

Original Paper

Carrots and Sticks in Online Education

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Abstract

This paper examines the key characteristics of online education versus the traditional ground or on-campus education. The paper aims to clarify several myths about both online and on-campus programs. By comparison, this paper provides an objective approach to help potential students to make an informative yet subjective decision on whether online or on-campus is more suitable. This personal decision would depend on one's own circumstances, preferences, and personal strength and weakness.

Keywords

Online education, ground programs, online teaching

1. Introduction

With the development of newer technologies and much improved online classroom sites, there are more and more interaction in online classrooms. The flexibility of online has made online education leading a new trend of efficient learning programs and has become a real “threat” to traditional ground/on-campus learning. More and more traditional universities, even those ivy league universities, have started offer online classes. Many universities have adopted a “mixed” or “hybrid” learning module, which consists of a required minimum percentage of courses taken on-campus combined with an optional percentage of courses taken online.

The demand for online learning has increased by several folds due to Covid-19. Even before the breakout of Covid-19, this trend toward online education has gained increasing momentum as studies have shown that online schools have delivered at least the same quality of education, if not better, as the traditional schools. Stack (2015) found that there is no significant difference in standardized final examination scores among online and traditional ground college students once his study controlled for selection bias wherein students self-select the mode of course delivery and the relative lack of proctoring of exams in online sections. Stack (2015) concludes that the academic performance of online

students was statistically indifferent to that of traditional students.

An earlier research conducted by Department of Education systematically researched the literature from 1996 through July 2008 and identified more than a thousand empirical studies of online learning. Based on this research, Means et al. (2009) concludes that on average, students in online learning conditions performed better than those receiving face-to-face instruction. They studied both college and adult students as well as K-12 students. They also examined the hybrid approaches that blend in-class and online activities as well as pure in-class and pure online approaches. They also concluded that this slight difference may become insignificant when factors are less controllable.

While most formal studies on the comparison between online and traditional on ground have been focused on the test results or other measurable quality of education, there has not been much formal publications regarding how the teaching and learning experiences may differ between online and traditional on ground classes. On the other hand, one can find many web articles and sites devoted to comparing the differences between online learning and traditional on-campus learning. Many of these websites also offer advertisements from online institutions (Note 1).

The lack of formal unbiased research papers on the teaching and learning experience comparison between online and traditional on ground is mainly due to the following. First, most people have the impression that the major benefit of online is flexibility, which is too simple to be investigated any further. Second, while the comparison of test results and measurable quality control factors are quantitative, the teaching and learning experience itself is intrinsic or personal and is qualitative and non-measurable. This makes it harder to do a formal academic research on this “subjective” experience comparison.

However, if the quantitative research has shown little or no difference between the measurable outcomes of online and traditional on ground classes, then the choice would be mainly a personal preference, i.e. the “subjective” personal experience will be the determinant of the final selection between online or on ground. Thus, this comparison from the experience perspective is as important as the comparison from the outcome perspective. This paper will offer a formal discussion on the pros and cons of online education versus traditional on-campus programs from an educator as well as a researcher’s point of view.

2. Method

I sensed the urgency to do this comparison research years ago but put away this idea because experience is very subjective and hard to capture or evaluate in an objective research paper. However, over the years, especially after Covid-19, I have found it increasingly important to research this issue. A solid research paper with professional views will defend future potential students from making unwise decisions based on misleading myths on online and on-campus programs. To accomplish this purpose, I decided to take a very unconventional approach to write this paper.

Most research papers are objective and avoid using “I” in particular. Since this paper is indeed to

compare one's subjective experience while one's experience is accredited by one's credentials, I decided to disclose my education and career pass first, and then use "I" for sharing my academic experience both as a faculty/instructor and as a student. I acknowledge this is a very uncontroversial approach for a research paper.

Another controversial feature about this paper is the open-end conclusion. Most research papers would provide a definite conclusion either for or against a proposition in the research. This paper, on the contrary, will only provide an objective approach to reach a subjective evaluation. Since learning as well as teaching is a subjective experience, each reader may reach an individualized conclusion in terms of whether online or on-campus or hybrid is a better fit.

Because of these controversies, it took me more than five years from my original initiative of writing this paper to the actual completion of the paper. Without further delay, I would like to bring you on-board to this personal journey on making an educated choice between online and on-campus.

