. The lack of face-to-face interactions may lessen the social bonds that establish the mutual respect between instructors and learners. The absence of the hallway conversations that help people humanize each other are also gone; most interactions in online classrooms are related directly to the learning with little occurring outside that dynamic. Further, there is less direct hands-on support for the learners. The conversations are mediated and "thin" instead of the more channel-rich face-to-face conversations and interactions of face-to-face learning. This context may enable easier justifications for cheating. The uses of the World Wide Web and Internet as substructures for online learning offer direct access to various resources that may make cheating easier—online sites for college note-taking, for example, and paper mills (Stebelman, 1998).

Quality

In 2010, the US Department of Education published a meta-analysis focusing on the learning outcomes of online vs. face-to-face instruction. The meta-analysis found that, on average, students in online classes performed better than those receiving face-to-face instruction.

A majority of U.S. higher education leaders (70.8%) see online learning as critical to their long-term strategy. The number of higher education students taking at least one distance education course in 2014 was up 3.7 percent from the previous year (source: our **2014 survey of online learning**). During this timeframe, online enrollment growth far exceeded that of overall higher education, accounting for nearly three-quarters of all U.S. higher education's enrollment increases last year.

The truth is that quality is driving the market. Institutions have been diligently working on the best ways to integrate online into higher education. Integrity and a focus on quality is the differentiator that is weeding out lesser providers.

Learning outcomes

The report, "Interactive Learning Online at Public Universities: Evidence from Randomized Trials," notes that students who utilize interactive online learning—or hybrid learning—produce equivalent, or better, results than students participating in face-to-face education.

Teacher quality is a very important part of success in an online course, but so, too, is the course design. Despite the delivery mechanism of the class, faculty members need to show students they care and that they aren't just a number. The ones that do this will help students to learn.

https://www.usnews.com/education/online-education/articles/2012/07/25/study-online-learning-outcomes-similar-to-classroom-results

See also this, did not know how to write all these information in a short form, and may be useful for you: https://olj.onlinelearningconsortium.org/index.php/olj/article/view/454

Online vs. face to face evaluation

When students are asked why they chose to take an online class, the most prevalent answer would probably be "convenience." This response is not surprising considering that the primary reason for online education is to serve students who are unable or find it difficult to attend on-campus classrooms. Online courses accommodate students by allowing them the flexibility to attend school at a time and location that is convenient for them. Even though online courses are a growing trend, students need to consider the differences between online education and a traditional classroom education before deciding which form of instruction to take.

An online course delivers most, if not all of the class content through the Internet. Student and teacher interaction is primarily text-based and the learning environment is independent of a location. Although audio and video components may be integrated into the course, written text is the main medium of communication between students, their peers, and the teacher. Some online courses are also time-flexible, where students and their teachers do not need to be involved in the same activity at the same time. Sounds like a good deal, but is it?

Consider the fact that online courses physically distance students from the college community. This distance often times affect students' experiences and success. Online students are physically separated; thus, the resources and interactions available to students through faculty, peers, and

other campus offices on campus may not be used or considered. This can result in a decrease of opportunities for academic and social integration, which are known predictors of student success for those who take traditional classes. In essence, students who take online courses miss out on the on-campus experiences that connect them with faculty and students and that help them through their college career. Without these retention factors, students may be less likely to persist in school and complete their degrees. In addition, students may feel alienated and isolated. Traditional brick and mortar institutions, however, provide students with a community where they can engage, interact, and support each other.

A second problem is that online education requires students to be self-disciplined. With online education, the instructor delivers the content, but students must take greater initiative to access, learn, and understand the material. In other words, online instruction may not provide sufficient student support. In face-to-face classes, students have their classmates, learning centers on campus, professors' office hours, tutors, and teaching assistants to support and help them with their various learning needs. These resources guide them, clarify and reinforce the material, and allow them to succeed in their education

In the 2009 report, Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, the Department of Education reported that "on average, students in online learning conditions performed better than those receiving face-to-face instruction." However, many of the articles show that because online learning often carries greater expectations and opportunities for interacting with course material and fellow students, an increase in time on task is a natural benefit. Some of the articles discuss that how the online classroom differs from the traditional face-to-face classroom, and suggested strategies for capitalizing on those differences to improve student learning. Let's look at the some of the differences:

