The Interplay of Institutional Support and Faculty Roles During the COVID-19 Pandemic: Implications for the Future of Online Teaching and Learning

Samar Aad
Lebanese American University, Adnan Kassar School of Business, Management Department, Beirut, Lebanon, samar.makhoul@lau.edu.lb; https://orcid.org/0000-0001-9493-4899

Manal Ginzarly
Lebanese American University, School of Architecture and Design, Byblos, Lebanon, https://orcid.org/0000-0003-3693-9258

F. Jordan Srour
Lebanese American University, Adnan Kassar School of Business, Information Technology and Operations Management Department, Beirut, Lebanon, https://orcid.org/0000-0001-7623-723X

Abstract
While the outcome of the COVID-19 pandemic was largely the same across higher education institutions (HEI) – a rapid transition to online teaching and learning (OTL) – the processes and institutional support leading to this transition varied greatly. As such, the perception and anxieties experienced by faculty warrant exploration as these perceptions likely dictate the future of online teaching and learning within higher education institutions. Through the use of tweets made during the pandemic and interviews with faculty, this study reveals the emotional stress experienced by faculty when playing multiple, unfamiliar roles hindered the implementation of online teaching and learning initiatives. This hindrance may in part be alleviated through well-targeted institutional support.

Keywords: Online teaching and learning, higher education institutions, faculty roles, CCOVID-19 pandemic

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The COVID-19 pandemic generated the largest disruption to education systems in recorded history (Pokhrel & Chhetri, 2021; United Nations, 2020). While some institutions had already implemented online teaching and learning (OTL), others only had experience with traditional face-to-face modes of instruction. These institutions lacked training, resources, and strategies to implement online teaching at such a quick turnaround and speed. Despite challenges, the predominant response of educational institutions was to resume classes and try to "save the academic year" (Longhurst et al., 2020). This crisis required immediate action with an immediacy typically resisted in all institutions as bureaucracy and governance prevail (Vaira, 2004).

Institutions desired to find ways to resume courses for the benefit of students and help those who were reluctant or unable to engage in online learning. Universities, concerned about students' online learning satisfaction and overall experience, tried to target the various problems students encountered (Baloran, 2020; Maqableh & Alia, 2021). In contrast, not all institutions were able to support their faculty members effectively in terms of both technical and mental support (Walsh et al., 2021).

The widespread impact of COVID-19 resulted in a tsunami of social media news transmissions, guidelines and precautions (Mourad et al., 2020). Among the most frequently posted hashtags during the COVID-19 pandemic were those related to online education (Cruickshank & Carley, 2020). People around the globe joined hashtag communities to express their preferences, experiences, and emotions. Despite research showing how instrumental faculty are to the success of online teaching and learning (Orr et al., 2009; Bolliger et al., 2019), the attention—and social media posts—were largely focused on students during the crisis.

According to a search in Scopus within the fields of social sciences, arts and humanities, around 3,000 peer-reviewed articles were published on the topic of online learning during the COVID-19 pandemic between 2019 and 2021 (Aad 2022). Within this corpus, more than 600 articles address higher education in general. However, the focus of these articles was mainly on students' experiences and perceptions of E-learning (Budur, 2020; Laili & Nashir, 2021; Muthuprasad et al., 2021). Some of the findings addressed the physical and mental health of students in the online environment (Chaturvedi et al., 2021; Idris et al., 2021; Wieczorek et al., 2021) while others looked at ways to raise student awareness and ethics online (Meccawy et al., 2021). Interestingly, only 83 documents looked into the faculty experience in contrast to the more than 500 addressing the student experience. Nevertheless, faculty play a major role in the overall student learning and engagement experience (Kranzow, 2013; Horvitz et al., 2015). In this study, we examine how institutional support and faculty roles combined to yield various OTL strategies during the COVID-19 crisis and what the implications of those outcomes might be into the future.

