International Journal of Technology in Education and Science (IJTES)

www.ijtes.net

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To cite this article:

Ghazi-Saidi, L., Criffield, A., Kracl, C. L., McKelvey, M., Obasi, S. N., & Vu, P. (2020). Moving from face-to-face to remote instruction in a higher education institution during a pandemic: Multiple case studies. *International Journal of Technology in Education and Science (IJTES), 4*(4), 370-383.

IJTES International Journal of Technology in Education and Science
Volume 4, Issue 4, Fall 2020 ISSN: 2651-5369

Moving from Face-to-Face to Remote Instruction in a Higher Education Institution during a Pandemic: Multiple Case Studies

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Article Info

Article History

Received:
19 May 2020

Accepted:
01 September 2020

Keywords

Face-to-face to remote transition
Higher education
COVID-19 pandemic
Anxiety
Technology
Online
Remote

Abstract

In response to the Covid-19 pandemic, our institution, like others in higher education, suspended face- to-face classes and offered remote learning as an alternative. We report five cases of undergraduate and graduate courses that transitioned from a face-to-face to a remote mode. Each case will provide a detailed description of how the course was moved to an online mode, how the course was managed, the instructors' previous experience in online teaching, their self-reflection on the process of transitioning to remote learning and their recommendations for a more successful experience in a similar potential scenario in the future. Further, we report the students' perspectives based on their responses to an online survey. The combined results of the cases reported in this study reflect the resilience on both sides. A sudden shutdown of the university along with disease- related fears caused anxiety both for the students and instructors regardless of previous experience in online education. However, having online material pre-pandemic, possessing the technical skills, and previous online teaching or learning experience as well as having the infrastructure in place, facilitated the smooth navigation of the courses. The mode of delivery of the course (synchronous, asynchronous or blended) did not have an effect on students' satisfaction.

Introduction

In the spring of 2020, higher education institutions across the United States of America (US) shut down physically due to the Covid-19 pandemic and provided remote learning for students as an alternative. This swift shift to remote online learning allowed academic programs to continue during the pandemic. However, the transition to online learning was unexpected and sudden. Many instructors and administrators were unprepared. This abrupt change caused chaos, confusion, and frustration for students, faculty, and academic administration. Students had chosen face-to-face (F2F) courses; however, they were forced to continue their courses online. This created problems, given that continuing studies online was not a choice. At the same time, students were asked to evacuate dormitories and return to their homes. Many students live in small communities that do not have access to stable internet connection or devices. The lack of access to technology, combined with the unpredictability of the circumstances both in terms of the impact on their education programs and health and safety of themselves and their family members, contributed to a great source of anxiety and stress (Bao, 2020; Cao, et al., 2020).

Evidence suggests that online teaching and learning is not necessarily easier nor more challenging than conventional F2F teaching and learning (Conrad, 2004; Li & Akins, 2005; McQuiggan, 2012; Redmond, 2011). However, it is the sudden pedagogical transition that might cause discomfort for some instructors and students. Some instructors and students may feel comfortable and embrace online teaching. Others may find it more convenient than and just as effective as teaching face-to-face. In addition, course content and the nature of the course play a significant role in the success of online learning delivery. For instance, hands-on experience or lab experiments may require a physical presence on campus.

Similarly, instructors' technology proficiency, and campus information infrastructure can be essential in online education success. Furthermore, online learning has its own challenges including (a) a sense of isolation due to lack of interactions between peers (Vu & Fadde, 2013); (b) difficulties with hands-on learning activities (Mawn et al., 2011); (c) instructors' limited presence (Richardson et al., 2015); and (d) timely support (Vu, Fredrickson, & Meyer, 2016). Therefore, a sudden unprecedented move from traditional F2F learning to remote learning (emergency online learning) certainly resulted in a big shock to instructors and learners, regardless of whether stakeholders were ready or not. To that end, this exploratory multiple case study documents instructors' and students' perspectives on their transition from F2F to online education.

This study focuses on F2F to remote transition of courses in a mid-size university in the Mid-western part of the United States of America. This higher education institute is a state university that serves mainly the students who come from the state of Nebraska, many from small and rural communities. This university may be different from some traditional universities given that it offers online courses and approval for fully online programs at undergraduate and graduate levels. To help students succeed in online courses, a variety of support services are available. These include 24/7 Help Desk access, discounted hardware and software, 24/7 library services access, and more. Faculty receive training for quality online teaching, managing online platforms and instructional design.

Here, we are reporting five cases of undergraduate courses (cases 1-4) and one case of a graduate (case 5) course that transitioned from a F2F mode to an online mode. Each case will provide a short description of the course content and its students, a detailed description of how the course was moved to an online mode, how the course was managed, and the instructors' previous experience in online teaching. We will then analyze the reports from surveys gathered specific to that course, and finally the instructors discuss their self-reflection and recommendations for a more successful experience in a similar potential scenario in the future.