1. The nature of student collaboration
2. The use of writing
3. Student interaction with content
4. The value of structure
5. The need for immediate feedback
6. The dependence on other professionals
7. The ease of assessment
8. The necessity of learning objects

There are many articles that show that online classes are becoming are more popular nowadays. In spite of some differences, there is no doubt that online courses have their benefits. Online

instruction can reduce classroom costs for colleges and universities. Students who work or have other responsibilities are still able to take classes. Classes are more accessible and convenient. Certain courses can be effective at accomplishing learning objectives. But with these benefits come expenses. The <u>advantages and disadvantages</u> of online instruction need to be considered; online courses may not be <u>suitable or appropriate for everyone</u> and for all instructional objectives

The prevalence of online courses has given rise to online degrees. However, research shows that employers do not <u>value online degrees</u> as much as they do degrees earned through traditional instruction. Studies show <u>employers</u> overwhelming <u>prefer candidates with traditional degrees</u> over online degrees. If this is the case, students who earn their degrees online are at a disadvantage when seeking employment. One explanation is that with the boom of so many online degree-granting institutions, some have been fraudulent establishments and others have been organizations that have not been accredited. Employers, therefore, question the education and training of students who have earned their degrees from unfamiliar institutions.

Another study compared the satisfaction of student experiences when taking a course online versus face to face. The students were surveyed after completion of the course in regards to how the course affected their critical thinking skills and their work ethic. The results of the survey illustrated that students who completed the online version of the course saw an increase in their ability to think critically and their work ethic as compared to students who completed the face to face version.

<div align="center">

"Proctoring vs. non - proctoring as refers to cheating"

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Proctoring vs. non-proctoring

In the simplest terms, proctored means someone is present while the candidate is taking the assessment. Proctored tests can be administered on a computer or using paper and pencil. Depending on the type of test, the proctor may or may not have to be certified. On the other hand, Non-proctored tests are unsupervised. Many times they are online assessments that a candidate takes from home.

Non proctored testing offers employers greater flexibility and reduced costs than proctored testing. However, non-proctored testing raises a number of concerns, most importantly cheating.

What about Cheating?

What if someone gets help when they're taking a non-proctored test? Some tests lend themselves to cheating more than others. Tests with clear correct answers, such as a simple math test are more susceptible to cheating than tests that rely on judgment or self-report. The most problematic is a test of knowledge, where someone could research the answers. These types of tests are best administered in a proctored environment. However, many assessments used in pre-employment testing or for development are not knowledge-based, nor do they have clear right or wrong answers. So, in those cases, how much does cheating really help?

A recent laboratory study looked at this specific question. The study used a group of 130 individuals and broke them into 4 groups: working alone or with a partner and in a timed or untimed environment.

The results indicated that:

- **Cognitive Ability** can be improved by working in pairs, but those differences can be almost completely eliminated by including a timer.

- **Situational Judgment** had very little differences. The partner timed group actually performed worst of all.

- **Personality** showed almost no differences. Where there were differences the paired time groups performed worst.

These results are interesting because they show that cheating may be less helpful than originally assumed. Even for sections where there are correct answers, such as cognitive ability, adding a strict timer to the section can almost eliminate the benefits of cheating.

Which Should You Use?

Depending on what type of tests are administering, a non-proctored environment can be quite sufficient. For example, when administering personality, integrity or behavioral reliability assessments, we can be fairly certain that the results will be accurate even if the candidate did receive outside help. In the case of these tests, correct answers are based on a publisher's research-based scoring key and therefore cannot be independently verified like answers to

questions on skills and intelligence tests - making it very difficult to cheat. On the other hand, if we are administering a basic skills or cognitive ability test where all correct answers can be ascertained without the assistance of the test publisher, we need to be more vigilant. This is where outside help could affect the accuracy of the results. To ensure that the results are representative of the candidate's true ability, it is best to test passing candidates again in a proctored environment.

