In-Person and Emergency Remote Learning: An Examination of the Perceptions and Experiences of Seniors at Harvard University

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Abstract Many higher education institutions previously offered online courses, but the COVID-19 pandemic accelerated the rate at which higher education institutions transitioned to emergency remote classes. Research on the effects of this emergency transition is limited due to how recent the events have occurred and given the fact that these events are ongoing. The emergency shift to remote learning due to the sudden onset of COVID-19 makes remote learning distinct from typical remote learning circumstances. In this context, it is critical to understand how students are perceiving and experience their classes. The aim of this study was to compare 4th year students' experience and learning in their emergency remote and traditional in-person class settings. Using qualitative data from six interviews with Seniors at Harvard, I found that student motivation and engagement have dramatically fallen while taking emergency remote classes, largely due to a lack of social interactions inside and outside of their classes. However, the students felt they had greater access to resources and their professors which they saw as a primary benefit of their remote experience. This study found that while students saw several benefits of learning remotely, overall the students expressed a strong preference for in-person classes.

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Xaley Yousey, April 30, 2021

Introduction and Research Question

In recent years, online learning has seen immense growth as students take advantage of hybrid and 100% online education opportunities (BCG 2020). While many colleges previously offered online options for their students, the onset of COVID-19 and the need to be socially distant came as a shock to students and higher education administrators as it became clear a new learning structure would be necessary to complete the Spring 2020 semester (Gallagher and Palmer 2020). Many colleges and educational institutions decided to transition to a completely online learning environment to finish the remainder of the semester (BCG 2020, Guide2Research 2020). Harvard was among the first universities in the United States to announce a transition to emergency remote learning and found itself facing a challenge like never before (IHE 2020). In the context of emergency remote learning and COVID-19, it is critical to consider the effects of students' perceived learning engagement and satisfaction.

Importantly, for the students and staff at Harvard, this transition online did not have equal consequences for all. While instructors and faculty sought to adapt to their new class formats and structures, students had to adjust to these new barriers in addition to other difficulties that directly impacted their college experience. Things like internet inaccessibility, family responsibilities, work commitments, and technological literacy, all impact how students experience and perceive this shift.

For the purposes of this paper, in-person or face-to-face learning involves students and teachers being located in the same physical environment. This type of learning can take on many forms but is usually structured with a professor lecturing to a group of students. At Harvard and other universities, online or remote learning utilizes the internet and web-based learning technologies like Zoom or Google Meet. These web-based technologies enable students and

professors to interact synchronously from different physical environments at the same time but can present additional barriers for some students who may not have adequate access to materials or a dedicated workspace.

Informal conversations with my friends as well as reflecting on my own experience following the shift to remote learning made it clear that many of us were having difficulty maintaining our motivation and productivity in this new class format. This made me become interested in exploring more concretely the primary distinctions between in-person and remote experiences of seniors at Harvard, and in particular, how the shift has impacted students' motivation and learning experiences. This capstone project will take the form of a qualitative analysis utilizing student interviews. These interviews act as my primary data source and discuss the students' remote classroom experiences between March 2020 to March 2021, and their in-person experiences between August 2017 to February 2020. Using the data collected from these interviews, this paper seeks to address this question: How do Harvard Seniors perceive and evaluate their learning experiences in remote lectures in relation to in-person lectures in previous years?

Addressing this question will provide critical insights into the learning experiences of Seniors college students during the emergency shift to remote learning. There has also been limited research on student perceptions of online learning in during the COVID-19 pandemic. Student perceptions of their learning environments may also provide insight for educators seeking to understand how to better engage their students during emergency remote learning. For the purposes of this paper, engagement is defined as increasing cognitive and emotional interaction with the intended content of the course. Additionally, by identifying student perceptions, learning objectives and lecture delivery can be modified and improved to achieve

higher learning objectives for students. Finally, this question is relevant because millions of students are attending university in emergency remote classes and can likely identify with some of the experiences of the students in this study.

Literature Review

Current research has focused on the challenges and barriers students face in online classes, their motivation and satisfaction, and their learning outcomes when compared to face-to-face courses. As it stands, little research has been published concerning the emergency transition to remote learning and its effects on student perceptions of their experiences. This literature review will discuss the key characteristics of in-person, remote, and emergency remote classes to summarize key distinctions. I have presented remote and emergency remote classes because while they share many of the same characteristics, emergency remote has unique barriers and benefits for students.