Research Method

The purpose of this exploratory multiple case study is to examine the instructors' and students' perspectives on their experience moving from F2F to remote teaching and learning. Most case study projects focus on a single case, often selected because of its unique characteristics. However, a multiple case study design allows researchers to explore the phenomena under study using a replication strategy, which can be conducted in different stages (Zach, 2006). Literal replication stage allows researchers to gather similar results, and a theoretical replication stage allows researchers to explore and confirm or disprove the patterns identified in the initial cases. In addition, we used an exploratory case study approach because it enabled us to answer not only what but also how and why type questions while taking into consideration how a phenomenon was affected by the context within which it was situated (Baxter & Jack, 2008). Furthermore, data collected in this type of multiple case study design is typically a lot richer and of greater depth than found in other types of case studies or experimental designs (Vu & Feinstein, 2017).

Case Selection

In the multiple case study approach, there are no hard-and-fast rules about how many cases should be included to satisfy the requirements of the replication strategy. Instead, sample size is determined by the number of cases required to reach saturation, or when no significant new findings are achieved (Maxwell, 2012; Yin, 1994; Zach, 2006). For this study, a sample pool of five instructors who were teaching in a college of education setting at a mid-size university in the Midwestern United States were selected. The inclusion criteria was as follows: 1) teaching in different disciplines at the undergraduate or graduate levels at the University of Nebraska at Kearney (UNK), 2) moving their courses from F2F to remote learning due to the COVID-19 pandemic in the Spring of 2020, and 3) having access to the same technology support from the campus.

Data Collection and Analysis

In this study, a "case" has been defined as a single, in-depth investigation into each course moved from F2F to remote learning during the pandemic. Data collected included the course instructor's written self-reflection with prompts provided by the researchers and a single unified online survey administered to the students who were enrolled in the courses taught by the instructors. Reflective practice is a research technique that helps individuals and groups reflect on their experiences and actions in order to engage in a process of continuous learning (Fook & Gardner, 2007; Vu & Feinstein, 2017). Conducting an online survey helped researchers test concepts, reflect the attitude of people, and establish the level of participant satisfaction in a large number of participants (Maxwell, 2012). The use of two different data sources in this study is also for triangulation purposes, which refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of the phenomena (Patton, 1999).

Content analytic technique was used to analyze data from the 05 cases. Ritchie and Spencer (1994) argued that content analysis allowed a systematic coding of collected data by organizing the information into recognizable

categories to discover patterns unnoticeable by merely reviewing the transcripts or listening to the recordings. The process of data analysis of this study was divided into two stages. The first step was the preliminary coding in which the researchers identified emerging concepts from written reflections, selecting keywords most frequently mentioned by participants in each case and creating relationship diagrams. The second step was focused coding where the researchers eliminated and combined the coding categories identified in the first step to reach the final results (Charmaz, 2006). Descriptive analysis was used to analyze students' responses to the survey. The survey results were then compared to participants' reflections in each case as well as across cases.

Case Study 1

The Primary Literacy Block is a combined set of courses for undergraduate students that includes instruction in phonics, word study, fluency, comprehension, writing, and assessment. The course includes eight full-day field experiences in a Kindergarten-Third Grade classroom and is a total of 7 credit hours. In the Spring of 2020, 52 students (21 students responded to this survey) were enrolled in two sections of the course. At the time of the campus transition to online instruction, the co-instructor had completed the majority of her teaching and the other co-instructor was finishing the semester. Most students had completed 4 of their 8 field experiences when the public schools they were placed in also moved to remote learning.

The instructor had not taught these courses completely online previously but since the instructor had two sections of students to teach on their own the final 6 weeks of the calendar, students alternated F2F time in the classroom with some online instruction to complete. The topics that were left to cover included vocabulary, comprehension, integration across the curriculum and a literature review on a topic of their choice. Since some of the instruction was already in an online format, there was a foundation that just needed supplemented with the information the instructor would have taught F2F. The majority of the students also needed to complete a read-aloud activity to accompany the lesson plan they wrote and intended to teach in their field experience. The instructor modeled the read-aloud using VidGrid but some students used other modes to record it.

Each field experience had a theme for students to observe and discuss with their cooperating instructor. Students then used the Discussion Board on Canvas to reflect on the topic. The instructor spent a considerable amount of time reviewing videos of high quality instructors and instruction that connected with the theme of the week. While a 60-minute video doesn't replace a full day in the classroom, students were able to observe instructors and primary grade students interacting in a classroom setting.

The instructor did not do any synchronous meetings based on the feedback from students. Many of them work in daycare settings and their hours increased due to the additional influx of children into the daycares from area schools that were closing. Each week the instructor created a video walking student through the assignments which provided content and maintained a presence in the classroom. Instructors across campus set up their courses differently in Canvas, which seemed to cause some confusion for students. Many of the survey comments made by students were generalized to all of the courses they took and not just the Primary Literacy Block course.

The survey results provided helpful information on how students handled the transition to online from a F2F course. All (100%) of the survey respondents had taken an online course before and the instructor used Canvas weekly so students were familiar with the course structure prior to moving to remote learning. Based on the survey results, 90.5% of the responding students still felt like they had access to the instructor throughout the process and 81% felt that the transfer to online instruction was efficient. "The biggest struggle for me was knowing that if I was in a face to face class I would have learned so much more." "...I would have much rather been able to finish the course in person because we had much better discussions and it was one of the most helpful education courses I've taken so far." 52.4% of the respondents said they missed the in-person interaction with the instructor and 38.1% scored the question 4 out of a possible 5.

