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VIRTUAL INSTRUCTION SUPPORT FOR FACULTY

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ABSTRACT

Aim/Purpose	This research study explores the challenges, successes, and supports desired in implementing virtual learning following a survey of faculty for their experiences and interests. Faculty in higher education need quick, practical tools and strategies to enhance teaching and learning in a virtual classroom.
Background	The sudden and ongoing COVID-19 pandemic had created an urgency to transition to a virtual learning environment, yet expectations for faculty to teach virtually may not have matched best practice and current research.
Methodology	This qualitative research begins with an anonymous, emailed survey of higher education faculty designed to explore participant thoughts and experiences related to their virtual teaching in Fall 2020. The survey included a series of demographic questions related to what type of faculty they were (full-time or adjunct), which discipline they taught, which format they were teaching in, as well as 5 open-ended questions to elicit feedback to teaching in this format of their challenges, some positives, strategies used, how they assessed learning, and which workshops they would like offered to better support them. A full year after the pandemic began, we sent out a follow-up survey to check in with faculty and find out specifically new skills/mindsets they developed, new tools they may have tried, their level of stress as well as how they perceived their students' stress and their students' level of learning. We decided to broaden our population by sharing the follow-up survey via social media to capture a diverse audience, which included international participants.
Contribution	Despite the different stress levels for most faculty and students during the pandemic of 2020-2021, our research highlights that it was also a time of growth and learning. Learning from past experiences can help us be prepared for future challenges related to virtual learning.

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Findings	We found that the emergency remote teaching caused faculty to explore new ways of teaching and learning and helped them to develop a mindset that embraced a variety of skills such as flexibility, creativity, and innovation. We also learned that being aware of the stress levels of both faculty and students is of great value to institutions and with a good infrastructure and support, virtual learning can be successful.
Recommendations for Practitioners	Through our research, we have found faculty are lacking the tools necessary to engage their learners in a virtual setting. As such, best practices need to be shared and then embedded into the instructional approach. However, given the pandemic, faculty were forced to transition face to face classes to a virtual format without having been provided these best practices.
Recommendations for Researchers	We recommend researchers explore the habits of minds of faculty and how they have developed and continue to develop due to challenges they experienced related to virtual learning and continue to experience.
Impact on Society	Many of the skills that faculty developed due to this emergency shift to virtual teaching during 2020 and beyond are skills faculty will have for life. With support and ideas faculty can implement quickly, faculty will be better prepared to provide instruction and create settings that enhance teaching and learning in a virtual setting.
Future Research	Future research could include providing a voice for students by distributing a survey to the student body for their views and perceptions on virtual learning during the pandemic and moving forward.
Keywords	virtual teaching and learning, flexibility, mindsets

INTRODUCTION

Due to the sudden nature of the COVID-19 pandemic, students, faculty, and administrators throughout educational institutions, accustomed to a classroom learning environment, have been placed into positions where teaching and learning virtually is their only option. In many cases, students, faculty and administration may have had limited exposure, training, or the desire to transition teaching and learning to this emergency environment. Unfortunately, there can be a lack of appreciation for the differences between these environments. Indeed, many faculty believe online learning is not as effective as face to face instruction, and this can hinder their progress toward accepting and implementing the insights around virtual instruction (Bailey et al., 2018).

Initially during COVID-19, the approach to instruction could best be described as emergency remote learning, whereby traditional classroom instruction was conducted via virtual means. The same formats, tools, and techniques were applied as if the students and faculty were collocated. As instructors have progressed past the initial shock and transition, the reality of and pedagogy of online instruction must now be considered more deeply. Panic was certainly present during the sudden shift to remote teaching in 2020 and is not the same as virtual learning that is expected and implemented using best practices and research and with willing participants who chose to teach and learn in this mode (Eaton, 2020).

Six months to a year into the pandemic, many faculty were still teaching virtual with a mix of requirements such as teaching face-to-face students at the same time as teaching virtual students, teaching virtually from home, teaching virtually from a classroom, or some combination.

Because of the uncertainty of the times, the stress level for many faculty remained high, which created its own challenges to accepting and implementing new methods. Faculty may not feel they are

getting the support and training they need to be successful in a virtual environment. Students may also present barriers in not having the technological and instructional supports in place needed to be successful in this environment. If the pedagogy, technology, and other environmental supports are not set up to sustain a virtual environment, frustration often ensues for both the faculty and the learners.

Leaders who are skilled and aware of the many facets surrounding virtual learning have a greater ability to create environments that are pedagogically appropriate with policies that support a well-designed virtual learning environment (Roache et al., 2020). When the policies related to virtual learning are aligned with the mission and vision of the institution, this can facilitate the support of stakeholders. However, if leaders are creating policies that contradict high quality virtual teaching, then faculty and students will both feel this disconnect. For example, expecting faculty to teach for hours as though they are face to face does not equate to a high quality, flexible virtual learning environment. In addition, when virtual learning policies are grounded in best practice and research, the likelihood is higher that supports are in place for sufficient training of faculty and students. Now that the panic phase is over, how can virtual learning be leveraged to provide research-based, supportive and engaging teaching and learning environments for faculty and students?

Since virtual instruction in some capacity may, arguably, be the new normal in educational institutions, it is imperative that we provide faculty with the resources and support they need to thrive in this environment with the goal of improving teaching and student learning. Students also need to be supported and provided with engaging and meaningful virtual learning experiences. For this reason, we wanted to examine the experiences of faculty both at the beginning of their emergency remote teaching and then a full year after the start of the pandemic in the Spring of 2021.

Our research examined participant thoughts and experiences related to their virtual teaching in Fall 2020. We followed up with the faculty, and we opened our research to a greater population in this follow-up survey, so that we could examine the skills faculty gained, new tools they may have tried, as well as their perception of stress and learning that took place during the year. This research study was precipitated by the COVID-19 pandemic and the sudden pressure faculty were under to teach virtually. Our goal is to use this information to provide faculty with practical, quick tools and strategies to enhance teaching and learning in virtual settings to improve learning. We also believe there is a lot to learn from emergency situations such as skills and mindsets that can be helpful moving forward and planning for high quality virtual learning. We also believed that being aware of stress and perceptions of learning were factors we needed to examine. Because we hope this research is applicable to an international audience, we provide definitions to ensure complete understanding of the terms used in this paper.

DEFINITIONS

The following definitions are provided to help clarify how we are using these terms:

Asynchronous instruction: Instruction that is offered not at the same time as the learning takes place. This allows for flexibility and convenience for the students or the instructor.

Dual Audience Learning: When there are some students in the same physical location as the teacher and some students are in a virtual space but learning at the same time.

Emergency Remote Learning: due to the COVID-19 pandemic, institutions were forced to quickly change their mode of instruction to online learning.

Faculty: This term will include any instructor who teaches in higher education, which would include full-time faculty, adjunct faculty, part-time faculty, etc.

Habits of mind: Having a disposition toward behaving intelligently when confronted with problems, and one that empowers creative and critical thinking.

Synchronous instruction: Instruction that is offered virtually while the learning is taking place. The instructor and the students are in a live session where they can interact and collaborate.

Virtual Learning: Instruction is offered in an online format where instructor and students are not in the same physical location.

BACKGROUND

According to the Office for Civil Rights in the Department of Education (United States Department of Education, 2021), postsecondary schools need to take action to ensure the health, safety and welfare of their students and staff. Given this responsibility and the risks of COVID-19 on the health, safety and welfare of students and school staff, postsecondary schools quickly transitioned to virtual learning in the Spring of 2020. However, given the emergency, this transition was conducted quickly, without proper training for many faculty and students who may have lacked experience in virtual teaching and learning, and without time to research and implement best practice for virtual teaching and learning. Fast forward to Fall 2020 and Spring 2021, many faculty and students were in the same position that they were in back in the Spring of 2020. The frustration, stress and anxiety of COVID-19 continued to burden institutions and the faculty, staff, and students who are part of them. Although many would have liked to return to what they considered normal, virtual teaching and learning may be part of our new normal. For this reason, there is an urgency to provide practical tools and ideas to help faculty utilize virtual learning effectively and support students in learning in this new environment.

Virtual learning has been around for a long time and integrated and available to institutions, but typically, faculty and students who were interested in this type of learning could elect to take part in either teaching or learning in this way. The virtual learning was deliberate, planned and hopefully faculty and students were supported and willing participants. However, Spring 2020 was different where emergency remote teaching and learning went into effect suddenly, and many students had not chosen to take their courses this way and were provided little to no training in how to do so successfully. Virtual learning can be effective and provide many benefits to institutions including flexibility for faculty and students, cost efficiency, and high-quality teaching and learning (Bailey et al., 2018; Joosten et al., 2020).

