Awareness, Perception and Readiness of Faculty and Staff Toward Remote Educational and Operational Services During the COVID-19 Pandemic

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Abstract
The sudden transition from face-to-face instruction to remote teaching in the early days of March 2020 created a new prototype for teaching, learning, and support for faculty and staff. The disruption brought to the surface the readiness of faculty and staff, and the planning and efficacy of professional development programs. Millions of faculty and students worldwide found themselves teaching and learning in a technology-mediated environment in a matter of days. Welcome videos midway through the semester, synchronous lectures, and multimedia elements thrust faculty developers, instructional designers, and trainers into a new role: providing the faculty at their institutions 100 percent support in Emergency Remote Teaching (ERT). While the goal was to provide faculty with the knowledge, skills, and tools required to be successful in a remote teaching environment, this new paradigm underscores the staff's importance and the readiness of the faculty, academic and student affairs staff, systems, support structures, and technological infrastructure. Training to always be ready should be a perennial and increasing endeavor. This abrupt change also brought to light the relevance of training, support systems, and academic continuity planning at an institution serving more than 100,000 students annually. The role that an online campus plays in the transition of faculty to remote educational and operational services during the COVID-19 pandemic is examined in this paper.

Keywords: Remote Teaching, Faculty Training, Online Teaching, Online Learning, Instructional Technology

Introduction

In the early days of 2020, the outbreak of a severe respiratory illness caused by novel coronavirus (SARS-Co-V2), later called COVID-19, was declared a pandemic (World Health Organization [WHO], 2020). The disease prompted mobility restrictions and calls to shelter in place, effectively triggering the closure of higher education institutions. In a matter of days, and, in some cases, hours, face-to-face interactions came to a halt, and colleges and universities suddenly found themselves providing instruction remotely. The initial strategy to deliver instruction was named Emergency Remote Teaching (ERT; Hodges, Moore, Lockee, Trust, & Bond, 2020), delivered via the internet and through a computer, similar to online learning (Singh & Thurman, 2019). During the same period, institutions rushed to provide faculty and students with tools and training to transition to this modality; instructional technology was now front and center.

Instructional technology is a strategy that has aided faculty in reaching students and helping them successfully acquire knowledge skills and instill critical thinking. To successfully adopt, use, and model instructional technologies that foster an embracement of hybrid and online learning, it is paramount to provide faculty with professional development opportunities or training (Zhu & Liu, 2020). Higher education institutions have served as de facto training centers for their own faculty, while some institutions may have a bare-bones unit that assists, supports, and trains faculty; other institutions have more sophisticated structures, such as Centers for Teaching and Learning, or an office of Academic Technology (Oblinger, 2006). The COVID-19 pandemic has triggered an acceleration (Bradley, Hirt, Hudson, Northcote, & Smit, 2020) in the use, adoption, and implementation of digital tools for teaching and servicing students, due to fears of spreading the virus and social distancing requirements. The global health crisis has created fertile ground for digital learning to take a leading role, prompting the realignment of plans and activities to support a recovery that will primarily take place in digital form (Baig, Hall, Jenkins, Lamarre, & McCarthy, 2020; Leng, Khieng, & Water, 2020). The range of services varies from basic training and the discussion of general and contemporary academic issues to more specific topics on pedagogical and classroom administration matters, including consultation, advice, course design, and the allocation of professional resources such as instructional designers, instructional technologies, and course developers to support their teaching endeavors (Morales Irizarry, 2006). The COVID-19 pandemic highlighted the need for faculty to receive continuous training in the use of teaching and learning technologies (Trust & Whalen, 2020). The sudden change from face-to-face instruction to a mode of delivery that is 100% mediated by technology took many by surprise and unprepared to handle the tasks and challenges at hand. In addition, many faculty members found themselves with a limited set of tools and strategies to support what would allow them to quickly pivot to what was initially proposed as a temporary mode of instruction, ERT (Pickett, 2020a, 2020b). In this context, it is important to define online learning as the delivery of instruction mediated through the internet and the use of information and instructional technologies, which can occur in asynchronous or synchronous mode (Singh & Thurman, 2019). While many institutions may have had a structure within academic affairs or information technology to promote and support the adoption of instructional technology, along with plans on how to do it, not all of them had these elements aligned in a comprehensive manner in the case an emergency arose, which prompted the case for business continuity or academic continuity plans (Morales, 2020). In the next few pages, I will address areas of practice that many institutions left unattended which then created a rush of activities of various scales to quickly provide faculty with what they needed to be in a new medium which is emergency remote teaching.