In-Person Courses

The most obvious difference between in-person and remote courses is that in-person classes provide opportunities for students learn alongside one other and their professor for a more hands-on learning experience. These in-person interactions help grow social bonds and relationships that research has shown ultimately helps students engage in class materials and concepts and boosts their motivation to succeed in the course overall (Brockman et. al. 2020). Discussing course concepts and materials in-person may also help facilitate conversation by using to social cues. Additionally, having a scheduled class that students must travel to and keep track of when planning their schedules often provides them with structure and improves time management skills.

Traditional Remote Courses

Research on online learning has indicated several benefits for students that in-person learning does not have. The first and most obvious is the flexibility that online learning offers. Students have more options regarding when and where they take their classes, and how they want to engage with the materials. In addition, online classes may be more cost effective and give students more room to take their learning into their own hands (Ramsden 1992).

On the flip side, research has also found that student motivation may fall when taking classes online. Research conducted by Robinson and Hullinger (2018) indicates that student engagement in online classes is different from traditional face-to-face classes. For example, students in online learning environments may be more likely to feel disconnected from their professors and peers, negatively impacting their overall engagement in a course. Further, Bullen (1998) found that the lack of in-person social interactions may reduce instructional effectiveness for some students. It seems possible that online learning may stifle student engagement as professors and students spend more time looking at their screens than one another.

Other research suggests that interacting with peers in an online class can help boost learning outcomes similarly to in-person classes (Chen 2010, Carini 2006). Sue et. al. (2005) also found that interactions among learners and teachers have positive implications for learning in an online learning environment. In addition, Bolliger and Halupa (2018) found that students enrolled in online courses at private universities experienced generally high levels of engagement. Students learning in a fully online environment can have perceive their remote experiences positively, so long as professors make extra effort to interact with their students virtually (Moore 1989). As students and educators are interacting in an online environment, it is critical that they are able to purposefully engage with one other in order to gain the same social effects as in-person classes.

Research conducted by Russell (1999) found that student performance is on average comparable between in-person and remote learning environments. This finding was corroborated by Walker et. al. (2021) which found that online offerings support the achievement of course objectives and learning outcomes. Another study showed that although students preferred to take in person classes, there were no significant differences in their test performances or academic outcomes online (Kemp et. al. 2014).

Emergency Remote Courses

While many characteristics of online learning can be extended to emergency remote learning, the emergency shift to due to the onset of COVID-19 makes the current situation distinct from typical remote learning circumstances. An important factor of note is that the students' experiences from the *Traditional Remote Courses* section freely opted into online classroom formats. In emergency remote courses, neither students or instructors freely chose to learn in this format which can impact how students perceive their engagement and learning outcomes.

Many of the positive characteristics of online learning echo in emergency remote circumstances. Most explicitly, the flexibility afforded to students and the ability to take learning into their own hands has continued to be a benefit for many students. However, many negative attributes have also carried over. Namely, reduced engagement and motivation in emergency remote courses has been found to have negative impacts on students' perceptions of their learning. In addition, the reduced opportunities for social interaction with peers and professors has likely worsened as state and federal laws mandate physical distancing from others outside of their household (Jeffrey 2020).

Alongside these perceived negative characteristics of online and emergency remote learning, the literature highlights several additional barriers for students. The pandemic has impacted people from various communities differently, and some students have had to take on more financial or family related responsibilities. Working outside of the home could also lead to higher levels of anxiety and stress for students which could negatively impact their studies (Gillis 2020). In addition, some students may have limited internet access or a dedicated workspace where they can take their classes leading to more distractions (Means 2020, Perets et. al. 2020). Other researchers indicate that students find course concepts more challenging or confusing largely due to a lack of clear communication from their instructors online (Hsu and Goldsmith 2020).

However, researchers have also identified additional benefits for students in emergency remote courses. One study found that supplemental resources from instructors, such as lecture recordings, slides, and handouts have helped students adjust to their new normal. The same study found that students may be more willing to attend office hours in a virtual setting, which has had positive on their learning achievements (Hsu and Goldsmith 2020). Further, students may have more time in general due to the pandemic, which may enable them to dedicate more time focusing on their studies and schoolwork (Supriya 2021).

Methods

The objection of this project is to examine 4th year undergraduate student perceptions across a variety of concentrations at Harvard University concerning their experiences before and after the shift to emergency remote learning. To characterize the students interviewed for this project, I collected limited demographic information including age, gender, race and ethnicity, and sexual orientation during my interviews. Because of the small sample size, however, the

demographic information provides little insight. In the following section, I will describe my method for conducting the interviews.

I conducted six one-on-one interviews with Seniors at Harvard College. Overall, my sample included six members of the Senior class. These interviews were semi-structured and lasted approximately forty minutes to one hour. The interviewees included both individuals who had deferred a semester during COVID-19 (one) and individuals who have been in a remote learning environment since March 2020 (five). This offers the opportunity to gain the perspective of students who may have never chosen to take online classes versus a student who had the option to defer. This offered interesting insights into the effects of self-selection into online learning environments that could result in other explanations for differences in their perceptions of remote learning compared to in-person learning.