In typical online courses, the format is set up to build relationships despite being remote. In this situation the course moved to online from a traditional F2F program, "I miss the interaction with classmates and making those lifelong connections. This was my last semester with them before student teaching and I felt like I didn't get to say goodbye." 61.9% of students responded to the survey that they missed the in-person interaction with classmates and 33.3% scored the question 4 out of 5.

After reviewing the student comments, the instructor was pleased that the majority of the students thought the transition went well but felt sad that students missed out on the F2F instruction and discussions they enjoyed

prior to the pandemic. Knowing how isolated from their peers some of them felt and how they missed the in-person relationships with their classmates that they have taken courses with for years is troubling but also confirms that we do a good job of meeting those needs when we are together.

Case Study 2

Adult Communication Disorders (CDIS 406) is a three-credit higher level undergraduate course offered twice a week. This is a theory course that introduces professional concepts and areas of specialty related to adults in the field of Speech and Language Pathology. Students learn about the etiologies underlying adult communicative disorders and general characteristics of the various disorders that include hearing loss, stroke, dementia, laryngectomy, degenerative and neurological disorders in adult and geriatric populations.

Typically, students find this course difficult due to the complex medical concepts including knowledge in neuroanatomy and anatomy to understand the pathologies. In F2F classes, the instructor normally spends a lot of time explaining difficult concepts linking them to their previous knowledge for effective teaching (Hativa, Barak, & Simhi, 2001; McParland, Noble, & Livingston, 2004), and making examples for new terminology. According to the instructor's student evaluations, students typically appreciate the instructor's lectures because of the instructor's skill to simplify difficult concepts. The instructor uses PowerPoint with videos, pictures and diagrams to help convey the message of the material. Normally, the instructor shares PowerPoint on canvas with the students. This course has 10 topics and after each topic students take a short online quiz which counts for 30% of their final grade. Students take one Midterm Exam (20%), and one Final Exam (30%). Also, students summarize 3 articles and present one article to their peers (20%). The midterm and the final used to be closed book exams including multiple choices, fill in the blanks and open essay questions.

When classes moved from F2F to remote learning, the instructor recorded lectures on Vidgrid while displaying the PowerPoint presentation in the background. Online lectures lasted about 10-20 minutes for each topic, which was much shorter than the 60-90 minute F2F lectures. Lectures were posted week by week and online quizzes were taken as previously scheduled. Students recorded videos of their presentations and posted them on Canvas. To compensate for F2F discussions, the instructor asked students to make comments under the video posts to ask questions and answer the questions they received.

The instructor met with students twice in total via Zoom for questions. Zoom sessions were scheduled during normal class hours. The students were asked if they preferred to keep the format of the Midterm and Final exams as is and use online proctoring or if they preferred the format of open-book, research-based essay questions. The students voted for the latter. In the evaluations, students stated that they liked this format of this evaluation because they found it meaningful and practical given that they had to deeply learn the content in order to answer the questions.

The instructor's perspective was that the transition was done smoothly and without a problem. The instructor did not have any technological challenges because the instructor already regularly used canvas and remote technologies such as Zoom for teaching. The PowerPoint presentations and tests were already shared on canvas before the emergency switch to remote learning.

The analysis of the student surveys revealed that the students agreed with the instructor that the transfer was fast (100%) and smooth (100%). All students found the instructor accessible at all times (100%) and reported to have received responses in a timely manner (100%). The majority of students reported that they liked transferring to an online environment for keeping safe (78%). However, the same percentage of students felt their learning was compromised because of transferring from F2F to an online environment (78%). A minority of the students (22%) linked this compromise to being bored and depressed. Less than half of the students liked online classes because of the time and place flexibility (44.4%) and for making them more responsible and involved in learning (55.6%).

It was interesting to me that while 89% reported they missed interaction with the instructor; only 78% reported missing interaction with their peers. My interpretation is that for the Gen-Z generation, the primary mode of interaction is through social media (Krishnan & Sajilan, 2014; Schroth, 2019; Turner, 2015), whereas their primary mode of interaction with me as their instructor was in a F2F manner. Another reason may be the quality of interpersonal interactions the instructor had with this group in class. In their course evaluations, many students appreciated that during F2F classes, the instructor told personal stories, made jokes, and talked about life-related topics that the instructor found relevant to the educational content. Online lectures were different.

They were short, to the point, serious, and limited to the lesson. Our previous study clearly showed that students value their instructor's humor and caring personalized interpersonal relationships (Ghazi Saidi & Vu, Submitted). Interpersonal relationships are equally important in an online class (Wade, Cameron, Morgan, & Williams, 2011). Students agreed that they responded to their questions in a timely manner (100%), and that no one had felt left on their own (100%).

It seems that the students' responses were based primarily on personal opinion rather than facts. The survey included two questions that were based on objective facts rather than personal opinion. Nevertheless, only 67% of the students reported that "discussion boards were used" and 77% reported that "my instructor recorded lectures". This finding was unanticipated and rather strange that over 33% of the students reported that discussions were not used and lectures were not recorded.. Discussion boards and recorded lectures are traceable and verifiable facts. In fact, as the majority of the students correctly reported, recorded lectures were posted and discussion boards were used for multiple reasons; to post students' presentations, to make comments, to ask questions, to discuss answers to the instructor's questions, and for voting for different class activities or exam options. This reflects that some students do not report class experiences accurately. This is consistent with the extensive literature reporting that student evaluation surveys are typically biased and inaccurate (Badri, et al., 2006; Thanassoulis et al., 2017).

