“IT’S A HEAVY LIFT”: HOW UNIVERSITY FACULTY AND STUDENTS EXPERIENCED EMERGENCY REMOTE TEACHING DURING COVID-19

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ABSTRACT

This mixed method, sequential explanatory study seeks to explore how faculty and students at a comprehensive university in a Mid-Atlantic American city were impacted by the shift to emergency remote teaching and learning during the spring of 2020. Data were collected through surveys, follow-up focus groups, and individual interviews. We tracked which technologies and teaching and learning supports faculty and students used when moving to emergency remote teaching and learning. Faculty and students reported overall positive experiences despite the challenges associated with the transition. Participants favored technologies that attempted to mirror the face-to-face experience and encouraged social presence. Quantitative and qualitative findings collectively indicated that participants were focused on variables that impacted student learning and fostered adaptions and accommodations in response to the needs of the university community during the COVID-19 pandemic. Lessons learned from this study offer universities evidence-based ways to engage and support teaching and learning processes even after the pandemic is over.

Keywords: COVID-19, emergency remote teaching and learning, online teaching and learning, information technologies, higher education students, higher education faculty

INTRODUCTION

In the spring of 2020 when COVID-19 closed colleges and universities (Quintana, 2020), higher education faculty were asked to embrace online learning technologies to meet the needs of their students. In the past 18 months scholars have documented, analyzed, and learned from this swift transition (see Iglesias-Pradas et. al, 2021; Jeffery & Bauer, 2020; Shim & Lee, 2020). This paper contributes to that growing knowledge base. Using an explanatory sequential case study design, we explored the experiences of faculty and students at Chestnut University (a pseudonym), a comprehensive, urban university in the Mid-Atlantic region of the United States during the spring quarter of March 2020 through June 2020. We focused on how undergraduate and graduate students and faculty of all ranks, including adjuncts, enacted emergency remote teaching and learning at the beginning of the pandemic and explored the challenges and affordances of this new approach. The COVID-19 pandemic created space to study this new instructional model and include participants who did not self-select this learning environment, which allows the examination of a broad population in a new context.
LITERATURE REVIEW

Technology Use and Experiences

The types of technology common to higher education include a range of instruction and learning tools, each with various affordances and constraints (Aljawarneh, 2020). These technologies can be used in face-to-face teaching as well as asynchronous instruction, which is usually described as online learning. Some technologies, such as learning management systems, are well-established and almost universally used in higher education (Dahlstrom et al., 2014), while others, such as teleconference technologies like Zoom, exploded in use when classes moved to the virtual setting (Yuan, 2020). In the spring of 2020, many instructors started delivering synchronous classes using emergency remote instruction to rapidly transition courses planned for face-to-face instruction into virtual environments (Hodges et al., 2020). Remote teaching can be facilitated with interactive technologies including online whiteboards with annotation features, breakout rooms for small group interactions, online labs, and various polling and quizzing applications.

ECAR (2020) conducted a survey during the first half of 2020 and collected data both before and during the move to remote instruction. The survey found that about half of higher education faculty generally like to use a blended model of instruction. Here blended means a course that combines face-to-face and online components. For example, more than half of the respondents preferred to use technology in some way for assignments and exams, but less than half used technology for student presentations. Overall, faculty reported positive experiences with technology in the first half of 2020. In this same survey, higher education students rated reliable Wi-Fi as the most valuable learning technology for them. Interestingly, the ECAR survey found that while students widely reported instructors using technology in their teaching both before and during the pandemic, the instructors were unlikely to utilize student devices such as smart phones as part of the learning experience.

Technology Supports

Providing faculty and students support for learning and using new technology tools is a complex process. The professional development needs of faculty differ based on their interest, rank, and discipline (Elçi et al., 2020). Research has demonstrated that faculty need time and ongoing organizational support to successfully adopt new instructional practices, including the use of learning technologies (Zheng et al., 2018). The rapid and necessarily quick shift from a face-to-face to a fully online learning environment due to COVID-19 did not allow much time for professional development and left many faculty feeling as though they were not fully supported by their institutions (TopHat, 2020).

