ABSTRACT

The authors conducted a worldwide survey to explore the experiences of higher education faculty who converted classes to distance learning during the COVID19 pandemic. Most respondents experienced much higher workloads and stress than in facetoface classes. Previous experience with Online Distance Learning (ODL) predicted positive faculty response. Less than half used a school provided LMS, instead using a wide range of other technologies. Respondents said they learned the need for adaptability and good planning, emphasizing doing what it takes to serve their students. There was high variability in most answers, indicating that the experiences of individual teachers ranged widely between positive and negative. The researchers provide recommendations based on the findings, including the need for better ODL instructional design training as part of longterm professional development for faculty and remembering the importance of all student higher education experiences, many of which are beyond the scope of the actual classes.

KEYWORDS

Corona, Coronavirus, COVID, Distance Learning, Educational Technology, Learning, Teaching, Technology, Virus

INTRODUCTION

In the Spring of 2020, schools around the world suspended facetoface instruction due to the coronavirus pandemic. Teachers around the world had no choice but to convert facetoface classes to distance learning, often with short notice, a seemingly daunting task for teachers who had designed their courses for inperson instruction (Petzold, 2020). The transition presented challenges for academic staff, many of whom needed higher levels of technology competency and proficiency than they had previously acquired, as well as for students who suffered from feelings of isolation through not being able to interact with their classmates or attend inperson classes (GillettSwan, 2017).

Most of the early publications about the impacts of the pandemic on education either promoted the benefits of practices such as social distancing and event cancelation (Tate, 2020), challenges faced by students (Supiano, 2020, March 19), technology choices and resources (Darby, 2020, April 14), or the biggerpicture landscape of education and consequences of suspending facetoface instruction (Ruf, 2020, March 17). Indeed, the only articles found in the scholarly press related to teaching and learning, because of the timeline required for empirical research, were editorials or reports on the course of the instructional transition in one school or geographic region, with limited quantitative data. The actual experiences of teachers while converting their classes to distance instruction, and thereafter managing the classes, received little attention in the first weeks following the transition. The goal of this study, therefore, was to be among the first to document the experiences of teachers at higher education institutions as the result of converting their classes on short notice. The researchers did this by providing a statistical survey and openended questions about the extent to which courses were converted due to the pandemic and the perceived level of difficulty. More detailed exploration

of the resulting pedagogy and technical problems were beyond the scope of this baseline study.

This study is, therefore, significant because it is one of the first scholarly publications to seek a worldwide sample of respondents exploring the experiences of higher education faculty as they negotiated the complex and stressful transition from facetoface instruction to distance learning in existing classes. Furthermore, it considers the levels and categories of support provided by the schools and the future curriculum consequences of the pandemic.

The following research questions guided this study:

The researchers grouped these research questions into constructs of two or more questions each, Teacher Experiences, Instructional Technology, Student Experiences, Curriculum Integration, and Difficulty. These constructs, drawn from the research questions, represented the most salient issues related to the conversion of facetoface classes to distance learning, and then teaching the classes for the remainder of the semester.

LITERATURE REVIEW

Little empirical research had yet reached the scholarly literature, as of the completion of this study, about the experiences of higher education faculty as they responded to the COVID19 pandemic. The scholarly medical literature abounds with studies about the SARSCoV2 coronavirus but little literature has yet reached publication that addresses the worldwide consequences for education and educational technology.

Brief History of the Pandemic

The SARSCoV2 coronavirus, and its resulting COVID19 disease in humans, surfaced in Wuhan, China, late in 2019. The first deaths were reported in January 2020 and by late January, multiple countries reported confirmed cases, leading to the declaration of a global health emergency by the World Health Organization (WHO). The virus is highly communicable, including by people showing no symptoms, and many countries recommended or required selfquarantineathome and social distance of at least two meters (six feet). Many businesses closed as a result of governmental policy or recommendations (Taylor, 2020, April 28) because no vaccine could be ready for months.

Schools around the world closed or suspended facetoface instruction. In the space of as little as a few days, higher education faculty had to redesign instruction to pivot classes from inperson to online or other distance learning methods (Gardner, 2020, March 20).

Separated from their familiar oncampus environment, students faced uncertainty, extra costs, anxiety, the effects of social isolation, and even sleep disorders (Cao et al., 2020; Ghebreyesus, 2020; Weissman, 2020). Economically disadvantaged and international students often did not all have their own personal computers or home internet access (Mukherjee, 2020, March 29). In some cases, students who relied heavily on campus resources, like food, housing, and healthcare, had no home to return to when their campus closed (Weissman, 2020). As a result, schools needed to innovate.

A poll released in April 2020 by the Kaiser Family Foundation in the US (Kirzinger, Kearney, Hammel & Brodie, 2020) found that 45% of American adults said the pandemic had affected their mental health and 19% said it had a major impact. A separate Kaiser Family Foundation report (Kirzinger, 2020) indicated that 58% of US young people ages 1824 reported that worry and stress related to the coronavirus had negatively impacted their mental health.