Another source of discrepancy and therefore a surprise was that although all 100% of students had had an online experience before, and in normal circumstances, one-third (33%) of the students might take an online course, only 11% reported that they might consider taking an online course if the pandemic continues. In contrast, 89% of the students reported that they would not take an online course if the pandemic continues. This seems counter balanced. This seems hard to explain why the 20% who would consider an online class in normal circumstances, would choose not to consider an online class if the pandemic continues. This might be tied to the contrast students felt in regards with the interpersonal interactions, students' learning style and the quality of my teaching in the two modes (online vs F2F) of content delivery. However, this contradiction may be explained by students' poor situational judgment (Chao, Sung, & Huang, 2019; De Leng et al., 2017; Grossman & Sharf, 2018), risk perception based on political bias (Barrios & Hochberg, 2020), COVID-19-related social issues (Pedersen & Favero, 2020), or COVID-19-related psychological issues such as anxiety (Cao et al., 2020). These factors may or may not be related to the students' learning experience.

Students reported challenges related to technological problems, personal learning styles that are not compatible with the mode of online education, frustration due to emotional aspects of missing interpersonal relationships and missing events such as graduation ceremonies. However, the majority were grateful that they had the option to keep safe and continue their education or be graduated.

Reflecting back, the instructor concludes that the most important factors in remote teaching is preparedness, clarity of the plans, schedules, and instructions. In addition, strong and consistent communication with students through remote technology that allow synchronous virtual presence and lecturing are advantageous over traditional online classes. In time-permitting circumstances, for a successful F2F to online transition, instructors should receive sufficient training on using different technologies, plan and schedule ahead, record lectures, use audio-visual supporting materials and show flexibility and openness to integrating students' needs and wants. Another important issue is to maintain interpersonal relationships strong, and provide timely responses to students' questions.

Case Study 3

Introduction to Health Promotion (PE 329) is a 3-credit undergraduate level course. This course is designed to provide undergraduate students exposure to the process of planning, implementing, and evaluating health promotion programs for small and large communities of people. Other foundational topics such as ethics, philosophy, work settings, etc. are woven into the course as well. The course was structured as follows: students would read the designated chapter and take an online quiz over the material the weekend before discussing it in class. Tuesdays the instructor presented a lecture over the material including using PowerPoint as a visual aid. The instructor also included videos to help bring additional understanding and real-life examples to the material being discussed. Thursdays were designated to perform group activities to apply the knowledge gained during the Tuesday lecture.

In the spring of 2020, 26 students were enrolled in the class. When the time came to move from F2F classes to online instruction the majority of the topics had been covered. There was one topic left to discuss and it was

somewhat complex. Beyond that, the remainder of the class was designated for presentations where students analyzed different health promotion programs and presented them to the class. The instructor took the approach of asynchronous learning to finish out the semester. Although this would be the first time this instructor had taught online, the instructor felt confident with the technology used to assist online learning.

The instructor used VidGrid to record the final lecture and then posted it to the Canvas platform. Upon receiving feedback from quite a few students via email, it was recognized that there was still confusion on the topic so the instructor made a second video reviewing the topic and reminded the students that Zoom meetings could be used to meet one-on-one with students to answer any questions. The original plan to cover the material F2F would have included a number of activities done as a class and in small groups dissecting the material more in smaller segments to further hone in on the concepts. Using the designated class period created the time and space for students to focus on the topic, ask questions, and bounce ideas off of other students, adding to the enhancement of their learning.

The final project for the class was originally designed to have the students work in groups of two. The last day of F2F classes the instructor took the class time to go over the final presentation project. Also, the students were asked to choose their partners and then pick their topic from a list of articles so everything was set up before the transition to online. The decision was made after consultation with support staff at the University of Nebraska Kearney to utilize the VidGrid application to create the presentations.

Plus, all students have access to VidGrid through the University. Part of the requirement for the project was that each student had to have equal time presenting. This posed a challenge of creating a presentation without being together in the same room recording it. VidGrid provided the opportunity for students to record their part of the presentation and then send the video to their partner. Then their partner recorded their part of the presentation and seamlessly combined the two videos. The students, in turn, posted their combined video presentations on a discussion board on Canvas. Students were unable to view other students' presentations until they posted their own presentation. Students also were required to provide feedback on each of the presentations.

There were 26 students enrolled in the course. Seven students responded to the survey. The majority of the students surveyed (66.7%) agreed that they missed the in-person interaction with the instructor after moving online. When asked if F2F interactions are more effective than or equally as effective as online discussion the students were essentially split. Four students felt F2F was more effective and 3 felt F2F was equally effective. Looking at the interaction with classmates the students were also split in their response. Four students felt F2F and online interactions with their peers were equally as effective compared to 3 students that felt F2F interactions were more effective. This may be reflective of how much the internet is used for communication.