3. My Online and On-Ground Experience

For my role as a student, I received my undergraduate degree after attending three different universities in three different continents. Two are ranked the best both in the country and in the region. My Ph.D. in Economics with Econometrics sub-major was from an ivy league traditional program. I started my master in Christian Studies just before I was pregnant. I finally got this master's degree from a hybrid university. This allowed me to experience the life as an online student and as an adult student with a full-time job. At that time, I was a full-time assistant professor in a top 30 traditional university. I swear I would take no more courses online or on-ground when I finally graduated when my daughter was already five years ago.

For my role as a professor/instructor, I have taught at instructor levels in two traditional universities in two continents, one is ranked the Number One in its continent and the other is an ivy league university. After graduation, I started my teaching career in a traditional university. When I gave birth to my daughter, I started teaching adult students at ground campuses for online universities. Finally, I started teaching online when my daughter was two. I have taught for three well known online universities for their ground, online, and hybrid courses. A couple of years ago, I switched to teaching online only most of the time.

This brief overview of my experience would provide a background for understanding why I may suggest the following objective approach to evaluate this personal and subjective decision between pursuing an online degree versus completing a traditional degree in a ground campus.

4. Understanding Online

This title was carefully selected to reflect the fact that several well-known benefits or advantages of online education may have a down-side as well (Note 2). Thus, it is more accurate to claim that the following features of online programs help to understand what online education is, rather than, simply

to associate the following characteristics of online education as the advantages over ground. For this same reason, the title of the next section is “Understanding On-Campus”.

The eight major characteristics of online learning can be given an acronym as “FLEXIBLE”.

“F” for Flexibility,

“L” for Learning at one’s own pace,

“E” for Efficiency,

“X” for Cross Country/State/Culture experience,

“I” for Individualized learning experience,

“B” for Be your own teacher,

“L” for Learning team experience,

“E” is for End-of-Course Application.

4.1 Flexibility

The number one feature of online education is, by its nature, flexibility. There is no doubt that one can take the courses at any time and any place with minimal restrictions varying by each school’s own policies. This is definitely a huge plus for students who work full-time or who have to stay in a different city/country for either work or family reason(s). However, I would like to stress a couple of elements that are not flexible in most online programs.

First is the curriculum or syllabus. Most online programs have adopted a standard fixed syllabus for each course across all classes offered at different time slots. There is usually only one syllabus for all classes taught by different instructors no matter where and when the course is taught. This greatly standardized online teaching but may not be beneficial or most suitable for every student as pointed out by Edmundson (2012) that “online education is a one-size-fits-all endeavor.” (Note 3)

In comparison, when I was in college, we could choose the same course taught by different professors, sometimes even in the same semester, quite often in a different semester. These professors’ syllabi could be so different that one would think they were for different courses. This reflects the fact that there is so much materials to cover in a course in a given subject/field, hence each professor can choose his/her focus within the same subject/field of study yet come up with a very different syllabus. I believe learning and teaching is a personal experience, so it matters a lot whether a student can choose his/her own match with a teacher and a curriculum.

Second is the evaluation. All tests and most of the assignments are standardized in most of the online courses. Most of these test and assignment pools are used repeatedly. This makes grading much more standardized. However, this also eliminates each instructor’s ability to adjust the delivery of course materials to fit the differences among classes of different students.

When I teach a ground class, I plan for a couple of concepts/materials to be covered in every class, but I will also plan to cover a couple of alternative materials depending on students’ interest. Some of my examples or case studies are always the same, but a lot of them are not the same in each class. I usually will ask students to prompt me an example after I have explained the concept and/or theory, and I will

just follow on with their examples in the classroom discussion. I can duplicate this idea to a certain degree in the online discussion forums. However, I cannot require all students to read all forum posts, and I am pretty sure many students do not even read all my posts, let alone those of their peers. Therefore, I cannot adjust tests and assignments based on what is discussed in online forums as I could based on what discussed in a ground classroom.