At a minimum, we can say that there are very few differences in terms of performance on proctored vs. non-proctored tests, at least with regard to self-report type assessments such as biodata and personality. In addition, adding a strict timer to tests that include correct/incorrect answers can greatly reduce the impact of cheating.

Table 1 – Means for the Question "The design of the course helped me achieve its learning objectives."

Online Proctored Students	Online Students not Proctored	t Stat
2.500	3.033	-1.959*

Online Proctored Students	Face-to-Face Students	t Stat
2.500	3.963	8.922***

Online Students not Proctored	Face-to-Face Students	t Stat
3.033	3.963	4.156***

H_0 = There is no difference in the means between online proctored students and online students not proctored when asked "The design of the course helped me achieve its learning objectives".

H_A = There is a significant difference in the means between online proctored students and online students not proctored when asked "The design of the course helped me achieve its learning objectives".

Results marginally support the alternative hypothesis that means are not equal for proctored versus not proctored.

H_0 = There is no difference in the means between online proctored students and face-to-face students when asked "The design of the course helped me achieve its learning objectives".

H_A = There is a significant difference in the means between online proctored students and face-to-face students when asked "The design of the course helped me achieve its learning objectives".

Results support the alternative hypothesis that means are not equal for proctored versus face-to-face.

H_0 = There is no difference in the means between online students not proctored and face-to-face students when asked "The design of the course helped me achieve its learning objectives".

H_A = There is a significant difference in the means between online students not proctored and face-to-face students when asked "The design of the course helped me achieve its learning objectives".

Results support the alternative hypothesis that means are not equal for not proctored versus face-to-face.

Table 1 – Means for the Question "The design of the course helped me achieve its learning objectives."

Online Students	Face-to-Face Students	t Stat
2.657	3.963	-8.622***

Online Undergraduate Students	Face-to-Face Undergraduate Students	t Stat
2.644	3.951	-7.616***

Online Graduate Students	Face-to-Face Graduate Students	t Stat
2.733	4.000	-4.080***

H_0 = There is no difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The design of the course helped me achieve its learning objectives".

H_A = There is a significant difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The design of the course helped me achieve its learning objectives".

Results support the alternative hypothesis that means are not equal.

In Table 1, online students scored "The design of the course helped me achieve its learning objectives" 1.31 lower than face-to-face students. The difference is statistically significant at the 1% level. The results shows that online students do not seem to like how the courses are set up. With the student centric design, students do not have a good feel for what is needed to master the material. The results are the same for both undergraduate and graduate students.

Table 2 – Means for the Question "The course material was delivered clearly."

Online Students	Face-to-Face Students	t Stat
2.670	3.830	-7.826***

Online Undergraduate Students	Face-to-Face Undergraduate Students	t Stat
2.618	3.832	-7.461***

Online Graduate Students	Face-to-Face Graduate Students	t Stat
3.000	3.836	-2.430**

H_0 = There is no difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The course material was delivered clearly".

H_A = There is a significant difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The course material was delivered clearly".

Results support the alternative hypothesis that means are not equal.

In Table 2, online students scored "The course material was delivered clearly" 1.16 lower than face-to-face students. The difference is statistically significant at the 1% level. The results shows that online students do not seem to believe the material is presented clearly. With the student centric design, students do not have a good feel for what is needed to master the material. The results are the same for both undergraduate and graduate students.

Table 3 – Means for the Question "The instructor was generally available to students seeking advice."

Online Students	Face-to-Face Students	t Stat
2.712	4.107	-9.671***

Online Undergraduate Students	Face-to-Face Undergraduate Students	t Stat
2.614	3.314	-3.453***

Online Graduate Students	Face-to-Face Graduate Students	t Stat
3.250	4.129	-3.365***

H_0 = There is no difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The instructor was generally available to students seeking advice."

H_A = There is a significant difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The instructor was generally available to students seeking advice."

Results support the alternative hypothesis that means are not equal.