A decade ago, the Department of Education (2010) released a report that described the following benefits:

Online learning has become popular because of its potential for providing more flexible access to content and instruction at any time, from any place. Frequently, the focus entails (a) increasing the availability of learning experiences for learners who cannot or choose not to attend traditional face-to-face offerings, (b) assembling and disseminating instructional content more cost-efficiently, or (c) enabling instructors to handle more students while maintaining learning outcome quality that is equivalent to that of comparable face-to-face instruction.

Although research suggests there are many benefits to high quality virtual learning, if done without proper training and support, faculty and learners can have poor experiences. Mathes (2018) reported the following themes present that came from their working group of professionals in seven regions (Africa, Arab region, Asia, Europe, Latin America and Caribbean, North America, Oceania) across the globe:

- Quality assurance concerns and inconsistent use of standards can cause poor learner experience.
- Professional development is not always available and faculty who are used to teaching face to face may not understand how their role is different in a virtual learning environment.

- Societal perception that virtual learning is less or not as good as face-to-face learning; these viewpoints can be difficult to overcome, and more so in certain regions.

The information from the Report by the International Council for Open and Distance Education (Mathes, 2018) can help guide institutions as they implement virtual learning. Knowing how a specific region perceives the use of virtual learning can help determine areas where support is needed. The report also reinforces that if faculty do not have professional development, then they may not understand or be equipped to adapt their teaching to a virtual environment. Consistent use of standards can help ensure learners have a positive experience. Standards are available and can be used to guide the design and implementation of virtual learning in a variety of settings. For example, the International Association for K-12 Online Learning (iNACOL) (2011) (now known as the Aurora Institute) has standards that have been adopted by some institutions but can also be used to guide the development of course design. Quality Matters is another quality review system that uses peer reviewers and a rubric to assess and support quality virtual teaching and learning. In an ideal situation, courses would be developed using a guide to ensure quality and appropriateness for virtual learning. However, during the pandemic, many courses that were not developed for virtual learning were suddenly delivered in a format that may not have been appropriate for both faculty and/or learners (Eaton, 2020).

Most likely the demand for quality virtual learning will only increase and especially during these times of social distancing and beyond. Quality virtual learning can provide students with flexibility and effective ways to gain skills, retrain, and discover new learning (Roddy et al., 2017). Not only can students learn in flexible ways, they can also learn in accelerated ways where courses run for 6 to 8 weeks, allowing them to obtain the skills they need faster. In addition, the traditional lecture and didactic style of education is much less relevant for today's learners (Bridgstock, 2016). Even prior to the pandemic, institutions and individuals were turning to virtual learning to meet the varying needs of faculty, learners, and administrators. In fact, financial pressures due to enrollment declines and decreased funding have been pushing institutions to explore the prospects of virtual learning for years (Stavredes & Herder, 2014).

Joosten et al. (2020) under the auspices of the Every Learner Everywhere Project of the WICHE Cooperative for Educational Technologies (WCET), provided the following insight into the benefits of innovative digital learning to not only improve student outcomes and close equity gaps but also to “have the potential to improve instruction and learning effectiveness by facilitating effective pedagogies of and to improve the efficiency of higher education” (p. 8). However, Joosten et al. (2020) reported that even when institutions made digital learning part of their strategic plan, faculty may still be hesitant to embrace these initiatives.

BENEFITS TO VIRTUAL TEACHING AND LEARNING

Virtual teaching and learning can provide opportunities for faculty to experiment with participatory pedagogy where students are engaged, actively participating, and part of the learning process. Emerging technologies can seem overwhelming when faculty are used to a different style of teaching and learning and when they are not sure where to begin. Ko et al. (2017) conferred that teaching with technology entails much more than deciding on what tool to use and how to use it, but also relies on how to do so ethically and responsibly while deciding on how to assess the value of the virtual learning and the credibility of the content. This is a complicated and involved decision and one that faculty need support and guidance while navigating the new territory of virtual teaching and learning. The virtual learning platform provides opportunities where learners can develop digital media skills; however, if faculty are not supported, encouraged, and incentivized to use emerging technologies to teach, students may miss these critical learning opportunities (Ko et al., 2017). Because there are many challenges to teaching and learning in a virtual environment, this will be discussed in the next section.

CHALLENGES TO VIRTUAL TEACHING AND LEARNING

Because education technology tools change frequently, professional development and training should not be focused on specific tools as this could prove to be a waste of time and money when tools change frequently (Mehta et al., 2019). Faculty instead need habits of minds such as flexibility, openness to ambiguity, calculated risk taking, and the ability to play (Mehta et al., 2019). If faculty are going to thrive in a virtual environment, they need administrators and leaders who appreciate, encourage and reward faculty who display these habits of mind. In addition, what happened in 2020 with the sudden transition to emergency remote learning, this caused unexpected changes to teaching and learning, and in turn caused stress on both faculty and students. Ko et al. (2017) compared unexpected shifts (like what happened in 2020) to airplane turbulence which results in stress and discomfort. However, if emerging technologies are integrated effectively, and if faculty are more open to taking risks and finding creative ways to support student learning, and are supported by their administration, this discomfort can be minimized. Institutions who do not embrace virtual learning may find that they are unable to enroll students and continue to serve their populations. Most likely, leaders and institutions that concentrate on developing sustainable and effective digital infrastructures and cultures will have the ability to overcome difficulties in the future (DeVaney et al., 2020).

Another concern related to virtual teaching and learning is faculty fear a lack of connection that is present in most face-to-face settings (Udermann, 2019). This community building and connection can be created virtually and is a critical component of virtual teaching and learning. Emerging technology tools help facilitate these social connections and faculty can find ways to do this without replicating courses as though they are face to face. Developing presence (cognitive, social and teaching) or a community of inquiry as defined by Garrison et al. (2001) in a virtual environment is critical to the success of building community.

If we try to recreate a face-to-face course and offer a course virtually without any modifications, faculty and students will encounter significant challenges. The faculty role shifts during a virtual environment to one of facilitator, coach, and guide and this shift can be challenging to faculty and students who are not used to their different roles in a virtual environment. There is danger in not modifying or changing the way a course is offered as there are many pedagogical approaches that are less effective in a virtual setting and vice versa. Institutions are responsible for providing support and resources to students and faculty to reduce barriers to teaching and learning (Roddy et al., 2017).

As discussed, prior, given the rapid changes institutions faced during the COVID-19 pandemic, faculty and students had little time to prepare for the new way of teaching and learning. For example, challenges such as video fatigue became a real problem (Sander & Bauman, 2020). Although there are numerous benefits to synchronous sessions, it is also important that leaders in higher education and faculty are aware of best practice regarding virtual instruction. Otten (2020) differentiates between virtual and remote teaching and explains that virtual teaching provides a mixture of media to share content with collaboration and conversation and is controlled by the week; whereas remote teaching is like face-to-face teaching and is controlled by the clock and each class starts and ends at a specific time. Remote teaching provides little to no opportunities for flexibility and engaging with the content asynchronously at times that work for a student. If students are provided virtual learning opportunities that merely mimic face-to-face instruction, this negates the many benefits of creating an environment where students have access to 24/7 learning, a variety of multi-model avenues to learn the content, time to think and develop critical thinking about the content area. In addition, the demographics of students has changed and includes more adult learners who need the flexibility offered by virtual learning experiences. The Making Digital Learning Work study found if institutions were strategic about their digital learning platform and invested in ensuring courses and programs were developed with high quality standards, outcomes could include:

- Improved student learning outcomes.
- Improved access especially for students who are disadvantaged.
- Financial growth due to increased revenue and decreased operating costs (Bailey et al., 2018).

METHODOLOGY

Survey research was the chosen method to collect data because survey research allows the researchers to collect information on perceptions, feelings, opinions and attitudes (Wienclaw, 2021). This survey method was also a mixed method approach including both qualitative and quantitative data which provides a better picture to understand and examine human behavior (Wienclaw, 2021). Two anonymous surveys were used. The initial survey (Appendix A) was administered at the onset of the new school year in September 2020, approximately six months since COVID-19 pandemic and the swift shift to emergency remote teaching occurred that most faculty experienced in March of 2020. The follow-up survey (Appendix B) was initiated in March 2021, one year past when schools in our areas were shut down. The subjects of the initial survey (Appendix A) and research were drawn from faculty and adjuncts in a small private higher education institution located in southeastern Pennsylvania in the United States. We sent the follow-up survey (Appendix B) to the original population and we decided to broaden the population and we shared the follow-up survey on social media. We decided to do this because we wanted to gain a greater perspective into the experiences and perceptions of faculty from a variety of settings.

