

Traditional learning vs. Online learning

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Introduction

The use of online learning has increased dramatically as an effect of the current pandemic and has allowed students and professors to successfully complete their schooling. In order to get a better understanding of how students feel about online learning vs face-to-face learning, we conducted a short research experiment that involved short interviews and surveys for current college students that have both online and face-to-face classes. We are looking to see how the behaviors of college students differ in each class setting. Specifically, this research assesses the effectiveness of online learning based on grades, mental health, and relationships between students, professors, and other classmates. It raises important considerations for the future use of online learning rather than face to face learning.

Literature Review

With today's current situation of being in a pandemic, the effectiveness of online school is something that's important to consider. Over the past year, there have been numerous studies conducted to find information on how well students excel in online learning, vs face-to-face learning. We have seen the usage of interviews, surveys, and other sorts of questionnaires to find out how students really feel about online learning. Many studies have shown that online learning can be convenient, but many students excel more efficiently in a face-to-face class setting. One of the studies conducted during the beginning of COVID-19 found that students' ability to absorb the material and focus with full attention was much higher rated in face-to-face classes rather than online (Aguilera-Hermida, A. P. 2020), which leads to the consideration of cognitive engagement and social cognitive theory.

Social cognitive theory, developed by Albert Bandura, explains that portions of an individual's knowledge that can be obtained is directly related to observing others within the context of social interactions and experiences (Schunk, D. H. 2012). Therefore, it can regulate students' cognition, motivation, actions, and emotions. For starters, this theory claims that previous experiences will determine the self-efficacy of an individual. If some individuals struggled with the use of technology before transitioning into online learning, it would put even more of a burden on them after they are required to use technology to get through school, meaning they have limited self-efficacy when it

comes to technology. Cognitive engagement is the cognitive process that allows students to absorb the knowledge that they are being taught. Students who struggle to connect with their professors and other peers through online learning will struggle to be successful in an online environment. One of the studies that we looked at for our research showed that students who engaged in face-to-face classes had a higher level of cognitive engagement when compared to online classes. In this study students who participated in online classes showed higher signs of withdrawal from online instruction (Bettinger et al., 2017). Another study we looked at describes interaction and engagement as being critically important to a student's learning experience and there has been a very limited discussion on how to promote, or even successfully engage students (Dong-gook Kim, 2020). This only enhances the reason to look into this engagement between the student and the teacher during these two settings.

Methods

Participants

The Target population was college students that have had a hybrid or fully online course. They were the ones able to participate in this study. No one in this course could have participated.

Demographics: The main demographics that stood out to our group were:

The age range was 18-23, with the majority of participants being 20 years old. That would mean the sophomores were the dominant group taking our survey

The gender split on who took the survey. That came out to be 59% female, 62 in total, and 41% male, 43 in total.

Lastly, the college status of the students who took the survey. The results were 98.1% currently enrolled full-time college students, 1% currently enrolled part-time, 1% not currently enrolled in college.

Procedures

It all began with finding a reliable, scholarly source and doing an annotated bibliography on an article related to online learning and face-to-face learning for college students. Then, we created some open-ended and closed-ended questions, which we submitted to the teacher. The teacher then created survey questions using some of the questions the students submitted, which is how the survey questions were created. Once the surveys were all put together, the students were asked to send the survey link to at least five college students. It was made clear that it could be any college student, it did not have to be isolated only to St. Norbert students. The interview was done by the students, each student had to interview a college student. The interview transcript was then created after the interview was completed.

Measures

Interview questions and the meaning behind them:

1. The first question was designed to make sure the population that is taking this survey fits the necessary outline to help in our research
2. This question was made to get specific information about what students find to be the positives to face-to-face learning
3. This question was made to figure out the downside to classrooms as well as finding out what could potentially lead some students to like online learning over face-to-face learning
4. This question was designed to find out more about what students specifically like about online learning to give insight on what teachers did right
5. This question was designed to find out exactly what the students think about the online learning by figuring out specific disinterests and what could've been improved on
6. This question was designed to find any information on how to improve the way of online teaching by asking the students what teaching strategies are useful and which ones are not

7. This question was designed to show the importance of a student-teacher relationship as well as understand the viewpoint of a student who has done both online and face-to-face learning.
8. This question is designed to have the student reflect on their online experience and see if they thought being online had any changing impact on their overall learning.
9. This question is designed to have students reflect back on their online experience to see if being online had any changing impact on their social and personal life
10. This last question is designed to see the change in perception of online learning from when first starting out using it.