Recruitment of interview subjects was conducted through convenient methods. I reached out to eleven Seniors I know personally or were the friends of individuals I know personally. The questions I used in the interviews centered around the perceptions of their experiences of both in-person and remote classes, including lecture format, engagement and motivation, benefits of in-person and remote classes, and their format preferences. In order to evaluate the responses to these questions, I took notes of themes and patterns that emerged from the data that were present across interviewees. For ease, I narrativized these themes and patterns in order to better evaluate and present findings.

When asking students to compare their experiences in classes in-person versus remote, I asked students to compare classes from their concentration for continuity as class learning objectives and format across fields of study are broad and far-reaching.

Before conducting interviews, I provided the students with a consent form and an outline of the project's goals and research question. In this form, I disclosed my intentions for the interview responses and ensured they knew that participation was entirely voluntary and that they could stop the interview at any time. When conducting the interview, I began by first asking the subject if they consented to an on-record interview. All participants agreed to go on the record. In addition, I asked their permission to either record the interview using audio or video. The questions can be found in Appendix "A".

Limitations

This research capstone is limited in several ways, and while I attempted to mitigate the limitations of this project, they were likely not completely avoided. First, because I used a convenient recruitment method in order to find interview candidates, I have personal relationships with the respondents I interviewed. This may have led some respondents to reduce the completeness or honesty of their responses, however, it could have also had the opposite effect of increasing their candidness with me. Secondly, my sample was somewhat small with only six interviews conducted overall. However, my interview sample contained great diversity in students' concentration areas, enabling me to see distinctions across concentrations. Thirdly, because I advertised the interviews as a way to share thoughts about the shift to remote learning, students with stronger options on the shift to remote learning may have been more willing to be interviewed for this study. Similarly, because this study is being conducted when many students were forced into online learning, it is possible the students I interviewed have more negative perceptions of online learning. However, this in itself may offer interesting insights into how students perceive the emergency move to remote classes. Next, because of the nature of my research question, many interview questions rely on retrospective accounts. Finally, because I

am also a Senior at Harvard, I am in a similar position to many of the interview respondents and hold my own personal beliefs about the shift to remote learning. I thereby acknowledge the bias I may have entered this research project with. I aimed to combat any biases I may hold by continually revaluating my impressions of the respondents and challenging my own assumptions when conducting this research.

I recognize that my research data is not representative of the experiences and perceptions of all Seniors at Harvard and acknowledge this limitation. It is also important to note that the findings from this research will not be generalizable on a large scale due to the specific nature of my research question. The research findings from this study can, however, be used to gain general insights into 4th year student perspectives at other elite colleges that made the shift to remote learning using the same methods and structures as Harvard. The following research findings should be considered in light of the limitations listed above.

Findings

Overall, five of my interviewees had completed at least one full semester remotely, with one only having completed the remainder of the Spring 2020 term and Spring 2021 term thus far. Five interviewees identified as female and one identified as male. Of these, two identified as being a member of the LGBTQIA+ community. Of the participants, one identified as Asian, one as Black, and four as White. The participants ranged between the ages of 19 and 22 years old. The interviewees all concentrated in different fields representing economics, psychology, human evolutionary biology, theater dance and media and history and literature, human development regenerative biology, and computer science and statistics.

The students I interviewed were able to point to both benefits and drawbacks to remote learning; participants' perceptions were generally negative with a few positives. Our discussions

tended to gravitate towards three major topics: motivation and engagement or lack thereof, social interactions or lack thereof, and learning outcomes. Many of the characteristics the students perceived as being negative aspects of emergency remote learning align with characteristics highlighted in the literature. I summarized the qualitative findings in the key areas that students perceived of their emergency remote classes compared to their in-person class experiences. The categories showcased in Tables One and Two were derived based on these recurrent themes and patterns. The information included in these tables is meant to act as a summary reference of the main takeaways from the interviews and does not necessarily encapsulate the full picture.

Two students, both concentrating in a STEM field, mentioned that they felt their courses were more difficult now during emergency remote than their in-person classes. When I asked each student why they thought this was, both indicated that their professors had increased the workload purposefully. One student quoted a professor who said, “Now that classes are online, you have so much more free time to spend on your work in this class”. So while the course itself may not have increased in difficulty, the students felt they had a greater workload than they would have if the class was taught in person. Similarly, three students (two in STEM, one in social sciences) discussed how they thought the actual concepts from their courses were more confusing or unclear than they would have been if they were taking it in-person. One student who felt this way said that attending lecture used to be where they learned the most in their classes, but now they feel like learning in lecture is secondary to the learning they do on their own time, and that they mainly go to lecture to, “make sure I’m doing it right”. Another student echoed the sentiment of unclear communication, and said they felt like the course was more challenging simply because their instructor was ambiguous about class assignments and key concepts.