The participants were asked to complete an initial survey (Appendix A) to collect their thoughts and experiences related to virtual teaching during Fall 2020. We developed a post survey (Appendix B) after we analyzed and reflected on the results from the initial survey. We realized we wanted to know more about the skills the teachers developed during this time, any new technologies they may have tried, their level of stress and their perception on the learning that occurred during this time. This post-survey was sent out in the Spring of 2021, which was a full year since many schools shut down in the United States and pivoted to emergency remote teaching due to the pandemic. In this second survey, we asked faculty to reflect on their experiences a full year out from the beginning of the pandemic, and in particular skills they developed, new tools they used, and their perceived stress level while teaching during the pandemic, as well as their perception of their students' stress level and the how they perceived their students learning compared to before the pandemic. We decided to share the follow-up survey to our original population, faculty and adjuncts in a small private higher education institution, but we also invited a broader population to complete the survey to capture the reflections of teachers/faculty outside of our small original population. We shared the follow-up survey on our personal social media accounts via LinkedIn, Twitter, and Facebook.

Participants were invited to participate in the initial anonymous survey (Appendix A) through email, and then the follow-up survey (Appendix B) through email and a link was also shared on social media:

A link was provided to the participants where they could access the survey. The form was located on Google Drive and only those who have access to the link will be able to view and participate in the survey. Participants were asked to complete the initial online survey in the Fall of 2020 semester. The follow up survey was sent out in March of 2021. If participants started the survey and decided not to continue and did not complete the survey, their answers were not used in the data analysis.

The data collected was anonymized, analyzed through direct statistical tools, cross correlated, and, for textual responses, In Vivo coding was used, which uses words or short phrases from the participant's own language in the data record as codes (Miles et al., 2019). This method was applied as phrases were repeatedly used by participants that resulted in regularities and patterns in the setting. Codes were reviewed for redundancy and collapsed under appropriate headings.

FINDINGS

On Friday, September 25, 2020, the initial survey was distributed via email to all full-time faculty and adjuncts from a small, private institution located in Pennsylvania. There were 63 full time faculty members and 122 active adjuncts. Of the 185 (FT faculty and adjuncts), there were 84 responses (Figure 1). The follow-up survey was shared via email and social media on March 24, 2021. We received 89 responses from our follow-up survey. Of the 89 responses to our follow-up survey, the majority were from the United States, 9 were from Bangladesh, and 2 were from the United Kingdom.

Full time Faculty vs. Adjuncts

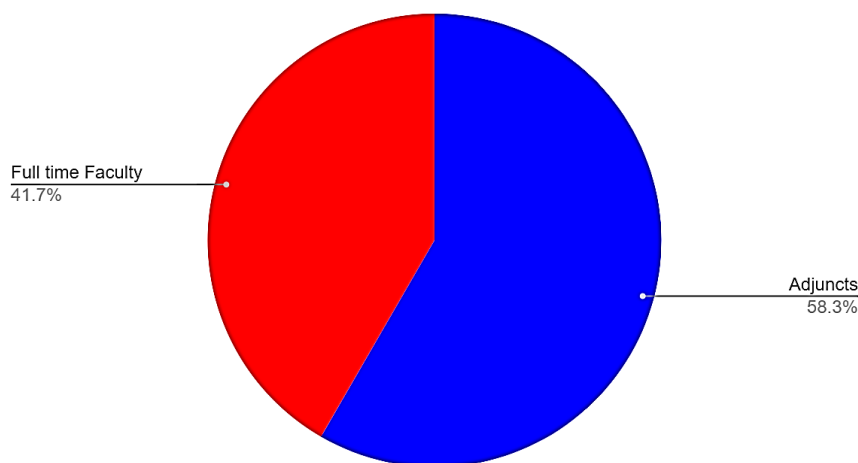


Figure 1: The initial survey consisted of responses from 89 faculty and adjuncts from one small private higher education institution in the United States.

Many responses from our initial survey (Appendix A) were from the majors of Early Childhood Education and General Studies (14 each) (Figure 2).

Responses from Disciplines

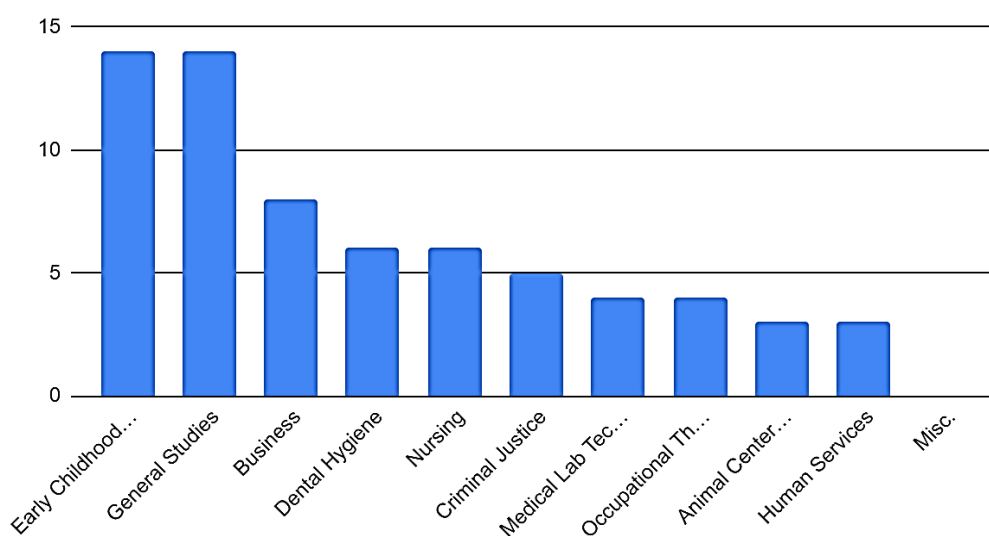


Figure 2: Responses from Disciplines

The format that most respondents were teaching in was fully remote (on Zoom with synchronous sessions) (52). There were 16 who were teaching fully face to face, 12 teaching part remote and part students in the class simultaneously (dual audience learning), and 5 teaching fully online asynchronous (Figure 3).

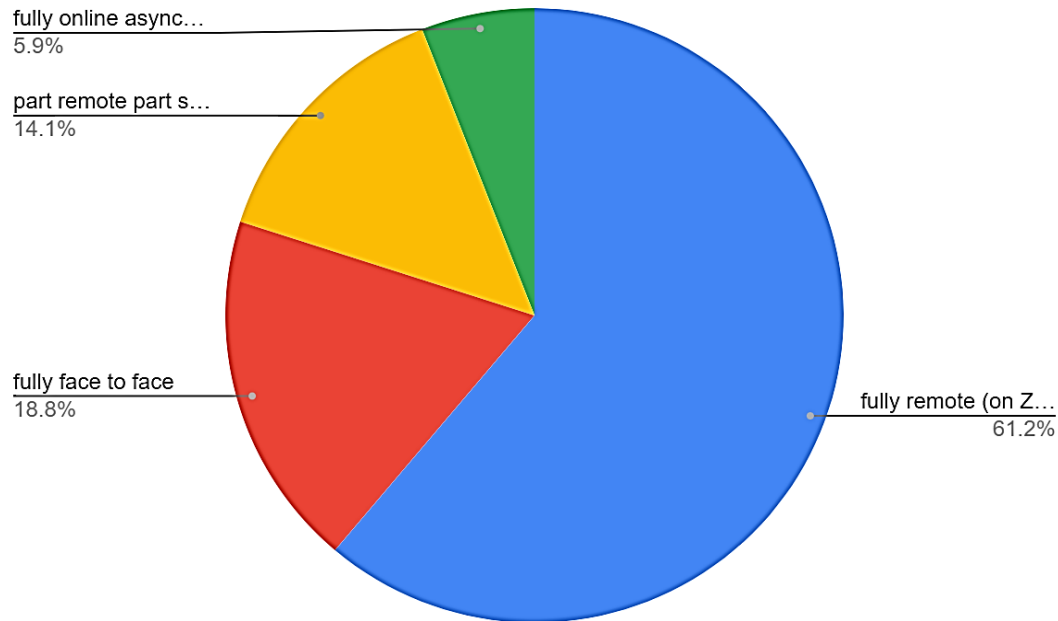


Figure 3: Format for Teaching in 2020

CHALLENGES FROM VIRTUAL INSTRUCTION 2020

Faculty and adjuncts were asked what challenges they faced with teaching in the format they currently were teaching in 2020 (Figure 4), and most respondents stated that the students were not “tech savvy” with various responses, such as: problems logging into Zoom, technical issues (not specified), lack of experience with technology, Canvas navigation, problems toggling back and forth between platforms, using Zoom, uploading/downloading files, and submitting assignments correctly.

One respondent stated, “Some students aren’t/weren’t familiar with how to navigate through online systems, such as Zoom and Canvas, or with computers in general.”

Additionally, student engagement was a close second with various responses, such as: feeling disconnected, it is hard to inspire students, I can’t connect with students via Zoom, breakout rooms did not work, I have difficulty interacting with students on Zoom, and students not showing their faces on Zoom.