4.2 Learning at One's Own Pace

This is another feature of online education that is highly advertised by all online universities and colleges. It is very true that any student can review and learn all the materials any time during the week. However, most online programs are shorter than traditional ground programs and most of them do not have vacations in between. Public holidays are also greatly discounted. One may choose not to do any activities on the national holidays, but there is no guarantee that one will get an extra day to complete all the assignments for that week. One need to keep in mind that most online courses are between 5 to 10 weeks, so one must complete everything by the last day of the course. If one misses a week, it is a lot to catch up for online while it is usually not the end of world if one misses a ground class. Because of this, some online programs will automatically drop a student if the student does not log into an online classroom for two consecutive weeks.

4.3 Efficiency

This is a huge benefit for students who have some previous experience on the subject or in the field and want to complete the program at a faster pace. This also helps students who are unfamiliar with the subject to examine the materials in a slower pace over the week. As long as these students are willing to spend more time than average, they may still do very well in the course. Students could read and watch the online materials repeatedly until they grasp the concept, while in a standard ground course, students usually cannot ask professors to repeat the same materials over and over again. Professors in ground classes usually must keep the class pace aligned with an average representative or “medium” student in class. Thus, an above average student can efficiently complete a course in much less time, while a below average student can still pass or even score an “A” by working over-time during the course and still complete the course without a need to re-take.

4.4 X-Cross Country/State/Culture experience

From here onward, this section will provide several less mentioned features of online education. I believe these are benefits from online programs, but some of these are not unique and can also be achieved from on-campus programs.

The online environment provides everyone a great opportunity to meet with others from a different part of the country or even residents in a different country with various culture and educational backgrounds (Note 4). Most online students will find some acquaintances that go beyond the completion of the course.

There is a big myth that one is all alone in an online program and it is hard to get to know anyone from an online classroom. On the contrary, because most online programs have a huge emphasis on online

participation or forum posts, students are required to read and respond to each other's posts more than once every week. As a result, although students do not talk face-to-face, they do communicate more than in a ground class. In a ground class, most time is instruction time, which means the professor talks and everyone listens. There is very limited time that students may talk to each other in traditional ground courses although this has changed a lot.

4.5 Individualized Learning Experience

As touched on earlier in the "Efficiency" sub-section, in an online program, each student not only has a choice to go through the materials on his/her own pace, but each student may also choose how much materials he/she want to grasp or read. An online student has a choice to grasp ALL the materials, both required and advanced, provided by the instructor, or choose only the required materials plus a sub-set of more advanced materials based on one's own need and desire to learn.

There is no time limit for online classes. Hence, an instructor can provide a list of supplementary materials that spin off from discussion forums that an instructor may not have time to cover in a ground class and may not have listed in the syllabus. Moreover, the online interface provides a chance for an instructor to do more research and collect more supplementary materials to provide a more extensive list for the students. When prompted in class, an instructor may have access only to what in his/her memory, which may be limited. Of course, for a more established and more confident professor, he/she may always tell the students that he/she needs to do more research to give a more comprehensive response to a question later.

4.6 Be Your Own Teacher

Online students will heavily rely on their self-learning abilities in terms of reading and comprehending the materials posted by an instructor as well as the ability to learn from each other through participation in the discussion forums. One may view this both as a pro and as a con for online education.

The benefit of this is that, to a certain extent as discussed above, one may choose his/her own pace and coverage of the online course materials. One may teach him or her-self at his or her own pace and may select the priorities of materials to cover. This self-learning ability proves to be just as important as grasping the materials taught in classroom. Hence, I would credit online education some extra credit in training students' ability to adopt and learn new materials quickly to stay competitive in today's ever-changing world.

The downside of this is that this self-leaning process is more time-consuming, and at times, can be very frustrating. Yet, it builds up one's character in perseverance, which is not a bad thing. I have several students, if not many, who have claimed they had so many sleepless nights and dreadful tears which eventually lead to their joyful and proud completion of my course. They felt more confident in learning new things, which I think is a more important achievement than learning the materials alone.

4.7 Learning Team Experience

Another myth for online education is that there is no teamwork. On the contrary, I have taught online courses with much more frequent and rigorous team assignments than on ground programs. One will

learn how to communicate and work with each other as a team in an online environment, too. Since nowadays, teamwork is almost a must at workplaces, it is very important to include team building skills in education. Although it seems more difficult to get connected and work together online than face-to-face, especially given the differences in time zones and locations, I have received many high-quality team projects delivered by online students, most due to online students' work experiences. Many online students have become great friends who support and help each other even beyond graduation. Hence, online is a great place to test and train one's teamwork capacity.