Another concept that came up in all six interviews was “Zoom fatigue”, or the mental exhaustion that comes from working virtually all day. One student characterized the feeling by saying that their, “brain has to work harder” to achieve the same level of engagement in their emergency remote classes than in their in-person classes. Another said the feeling comes from the expectation to be “on” while on Zoom in order to gauge other people’s reactions and social cues virtually which isn’t an issue in their in-person classes. Two students I spoke to described feeling anxiety because of the requirement to have their camera on in their classes. These students worried that others may be judging their backgrounds or that their workspace would draw additional attention to them. Further, one student said that in all of their classes, it is required that their cameras stay on for the duration of class which they said has the same effect as “staring into a mirror for hours on end”, which has been greatly taxing on their mental health.

Additionally, multiple students admitted they were prone to “zoning out” or “daydreaming” during their classes rather than listening and actively engaging. More than one said the constant necessity to be on their computers simply made doing work outside of class is more tiresome after they spend multiple hours staring at their screen to attend class. One student said, “Before [in-person] after classes you could go and do work somewhere, but now after watching my classes from a screen all day, the thought of looking at computer to do more work seems like hell”.

Another aspect of emergency remote learning that emerged across the interviews was the students’ perceived “plunging motivation” and engagement. The students pointed to various reasons they thought their motivation and engagement in their courses had fallen, many of which had to do with their significantly reduced social interactions inside and outside of classes. Nearly all of the students I interviewed told me that in previous semesters, they generally took classes

with friends or made friends in the class throughout the semester. When I asked how students usually made friends in their classes, many said it was through their “unassigned assigned seat”. They said they usually just made friends with the people they sat next to in lecture by happenchance. In a virtual environment, students don’t have this informal method of making friends that plays a big role in in-person lectures. One student described the lacking social aspect of their classes as a huge reason they felt less motivated saying, “The best part of regular [in-person] classes are the social aspect, and you don’t get that online which makes it less fun and leads to less motivation for me”.

The social interactions described by the students also points to something else that may be lacking in the online environment – routine. While a routine can be helpful in many ways, sitting down in the same chair and listening to the same lectures every day without any change in their day-to-day lives can be exhausting by itself. One student put this feeling eloquently by saying, “there isn’t a rhythm to the day anymore because every day seems exactly the same”. For others, less motivation doesn’t necessarily equal less engagement. One student said that even though they are less motivated than they were during their in-person classes, they are still putting in a ton of work to their classes an engaging with their professors a lot more. Interestingly, this was said by the student who chose to defer in the Fall 2020 semester. It seems possible that this students’ break from classes in the Fall may be a reason they feel more motivated to work hard despite feeling “burnt-out”.

Next, all six of the students I interviewed said they felt like their learning outcomes had changed or were lower this semester as compared to previous in-person semesters. When prompted about why this may be, a few students said they thought their professors had reduced the amount of materials covered throughout the course. One student studying computer science

who works as a TF said that the professor in their class purposefully did this in an effort to ease the burden of their class during this difficult time. Another student studying theater said that they also thought their professors had reduced the materials covered in the course, but that they think they gained a deeper understanding of the concepts that were covered as a result. In this case, it seems like the difference may not necessarily have been a bad thing.

On a more positive note, nearly all the students said they appreciated the increased accessibility of their professors and learning materials during emergency remote learning. Over half of the students said they felt like their instructor was a positive aspect of their remote experience. One student said, “I used to never go to office hours because I either didn’t have time or I didn’t want to walk there, but now I can just hop right on and not feel like I used up a huge amount of my day”. Four other students echoed this sentiment and said they had taken advantage of their instructor’s office hours much more regularly this semester. Interestingly, even a student who said they felt like their instructor was sometimes confusing about course concepts said they had gone to office hours much more regularly and appreciated the greater accessibility.

In addition, five of the students said that they had access to significantly more learning resources this semester that they would not have had regularly. When I asked why one student thought this was the case they said, “Before, professors would write on the white board and we would have to hurry to take notes on it. Now, the professor has lecture notes and notes they take during class that is already in an electronic format, so why wouldn’t they share it with us?”. Others, said that their lectures were recorded for the first time ever, and that professors often uploaded their lecture slides to canvas. One student said that this, “takes the pressure off of taking detailed notes because I know I can go back and look at it if I need to”.