In Table 3, online students scored "The instructor was generally available to students seeking advice" 1.4 lower than face-to-face students. The difference is statistically significant at the 1% level. The results shows that online students do not seem to believe that I was available for them. I have only been contacted twice in the non-traditional hours (hours at night or weekend) in the 8 online classes I have taught over a 3 years period. Each semester I have gotten less than a hand full of calls (skype, phone, chat etc.). The students do not seem to actually like to talk, but prefer to e-mail. The results are the same for both undergraduate and graduate students.

Table 4 – Means for the Question "The course helped me to understand the subject matter."

Online Students	Face-to-Face Students	t Stat
2.806	3.979	-7.627***

Online Undergraduate Students	Face-to-Face Undergraduate Students	t Stat
2.833	3.941	-6.238***

Online Graduate Students	Face-to-Face Graduate Students	t Stat
2.643	4.037	-4.245***

H_0 = There is no difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The course helped me to understand the subject matter."

H_A = There is a significant difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "The course helped me to understand the subject matter."

Results support the alternative hypothesis that means are not equal.

In Table 4, online students scored "The course helped me to understand the subject matter" 1.17 lower than face-to-face students. The difference is statistically significant at the 1% level. The results shows that online students with the student centric design do not seem to believe they understood the material as well as face-to-face students. The results are the same for both undergraduate and graduate students.

Table 5 – Means for the Question "Overall, the instructor is a good teacher."

Online Students	Face-to-Face Students	t Stat
2.982	4.104	-7.495***

Online Undergraduate Students	Face-to-Face Undergraduate Students	t Stat
2.924	4.061	-6.686***

Online Graduate Students	Face-to-Face Graduate Students	t Stat
3.278	4.191	-3.108***

H_0 = There is no difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "Overall, the instructor is a good teacher."

H_A = There is a significant difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "Overall, the instructor is a good teacher."

Results support the alternative hypothesis that means are not equal.

In Table 5, online students scored "Overall, the instructor is a good teacher"1.12 lower than face-to-face students. The difference is statistically significant at the 1% level. The results shows that online students do not seem to believe I am as good of a teacher as my face-to-face students do. With the student centric design, students do not have a good feel for what I am demonstrating when they can only watch a canned video. Videos do not have the dynamic quality that lecturing face-to-face does. The results are the same for both undergraduate and graduate students.

Table 6 – Means for the Question "Overall, I learned a great deal from the course."

Online Students	Face-to-Face Students	t Stat
2.864	3.993	-7.744***

Online Undergraduate Students	Face-to-Face Undergraduate Students	t Stat
2.864	3.945	-6.412***

Online Graduate Students	Face-to-Face Graduate Students	t Stat
2.867	4.091	-4.134***

H_0 = There is no difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "Overall, I learned a great deal from the course."

H_A = There is a significant difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "Overall, I learned a great deal from the course."

Results support the alternative hypothesis that means are not equal.

In Table 6, online students scored "Overall, I learned a great deal from the course" 1.13 lower than face-to-face students. The difference is statistically significant at the 1% level. The results shows that online students do not seem to believe they learned as much as face-to-face students. With the student centric design, students do not have a good feel for what is needed to master the material. Thus, online students do not get the appreciation for how all the work applies to real life examples as they see assignments as just a task to be done. The results are the same for both undergraduate and graduate students.

Table 7 – Means for the Question "What grade do you expect to receive in this class?"

Online Students	Face-to-Face Students	t Stat
2.113	2.559	-3.399***

Online Undergraduate Students	Face-to-Face Undergraduate Students	t Stat
2.010	2.361	-2.696***

Online Graduate Students	Face-to-Face Graduate Students	t Stat
3.200	3.194	0.017

H_0 = There is no difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "What grade do you expect to receive in this class?"

H_A = There is a significant difference in the means between online students and face-to-face students (online undergraduate students and face-to-face undergraduate students & online graduate students and face-to-face graduate students) when asked "What grade do you expect to receive in this class?"

Results support the alternative hypothesis that means are not equal for online versus face-to-face and online undergraduate versus face-to-face undergraduate.

Results support no difference in graduate students.

In Table 7, online students scored "What grade do you expect to receive in this class?" .45 lower than face-to-face students. The difference is statistically significant at the 1% level. The results shows that online students do not seem to believe they will get as high of a grade as face-to-face. The results are the same for undergraduate students. The results for graduate students are they have a higher (.01) expected grade. There was not statistical significant difference.