One faculty member stated, “Student interaction is challenging with (students) putting their video on (during Zoom), as many leave (the) video off. It is harder to connect when looking at a blank box or just an initial.”

Other minor responses were PPE requirements, wearing a mask, COVID-related items, student attendance, internet issues (poor WiFi, connectivity issues), and live class simultaneously with Zoom sessions.

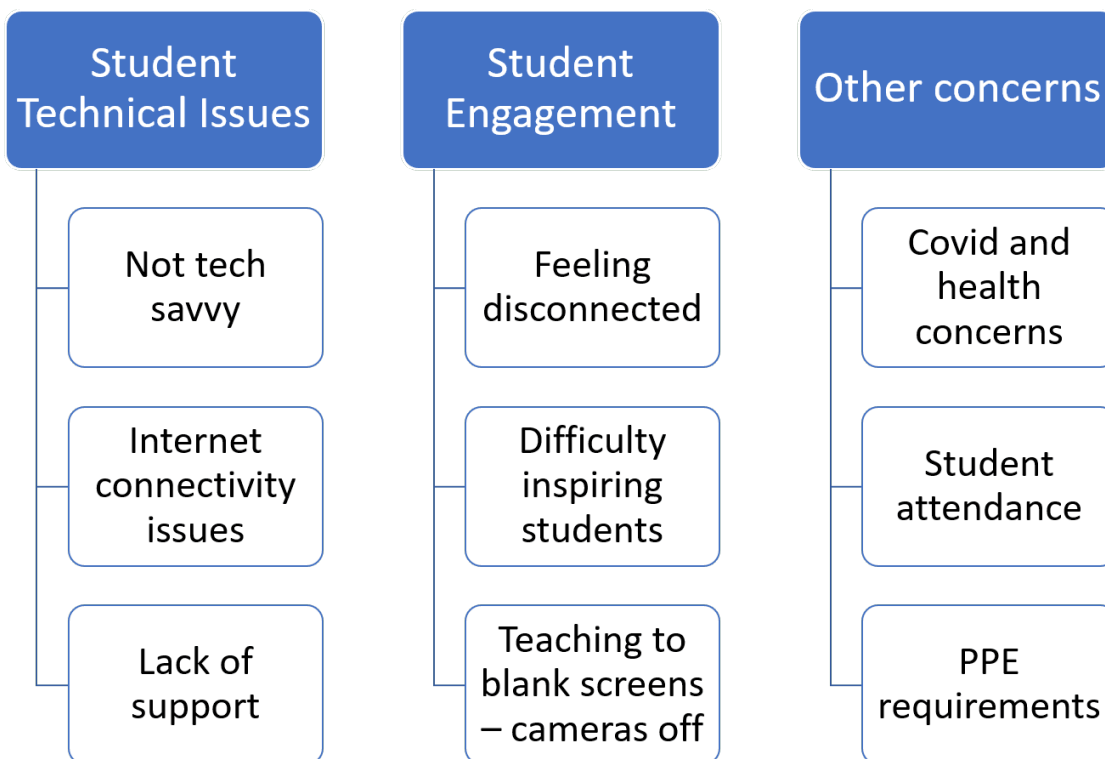


Figure 4: Faculty identified challenges they encountered while teaching in 2020 and these results are from the initial survey (Appendix A).

POSITIVES FROM VIRTUAL INSTRUCTION 2020

Faculty and adjuncts were then asked what positives (Figure 5) resulted from this new style of teaching. The majority stated that it was a positive experience using instructional technology for both instructors and students. This included responses such as: learning new teaching strategies and learning new technology for students to use to their advantage (pre-recorded lectures).

Additionally convenience was also mentioned, which included answers such as: students globally could attend class via Zoom, no traffic and no commute, you get to be home with your family and you can get onto Zoom anywhere.

Similar to those who responded that it was convenient to teach in this format, student engagement and communication was also mentioned. They explained that students would be engaged in discussion boards, Jamboard, Padlet, etc. Faculty and adjuncts stated that they felt freer to chat with students via Zoom, as well as it was easier to help students. Another response noted that students who don't normally participate in class would participate on a discussion board.

Other themes that emerged were: better attendance, students are on time for Zoom, faculty share the material and flip their classroom instead of full lecturing on Zoom, and it's safer (COVID-related).

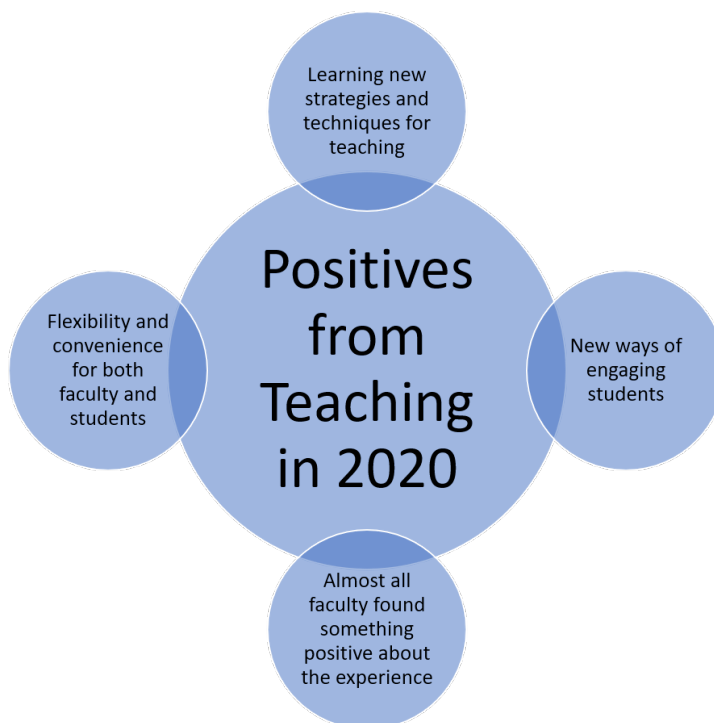


Figure 5: Faculty identified many positives that resulted from virtual instruction in their initial responses to the survey.

STRATEGIES DEVELOPED IN VIRTUAL INSTRUCTION 2020

Faculty and adjuncts were asked what strategies they are using to teach in this format. The majority of responses included the use of Zoom in some capacity (Figure 6). Some said using Zoom in general (6), and others were more specific to the tools in Zoom such as: breakout rooms (21), polling (10), chat (9), reactions, i.e., thumbs up (5) and the whiteboard (2).

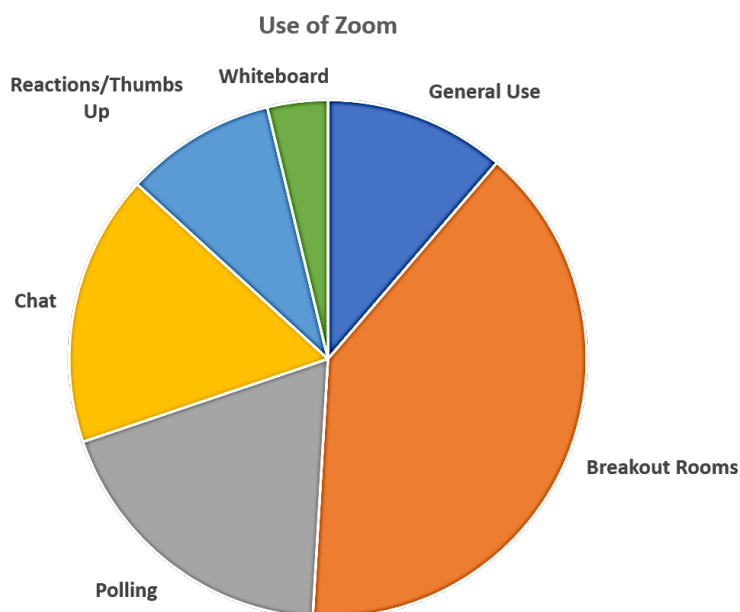


Figure 6: Use of Zoom and Features of Zoom

In the initial survey, besides Zoom, many faculty also mentioned the use of the following tools and technologies (Figure 7), Kahoot! (21), Jamboard (9), Flipgrid (6), Padlet (5), Polling programs like Polleverywhere and Mentimeter (4), Voicethread (3), Screen sharing (3), Drawize (2) and miscellaneous responses with (1): escape rooms, Quizlet, and Wordclouds. Films/videos/Youtube/Loom were also mentioned (14). Additionally, responses also included the use of Canvas in general, but then others specifically used the discussion board tool (16). Some also stated that they had 1:1 individual meetings, some via Zoom and other face to face (8). Five (5) responded that they used PowerPoint or Google Slides.