4.8 End-of-Course Application

Since most distance learning students have some work experience, the end goal of learning is not the grade but rather the ability that students can apply what they have learned in class to their workplace or daily life activities. As a result, although online programs may not be as technical as ground programs, online courses are highly applicable. For example, an online student may not be able to solve a complicated probability problem involving conditional probability while this can be a common test question for a ground course. However, an online student may deliver a paper on a team project that applies the Markov chain process in a real-world application either using data from their workplace or secondary data collected from online or other resources.

5. Understanding On-Campus

The six major characteristics of on-campus learning can be given an acronym as "GROUND".

"G" for Grants and Ground labs and interdisciplinary presence,

"R" for Research,

"O" for On task,

"U" for You advocate yourself,

"N" for New discovery/Innovation,

"D" for Demonstration.

5.1 Grants and Ground labs and Interdisciplinary Presence

In most cases, traditional ground universities still have the best chance to get grants from government and various institutions and corporations. Chances to get research grants as a faculty in an online university is very limited. This means students have a much better chance to receive financial support from faculty or university grants in addition to government supports. Ground universities also offer teaching assistant positions to graduate students, which are very rare in online universities. Thus, scholarship and fellowship and other tuition deduction and financial supports other than those from government organizations are much more limited for online programs. However, students can save a big deal on housing by living at their homes and most online universities also offer online materials which may save a huge amount of money on purchasing textbooks (Note 5).

Campus itself is a great host of a community of multidisciplinary research. If the subject needs a lot of lab work, then online has no way to compete with on-campus education in terms of lab facilities and

hand-on experiments. The physical presence of multiple schools and departments makes no doubt to facilitate multidiscipline research much better than online programs. When I was teaching on ground, I had a lot more students from other departments and schools. I also attended seminars not just in my department but also those at other centers, departments, or schools.

5.2 Research

As a natural consequence or extension to the previous feature of online education, research is mostly done in traditional on-campus universities while teaching is the focus in online universities, just as in smaller on ground colleges. The number one task for most faculties at traditional, especially those top ranked universities, is to create a solid publication record for their research. Since teaching is minor and may not be the top priority, undergraduate students may still need to do lots of reading on their own even they meet at least twice a week in most cases in a ground classroom setting. Because of its research focus, ground courses usually require more technical skills to stay at the frontier of the field.

5.3 On Task

Another good or bad feature of ground classes is that everyone usually must be on the same pace. When an assignment is due, everyone must turn it in so that professors will discuss the solutions in class. It is rare that a professor will hold off discussing the solutions to wait for a late submission. Late submissions are allowed usually in cases where a student is sick or absent due to other well accepted reasons. In an online course, most student can get a one-week extension without too much trouble because the release of solutions can be made private via individual messages.

In my entire teaching career, I only had one student, who was the best student in class and might be the best in all I have taught, rushed to me when I collected all examine papers and was about to leave the classroom. He said he was so stressful that he could not go to sleep and then did not hear the alarm at all. I did allow him to take the final and sat there for another three hours for him to finish. But this is the only incidence. In almost every case, if one misses an examine, especially a midterm exam, in a ground class, one will not have any chance to make up. If one comes late, one will not get an extension. While for online, I have had at least several students who submitted their final after the course ended for various reasons. Allowing students to make up or even re-submit their work during the grading period after a course ends is not a rare practice at all for online.

5.4 You Advocate Yourself

Most ground courses have over 50 students for undergraduates and 25 for graduate students. Some larger service or introductory classes can have over 100 students per classroom. In such a setting, if one does not advocate for oneself, then one's need and voice will not be addressed. Professors have office hours, but once again, if one does not come to the office hours, the professors will not chase their students in most of the cases. Professors are largely be treated as researchers not babysitters at the college level. Thus, most college students are given the privilege and honor to make their own decisions, good or bad. Self-control is one of the key characteristics for success and is a wonderful training obtained from traditional universities. Most students must acquire this characteristic long

before they may graduate from ground programs.

While teaching online, since I usually do respond to every student at least once every week, and there are weekly assignments in almost every online class which I must grade all by myself, believe it or not, I actually do know my online students better. Private messages do make it easier for students to communicate with online instructors as they do not need to face the pressure to speak up in front of a large group of peers in order to raise a question or concern. I usually respond to these messages within a couple of hours if received during the normal business hours and make them into almost a real-time chat of going back and forth on messages if students have follow-up questions (Note 6).