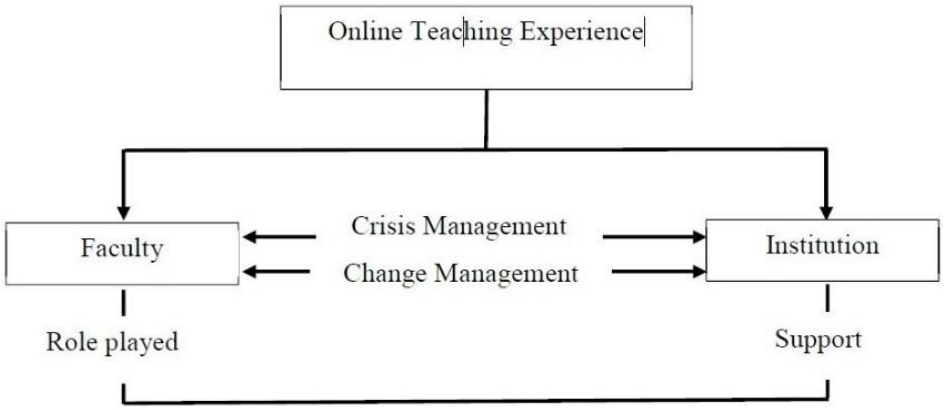
Our investigation follows a mixed-methods strategy. We begin by examining the full COVID-19 pandemic context in the arena of teaching and learning as it was this backdrop that influenced faculty perceptions of the crisis. We capture these perceptions of the crisis within online teaching and learning from tweets posted throughout the pandemic. We then drill down to the lived experience through first-hand faculty accounts regarding the rapid transition to online teaching within different conditions of institutional support.

The next section of this work discusses the literature review focusing on faculty roles and institutional support. The subsequent section presents the methodology applied to capture and analyze both the Twitter and interview data; after which we present the results of both the Twitter and interview analysis. Finally, the paper concludes with a full discussion on the roles played by faculty members in Online Teaching and Learning (OTL) during the COVID-19 pandemic while highlighting both practical and theoretical implications relative to the future of OTL in higher education institutions.

Review of Related Literature

This research addresses the interplay of faculty roles played and institutional support given against the backdrop of the broader online teaching environment during the COVID-19 crisis with the aim of understanding how different roles and levels of support might influence the future of OTL. Figure 1 illustrates the research model. In light of this research model, the remainder of this literature review focuses on the faculty role and institutional support during the COVID-19 crisis.

Figure 1
Illustration of Research Framework.



The Faculty Role

As mentioned in the UNESCO *COVID-19* educational disruption and response report 2020 (UNESCO, 2020), faculty were asked to teach online using virtual modalities with little regard for their previous experience or lack thereof often without the appropriate tools and resources, especially at the beginning of the crisis. The transition to OTL was made at a different pace by different educators. Some responded immediately, others within days, weeks or even months of the closure. Perrotta & Bohan (2020) note that the shift to online classes required faculty to interact and engage via discussion forums and other communication tools, either synchronous or asynchronous, and provide timely and frequent constructive feedback, encouragement, and motivation to help students achieve their learning goals. Furthermore, during the pandemic faculty were forced to explore various aspects of online learning such as

how to influence learner motivation using different forms of interactivity, enhance learner engagement, and find effective assessment methods (Martin et al., 2020)

The faculty's role in the online environment as a facilitator, course designer, mentor, and organizer is important for students to be able to engage meaningfully in the learning process (Young et al., 2001). Carril et al. (2013) argue that faculty with prior OTL experience are more confident in their pedagogical competencies in online teaching and learning. Bolliger et al. (2019) further confirm that with no experience, faculty teaching online are less likely to use appropriate activities to support and engage students. Hämäläinen et al. (2021) add that faculty's digital competencies should enable them to have the appropriate skills to achieve the necessary course learning outcomes. Several researchers agree that face-to-face teaching skills are different than online teaching skills (Ferrari et al., 2012; Hämäläinen et al., 2021).