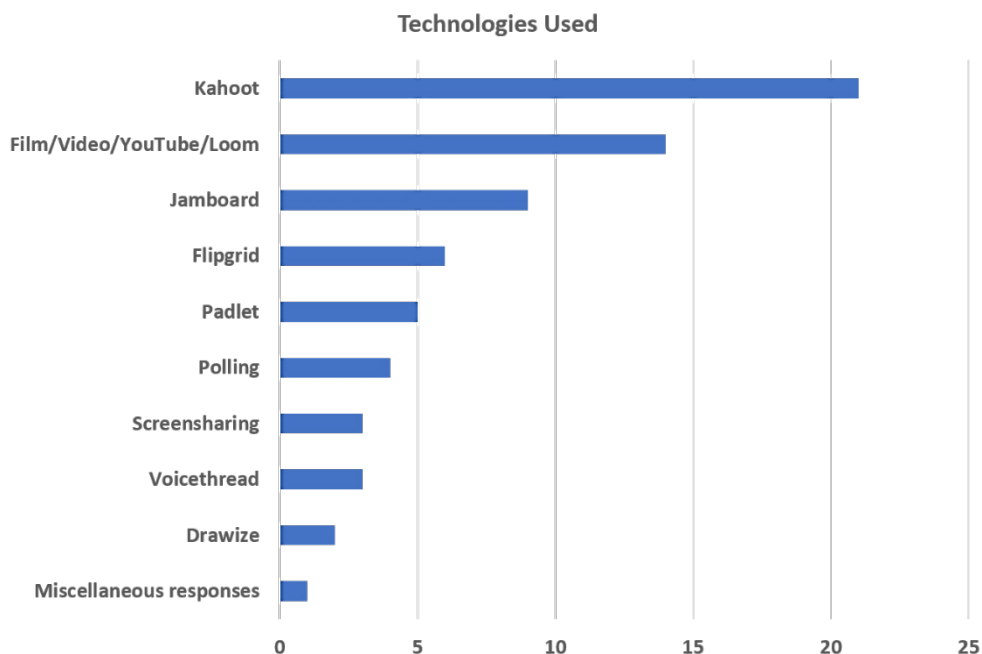


Figure 7: Responses to Technology used in Initial Survey (Appendix A)

ASSESSMENTS IN VIRTUAL INSTRUCTION 2020

Faculty and adjuncts were asked in the initial survey (Appendix A) what assessments they were using. Figure 8 breaks down the responses with the majority indicating they were assessing students through assignments/projects (45), quizzes/tests (35), and discussion, which could be in-class or a discussion board (29). Other responses included: critiques/feedback/surveys/check-ins/journals/reflections (15), responses on tech games, such as polling, Padlet, Kahoot (10), clinical competencies/perform procedures (11), exit tickets (4), Voicethread responses (3), and Flipgrid (3).

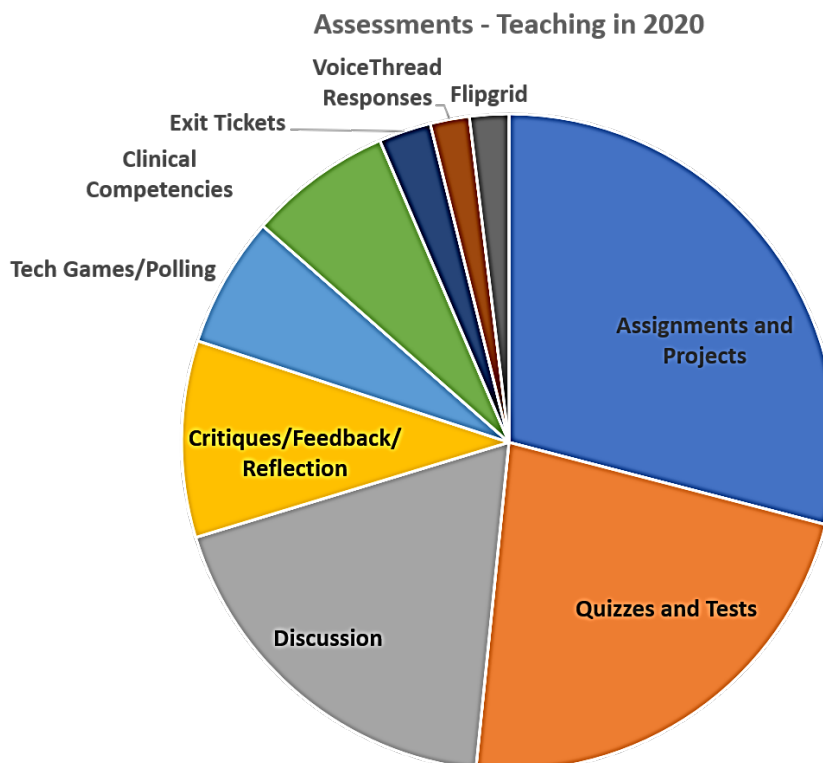


Figure 8: Assessments used per Initial Survey (Appendix A)

FUTURE WORKSHOPS

Finally, faculty and adjuncts were asked what kinds of workshops they would like offered to help them with teaching this semester. Most workshops requested are those on student engagement (in the virtual classroom) and web-based teaching tools (33). Other requests were for more workshops on the tools in Canvas, such as rubrics, grading, adding resources, etc. (6), as well as supporting students (those that are struggling, those during the Pandemic, time management skills, burn out, those who do not want to work in groups, etc. (6).

Additional workshops that were requested were: workshops for students and how to navigate technology (3) and self-care/mental health (3).

Other requests were web-based platforms, such as: Flipgrid, Kahoot, Google Apps, etc. Responses also included diversity training, how to solve tech issues and reinforcing students to keep camera on during Zoom.

DISCUSSION OF FINDINGS

In the initial survey, the majority of faculty were teaching fully remotely using Zoom as the platform for synchronous classes. They stressed that their biggest challenges were that students were not tech savvy, which made teaching difficult. Since most fall classes 2020 were offered to students remotely, students did not have much of a choice in format; students either had to take a class remotely or not take the class, regardless of if they were competent with technology. Teachers had to contend with all levels of student technology usage, as well as having some students not have a device to watch and participate during the synchronous sessions. Since the pivot in the spring of 2020 was immediate and

an emergency response, students who returned in the fall 2020 were somewhat prepared to be knowledgeable about the format of synchronous classes and using Zoom as the platform.

Although faculty reported many teaching challenges during the Pandemic, many of them also reported that there were positives that resulted. In the initial survey (Appendix A), faculty reported that a positive to teaching remote was that they were using instructional technology. Although it was a forced decision to teach synchronous classes on Zoom, the majority of faculty embraced it and found some positives that they otherwise might not have ever had if the Pandemic never occurred. This was apparent in the follow-up survey (Appendix B) when faculty reported on the numerous habits of mind that they now possess due to teaching in this format. Teachers acknowledged that they developed skills such as flexibility, innovation, problem solving, open-mindedness, creativity and collaborative skills, just to mention some, which were further developed teaching during the Pandemic (Figure 9).

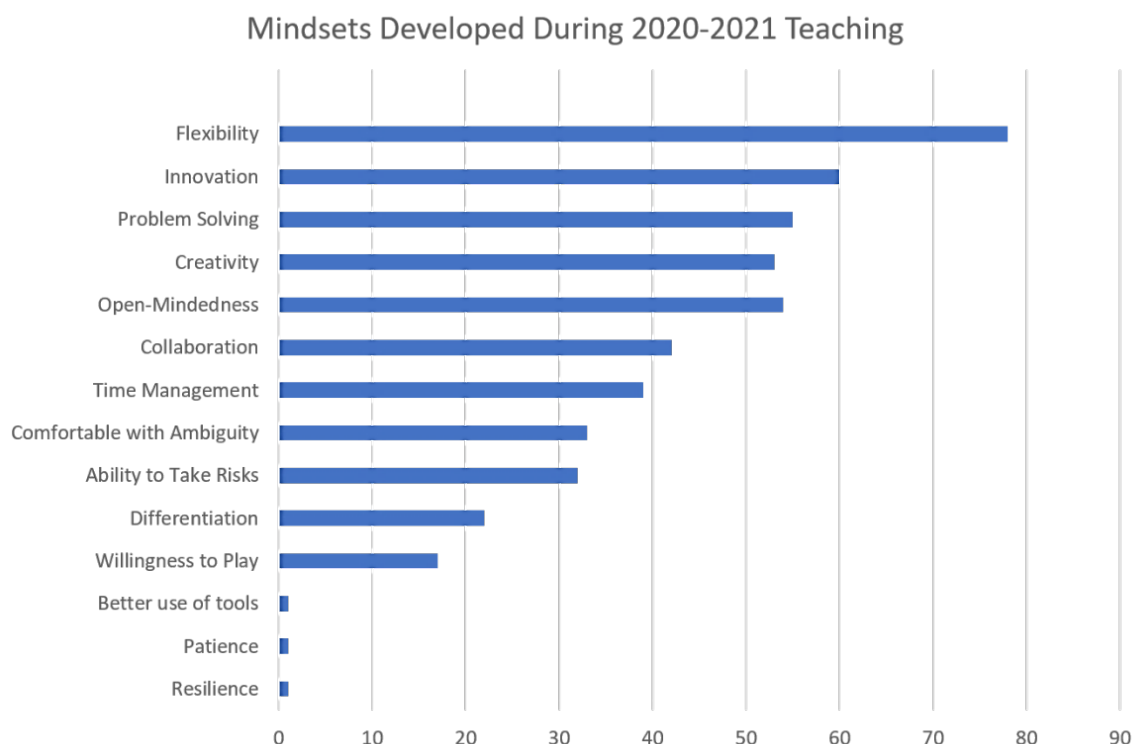


Figure 9: Faculty Identified Mindsets Developed During Pandemic Teaching

One positive for a faculty member teaching in this format was quoted as: “More opportunities to be resourceful and utilize online learning tools such as Padlet and Poll Everywhere to boost engagement.”