Awareness

While the topics of instructional technology, educational technology, online learning, and web-assisted or hybrid courses are not new to us in higher education, it is well known that they have not been embraced at higher rates (Geilman, 2018). These attitudes may have contributed to the difficulties experienced while transitioning from face-to-face teaching to emergency remote teaching during the early days of March 2020. Faculty have been aware of the existence of these tools and, for a variety of reasons, have delayed their use and implementation; institutions that are not grounded on a digital-first philosophy lacked plans to advance the adoption of these tools and practices. This situation continues to occur even when students are more mobile, tech savvy and prone to using technologies for learning. A few years back, the topic of web assisted, or hybrid courses was very active in the practice of teaching as a strategy to address the needs and learning styles of students, increase student success, and as a method to maximize limited physical space and create a culture of data driven decision-making (Leng, Khieng, & Water, 2020).

While there is no shortage of tools to help faculty excel at teaching, what may have been missing before this sudden change were the strategies to put training front and center for faculty to adopt new tools and methods and to incorporate them to their repertoire, thus creating a culture of innovation in the classroom. Video conferencing has existed for over 15 years in different formats. Tools such as Skype, Blackboard Collaborate, BigBlueButton, Webex and, more recently, Zoom and Microsoft Teams (Buchal & Songsore, 2019) have made possible connecting and communicating with students in a synchronous manner (Kudyba, 2020) that promotes additional and superior engagement and interaction with classmates and content (Moore, 1989). Developments in the telecommunications sector have made significant increases in bandwidth, making these types of communications possible with increased reliability from practically any place. The adoption of mobile devices has skyrocketed in the last decade and it is projected to reach to 13.8 billion in 2025, (Statista, 2020), thus creating opportunities that foster the use of these devices for educational purposes. What is new and different now is the number of digital devices that connect to the Internet that our own students own; this requires a different strategy for the delivery of educational content, acknowledging the limitations of bandwidth and screen size. Learning Management Systems, in existence for over two decades, has also made this transition possible by making content available on what is known as a web-assisted class allowing the faculty member to provide content, but that students can use asynchronously. This was one of the early ways to implement instructional technology (Pastrán Chirinos, Gil Olivera, & Cervantes Cerra, 2020). Early adopters thought this approach was convenient when emergencies, such as absenteeism due to health, closures due to the weather, and other spontaneous situations occurred, allowing for academic continuity (Morales, 2020). Online learning provided the groundwork and a solid foundation to support the transition to ERT and its subsequent growth after the pandemic (Lederman, 2020). Similarly, the pandemic has solidified the stature and quality of online learning as a viable way for students to learn (Zhu & Liu, 2020).

Tarrrant County College conducted a survey on March 23, 2020 of faculty and students to gauge their level of preparedness to teach or take an online course respectively (Table 1).

Faculty	**Students**
80% felt prepared to teach an online course	75% indicated they were prepared to take an online course
n=1,520	n=17,879

Table 1. Digital Readiness Survey

In addition, it is important to consider that after the COVID-19 pandemic, universities and higher education will be different (Witze, 2020). During the past 14 months, many institutions have made significant changes in the way they operate because of the sudden shift to emergency remote teaching and the closure of physical facilities. These changes have promoted the adoption and further implementation of technologies that have existed for quite some time: automation, increased accessibility, artificial intelligence, and inclusivity (Sherwood, 2021). This period of redesigning how higher education institutions operate has provided us with an opportunity to review, explore and re-engineer how we reach our students, how we can increase access by making education more accessible and with increased inclusivity through digitalization. The pandemic has accelerated these changes which will lead to better models of higher education and, ultimately, for the delivery of education. Faculty that is more experienced and skilled in the use of instructional technologies is also more empathetic toward our students that are still multi-tasking and juggling multiple responsibilities. The role of the faculty member is changing (Pastran Chirinos et al., 2020) from being the source of information to becoming a facilitator of students' knowledge acquisition. The paradigm of teaching has been permanently influenced by the acceleration of change, the increased use of digital resources, the acceptance of alternative teaching-learning schedules, and the best practices that have been developed as a result of this global emergency (Bigatel, Ragan, Kennan, May, & Redmond, 2012). Online learning has been the precursor of this change. Most of the practices, procedures, and strategies employed during the pandemic have been widely embraced at a global scale. There is ample evidence of the benefits of the face-to-face teaching experience when the faculty adopts new strategies and techniques.