Most of the students felt that the emergency online learning was not as engaging as F2F learning – 4 students agreed, 1 student was neutral and 2 students disagreed. Also, the majority of students did agree, though, that instruction via remote learning was less productive for them versus a F2F environment. Four of the 7 students also voiced that safety was a priority while only 1 student felt the lockdown was unnecessary. They felt it was challenging but felt it was necessary to stay safe.

The instructor made a concerted effort to respond quickly to students' questions and sent out reminders of upcoming deadlines. This was reflected in the response of 5 students saying they received timely support from the instructor. All of the students have taken online courses previously and when asked if the pandemic continued would you prefer taking online 42.9% said maybe while 28.6% said definitely no and 28.6% said definitely yes. The students said flexibility was what they liked most about online learning but they found it challenging to stay engaged and motivated while group work proved to be more difficult. Another interesting point was 43% of the students said they would definitely not prefer taking online classes and 43% said it depended on schedule and personal reasons at the time. 14.3% said maybe but no students chose a "definitely yes" response.

Something that was surprising from the survey results was moving online during the pandemic did create additional stress for the students. The instructor was under the assumption that it would not really affect the students too much moving online since the current generation appears to be technologically savvy. The uncertainty of the COVID-19 pandemic situation could have created additional stress, also. The instructor believed that making the effort to respond quickly to questions and having a comprehensive plan that is clearly communicated was helpful in creating a supportive environment for the students.

One thing the instructor would have done differently was keep the class synchronous to the schedule allotted before moving online. The instructor would have had the class meet online over Zoom to attend the lectures live. This may have helped to keep students engaged while creating a supportive environment that provides additional accountability for completing schoolwork. The other aspect the instructor would have done differently was to have the students do their presentations live over Zoom during our scheduled class time. Each student would have had the capability of easily sharing their screen and seamlessly passing off to their partner while still having the experience of presenting to the class.

Having a strong technical support team at the university was paramount in helping faculty switch over to online quickly, especially if some faculty had no previous experience with teaching online. With the technology capabilities available, being online can still somewhat resemble a live classroom setting through Zoom and other platforms, further helping students who have a learning style that is more conducive to F2F settings.

Case Study 4

Families and Social Policy is an upper-level undergraduate course required for successful completion of the Family Studies (Science) degree and the Early Childhood and Family Advocacy degree. At the time of transitioning to remote learning there were 35 students enrolled in this course and the course met twice a week, F2F, for approximately 75 minutes each session. Families and Social Policy explores the reciprocal relationship between families and the articulation, enactment and implementation of social policy (e.g., welfare, healthcare, family leave, eldercare, taxes, etc.) at the local, state, regional, federal and international levels. There is a global aspect to this course evident by the comparison of policy development in the United States versus other developed (e.g., Japan) and developing (e.g., Barbados) countries (Frederick, Mohammed & Obasi, 2018). Diverse strategies are used in this course to engage with content including policy analyses, logic model development and evaluation, family impact analyses, the writing of policy briefs, the delivery of policy presentations and the attendance and participation in policy meetings, for example, city council or school board meetings.

Transitioning Families and Social Policy to an online format was seamless for three principal reasons. First, although this course was taught in a F2F format, there was already an online component to the course: all PowerPoint slides and other media (e.g., video clips) used in the face to face lectures were uploaded to Canvas after each lecture; all exams and assignments were completed and submitted online. Second, the instructor is extremely competent and familiar with teaching in an online format. Third, given that the reason for going online was the COVID-19 pandemic, the instructor readily modified course content, assignments and activities to focus on examining rapid changes in social policy in response to the global health crisis. The incorporation of extant data and circumstances to reinforce course content is a well-documented practice in Family Science (e.g., Obasi, 2018).

Once Families and Social Policy transitioned to being completely online, Voice Thread was utilized to deliver lectures, facilitate class discussions, and host student group policy presentations asynchronously. The asynchronous approach was adopted to minimize issues regarding technological support and accessibility to reliable internet connections necessary for synchronous meetings. Using the same PowerPoint slides that would have been used in the F2F class the instructor recorded lectures on Voice Thread. In addition, the instructor posted discussion questions on Voice Thread to which students could share opinions and provide feedback to the comments made by their peers thus facilitating student interaction.

Finally, Voice Thread was used to host student group oral presentations on their Family Policy Education projects where students conducted a family impact analysis of a COVID-19 policy implemented in their home communities (e.g., remote learning for K-12 students), across the state (e.g., social distancing), nationally (e.g., the CARES Act) or internationally (e.g., global travel restrictions). Using Voice Thread students were able to participate in their group presentations and provide feedback to peers about their presentations. To facilitate instructor-student engagement Zoom was utilized weekly for virtual office hours and as usual students were encouraged to contact the instructor via email for help, with the understanding that responses would be given within 24 hours of the email being received.

More often than not, however, the instructor responded immediately to emails received. Of the 35 students enrolled in Families and Social Policy, 17 completed the student survey (response rate 48.5%) and all of the respondents had taken an online course previously. Given the exploratory nature of the survey and the limited response rate, statements cannot be made about causation or generalizability. Nonetheless, the student survey

responses were quite informative and may be used to guide decisions regarding remote/online learning in the future. A majority of students missed personal interaction with the instructor (10/17; 59%) and with their peers (12/17; 71%) and indicated that they found F2F interactions more effective than online discussions (12/17; 71%) and F2F interactions with peers more effective than online interaction with peers (13/17; 76%).