Another quoted: “New and innovative teaching strategies.”

In addition to developing numerous habits of mind while teaching during the Pandemic, faculty also learned new technology such as Zoom, Canvas (LMS), and screen sharing. They also learned new technological student engagement tools such as Padlet, Jamboard, Kahoot and Flipgrid, as well as made use of showing videos on YouTube. Teachers embraced finding innovative ways to engage students during their synchronous classes instead of using lecture as their only mode of teaching. Teachers stated that they could not teach their remote class the same way that they taught their face-to-face class and stepped out of their comfort zone to learn new technology to enhance their class.

One faculty member stated: “I am grateful for COVID in that it has allowed me to open several doors to new teaching modalities and I plan to incorporate them when we are fully in person. With that being said, I can’t wait to be back in person.”

Another one noted the following: “It challenges you as an instructor to come up with creative content, and strategies to keep their attention and get them to engage in class. Also, I found that there is less of a lateness issue in class attendance.”

On the follow-up survey to faculty, they were asked a few questions about their stress level teaching this past year during the Pandemic, and the students’ stress level. The majority of faculty reported that they were not fully stressed nor were they totally stress-free. Instead, they were moderately stressed while teaching this past year during the Pandemic; however, much of the faculty believed that the students were very stressed during this past year (Figure 10).

The following quotes capture these ideas:

- “I thought my students were stressed but did a great job adapting. As long as I remained flexible and understanding, they felt comfortable communicating with me about any issues they were having in and out of class, and we were able to come up with plans to help them succeed even if they missed class or had trouble with assignments.”
- “Students performed much better in person and were less stressed.”

Additionally, faculty were asked how they would measure their overall performance of students during the past year compared to other times they have taught, and the majority of faculty responded that student performance was moderate. This indicated that faculty believe that students’ learning did not suffer due to classes being virtual and being taught virtually; there was no change in student performance.

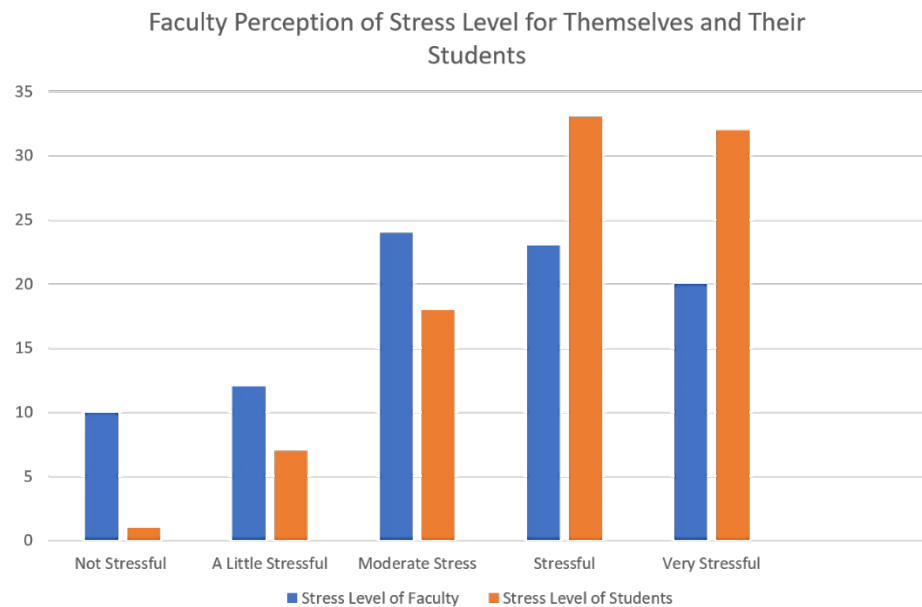


Figure 10: Faculty Perceived Stress Level of Themselves and their Students

In the initial survey, faculty were asked what kinds of workshops they would like offered to better support them in the virtual classroom. Most responded that they wanted workshops on how to increase student engagement in the virtual classroom.

“More about engaging learners for online learning. Many students have expressed they don’t learn this way, so it is difficult for them to buy in at times.”

“More on engagement in a virtual classroom.”

Then in the follow-up survey, faculty were asked what support they need or wish they had and the majority of faculty at the small, private college emphasized that they felt very supported.

“I have felt very supportive throughout my journey. I have had hiccups but Faculty and Program Directors have been extremely supportive and smoothening the wrinkles.”

“I have received a lot of support from the college.”

“The on-going professional development throughout the past year has been very helpful.”

Some faculty did express some challenges and wanted support in other areas, such as suggestions on how to teach in dual audience learning:

“Managing two formats at the same time, face to face and zoom with a large group--we have 38 students in a section. Very challenging for one instructor. Students on zoom interrupt and ask for questions of students in the classroom to be repeated. Makes it difficult for both groups to stay engaged. Difficult to break into groups in both spaces.”

Through this research, it became apparent that this past year teaching during the Pandemic, faculty grew as educators in a way that they might not have done so if the Pandemic did not occur. Faculty became aware that they were finding innovative ways to teach their virtual classes and learning new technology to do so. In order to teach their virtual classes, they realized that they could not teach the same way that they did in a face-to-face format. They were finding ways to be creative and to engage their students. Not only did they learn new pedagogical methods, but they also developed several habits of mind. Faculty had many positive experiences with teaching during the Pandemic, as noted by their quotes above. They were at first thrown into emergency remote teaching with little or no training, but as the fall semester began, they found themselves becoming comfortable with teaching in this format. Then when the spring semester rolled around, faculty, although somewhat stressed, were embracing the new technological platforms and innovative ways of teaching their students in this format.

REFLECTIONS AND IDENTIFYING THEMES

Virtual teaching and learning may be the new normal for quite some time due to the nature of the COVID-19 pandemic. Through this research, faculty shared responses that illustrated the emergency remote teaching that began suddenly in March 2020, was still happening in Fall 2020 and then in our follow-up survey, many were still teaching this way a year later, Spring 2021. Most emergency remote teaching was set up to quickly replicate face to face instruction and may not have employed best practice regarding virtual pedagogy. Faculty were expected to suddenly use tools and technologies they had no experience or assistance in using and had not mastered yet themselves. (Rapanta et al., 2020). Thus, moving forward in this same direction provides opportunities for both faculty and students to become frustrated and skeptical of the value and need for virtual learning. However, if institutions invest in strategic development of high-quality virtual learning, the outcomes for student learning can improve while providing flexibility and increased access across diverse demographics, while increasing revenues and decreasing operating costs (Bailey et al., 2018). The following three themes were evident from the data and recommendations for higher education institutions in relation to virtual teaching and learning revolve around these three themes: 1. address challenges (student and faculty); 2. build on successes; and 3. facilitate exploration and growth.

ADDRESSING CHALLENGES

According to our research, faculty have experienced a multitude of challenges while balancing a variety of formats while teaching and learning in 2020. The three main challenges faculty identified were student technology issues, student engagement, and other concerns related to COVID. Faculty need support to teach and learn in a different environment than they may be used to. For faculty who are teaching in a face-to-face format while having learners online (dual audience learning), this can create a challenge. However, if designed well, a blended synchronous setting can create an environment that is flexible, accessible, and adaptable to varying student needs (Angelone et al., 2020).

Faculty perceived one of the biggest challenges encountered during virtual teaching in 2020 was having students who were not “tech savvy.” This is an interesting finding because many believe students are digital learners and possess extensive technical skills than in past generations. However, learners are diverse and have different needs when it comes to technology. Mishra et al. (2020) found that a major challenge during online teaching was if students had an unstable network connection. If students turned off their cameras, sometimes this would help their unstable network connection, but would leave a feeling of teaching to a black screen (Mishra et al., 2020). Another research study found a similar challenge where students lacked interest and capabilities for the e-learning environment (Seraj et al., 2020). Faculty awareness of the challenges students may face or have faced due to the sudden shifts such as what occurred in 2020, can help pave a way for student support services in the future. Faculty can use this awareness to provide a flexible environment that acknowledges and accounts for challenges students may encounter due to connectivity and lack of motivation. Faculty can think about how to allow for accommodations such as cameras off so students can connect if experiencing connectivity issues or provide more asynchronous learning where students can listen and respond to course content offline.