Our role as champions for faculty work and success will be of continuous investment in professional development as well as in being open to new ways of delivering instruction through a wider array and repertoire of tools and teaching techniques (Gallardo-Alba, Grüning, & Serrano-Solano, 2020; Shah, 2019), active learning (Huang et al, 2020), ready-to-teach content (Geilman, 2018) and coaching of faculty for just-in-time training (Morales & Tapia, 2018). During this period of intense professional development for faculty, we included several strategies that resulted in the creation of a workflow to facilitate the creation of content by faculty. From PowerPoint to PDF documents, to resources located on the Web in repositories like merlot.org, our instructional designers provided faculty with training, strategies, and support to create short video lectures to enhance the lectures they were provided with during emergency remote teaching.

Throughout all this time, the global higher education community embarked on an extensive experimentation approach on the best combination of strategies for faculty that were previously accustomed to face-to-face instruction to now embrace and adapt instructional technologies. Tarrant County College and its online campus, TCC Connect, have

implemented (Morales, 2018) a series of strategies that have placed the college in a privileged position to facilitate a seamless transition of its face-to-face faculty to embark in ERT. These activities are the result of the implementation of the newest campus as a fully online operation.

Readiness of Faculty and Staff toward Remote Educational and Operational Services

To provide faculty with the information and knowledge they need to develop skills in ERT, a set of professional development sessions were identified. Professional development has been identified as a strategy that allows users to learn, practice and adopt new strategies, techniques, and the understanding of how to incorporate technology for teaching and learning (Johnson, 2021).

Conceptualized as a faculty success strategy, the College academic administration recognized the need to equip our faculty with online teaching strategies. Over the course of two weeks in July 2020, a total of 43 sessions on various topics were offered to all faculty members at the institutions (Table 2).

Topic	Sessions	Attendees (n)
Blackboard Basics	7	196
Accessible and Inclusive	3	152
Content and Copyright	3	166
Peer Developed Courses	4	136

Table 2. Instructional technology training sessions

It was also important to provide the professoriate with the professional development they needed to be effective in remote teaching. To accomplish this, the team at the virtual campus borrowed a page from online learning creating training in online pedagogy. Training sessions on online pedagogy were made available to faculty for their knowledge and competency development (Picciano, 2002). These aspects are paramount for the success of both students and faculty members in any teaching endeavor that is heavily mediated by technology (Table 3).

Topic	Sessions	Attendees (n)
Instructor Presence Online	4	248
Reasonable Rigor	3	201
The 1st Day of Your Online Class	4	229
10 Kinds of Instructor Videos	3	243

Table 3. Online pedagogy training sessions

Early on, it was identified that faculty needed training in teaching technologies and strategies with content that now resided on servers instead of traditional formats, that is, physical materials. A significant barrier was the quick conversion of content or its creation for over 10,000 sections for the entire college. To expedite and ease this burden on faculty, the virtual campus had previously created 35 Peer Developed Courses in high enrollment subjects. These are master courses are ready to teach and that were developed by subject matter experts and instructional designers, which included all the components, lectures, activities, and assessments (Morales, 2017). These courses were released to our colleagues in face-to-face courses that now are being taught remotely. The approach was adopted by some faculty

members and those that accepted the help. Professors found themselves relieved of the work and stress related with creating more than 7 weeks of content in the middle of a public health emergency.

Research shows that training in the use of instructional technology tools, the pedagogy of online learning, as well as online presence has been of great benefit as these increase the success of faculty in the virtual classroom (Johnson, 2021; Morales 2017). The global crisis of COVID-19 had created an express lane that had facilitated the transition to online and blended courses in subjects that before were not even considered make available in these instructional modalities. (Beatty, 2006; Johnson 2021; Means et al., 2013; Tallent-Runnels, et al., 2006)