One downside to this semester has also proven to be an upside – time. Because college related extracurriculars that would have once taken up a significant amount of time have been cancelled or moved online, all six students said they have more free time now compared to when classes were in-person. One student said they use this extra time to take care of their mental health by exercising more and taking walks. Another student said they have put this extra time towards a theatrical script they have been working on. And another said they used this extra time to dive deeper into their coursework. No matter how the students chose to use their new free time, each of them seemed grateful to have it.

When asked if they would prefer to take their courses remotely or in-person, all six students gave a very enthusiastic "in-person!" response. Many of the students pointed to the barriers discussed above as their rational, and across every interview the biggest reason the students cited was the loss of social interactions in their remote classes. One student said, "there's something inherently missing from online classes…you lose the energy of the room and the spontaneity of the class discussions". It seems that while students go to college to learn and study, it is possible that the most important aspect of their college experience has been the opportunity to interact with professors and peers organically.

Conclusion

This research study examined the perceptions and experiences of Harvard University Seniors regarding the transition to emergency remote learning utilizing six student interviews. It aimed to characterize their perceptions on the barriers and benefits of emergency remote learning as compared to in-person learning. Ultimately, my findings suggest that, as students see it from their own perspective, in-person classes are superior to emergency remote classes primarily due to the lack of clear communication and dramatically decreased social interactions with fellow

classmates and instructors. I found that many of the characteristics of remote and emergency remote learning barriers and benefits from the literature were highlighted in my interviews with the Seniors.

This research project makes several important contributions to the literature focused on student learning. This research first provides a look at Seniors' perceptions of their learning experiences during the switch to emergency remote learning due to COVID-19. This project makes it clear that while students would much rather attend classes in-person, while they learn remotely they want to see more communication and opportunities to interact and socialize with their fellow classmates.

Next, this article examined the nuances of emergency remote learning as compared to regular remote learning and helped identify many additional barriers students are facing right now. Things such as stress or anxiety due to the pandemic, zoom fatigue, and extreme reductions to social interaction are unique to emergency remote. The results from this study help highlight a few possible sources of the anxieties students may be facing and helps connect them to their perceived lack of motivation and engagement.

In consideration of both my findings and limitations, this research project can serve as a point of reference for students and scholars seeking to gain a greater understanding of students' perceptions of their emergency remote courses. In addition, it can also serve as a reference for those seeking to understand the nuances of emergency remote versus regular remote learning. More research with greater sample sizes and diversity are critical to gain a fuller understanding of many of the issues discussed in this research project. How students think about and perceive their experiences at this time will likely differ between institutions, background, and other characteristics unique to the individual. Only future research exploring these questions at a broad

range of institutions can address the current gaps in the literature and provide greater understanding about the students in emergency remote classrooms.

Table One

Student Perceptions of Negative Aspects of Learning Remotely Compared to Learning In-Person

Category name	*Definition*	*Number of responses that fell under this category*
Difficulty or rigor	Mentioned increased difficulty or rigor of classes	2 (33%)
Concepts	Mentioned class concepts were more challenging or confusing	3 (50%)
Zoom fatigue	Mentioned remote synchronous classes as tiring or taxing	6 (100%)
Engagement	Mentioned it is harder to engage online	5 (83%)
Motivation	Mentioned a lack of motivation or increased procrastination	6 (100%)
Social Interaction	Mentioned a decrease in social interaction	6 (100%)
Learning Outcomes	Mentioned decreased or changed learning outcomes	6 (100%)

Table Two

Student Perceptions of Positive Aspects of Remote Learning Compared to Learning In-Person

Category name	*Definition*	*Number of responses that fell under this category*
Instructor	Mentioned instructor positively	4 (66%)
Resources	Mentioned additional supplemental resources as helpful	5 (83%)
Office hours	Mentioned attending office hours	4 (66%)
Time	Mentioned increased time outside of class	6 (100%)

Appendix A

List of the interview questions I used to guide the conversation with my interviewees.

1. Can you describe the typical format for in-person vs remote lectures you have attended?
2. How do you perceive your professors have responded to the shift to remote learning?
3. What were the effects of the shift to remote learning on your learning outcomes?
4. What have been the effects of remote learning on your motivation?
5. How has your engagement with classes changed?
6. What has been the most significant difference between remote learning and non-remote learning for you personally?
7. If you were asked to choose between taking a course in-person or online, which would you choose and why?
8. Is there anything else I should have asked you to better understand how your academic experiences of remote classes compare to your academic experiences of in-person classes?

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