Institutions are responsible to ensure learners are prepared to learn with instruction that supports these efforts. If institutions are failing to invest in an infrastructure that supports all parties and provides resources to both students and faculty, the risk of frustration is high for all. Students who are taking online courses should receive equitable student support, access to extracurricular activities, and opportunities to interact with their classmates (Montelongo, 2019). Although these infrastructures may not have been in place during the remote emergency teaching of 2020, these are structures that should be advocated for as we move forward.

The second most common challenge noted by faculty was a lack of student engagement. Some responses included having a difficult time connecting to students. Faculty can find ways to build community in an online course by combining synchronous and asynchronous sessions and by being present within the online course through discussion boards, sending reminders and announcements, and checking in with students. Personal connections and setting up one-on-one meetings with students can also provide a way to build connections and help students succeed in an online course. Combining a variety of strategies that engage students via learner to learner, learner to instructor, and learner to course content was found to be important in online teaching (Bollinger & Martin, 2018; Fletcher, 2020). If teaching is still occurring the same way it was set up for remote instruction during an emergency, then this would certainly be a reason for challenges related to student learning. Emerging technologies can create an environment where the learning is deeper and more engaging when used effectively.

Faculty can benefit from administrators who support their efforts with knowledge of best practice related to virtual teaching and learning. If administrators do not understand the shift that needs to happen, then they may expect faculty to teach in ways that are not pedagogically best for students, thus, adding to the frustration and lack of engagement of students. Students who are supported, listened to, and provided virtual learning experiences that are more active and participatory, may have a very different experience (Ko et al., 2017). Communicating these ideas and transitioning courses to

become more active and participatory is the first step in this process. However, this takes time, resources, and faculty, students, and administrators who have a growth mindset towards virtual learning.

BUILDING ON SUCCESS AND NEW POSITIVE MINDSETS

Building on successes through expanded promotion of the positive ideas shared by faculty and collaboration illustrates a growth mindset. Faculty and students can fret about their current situation or they can make the most of it as was shown by the overwhelming responses when asked about the positives they were experiencing from teaching in 2020 and then again by faculty responses to mindsets developed in our follow survey (Figure 9). Faculty need opportunities to share what works and how to personalize these ideas to their own teaching and learning.

Collaborating with colleagues, sharing ideas, finding out what is working for them aid in this exploration of virtual learning. Faculty need time to connect either virtually or face to face to discuss these ideas. Within higher education, a culture of transparency, collaboration and sharing may go against the grain of an academic culture of protecting one's intellectual property. However, in 2020 especially, we needed an academic culture that embraced collaboration and sharing of ideas and resources that will benefit students and faculty. In addition, one group of experts concluded the need for flexibility along the way based on the evaluation of the learner, tasks, tools and context all guided by the online teacher (Rapanta et al., 2020). In our follow-up survey (Appendix B), faculty indicated a variety of skills they developed due to teaching in 2020-2021 (Figure 9), and flexibility was one of the greatest skills noted. The identification of the many skills faculty developed also aligns with the research stating that faculty need practice in developing skills such as creativity, innovation, flexibility, etc. Although this was a challenging time for most faculty and students, our research highlights that it was also a time of growth and learning. Facilitating Exploration and Growth and Managing Stress

Students deserve to be taught in ways that are effective, research based and engaging so that they can learn. Faculty deserve to be supported and trained on how to implement effective virtual pedagogy by administration who also understands and rewards high quality virtual teaching. High quality virtual learning and course design takes time and resources, and thoughtful integration of best practices that increase learning, access, and collaboration. Montelongo (2019) advised institutions to invest in resources to support faculty in developing high quality virtual instruction. Organizations need to fully appreciate the time and effort that goes into virtual teaching and learning in a digital environment (Montelongo, 2019).

Virtual learning can provide flexible, engaging, and cost-effective opportunities for students (Bailey et al., 2018). Virtual learning may be thought of by some as less than face to face learning and this is not true if done thoughtfully and intentionally. Opportunities to collect data and share learning that is taking place in effective virtual environments can help to eliminate this fixed mindset. Davis (2020) described the importance of having a growth mindset in relation to virtual learning and that leaders set the tone for this mindset. Connected educators share what they are doing as well as obtain ideas from others. (Whitaker et al., 2015)

While facilitating exploration and growth and managing stress, it is important to build on successes, address challenges, and research and implement best practice related to virtual learning. Reflecting on what works and what does not work can help make this process fluid and changing. As identified in our research, the majority of faculty and students experienced stress due to the pandemic and how this affected their teaching and learning (Figure 10). Checking in, being flexible, and providing options for both students and faculty is important now more than ever. Faculty cannot teach and students cannot learn if their level of stress is debilitating. Faculty and student wellness are key indicators to future success. Although we may not have quite mastered virtual learning, we can keep trying, while supporting each other and our students and modeling a growth mindset. Supporting faculty interests in workshops, tools, improved student preparedness help to facilitate exploration and growth

and manage stress during these trying times. Leadership appreciation of the complexities and yet the urgency to address all these interests and needs is necessary for faculty and students to feel supported in their new virtual learning environments.

MOVING FORWARD IN VIRTUAL TEACHING AND LEARNING

While faculty shared a multitude of strategies they used during virtual instruction, it is critical to provide time and resources for facilitation of their teaching. Martin et al. (2020) suggested the need for time to facilitate the virtual environment by responding to questions, providing group feedback as appropriate, and individual feedback. According to the survey responses, faculty and adjuncts used other formative assessment tools (polling, reactions, chat box, etc.), because they were not in the traditional physical classroom setting. Faculty were willing to take risks and developed a growth mindset by using these types of tools that were a new experience for them. Not only were these tools quick assessments, but these tools also encouraged active student engagement, which is a goal in any class.

In addition to using these formative assessment tools, faculty were able to provide a sense of community by accessing different platforms (Jamboard, Padlet, etc.) where all students could participate at the same time. Faculty tried to mirror their face-to-face classes in the virtual setting, but with much more difficulty. They learned new technologies to aid in not just teaching the material, but also to provide a sense of community amongst the students.

These types of tools and platforms can promote social presence and opportunities for instant feedback, and as a result, present a valuable array of learning opportunities for students (Kliger & Pfeiffer, 2011). The virtual classroom has become one that might not have the same spontaneity as the traditional classroom, but with planning, creativity and nurturing it can be possible.

As shown in the research, faculty can benefit from tools and strategies to engage students both synchronously and asynchronously. However, it is important to demonstrate why a tool is being used and the connection between learning and the technology (Ko et al., 2017). The focus should never be on the tool, but on the learning and how learning is improved using the tool (Budhai & Taddei, 2015).

In addition, faculty support and guidance in how to modify the way they teach to meet this new normal would most likely lead to teaching that is more dynamic and appropriate for a virtual environment. van der Spoel et al. (2020) found that although faculty were able to use new technology during the pandemic, this use of technology may not continue unless faculty are supported in the development and use of technology. Faculty development programs can provide these skills and stress the importance of flexibility, time management, differentiation, among other skills (van der Spoel et al., 2020). Our research indicated that faculty developed many skills associated with a growth mindset during their experience teaching in 2020-2021 (Figure 9). Faculty should be supported in developing these habits of mind associated with creativity such as flexibility, ability to accept ambiguity, willingness to play and being open-minded and many more as identified in the survey by being provided intentional coaching and/or professional development related to these skills. These habits of mind help faculty become more successful and willing to try out technology and experiment with different ways to engage learners (Mehta et al, 2019, p. 65). This training would help lower the stress experienced when and if a sudden shift occurs like this again. Accordingly, Mehta et al (2019) suggested (and this was before COVID-19), teachers need training that helps build their creative abilities and willingness to try new technologies and ways of teaching. Leaders in higher education also should be supportive of faculty who embrace a mindset that is creative, flexible, willing to try new things, and collaborative. Faculty efforts to improve virtual teaching and learning should be supported with resources, training, and incentives. Most importantly, faculty need the time and the resources to create these virtual learning environments.

LIMITATIONS

Limitations to this research included sample bias. The initial survey was distributed to only one institution of higher education in the United States, which did not include any international participants. The sample size was also somewhat small, for which was a limitation to the research. Both limitations influenced the follow-up survey so that the feedback was elicited from other institutions of higher education in the United States as well as internationally. The follow-up survey was distributed via email to the original faculty members of the small, private institution; however, a link was also used in the researchers' personal social media outlets.