Student Services

Prior to the pandemic, the virtual campus was very active in developing solutions to reduce the distance between students and the institution. Previously, in 2018, several initiatives were implemented to honor and capitalize on the benefits of online learning. A vital area of the campus that maximizes information technologies for student success is Student Services by implementing several initiatives and service units to support the endeavor. Online Advising and Success Coaches were identified as areas of need to serve students. With the expectation to create an environment for students to achieve learning outcomes and progress through their degree plans, a fully online advising unit across three time zones was created (Morales & Gantt, 2018). The virtual campus completed its transition to offer New Student Orientation entirely online in the fall of 2018. The strategy reduced the dependency on physical meetings for new students to receive their orientation. The orientation, delivered synchronously using Blackboard, was made available to the entire college to serve the over 5,000 students that are accepted every fall semester. Finally, in spring of 2019, the campus upgraded one of its most important technological tools that permitted us to communicate with students, our Chat tool. Recognizing developments in machine learning, a tool that incorporates artificial intelligence, was selected. This tool is Ivy.ai, which provided the advisors with added flexibility, quick response and to expand the creation of a knowledge base.

Perceptions

The COVID-19 Pandemic has brought to the surface the needs of faculty for more opportunities to try teaching strategies enhanced by technologies that help them better reach students and for students to increase their performance. Before the pandemic, instructional technology was used in several instances to complement teaching. It widely ranged in usage and implementation, from web-assisted to blended learning to fully online (**Seaman, Allen, & Seaman, 2018**). However, it stayed as the foundation to deliver the entire activity of teaching and learning (Geilman, 2018; Quinn, 2014), creating a limited view by some of the capabilities of the tools. It is known that some academicians believed teaching with technology at various rates of inclusion would not allow for effective student learning outcomes, but before the pandemic, and widely documented in the literature, that teaching with technology resulted in no significant difference in the learning outcomes of students (Fendler, Ruff, & Shrikhande, 2018; National Research Center for Distance Education and Technological Advancements [DETA], 2019; Russell, 2001; Stack, 2015).

Lessons learned and Conclusions

The pandemic has triggered enormous acceleration in almost every industry, and higher education is not exempt. The implementation of the above-mentioned units two years before the pandemic affected College operations provided the framework and experience to quickly transition to remote services. The experience the virtual campus staff had with technologies such as web cameras, softphones, cloud services—already in existence at the college—and conducting sessions remotely, in what can be considered a best practice, allowed for the immediate validation of the procedures, which were already in place within the College. Teaching and learning at higher education institutions will be different (Witze, 2020). It is believed the world has advanced between 6 and 10 years in the adoption of digital technologies (McKinsey & Company, 2020), but it has gone an equal amount of years or more backwards in terms of equity and social mobility (Jack, 2020). Simultaneously, the global emergency created the conditions for us to pause and reflect on how we want to deliver education in the future, a future that seems to be dominated by digital learning and the need for more equitable access. It is critical for higher education institutions to create professional development opportunities for our faculty to equip them with the techniques, tools, and knowledge to fully unleash the power of technology-mediated learning (Morales Irizarry & Casanova Ocasio, 2020). Similarly, it is imperative that more and better ways to serve students via digital services be provided as these are the way where we can widen the access to increase educational attainment. Research indicates that blended learning is as effective and valid as face-to-face instruction in delivering learning outcomes (Wang, Han, & Yang, 2015). After the COVID-19 pandemic, it is forecasted that offerings delivered using blended learning approaches will increase; this will be in response to students' needs and preferences based on their learning styles.

The pandemic has accelerated the adoption of online learning in many countries, where before it was not mainstream (Zhu & Liu, 2020). The COVID-19 pandemic has also created an opportunity for us to realign priorities as we all embark in new ways of working (Kudyba, 2020), the adoption of instructional technology for teaching and learning, and a new paradigm of teaching at higher education institutions.

On the other hand, the pandemic has accelerated the need to reflect so we can all redesign philosophies, priorities, needs, and learning outcomes and competencies of our faculty so we can be better prepared, plan for emergencies, and ensure a better academic continuity. Incorporating global education and leveraging experts from other parts of the world and bringing them in through the Internet will be the norm. The past 14 months have been a testing bed regarding new ways of teaching, working, and doing things. Many of the innovations that have flourished during the crisis are centered around digital technology and will have become part of everyday life when the world returns to more ordinary times.

Technologists and policymakers face the challenge of ensuring these innovations do not entrench inequality but instead broaden opportunity. This is truly an important chance for humanity to not only bring new technology to bear but, for the first time, to do so in an equitable way to serve our students.

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