I also do send a kind reminder to every student who missed turning in an assignment every week although I am not required to do so. I do this because students can turn in their assignments up to one or two weeks late, and I do not want them to miss out on this opportunity. Sometimes, I send them a second and even a third or fourth reminder. Each student also must post multiple times over the week and thus I do hear everyone's voice at least once every week.

5.5 New Discovery/Innovation

There is almost no argument that almost all new discoveries or innovations have been from faculties in traditional ground universities. Of course, these faculties can be an adjunct professor at an online university, but most of their research leading toward the new discovery or innovation is completed in a traditional ground campus. This is largely because on-campus faculties may hire high caliber graduate students as research assistants to speed up their research. Students also get an early exposure to great skills and experiences in conduct research. Such discovery and innovation skills usually must be learned in person and on campus.

5.6 Demonstration

One last but the most important advantage, which is like the discovery and innovation skills, is the hands-on or personal experience with a professor and the old-fashioned blackboard writings or drawings that demonstrate a procedure step by step. Therefore, many online students have found it very frustrating to learn math and statistics models because they need to read word descriptions and figure out all the details to make the model work. Students may be able to watch a pre-recorded video which would help a lot, but if they fail to understand something, they will not be able to ask. They need to be able to describe what they do not understand to be able to get help from an instructor or classmates. Sometimes, students may not be able to describe exactly what puzzles them and an experienced professor may be able to tell from students' facial expression.

6. Conclusion

This paper explains the major features for both online and ground programs. The paper adopts an approach to explain a balanced view on each feature with both pros and cons if both are present. The paper also points out a couple of features that have been less addressed in the literature. The paper shares a personal view from the perspective of an online full professor who has also been an assistant

professor in a traditional ground university and who has received a PhD from a traditional ground campus and a master's degree from a "hybrid" university. The purpose of this paper is to equip potential students with adequate information without myths so that they may choose a more appropriate learning module to achieve their individual learning objectives. So, now is your turn to make your decision.

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Notes

Note 1. For examples, Rasmussen College provides a good comparison between online and tradition education at <https://www.rasmussen.edu/student-life/blogs/college-life/online-vs-traditional-education-answer-never-expected/>, and at <https://www.rasmussen.edu/student-experience/college-life/>. University of the Potomac explains its benefit of online education at <https://potomac.edu/blog/online-learning-versus-traditional-learning/>.

Note 2. The eLearning Industry forum also tried to keep a balanced view in their list of the pros and cons of E-Learning versus Classroom Learning at <https://elearningindustry.com/pros-and-cons-of-campus-learning-vs-online-learning>. Similar points are expressed at My College Guide as well at <https://mycollegeguide.org/blog/2017/05/online-classes-vs-traditional-classes/#flexible>.

Note 3. This article receives several letters posted in the Letters section on July 25, 2012, only several

days after the article was published. These letters demonstrate very well the point I address at the beginning of this paper; that is, how teaching and learning can be such a personal experience that it is very hard to reach a common conclusion whether online or ground is the best under certain circumstances.

The website at <https://www.nytimes.com/2012/07/26/opinion/learning-in-classrooms-versus-online.html> contains some response letters.

Note 4. This broader cultural exposure is also highlighted by the Online Learning Consortium at <https://onlinelearningconsortium.org/online-vs-class-asking-wrong-question/>. It also mentions a couple of other features of online education mentioned in this paper and provides a couple of approaches to make the best of online and in-class education.

Note 5. This advantage of accessing convenient and economic online resources is also explained by Petersons at <https://www.petersons.com/blog/major-differences-between-online-and-traditional-college-programs/>.

Note 6. Seattlepi addresses several very important differences between online and ground programs at <https://education.seattlepi.com/compare-contrast-online-vs-classroom-instruction-1757.html>. I especially agree that the student and faculty relationship dynamic differ a lot, yet I do not think online students would necessarily have less attention from faculties. On the contrary, I think online students, on average, get more attention, however, on the learning and teaching perspective, but not on the personal level, which leads to my next point why innovative skills and research experience may not be easily passed on and learned in an online environment, but is a big advantage for traditional ground programs.