Indeed, most students found remote learning not as engaging as F2F (11/17; 65%) and found online learning less productive than F2F (11/17; 65%). In describing the remote learning experience, 7/17 (41%) students liked it because they received continuous education while remaining safe, 9/17 (53%) found it challenging but had no other choice in order to be safe and 2/17 (12%) found it challenging and did not think lockdown was necessary. The responses were comparable in terms of students spending more (5/17; 29%) or less (3/17; 18%) time engaged in remote learning in comparison to F2F learning. Students indicated that they received timely support from the instructor (13/17; 76%); would not have waited to take the course in the F2F format (10/17; 59%) and did not find that technology made remote learning challenging (11/17; 65%).

Notably, 50% of students indicated they would prefer taking online classes if the pandemic continues; 37.5% indicated that they would not prefer taking online classes if the pandemic continues and 12.5% indicated maybe. Challenges about online learning shared by students include time management concerns, being organized, group project participation and maintaining motivation. Aspects about online learning that students liked include working at their own pace, not being obligated to take part in synchronous meetings, instructor flexibility and access including efficiency in transferring the course online, and timely responses received from the instructor.

Unsurprisingly, students indicated a health and wellbeing aspect to the transition to remote learning. While no students reported being physically ill, several students (11/17 or 65%) indicated that, the stress of the pandemic impacted their learning while 9/17 or 53% indicated that the stress of remote learning impacted their learning and one student indicated that stress due to loss of work impacted their learning. Interestingly, in response to the question of taking an online course in the future under normal circumstances, 11.8% of students said definitely yes, 11.8% maybe, 29.4% said definitely no and 47.1% said it depends on my schedule and personal reasons.

Overall, the results of the student survey are in concert with the instructor's own observations. The instructor anticipated that even with a quick and efficient transition to online learning, there would be some students who would experience challenges with this approach even with previous experience with online courses. In addition, Families and Social Policy has a significant discussion or debate component. In the F2F format at least one third of class time is spent discussing or debating a particular issue, for example, the algorithm used to calculate the federal poverty level in the U.S. or a structural versus a functional definition of family. Course evaluations indicate that students enjoy these direct interactions with peers during small and large group discussions. It is challenging to recreate that same level of engagement in an online format whether synchronous or asynchronous.

Finally, the impact of stress on performance in online learning warrants further attention. There is a burgeoning body of research focusing on the impact of stress on learning in disparate settings (e.g., Lazarevic, B., & Bentz, D. (2020). The preliminary findings from the student survey suggest that this idea warrants further investigation in light of COVID-19 and the sudden transition to remote learning in K-12 and higher education.

From the instructor's perspective, when moving a course from F2F to online, especially during a time of disruption as during COVID-19, accessibility and flexibility are key. Online teaching is not simply taking a F2F course and delivering it online. Online courses need to be intentionally designed and developed with the online format in mind. Thus, using universal design of learning principles to give students equitable opportunities to be successful is critical. Online teaching presents unique opportunities for instructors and students. One has to be creative in developing assignments and activities for the online format as well as promoting student engagement not only with course content but with each other.

The most challenging aspect of the rapid transition to remote learning precipitated by COVID-19 was assuring students that their education would not be disrupted and advising students regarding graduation. With so much uncertainty regarding personal health, familial health, finances, employment, and so on, the instructor found it extremely beneficial to be accessible to students and to reach out via email or virtual office hours just to check in and see how students were coping. It was also critical to provide feedback as quickly as possible to students and to be flexible in terms of assignment deadlines.

Case Study 5

Motor Speech Disorders is a required two-credit course in the graduate program of Communication Disorders. There were 18 students enrolled in this eight-week course that focused on the assessment and treatment of individuals with dysarthria and apraxia of speech. During the course, students complete assigned readings, take three exams, and complete two group activities (motor speech assessment and motor speech description presentation). During the F2F course, the instructor spent a lot of time demonstrating assessment and intervention techniques. Students are often paired at their tables and practice the therapy assessment or intervention techniques on each other. Much of the class time is spent watching and listening to audio/video samples to identify significant perceptual and physical characteristics of motor speech disorders.

Typically, the instructor introduces a type of dysarthria and then plays several samples of individuals with the disorder. The students individually or in small groups are asked to identify the salient characteristics of the dysarthria type. The class discussions center around identifying salient characteristics of dysarthria and apraxia of speech to develop the students diagnostic skills. The course was in the second week when instruction was moved to online only due to COVID-19. During the first week of online instruction, the class did not meet synchronously to allow students to move home during the pandemic.

The instructor has taught online before but never this particular course. Given that the course was only in its second week, the instructor had to rearrange things quickly for the students. The instructor chose to have the students meet synchronously online via Zoom during the regularly scheduled time for the remainder of the semester so the students had consistent access to the instructor and their classmates. The instructor wanted to check learning weekly and to ensure students were not falling behind. The instructor believed that during this trying time, smaller frequent evaluations would be less stressful. The two major projects were redesigned into a single project that incorporated key elements of both the assessment and treatment projects. Students worked in pairs and created recorded presentations. Then, students were assigned two projects to review and rate using a rubric created for this purpose.