Emergency Remote Instruction

The shift to emergency remote instruction that occurred during the spring 2020 quarter at Chestnut University cannot be considered either online or blended, though there are overlaps in the ways that these models deliver instruction. Emergency remote instruction “involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated” (Hodges et al., 2020, p. 7). Emergency remote instruction courses were not designed to be taught in an online or blended format and students had not planned on attending these courses in virtual environments. As institutions prepared to deliver courses in virtual environments due to the global COVID-19 pandemic, the major online teaching and learning organizations offered definitions of this new method of delivery and provided supports for faculty and institutions as courses and programs moved to virtual environments (Hodges et al., 2020; O’Keefe et al., 2020, Online Learning Consortium, 2020; 2021; Quality Matters, 2020).

Chestnut University’s Emergency Remote Instruction Teaching Model

Chestnut University is a large, private, comprehensive research university in the Mid-Atlantic region of the United States. On Monday March 16, 2020, the university president announced in an email that the spring 2020 term would be taught remotely using web, video, and teleconferencing tools and sent an email that outlined what emergency remote teaching at the university entailed:

Students should expect that their remote
courses in spring will be a mix of synchronous (i.e., course sessions that will be offered virtually to all registered students at the same time using tools like Zoom) and asynchronous engagement.

While it is not required for courses to include synchronous engagement, it is highly encouraged. Any course sessions that are being delivered synchronously must be conducted during the originally scheduled time slot (Eastern Daylight Time).

To accommodate students in widely varying time zones or who need other academic accommodations, all synchronously delivered content must be recorded and made available to students (i.e., posted to Blackboard). In keeping with current University policy, students are free to download and use these recordings for their own use but are prohibited from distributing them.

In that same email, the president indicated that the Office of the Provost would provide resources for remote teaching and learning to faculty and students. These resources largely consisted of university laptops for faculty and students who did not have a computer at home and Wi-Fi hot spots for students who requested them through their academic unit. The university also offered a range of training and professional development sessions to faculty and students (see Figures 5 and 7).

METHODOLOGY

Research Questions

We collected quantitative survey data from both students and faculty at Chestnut University regarding their remote instruction experiences and then qualitatively explored the survey results using interviews and focus groups with a subgroup of faculty and student survey respondents. The following research questions guided this inquiry:

RQ1: What did emergency remote and online teaching and learning look like at Chestnut University in the spring of 2020?

RQ2: What were the challenges and supports that faculty and students experienced during this shift?

Research Design and Instruments

We employed a sequential explanatory mixed methods research design for this bounded case study (Creswell, 2014). We collected quantitative and qualitative data to examine the shift to online and remote instruction during the spring 2020 quarter. This approach, paired with a purposeful team of five researchers with differing qualitative and quantitative research expertise from three different academic departments, ensured data source triangulation, analyst triangulation, and methods triangulation to increase validity (Yin, 2013).

Quantitative Instruments

Student and faculty surveys were similar, but not identical. The student survey is described below:

1. The survey included 47 four-point Likert scale technology survey questions and a subsection of nine questions for students who received accommodations through disability services. Items were drawn from the EDUCAUSE DIY Survey Kit: Remote Work and Learning Experiences (ECAR, 2020), and others were generated specific to available Chestnut University technologies.

2. There were 12 questions regarding students’ demographic characteristics, their prior experience with remote, online, or hybrid learning, and their teaching environment at home.

The faculty survey was constructed to chronicle the same dimensions of the shift to emergency remote learning but from the faculty perspective, as detailed below:

1. There were 47 four-point Likert scale technology survey questions. Items were drawn from the EDUCAUSE DIY Survey Kit: Remote Work and Learning Experiences (ECAR, 2020) and others were generated specific to available Chestnut University technologies.

2. A second section of the survey included 17 questions generated by the research team to describe faculty’s demographic characteristics, their prior experience with remote, online, or hybrid learning, and their learning environment at home.
Qualitative Instrument

After analyzing quantitative data, interview protocols with structured, open-ended interview questions (Hesse-Biber, 2017) were created for both students and faculty. These questions were designed to elucidate participants’ thoughts on significant quantitative results. During the Zoom interviews and focus groups participants were shown a PowerPoint with figures summarizing the findings of the survey.

Research Participants

The participants included Chestnut University students enrolled in at least one course and Chestnut University faculty of any rank or employment designation teaching at least one course during spring of 2020. The surveys were distributed to students and faculty via email from the provost’s office. Following informed consent, the first question on the survey asked if a student was currently learning remotely or taking online classes or if the instructor was currently teaching remote or online classes. If they answered no, the survey ended. A total of 688 students and 225 faculty completed surveys.