During COVID-19, another role faculty had to play was that of coach, mentor, and good listener to help students navigate changes (Ersin et al., 2020; Krishan et al., 2020). Researchers specifically highlight the importance of the faculty in managing discussions, providing constructive and personalized feedback, and encouraging the use of information and communication technology (ICT) tools (Wright et al., 2023). The importance of multiple faculty roles in the online experience is not new; past research notes that these roles have either a direct or indirect effect on the students' emotions (Chen et al., 2019; Hattie, 2010; Horvitz et al., 2015; van der Spoel et al., 2020). Faculty in the online environment are not only facilitators or knowledge disseminators, but they also play the role of "leaders" and "accompaniers" who coach and mentor the students (Yao et al., 2020). Accordingly, higher education institutions need to ensure that they facilitate technology use which allows faculty to fulfil these roles with minimal barriers to integration (Tarhini et al., 2019).

Institutional Support

Like all technology-related sectors, OTL has seen immense growth in the higher education sector. Investment in online education was projected to reach $350 billion by 2025 (Research and Markets, 2019). Some universities engaged with OTL well before the COVID-19 pandemic and developed strategies for e-learning deployment (e.g., Durham University, Open Arab University, Arizona State University, University of Liverpool, University of Florida, etc.) (Keengwe & Kidd, 2010). Even though some institutions engaged early in OTL, the effectiveness of these measures varied from one institution to another (Curran, 2004). The pandemic accelerated OTL adoption forcing all institutions with or without prior institutional support or planning to transition rapidly.

Frankel et al. (2020) found that having appropriate technical and pedagogical support is vital to OTL transitions. In crises such as COVID-19, planning appropriately for technical support was not possible. While on one hand the technology used during the pandemic solved the problem of in-person attendance (Majewska & Zvobgo, 2023), it created several challenges related to issues of faculty training, student support, online pedagogy, and online implementation (P. Mishra & Warr, 2021a; Scherer et al., 2021). Faculty who effectively used technology in their face-to-face classes were not necessarily effective in a fully online teaching and learning environment. Additionally, both faculty and students experienced pandemic-related anxiety and uncertainty. Institutional support was necessary to overcome this anxiety and promote the idea

that OTL can yield effective engagement. Both pedagogical and technical support were needed to ensure quality assurance and readiness during the pandemic (Dhawan, 2020). Focusing solely on learning outcomes and the assessment of students' achievement of those outcomes was no longer an option, there was a dire need for faculty upskilling in appropriate course design and pedagogical decision making (Doo et al., 2023).

Through the Lens of Change and Crisis Management

Theories of crisis and change management show that the way employees adapt and respond to change influences their emotions (Pulakos et al., 2002; Baard et al., 2014). According to these theories, during a crisis, job positivity might drop due to anxiety and uncertainty; therefore, maintaining employees' emotional balance and engaging them in the change needed during a crisis can lead to a positive emotion (Spector, 1986; Brown & Peterson, 1993; Marques-Quinteiro et al., 2019). Furthermore, Howe et al. (2018) find that faculty who receive support from their institution during a change or a crisis, such as mentoring, training, or communication are more positive than those who don't.

Change management is crucial to any type of organization including educational institutions. Resistance to change is a common phenomenon in organizations especially when the change affects the routine of individuals; for any change to be successful, the organization must be ready to overcome resistance (Dent & Goldberg, 1999; Jager et al., 2017). People fear the unknown, they fear that change will require them to do more tasks, and they fear the change will affect their financial position (Bordia et al., 2004). Employee involvement in the change process has a positive impact on their emotions mainly when they have the knowledge and skills to contribute to that change (Osei-Bonsu, 2014). Employees who are engaged with the change tend to be more positive than if the change was imposed on them (Chien, 2015).

The notion of change management is credited to Kurt Lewin who believed that change happens through learning, planning, and involving individuals who will be affected by that change. In contrast, during the pandemic, institutes of higher education experienced unplanned changes. Mishra et al. (2020) discussed the shift to OTL as innovative and adapted Lewin's model of change into three steps: unfreezing, changing, and freezing.