Table 8 Correlations between Grade Point Average, Overall Evaluation, Expected Grade, Understood Material and Overall Learned

	GPA	Overall Evaluation	Expected GPA	Understood Material	Overall Learned
GPA	1.00				
Overall Evaluation	0.48	1.00			
Expected GPA	0.65	0.55	1.00		
Understood Material	0.61	0.48	0.78	1.00	
Overall Learned	0.58	0.46	0.79	0.97	1.00

19 classes (Spring 2013 to Fall 2015)

       14 undergraduate – 5 Graduate

       8 online – 11 face-to-face

       9 Intro Finance – 5 intermediate finance – 5 MBA Finance

       6 online proctored – 2 not proctored

304 out of 359(84.7%) students did online evaluations

Student evaluation done by Smartevals.com

Data was collected from 19 corporate finance classes from the Spring 2013 to Fall 2015. There were 14 undergraduate classes. There were 5 graduate classes. There were 8 online classes and 11 face-to-face classes. There were 9 Introduction to Finance classes, 5 Intermediate Finance classes, and 5 MBA Financial Management classes. Student evaluation were collected by Smartevals.com. There were 304 out of 359(84.7%) student responses. The high response rate is due to an incentive I give of 5 points on the final if 80% of class does the evaluations.

In Table 8, there is a strong correlation between GPA and Overall evaluation, Expected GPA and Overall evaluation, Material Understood and Overall evaluation, Overall Learned and Overall Evaluation, GPA and expected GPA, GPA and Overall Learned, etc. All had a strong correlation.

Table 9 - t-Test: Paired Two Sample for Means		
	Overall	Percent
Mean	82.60273973	67.38931169
Variance	184.1384376	281.6734086
Observations	657	657
Pearson Correlation	0.869027083	
Hypothesized Mean Difference	0	
df	656	
t Stat	46.61399987	
P(T<=t) one-tail	1.1615E-210	
t Critical one-tail	1.64717975	
P(T<=t) two-tail	2.3231E-210	
t Critical two-tail	1.96358678	

Figure 1

Difference in Scores	Number
-10 +	1
-5 to -9.99	3
0 to -4.99	13
.01 to 5	41
5.01 to 10	112
10.01 to 15	188
15.01 to 20	132
20.01 to 25	85
25.01 +	82
	657
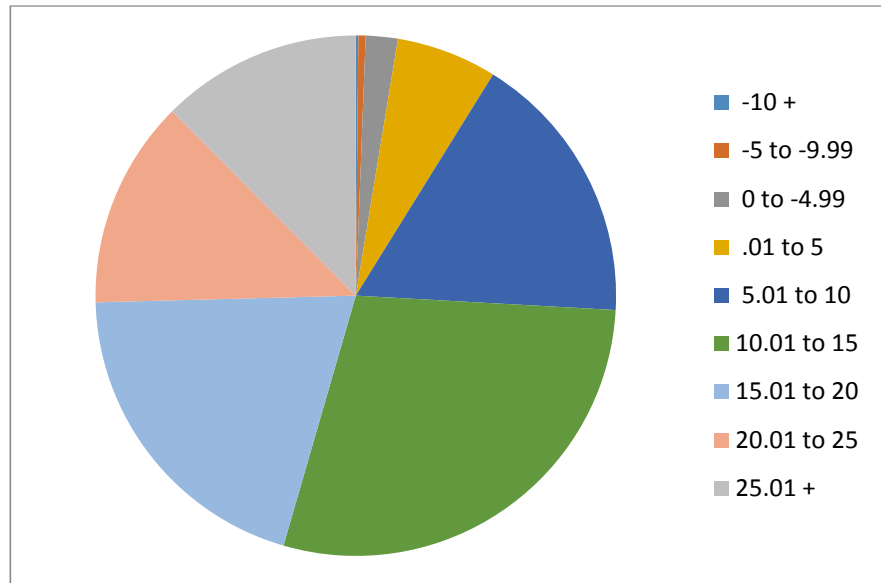
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