In higher education, the importance of the social relationships and the socialemotional distress caused by the pandemic closure of schools rapidly gained attention. Carolyn Foote (in Yorio, 2020) said that addressing student stress caused by uncertainty and isolation was central to the question of remote schooling, not just refining the logistics of making instruction work. She said that educators needed to stay connected with colleagues, be visible to students, [and] help students be visible to each other (p. 14).

Lieber (2020, May 1) said that parents send their children to college/university for at least three goals, (1) gaining knowledge and forming improved adult brains, (2) obtaining the diploma that signals perseverance and the ability to succeed to prospective employers, and (3) finding friends and mentors who will support them in their lives, which is difficult to achieve when studying from home, Lieber said.

Many students longed for their return to the campus environment. A student of one of the authors said, Im someone who benefits from having a facetoface conversation and learning in a classroom setting. Ive never realized how much I have taken for granted the human interaction here on campus and how much I do truly appreciate what goes on.

Educators in discussion boards reported students disengaging, challenging teachers to keep their students motivated (Higheredandcoronavirus, 2020). Learners become engaged when their learning environment fosters relationships, employs productive instructional strategies, and encourages social and emotional development. As a result, engaged learners exhibit behaviors, thinking processes, or emotions that indicate they are connecting with course materials, with the teacher, and with each other (Rice & Kipp, 2020, May 6).

Consequences for Higher Education

The pandemic need to convert classes to distance learning was eyeopening to many people about the potential of using educational technology to create virtual classrooms, live lectures, online tests and quizzes, the sharing of documents, and doing so in a way that was effective (Mahalakshmi & Radha, 2020). Many of the tools needed for the conversion of classes to distance learning were already available at the schools, such as existing learning management systems and conferencing software like Zoom

and MS Teams (Gardner, 2020, March 20). The authors know anecdotally that some teachers and schools developed their own technology solutions, adapting software or apps designed for other uses. Many scholars have observed that courses that are converted to distance learning on an emergency basis are not true online distance learning (ODL) classes because they are often not wellconsidered, theorybased instructional designs for sustainable online learning but rather are adhoc, low fidelity mitigation strategies (Gardner, 2020, March 20, p. 2). Professors who converted their classes to distance learning often did not have the expertise required for online teaching and learning pedagogy, finding it to be an intimidating task (Petzold, 2020). The challenges were complicated by the fact that the majority of higher education teachers have never actually taken a course in teaching (Bailey & Card, 2009), much less about instructional design for online learning. DeRosa recommended not thinking of converting or translating a class to distance learning for one semester, but rather thinking in terms of adapting which, she said, requires faculty to understand the choices they have and to make those choices from an informed perspective (Supiano, 2020, April 30), or in other words,

to make decisions based on the affordances of the educational resources (Marek & Wu, 2020).

Teacher Experiences

The few scholarly papers that have been published about teacher experiences in response to the pandemic have been limited. For example, a study of higher education teachers in the Ghaziabad region of India found that the actual benefits of virtual teaching were less than expected as a result of issues of network connectivity, training, and lack of the personal touch limited the adoption and success of virtual classrooms (Arora & Srinivasan, 2020). Past research has shown that in 2016 compared to 2002, faculty were progressively less enthusiastic about online instruction because the normalization of online distance learning made faculty more sensitive to the transactional gap created by time and location separation and other negative factors (Perry & Steck, 2019, p. 10).

The rapidlychange environment of teaching during the coronavirus pandemic, and the fragmented nature of the scholarly research, as of this writing, led the authors to conclude that a baseline study of the experiences of teachers worldwide, reflecting on their transition of classes to distance learning, would be valuable.

METHODS

Instrument

The researchers used a Google Forms survey to collect data answering all seven of the research questions, including quantitative questions, most of which were answered by Likertlike scales, and one research question answered by openended answers. The following section describes the research design.

Because the coronavirus pandemic, and the suspension of facetoface instruction, was unprecedented in the modern age, no previous model or research design existed that could be adapted for this study. As a result, the researchers developed a survey instrument based on journalistic reports, professional publications, and online articles focusing on higher education; editorials about the ramifications for higher education; and discussion threads in online faculty discussion forums. The quantitative portion of the instrument included 17 items, 16 with Likert like scales, and one with checkboxes. In additional, participants answered several demographic questions to allow examination of differences found among the demographic variables, such as age, region of the world, faculty rank, discipline, years of teaching, and incorporation of instructional technology into classes in previous semesters.

The researchers created a construct for each of the quantitative research questions, with two or more individual survey questions per construct. The complete list of questions, sorted by construct, is in Table 1 in the Findings section. The six constructs were Teacher Experiences, Instructional Technology, Student Experiences, Curriculum Integration, and Difficulty.

The researchers tested the questionnaire in a pilot study with 61 colleagues, who did not participate in the final data collection, and the overall internal consistency was found to be acceptable (Cronbachs Alpha at 0.79). A native Englishspeaking expert in survey methodology for scholarly research assessed facevalidity and suggested minor wording changes in some questions. The final survey questionnaire received minor adjustments based on both the pilot study results and the validity feedback. The Human Subjects Institutional Review Board at the first authors institution, Wayne State College, Wayne, Nebraska, USA, approved the study, including the final methodology and the statement of informed consent at the beginning of the online survey document.