Because of the delicate timing and the sensitive nature of this study, we wanted to give the participants assurance that they would not be identified in this research. As such about half of the student survey respondents chose not to self-identify their demographics. Of the survey completers, 29% were undergraduates and 19% were graduate students, and 33% identified as male and 14% identified as female. The respondents who completed the demographics section of the survey were fairly evenly spread across 11 of Chestnut’s 12 academic units. Almost 60% of survey completers chose not to identify their race/ethnicity.

Similar to the student survey, approximately 30% of faculty did not complete the demographics section of the survey, and 39% identified as female, 27% as male, and 4% preferred not to answer. For demographics, 55% of the sample chose to identify as white, 2% identified as Asian American/Pacific Islander, and 2% identified as Black or African American, while 8% of the respondents chose to self-identify or not disclose their race and/or ethnicity. Twenty three percent were full time tenure/tenure track professors, 32% were fulltime nontenured professors, and 16% were adjuncts. About a third reported teaching both undergraduates and graduate students, while 27% taught undergraduates only, and 13% taught graduate students only.

At the conclusion of each survey, there was a link to an Office 365 form where faculty and students interested in participating in the follow-up interviews could leave their email address. This de-coupled their identifying information from the Qualtrics survey data. These emails formed a subset of participants from which we invited faculty and students to participate in follow-up interviews. Seven faculty and 14 students completed interviews. The seven faculty included four women and three men and both full-time and part-time instructors. They represented six departments and five academic units at the university. The 14 students interviewed, seven male and seven female, represented nine academic units and five were graduate students.

Data Analysis

Survey data were analyzed descriptively and inferentially (e.g., t-tests, ANOVAs, correlations) using quantitative software (Excel and SPSS). In a sequential explanatory design, the qualitative data collection is informed by the collection and analysis of the quantitative data. More specifically, “the data collection decisions for the explanatory sequential design focus on making a strong connection between the two phases” (Creswell & Plano, 2018, p. 190). This research design means that the interview questions were at least partly based on the quantitative results of the survey. The participants viewed a PowerPoint with the figures included in this paper and were asked to share their insights about the data. The participant interviews were transcribed via software embedded in the video conferencing tool used in the interviews and then anonymized. The transcripts were coded using thematic analysis (Braun & Clarke, 2006). A spreadsheet to collect and share data was created. Three members of the research team coded the transcripts individually and then used a consensus process in order identify relevant data to explain and extend the quantitative findings. In vivo codes (Creswell & Poth, 2018) were used as subheadings in the following section to highlight trends in the qualitative data. Finally, the quantitative and qualitative data were synthesized and the integrated results communicated to the participants.
RESULTS

RQ1: What did emergency remote and online teaching and learning look like at Chestnut University in the spring of 2020?

Survey Findings for RQ1

Overall, the technology responses generated by faculty fell into two main categories: 1) technologies that faculty felt had positive impact on online/emergency remote instruction experiences or 2) technologies that faculty did not report using (see Figure 1). Technologies with the greatest reported positive impact on online/remote teaching experiences (three-quarters agreement or more) were: Ability to interact verbally (87%), Videos (79%), and Blackboard (78%). While technologies reported most frequently (50% and higher) as not applicable (not used) were: Online lab software (73%), Audio only resources (61%), and Polls (50%).

Overwhelmingly positive responses were reported by faculty across all spring teaching experience statements with more than half of faculty agreeing with all items (see Figure 2). Five statements about the spring teaching experience had more than 90% of faculty agreeing with them: Reliable personal access to communication software (95%), Students familiar with course tech (93%), Reliable personal access to internet (92%), Reliable access to digital device (91%), and Access to library resources (91%). One item with the least agreement, slightly over half of faculty, was Appropriate time to adapt to face-to-face instruction online (56%).

Overall, most students believed that educational technology had a positive impact on their online/remote learning experience. For example, Figure 3 illustrates that the educational technologies, shared faculty screens, class recordings, real-time chat, ability to interact verbally, the Blackboard Learn platform, videos, and recorded faculty lectures were the most popular with students as more than 70% of students agreed that these technologies positively influenced their learning experiences. In addition, students had the opportunity to utilize most of these educational technologies in their courses last spring. Figure 4 also highlights that only six educational technologies were rated as “N/A” by more than 25% of students: digital whiteboards, breakout rooms, polls, online lab software, audio-only resources, and online learning modules. These were the least utilized technologies in these students’ courses.
Most students had a positive learning experience (Figure 4). More than three quarters of students reported high levels of educational access with more than 80% of students reporting reliable access to digital devices, internet services, and communication software and the time to attend class meetings or participate in synchronous classes. Importantly, 92% of students felt familiar with the technologies required for classes. Most students, more than three-quarters, agreed that their course instructors were familiar with course technologies, set clear expectations around course assignments, and were appropriately available/ responsive.