Results and Discussion

The results that we have found from our interviews and surveys are interesting and in line with some of the original assumptions we made about online education. The results from the survey showed that among the participants online learning was generally mildly effective however when compared to online learning face to face learning is much more effective. Overall students who experienced more years in school were more likely to prefer the online class format as well as have better grades compared to students who had not been enrolled in school for as long. Another interesting result from the survey was that the students who had more years in the school reported preferring online classes and their flexibility to fit into varying schedules.

Taking a look at the survey results from another perspective shows why students may favor face-to-face classes instead of online. When looking at the quality of relationships that were formed in an online setting versus a face to face one participant reported a less close experience when interacting with peers. Participants also reported that they found communication as well as the creation of a meaningful relationship with their instructor was much more difficult in online classes. Many of the survey's participants also reported some type of mental strain while engaging in class in an online setting. Participants reported higher levels of stress and anxiety when engaging in class online along with a decrease in confidence when participating.

The most interesting part to us about the results of our survey was that although face-to-face classes are preferred in most cases there are still benefits that students have when participating in classes online. Overwhelmingly, however we found that face-to-face instruction is more effective in most cases than online education. We were also surprised to see a decrease in confidence when interacting in classes online, after some discussion however we believe that this could be because of students feeling less of a connection with their classmates and more as though they are talking to strangers, this effect can be amplified if students choose to not turn on their cameras. Another interesting result that we feel is worth talking about is the finding that students with more years of schooling reported better performance in an online setting, this was interesting to us because with an increase in distraction and a decrease in course engagement, we would have expected the opposite to happen, or in general for students to perform worse online classes.

The results that we gathered from the interview seemed to line up with our survey results. After discussing our interview transcripts, we came to 2 major conclusions; students preferred face-to-face classes due to better relationships with their peers and professors. The other major conclusion we came to from our interview results was that meaningful connections/interaction amongst professors and classmates is what contributes to a successful classroom, although this is difficult to accomplish in a zoom setting there are ways that it can be done. Another interesting result from our interviews that lined up with the results from our survey was that younger students seemed to have more of a struggle with online classes than older students.

The results of our interviews were interesting because they correlated somewhat with the results of our survey. In both cases, we saw that students felt a more meaningful connection with professors in face-to-face classes and were able to maintain better focus in this setting. Some students preferred online classes because of the flexibility/ease of the schedule that was provided but when it came to course content found online classes more difficult to pay attention to. Both the survey results and the interview results can help to provide key information for answering our research questions.

The research question that our class is asking is “*How do behaviors of college students differ in face-to-face v online classes?*” The results from the survey that the class conducted as well as our interview results show that college students prefer face-to-face classes because of the meaningful connections made. Online classes were preferred in some cases, but this was not because of the effectiveness of the course content, but instead because of the flexibility

provided by the online courses. In most cases, students were less focused and driven when interacting in online classes and were less confident in their ability to answer questions correctly. The most interesting finding about the difference in behaviors of college students in face-to-face v online classes however was that older students both performed better and preferred online classes compared to younger students.

Conclusion

The major takeaway is that the majority of college students that participated in this research felt that they were closer to their professors in traditional face-to-face classes. Online learning has increased dramatically due to the national wide pandemic, so this semester was the perfect time to do this research. We noticed from reviewing the survey results and the interview that most of the students prefer face-to-face traditional classes because of the com moderation with their peers and the relationship they can build with their professors. The interview allowed you to get more in-depth answers from the individual while the survey was close-ended questions for the most part. The interviewees stressed the negative effect that online classes have on some individuals due to the separation from others. The results that we found reassured the original assumptions and hypotheses that we had about online learning. None of the results that we found discourages the effectiveness of online learning, online learning is effective, but face-to-face learning is just more effective. Although the survey shows that students who have more schooling experience prefer online learning, the study also shows that online learners do not comprehend as much as traditional face-to-face classes. The lack of comprehension of online learning could have to do with the fact that students are more likely to be distracted during online classes. The most interesting part to us about the results of our survey was that although face-to-face classes are preferred in most cases there are still benefits that students have when participating in classes online. In concussion, traditional online learning is found to be a more preferred and effective learning method according to college students.

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