All classes were held via Zoom and most of the time without significant issues. Occasionally one or two students had difficulty logging on or losing the internet during class. All class meetings were recorded for the students to review at any time. The instructor would rate their technology skills as a 4 on 5 point scale. The instructor felt comfortable with Canvas as a course delivery system. Online quizzes, assignments, and rubrics were already completed for this course so the transition was fairly smooth. The instructor did record additional small topic lectures for material believed to require additional explanation. These small topic lectures were 10 minutes in length. In the beginning of the synchronous class time, the instructor had the most difficulty switching between screens and applications during class. The instructor encouraged the students to speak up immediately if they were not seeing or hearing what was described. The instructor also built into the schedule 15 minutes before and after class for students to ask questions. Students were encouraged to set up individual meetings or email the instructor privately with questions or assistance with course materials. The three large exams were modified into weekly quizzes. There was a quiz review time at the end of each synchronous session.

Of the 18 students enrolled in this course, 16 completed the survey (response rate 88%) and all of the students had taken an online course prior to this one. The instructor found the student survey responses informative and felt the information could be used to guide future online course preparation. Most students agreed that transiting the course to online was fast (93.8%) and efficient (87.5%). Thirteen students agreed that they liked online classes because of the flexibility and safety it afforded them. Most students reported missing personal interactions with the instructor (87.6%) and with their peers (75%). Similarly, students reported that F2F interactions were with the instructor (75%) and peers (81%) were more effective than online interactions. Eleven (68%) students identified online learning as more challenging than F2F learning but knew they had no other choice, while the remaining six (37%) students appreciated the opportunity to continue their education while remaining safe during the pandemic. The students were divided (50%) in their responses about online learning during the pandemic, half believed that online learning was not as engaging or as productive as F2F learning. Only half the students reported that technology issues made online learning difficult. Over 81% of the students agreed they received timely support from the instructor and only 37.6% stated they spent more time completing online course work compared to F2F course work. Twenty-five percent of the students would take an online course again while 37% said it would depend on their schedule or other personal reasons. Only one student reported an illness during the semester and 43% reported the stress of the pandemic and stress due to remote learning (31.3 %) impacted their learning.

The survey results were not surprising in that most students navigated the change to online learning well while there were a few who struggled. This is typical of the instructor's experience in online teaching. Most students indicated that they missed the hands-on experience of a F2F environment and believed that this compromised their learning. Typically, in Motor Speech there are multiple sessions with hands-on experiences using diagnostic equipment. Students learn to capture and analyze samples using the equipment and this was difficult to recreate in an online environment in such a short time span. Students liked online learning for the flexibility and freedom to work at their own pace and 62% reported a greater sense of responsibility for their own learning. However, almost half of the students reported that stress impacted their learning in this course. As these two positions are juxtaposed perhaps exploring the emerging literature on resilience and online learning is warranted (Berenson, Boyles, & Weaver, 2008).

Reflecting back on this experience, it appears that students were pleased with the communication with the instructor and the course content but missed the personal interaction and hands-on activities in the traditional F2F course. Moving course content into an online format was more familiar to the instructor than constructing lab activities and small group interactions. Given the stressful environment created by COVID-19, the goal was to deliver content in a clear, uncomplicated format that was flexible for students. It is clear this was accomplished; however, students clearly expressed their need for more peer interaction and a desire for activity based learning in an online format. I believe with additional training and consultation with the university online learning staff changes can be made to meet these needs.

Overall Findings, Discussion and Implications

Comparing the results across the cases, the pattern of the responses were similar and consistent. Students strongly forfeited F2F interpersonal relationships both between the instructor and the student and among students. This is despite the fact that most students agreed virtual interactions were effective. There is evidence that interpersonal relationships in online environments are similar and correlated to F2F learning (Li, Jiang, Yong & Zhou, 2018). However, the students in this study did not select online learning by choice; rather, they were forced to transition to an online forum in an unpredictable and stressful circumstance due to the COVID-19 pandemic. This can be discussed from two viewpoints. First, the characteristics and personality of the students are strong determinates of their satisfaction and success in online courses (Gray & DiLoreto, 2016). Some students generally do not thrive in online education. Among the students in our samples, some students mentioned this and emphasized this was the reason they were unsatisfied with the transition. Second; in general, the COVID-19 pandemic has created anxiety among many (Lee, et al., 2020; Roy et al., 2020; Sher, 2020), including students (Cao, et al., 2020). In addition, the unpredictability of the situation added to the abrupt changes to their lives as well as their courses. This intensified their level of anxiety. For some, lack of access to the internet or devices to be able to continue online was an additional source of stress. Additional levels of anxiety calls for additional; and ideally, F2F support.

However, the circumstances including the shutdown of the university, and health care recommendations; such as social distancing, would not allow for such support. Anxiety due to complications of the COVID-19 disorder and its effect on families and individuals (economic, caretaking, losing employment, etc.) along with anxiety due to the unpredictability of the circumstances impacts life satisfaction, life meaning, and positive orderliness to the world (Trzebiński, Cabański, & Czarnecka, 2020). Perhaps for the same reason, most students felt that their learning was compromised. This is despite the fact that they agreed the transition to an online/remote platform was done smoothly, that they received support from their instructors, and their previous experience in online learning/education. Most students reported that they found it difficult to stay motivated and on task. Losing motivation during the pandemic is a well-documented phenomenon (Hasan & Bao, 2020; Purwanto, et al., 2020).