Despite these positive experiences with instructors and technology, approximately half of students disagreed that they were able to stay focused/pay attention in class or had high motivation to complete course work.

... as close to what we’re used to in terms of an in-person class as possible, right, if you have a shared faculty screen. And a lot of the times I know in engineering, you know, they just have a blank whiteboard up and the writing on the screen just like they would be writing on a whiteboard in class.

Some students found that the technology improved on the face-to-face experience:

I personally found [class recordings] the most helpful because I was the slow note taker and, for my professors that talk really fast, I was able to write the notes that I wanted and then go back and go back and fill in what I needed, which is really helpful.

Sharing the screen in particular was very helpful. We have [had] a few additional zoom sessions that the faculty member set up that probably or may not have normally been part of the course ... And I think having the presentations that you can follow along, was very helpful. You could also prepare ahead of time and maybe prepare questions ... It’s nice to have the recordings and that just makes it all a lot easier to for note taking.

“Feels a Bit More Natural.” Students and faculty described the impact of these technologies in similar ways. For example, both students and faculty felt positive about the technologies that replicate the face-to-face experience. A full-time faculty member described how they “tried to make my class even more interactive than it would be in a classroom by building questions into my presentation so that when I got to them. I knew I had to ask a question here.” From the student perspective, “you got cameras turned on; you’re talking [and] asking questions—that feels a bit more natural, a bit more worthwhile.”

A graduate student described technology as a tool that “mimics and mirrors the like in classroom experience.” A 2020 graduate made the point that the technology made it:

“It Was Just So Alien.” Students who engaged with virtual lab technologies expressed disconnects. Students commented “well we do these virtual labs, and it’s better than not having a lab,” but the labs “didn’t teach me really like anything because it’s not like I’m doing it and getting to work, hands on with [the lab].” The issues students experienced with virtual lab technology may be due to limited faculty-to-student and student-to-student interaction during the virtual lab experience rather than a deficit in the technology tool selected for virtual engagement. As one student noted, “not having that one on one with the professor being there explaining it [and] not having the same kind of in person interactions is a totally different experience when you’re doing it online.”

The faculty talked about how hard they worked to move their classes to the remote space. One described it as a “heavy lift” and another mentioned that they used “more PowerPoint slides than I ever would have if we’d been in class.”
Some faculty were frustrated with Blackboard, with one saying, “Blackboard has a lot of issues.” Other faculty described Blackboard as a real asset during the shift to remote teaching:

... not to toot my own horn, [but] I felt like my Blackboard page was very organized ... it helped me keep track of things and Blackboard was great. I recorded ... my zoom lectures because not, you know, not everybody could watch at the time ... but my worry, it was that these were undergrads and they might blow off the class or blow off my lectures [so] I designed short quizzes for like three or four questions. Super easy. Just if you watch the lecture, you could answer. So then Blackboard has that quiz function and it dumped it right into my gradebook.

Faculty did express concern about learning new technologies and maintaining student engagement through virtual instruction. For example, one adjunct faculty said, “I’m talking at a computer screen, it was just so alien and times difficult for me; people can’t really stay focused online for that long … You, like I said, you can’t read the room.”

Breakout rooms in Zoom and Blackboard Collaborate, a video conferencing tool built into the Blackboard learning management system, offered some contrast. Sixty-one percent of faculty said they had a positive impact on their teaching, while only 37% of students reported using breakout rooms. In interviews most faculty and students talked positively about breakout rooms, describing them as “helpful,” and suggesting they help keep students “accountable.” An engineering student suggested that “maybe for certain discussion-based classes I could see how [breakout rooms] could work. But for an engineering class, it was just awkward and weird and just kind of a time waster.” Another student shared that polls could also be distracting, stating, “So when class breaks up like that, you’re focused on the lecture, you’re engaged, then you get a poll and it’s like, all right, I got 10 minutes I’ll check my phone and I’ll disengage and then it’s kind of hard to hop back into it after that.”