The initial survey was completed by more faculty in 2 disciplines than any other discipline, which could be biased, and results cannot be generalized for the whole population. Researcher bias could be a contributing factor to one of the disciplines due to them being an administrator of that particular major, for which their faculty members felt obligated to complete the survey in regard to their employment, although the surveys were anonymous.

Another limitation was the research method of In Vivo coding. This method was used to categorize recurring patterns in the qualitative data. The data collectors initially coded each response and then revised and relabeled as needed.

FURTHER RESEARCH

Although the research in this study indicated that faculty were stepping out of their comfort zone to try new and innovative teaching methods, further research with interviews with faculty members would provide more insight if they were able to expand on their responses and experiences with teaching in this format. Faculty also stated that they developed many habits of mind during this experience. An interview with faculty members would elicit more details as to how they developed these habits of mind, and descriptions of their experiences and behaviors. An interview would also provide details on faculty's beliefs and attitudes regarding virtual instruction, and how they perceived their teaching methods during this time.

Additionally, the follow-up survey in this study included an international audience, but it was limited to just a few countries and provided just a small sample size (89). If this research continued, it would be beneficial to include a survey that would be more accessible to universities and colleges worldwide, so that a larger sample size could be possible.

Future research could also include providing a voice for students by distributing a survey to the student body for their views and perceptions on how their teachers performed during this time, and if they are consistent with the responses from the faculty.

CONCLUSION

The expansion of technology over the years has changed how we deliver instruction in higher education (Kliger & Pfeiffer, 2011); however, faculty were forced to use at least a video conferencing platform such as Zoom when the pandemic hit. Even those instructors who did not use technology in their face-to-face classrooms had to alter their instructional delivery once the world was shut down.

As with any approach to teaching and learning, there are pros and cons to virtual instruction. Although faculty and adjuncts expressed many struggles with teaching in a different modality, most of the respondents (98%) stated that they did in fact find something positive about teaching in a remote environment. Faculty were forced to teach in this modality due to the pandemic; however, they were willing to take risks and attempted to use technology in novel ways. Faculty established a growth mindset by thinking "outside the box" on how to take their face-to-face classes and convert them to a completely different modality. With little support and experience, faculty found ways to promote

the feeling of “being there” and maintained a sense of cohort that existed when they were in the traditional classroom.

Otten (2020) urges that for faculty to get the most out of virtual teaching and learning, they will need to:

...retool, change mindsets, use different approaches and tools for achieving learning goals. They have serious work that needs to be done that could not possibly happen in a mere two weeks. Students, too, need to be prepped, as learning virtually requires a shift in thinking, as well as discipline and a strong desire to learn.

However, research has shown that if done with purpose and intention using best practice to plan and implement online instruction, student learning outcomes improve along with retention and graduation rates, and access to diverse populations increases. Virtual learning has the potential to help institutions not only improve student learning, but also offers an opportunity for new and innovative revenue sources.

So much of what instructors took for granted as part of the higher education experience by teaching in a face-to-face format was altered by a pandemic. The virtual classroom has now become the place for students and instructors to teach and learn together. Creating an effective and engaging virtual environment takes time, collaboration and support. Darby and Lang (2019) provided the following advice as we move forward to start small, try things out, note what worked for us and what didn't, make adjustments and then try again.

Although many faculty expressed frustration and stress teaching during the Pandemic, many found positives to their teaching, as well as new and innovative ways to teach. Faculty developed many different habits of mind, as well as innovative and creative ways to engage their students during virtual classes. Faculty were forced into emergency remote teaching initially in spring 2020, and then in a planned format for virtual classes for the fall 2020 and spring 2021 semesters, but, according to this research, most faculty grew from this experience in ways they might not have ever grown had the world not encountered a Pandemic. Despite the different stress levels for most faculty and students during this time, our research highlights that it was also a time of growth and learning.

Moving forward, for faculty and students to thrive in this virtual environment, institutions of higher education should follow research and support and listen to faculty and students by addressing challenges, building on successes, and facilitating exploration and growth.

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APPENDIX A - INITIAL SURVEY

3/30/2021

Teaching in Fall 2020 Survey

Teaching in Fall 2020 Survey

Please complete the following survey on teaching this semester during Covid

* Required



OFFICE OF INSTRUCTIONAL SUCCESS
HARCUM COLLEGE

1. Are you a full-time faculty member or an adjunct? *

Mark only one oval.

☐ Full-time faculty

☐ Adjunct

3/30/2021

Teaching in Fall 2020 Survey

2. Which department are you from? (check all that apply) *

Check all that apply.

- ☐ Animal Center Management
- ☐ Allied Health Science
- ☐ Business Administration, Marketing, Sports Management
- ☐ Criminal Justice
- ☐ Dental Hygiene
- ☐ Developmental Studies
- ☐ Early Childhood Education
- ☐ EFDA
- ☐ English Language Academy
- ☐ Fashion Design
- ☐ Graphic Design
- ☐ General Studies
- ☐ Histotechnology
- ☐ Human Services
- ☐ Interior Design
- ☐ Medical Assisting
- ☐ Medical Lab Technician
- ☐ Nursing
- ☐ Occupational Therapy Assistant
- ☐ Photography
- ☐ Physical Therapist Assistant
- ☐ Radiologic Technology
- ☐ Veterinary Nursing

Other: ☐ _____

3. Which format are you teaching in this semester? (check all that apply) *

Check all that apply.

- ☐ fully remote (on zoom with synchronous sessions)
- ☐ part remote and part students in class
- ☐ fully online (only asynchronous)
- ☐ fully face to face

Other: ☐ _____

3/30/2021

Teaching in Fall 2020 Survey

4. What is / what are your biggest challenge(s) this semester teaching in that format? *

5. What are some positives to teaching in this format? *

6. What strategies/tools do you use to engage all of the learners? *

7. How do you assess their learning? *

8. What workshops would you like offered to better support you as an instructor? *

Thank you for your feedback!

APPENDIX B - FOLLOW-UP SURVEY

Teaching in 2020-2021 Survey - Follow Up

Please complete the following follow up survey on teaching during the COVID pandemic. We are collecting research so that we can help provide resources and tools for teachers that are practical, quick, and easy to implement with the goal of increasing student engagement and learning.

* Required

What is your position *

- ☐ full time faculty member
- ☐ adjunct
- ☐ administration/teaching
- ☐ Other: _____

Country where you teach

Your answer _____

How long have you been teaching? *

- ☐ Less than 5 years
- ☐ Less than 10 years
- ☐ Less than 15 years
- ☐ More than 15 years

How long have you been teaching virtually? *

- ☐ Haven't done it yet
- ☐ Covid was my first time teaching virtually
- ☐ I have experience, but I need more resources
- ☐ I am a pro

What content area (discipline) and/or grade level do you teach? *

Your answer _____

Which format are you teaching in this semester? (check all that apply) *

- ☐ fully remote (on zoom with synchronous sessions)
- ☐ part remote and part students in class
- ☐ fully face to face
- ☐ Other: _____

Now that one year has passed from teaching during the Covid pandemic, what new mindset skills did you develop? (Check all that apply). *

- ☐ creativity
- ☐ flexibility
- ☐ innovation
- ☐ ability to take risks
- ☐ comfortable with ambiguity
- ☐ collaboration
- ☐ problem solving
- ☐ differentiation
- ☐ time management
- ☐ willingness to play
- ☐ open-mindedness
- ☐ Other: _____

What new technology did you learn and use during this past year? (check all that apply) *

- ☐ Zoom
- ☐ Kahoot
- ☐ Jamboard
- ☐ Padlet
- ☐ Youtube
- ☐ Meme maker (any version)
- ☐ Canvas
- ☐ Flipgrid
- ☐ iMovie
- ☐ virtual escape rooms
- ☐ Quizizz
- ☐ Voicethread
- ☐ Loom
- ☐ Screen sharing
- ☐ Screencastify
- ☐ Drawize
- ☐ Other: _____

What support do you need or wish you had? *

Your answer _____

How stressful do you find teaching this past year during the pandemic? *

1 2 3 4 5
Not Stressful ○ ○ ○ ○ ○ Very Stressful

How stressful do you think your students find learning during the pandemic? *

1 2 3 4 5
Not stressful ○ ○ ○ ○ ○ Very Stressful

How would you measure the overall performance of students during the past year when compared to other times you have taught? *

1 2 3 4 5
Very low ○ ○ ○ ○ ○ Very high

Anything additional you would like to add

Your answer

Thank you for sharing your thoughts and experiences! Your feedback helps drive the programming of faculty development for the Office of Instructional Success!

Submit

AUTHORS



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Joanne Ricevuto is the Assistant Vice President for Instructional Success and is responsible for the faculty programming at her institution, which includes providing and presenting a multitude of professional workshops to the faculty on various current topics in higher education. She has been in higher education for 20+ years and a professor of early childhood education.