Although most students believed that the shutdown was necessary for their safety and health, many students found it challenging to stay connected and reported they lacked the interactive activities they did in class. Furthermore, most students reported being anxious about keeping up their motivation levels and staying on-task and a few reported to have felt left on their own. Some reported having experienced difficulties with access to technology (i.e. internet or device) and felt their learning was compromised or the course content was compromised.

Despite all inconveniences and difficulties, the majority of the students (over 80%) and the instructors (100%) reported that a smooth transition had been achieved. Multiple factors played a role in smooth transitions. Previous online teaching and learning experience of both the instructors and the students played a role. The

majority of instructors had most of the course materials, assignments, and tests on Canvas. Therefore, minimal modifications were required. The existing online/remote infrastructure, eCampaus, system support, and available resources (such as lending devices to students who did not have access, free hotspots for those who did not have access to the internet, faculty were allowed to take their equipment home, etc), facilitated the smooth transition. Most students distinguished between remote learning in normal circumstances as opposed to remote learning during the pandemic. Personal preferences for course delivery mode (online vs face-to-face) were not necessarily granted during a forced university shutdown. Apart from learning styles, technology access and personality differences, anxiety due to the pandemic was a true obstacle.

Our case studies allowed for comparison of different modes of delivery. Upon transition from F2F to a remote/online mode, some instructors delivered the content in a traditional online mode, some held synchronous sessions via zoom during the times previously the F2F class was held, and some provided a blended mode (one day a week synchronous remote and the rest online (i.e. recorded lectures, Canvas discussions, etc). Each of these modes have advantages and disadvantages. Synchronous remote courses can be designed very similar to traditional F2F courses (Midkiff & DaSilva, 2000). Synchronous remote courses can even be more effective given the convenience (i.e .time and place) they offer and the advanced technology available (i.e. Internet, zoom and other video-conferencing applications that allow for group work and more, Canvas and other online class platforms to share lectures, assignments, documents and more, etc).

Online courses are popular for students who work or have other commitments for multiple reasons (Bartley & Golek, 2004; Bergman & Sams, 2012; Degago & Kaino 2015; Palloff & Pratt, 2007; Powers et al., 2001; Shank & Sitze, 2004; Singh & Hurley, 2017). Online courses can enhance communication between faculty and students by providing opportunities for students to engage in critical online discussions, given that some students may feel intimidated to speak in front of a class in a F2F environment. Online education is generally viable and cost effective financially, given that students would not have to burden the costs of residence, meal and other related expenses. Online courses provide flexibility, convenience, and accessibility by both time and place. In addition, there is evidence that technology increases teaching possibilities for instructors, enhances student engagement or involvement in the learning process, and provides opportunities for personalized education tailored to students' needs (Bartley & Golek, 2004; Bergman & Sams, 2012; Degago & Kaino 2015; Palloff & Pratt, 2007; Powers et al., 2001; Shank & Sitze, 2004; Singh & Hurley, 2017). Further, in terms of interpersonal relationships, an important factor in students' course satisfaction. Online environments can provide similar opportunities toF2F courses (Li, Jiang, Yong & Zhou, 2018). Comparison of the results of the cases in this study suggests that regardless of the mode of delivery (Synchronous, asynchronous or blended), the perception of the students was consistent in terms of successful course transition and learning the content of the courses. Blended courses encompass the advantages of both modes of delivery.

Conclusion

In sum, the combined results of the cases reported in this study reflect the resilience on both sides; the students and the instructors. A sudden shutdown of the university resulted in an unanticipated and unplanned transition of F2F classes to remote learning. Therefore, it was reactive rather than proactive (e.g. as in the case for many academic institutions planning for fall 2020; anticipated breakouts, planned online/remote courses), which would not allow for mental preparation, proper curriculum planning and anticipation for equipment and technology requirements. This sudden unplanned change along with disease related fears can cause anxiety both for the students and instructors regardless of previous experience in online education. However, having online material pre-pandemic, possessing the technical skills, having had the experience in online teaching or learning as well as having the infrastructure in place, both the students and the instructors navigated the courses smoothly. The mode of delivery of the course (synchronous, asynchronous or blended) did not have an effect on students' satisfaction or opinion if the course content or their learning was compromised.

Limitations and Suggestions for Further Studies

This study has some limitations. The response rates were lower than expected. We argue that given that the surveys were distributed during the summer, many students did not check their emails or felt it unnecessary to participate. From the methodological viewpoint, given the urgency of the situation, the survey used in this study lacks validity and reliability. Further, typically in multiple cases, there is a theoretical concept explored and tested in small numbers (Lijphart, 1971; 1975). However, in this study the inclusion criteria for the cases were not based on a conceptual theory, rather the urgency of transitioning from a F2F mode into an online mode due

to an unpredictable pandemic. Thus, the cases were selected randomly and by convenience. Moreover, this study is observational, not experimental. The samples across cases are not homogenous and the design does not allow for internal validity, nor does it effectively isolate any relationships of interest. Therefore, due to a lack of purposeful sampling, generalization of the results can be limited.

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