RQ2: What were the challenges and supports that faculty and students experienced during this shift?

Survey Findings for RQ2

Faculty responses can be categorized as either half or more of respondents agreeing with a spring teaching support or indicating the support was not applicable (not used) (see Figure 5). The spring teaching supports endorsed most by faculty were College/School Specific (72%), Instructional Technologies Group (67%), and Technical Assistance (57%). Supports considered not applicable by most faculty were Peer2Peer Network, a voluntary faculty to faculty support program created for emergency remote teaching (70%), Teaching Assistants (64%), and Online Learning Fellows (56%). The one support that falls into neither category is the Teaching and Learning Center, which had 49% of faculty agree and 30% reporting it was not applicable.

Figure 5. % Agreement that Various Supports Helped Spring Teaching

Overall, faculty reported feeling not concerned or only somewhat concerned with all aspects of teaching their spring courses (see Figure 6). Items with the least concern were related directly to faculty: Tenure/promotion impacts (16% concerned/very concerned), Teaching evaluations (23% concerned/very concerned), and Online privacy (24% concerned/very concerned).
very concerned). Approximately a third or more of faculty indicate they were concerned or very concerned with student-related to variables such as Student learning (38%), Changes to grading (37%), Online exam security (32%), and Student performance (31%).

The learning supports featured in Figure 7 were utilized by about half of the students surveyed. The most utilized supports were supports provided by colleges or schools. Among students who used supports provided by specific college or schools or teaching assistants, approximately 60% agreed that these supports were helpful during spring quarter 2020.

Students also expressed some concerns that were specific to teaching and technology, although the prevalence of these concerns was not high, ranging from a quarter to a half of students. The most frequent concern shared by 46.8% of students was timed tests. (See Figure 9).

![Figure 7. % Student Agreement with Learning Support Statements During the Transition to Remote Learning](image)

![Figure 8. % Student Concern with Various Aspects of Learning](image)

![Figure 9. % Student Concern with Aspects of Teaching and Technology Since Transition to Remote Learning](image)

**Participant Perceptions of Survey Findings for RQ2**

“Some of Us Worked Our Butts Off.” Faculty were similarly concerned about learning and course performance, sharing “some of us worked our butts off to try to produce a good product for the students” and “maybe some people were disappointed that in spite of all their hard work students weren’t doing as well on the assessments as they had hoped.” An undergraduate student shared their concern and frustration in this way:

> And we’re basically teaching ourselves a lot of things. So that’s a big focus. And then, how we actually do in our grades is actually really, really important, which is where you kind of fall in the whole like, “Well, I can find—basically, I could find all these answers online. But if I do that, I’m not really going to learn anything. But I might fail because I’m having a hard time learning everything online. So what do I do?

Although some students were concerned about their ability to learn in virtual environments, one student expressed that the shift “gave us more advantage of getting a better and different view at what we were learning” due to the use of different tools and strategies by the faculty. Another student commented “I feel like it’s actually more engaging and you still get one on one time with
your professor, you still get to engage with the students, if not more.”

**DISCUSSION**

The move to emergency remote teaching and learning in the spring of 2020 was abrupt and without precedent. Our research found that faculty and students at Chestnut University reported overall positive experiences despite challenges, and they described themselves as capable of effectively teaching and learning in a virtual platform. This may be related to the “can do” spirit and sense of community brought about by the universal experience of the COVID-19 pandemic. Students and faculty alike reported positive impacts from the varied learning technologies that were made available to them. This aligns with research from ECAR (2020) both before and during the pandemic that found faculty and students saw value in blended learning and other technology-infused instructional models.

One important finding was the value participants placed on human interactions and reliable connections between faculty and students. Technologies that somehow replicated face-to-face experiences, such as shared faculty screens and recorded lectures, were rated highly. More than half of faculty who completed the survey (61%) indicated that use of breakout rooms was constructive, but 37% of students surveyed indicated they did not get to use breakout rooms. This may be an underutilized strategy by faculty that would be worth providing professional development and support for it. Both faculty and students also appreciated learning technologies that helped them communicate expectations, share content, and stay organized. For example, the active use of Blackboard was valued by students and instructors, which makes sense since the use of leaning management systems had been common well before the pandemic occurred (Dahlstrom et al., 2014). Online lab software had a limited positive impact on teaching and learning in this term, with only 7% of faculty and 18% of students reporting it as helpful. However, most respondents did not report using online labs at all. This aligns with concurrent research during the pandemic showing that many online lab experiences could not replicate the hand-on, decision-rich experiences students expected (Jeffery & Bauer, 2020).

The sense of a human-centered community was also seen in the way that all types of participants placed student learning at the center of their responses. While faculty expressed some level of concern about their own teaching evaluations and tenure/promotion pathways, they were most concerned about student learning and student performance. Students expressed these same concerns about their own learning and performance, but they also shared that some aspects of the emergency were positive. Students talked about being able to rewatch recorded lectures to increase their mastery of content and increased interactions with professors through Zoom-facilitated synchronous classes and office hours. Changes in the grading structure were part of that worry for student learning, which was slightly more concerning for faculty than it was for students (e.g., 37% of the faculty and 30% of students were concerned or very concerned about the shift to Pass/No Pass). Throughout the interviews and focus groups, students and faculty alike suggested that Pass/No Pass was appropriate considering the stresses of the COVID-19 shutdowns but shared their fears about its impact on meaningful student engagement in the short-term and student content mastery in the long-term.

Faculty were more likely than students to access professional development and formal virtual instructional supports during the transition, but neither group reported much interest in this type of assistance. Only 15% of the faculty who completed the survey had positive experiences with professional development and formal teaching supports. The literature acknowledges that faculty professional development with regards to technology use varies widely based on interest, rank, and discipline (Elçi et al., 2020), so the quick and intensive approach necessitated by the sudden switch to emergency remote instruction may not have met the needs of many faculty. The qualitative results suggested that faculty were largely unaware of these opportunities, not that the supports were ineffective. Faculty gravitated toward supports offered by or marketed by their own academic unit, while the interviews found that students reported turning to peers most frequently for learning support.
LIMITATIONS AND ETHICAL CONSIDERATIONS

This explanatory sequential mixed methods case study has limitations. It was conducted at one university in the United States during its first term of remote teaching and learning. Data were not collected over subsequent remote terms or from other universities, which limit longitudinal or more generalizable findings. This unfunded research was approved by the university’s Institutional Review Board and supported by both the Faculty Senate and the Provost’s Office.

CONCLUSION

Case study research has the potential to offer “in-depth inquiry into a specific and complex phenomenon (the ‘case’), set within its real-world context” (Yin, 2013, p. 321). In the spring of 2020, teaching and learning rapidly changed without warning for nearly all students and faculty around the globe. Universities in the United States and around the world responded to the COVID-19 pandemic by sending students and faculty home, resulting in previously unimaginable modifications to higher education. It offered researchers an ideal opportunity to study the phenomenon of remote and online teaching and learning in a novel, real-world context. The higher education community lived through these changes and they may feel familiar now, but robust and well-founded research is needed to document these experiences.

The shift from traditional forms of teaching, learning, educational engagement, and communication required significant adjustments by university students and faculty. Not surprisingly, concerns for student learning, academic progress, access, and proficiency with educational technology dominated the headlines and university conversations. While our research provides only a snapshot of student and faculty experiences at one university, our findings suggest that despite challenges, many students and faculty adequately adapted to educational instruction during the “new normal.” These findings align with the relatively optimistic findings of similar case studies in higher education contexts across the globe (see Hibbi et al., 2021; Peimani & Kamalipour, 2021; Shahrill et al., 2021)

The need to adjust rapidly left universities with little time to do more than simply react. However, having had time to adjust to and reflect on the remote/online experiences of students and faculty last spring, there is now the opportunity to implement teaching practices found to be helpful during the rapid shift to virtual instruction. Our findings yield noteworthy avenues to foster educational engagement and progress. Positive experiences with educational technologies that facilitated communication and emotive connections echo other research that spotlight the promise of both synchronous and asynchronous video to foster academic engagement and social connections (Borup et al., 2014; Kaplan-Rakowski, 2021). However, despite the availability of and generally positive experiences with institutionally provided technological supports for students and faculty, these supports were not widely utilized. One way forward may be for universities to integrate technological skills more deliberately into the existing curriculum for students and professional development for faculty. As one faculty interviewed noted, “Doing [remote teaching] the right way with the right support systems … will be a strategic differentiator” for institutions of higher education going forward. Even after the pandemic recedes, universities can use the lessons learned to create effective environments that engage and support students and faculty working across varying teaching and learning modalities.
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