Unfreezing is the first phase of change when the routine of individuals is shaken by a certain force or incident. For example, in the case of the pandemic, the mode of teaching and learning was unfrozen forcing faculty and students to adapt to online modes of delivery. Faculty and students who were used to face-to-face interactions were no longer able to meet physically on campus. Unfreezing motivates individuals to change directions and to identify and evaluate other options in order to fulfil their tasks despite unforeseen circumstances. In the pandemic, the change stage was the adoption of new technologies and ways of working to ensure continuity of learning. Freezing as adapted by Mishra & Warr (2021) is the final phase where individuals adapt to the change that happened. They will not go back to the old norms of face-to-face teaching and learning, but they will learn from the change and adopt a new mode. This is at the heart of this research: Investigating how the interactions between faculty and institutions during the unfreezing and changing phases of COVID-19 might affect the future adoption of online teaching and learning (OTL), with a focus on the implications for the freezing phase.

The three stages of change management are consistent with the three stages of crisis management (Smith, 1990, 1995; Burkle, 2019):crisis of management, operational crisis, and crisis of legitimation. It is in the crisis of legitimation stage when the institution accepts the crisis and adopts the change into their operations to sustain and resume functions. In the case of the COVID-19 pandemic this meant adopting online teaching and learning despite the absence of legislation in many countries such as Jordan, Egypt, and Lebanon (Al-Salman & Haider, 2021). During that phase, stakeholders were highly emotional as they have been affected by the crisis and they started to learn new ways. The change management stage of freezing begins during the crisis of legitimation stage, but also allows for innovation and the charting of a new course not dependent on potentially ad hoc crisis-driven solutions.

As this entire crisis trajectory occurs only when a crisis is perceived, it is critical to document the broader context in which the faculty and institutional interaction occurred in the lead-up to the OTL transition. Clearly the emotions driving both the faculty to recognize the crisis and the institution to establish support policies were fueled by the prevailing context. For this reason, this study takes a broad-to-narrow strategy in its methodology. We begin by looking at the prevailing feelings relative to online teaching and learning as reflected by Twitter and then narrow in on the specific lived experience of faculty members embedded in institutions of higher education.

Research Design

This study aims to explore how institutional support and faculty roles combined to yield various OTL outcomes during the COVID-19 crisis and what the implications of those outcomes might be in the future. The study was guided by the following research question:

1. How can the various OTL techniques—seen during the pandemic and driven by the interplay of institutional support and the roles played by faculty—inform the future?

Materials and Methods

Recognizing the importance of the broader context that fueled much of the anxiety felt by faculty and university administrators who were making policies relative to OTL, this research relies on two key strategies: an analysis of Twitter data, also known as “tweets,” and a critical reading of first-hand interviews with faculty members across a variety of institutions. The Twitter data, while not directly informative as individual faculty members and their institutions cannot be identified in the anonymized data, do serve to set the context in which institutions and faculty were operating during the rapid OTL transition. In many ways, with the isolation brought about by lockdowns during COVID, the broader social media landscape served for some to replace more traditional institutional channels for OTL support. The interview data are more germane to this topic and serve to answer the research question regarding the rapid transition to online teaching within different conditions of institutional support in a more direct manner.

Accordingly, this section is divided into two subsections: one on the social media (Twitter) strategy and one on the interviews.

Social Media Data Collection and Processing

Social media, specifically Twitter, was a source for many users worldwide to express their opinions related to online teaching and learning during the COVID-19 pandemic. Accordingly, we examined tweets posted in all languages using the Twitter API service from June 2020 to March 2021 with the hashtags #onlineteaching, #onlinelearning, #highereducation, and #COVID19. The total number of tweets after discarding retweets using the Duplicate Remover add-in within Excel yielded 2,350. A Google translate sheet was used to translate the tweets into English.

Textual data was imported into Rstudio to run a text mining analysis. First, the *tm package* was applied in R to clean and pre-process the textual data by removing stop words and other elements that don't have any impact on semantic meaning including mentions, URLs, emojis, numbers, and punctuation. Then we conducted an automatic sentiment analysis using the *syuzhet package* (Jockers, 2015). This analysis not only identifies "positive" and "negative" emotional expressions but also detects specific emotions including trust, surprise, sadness, joy, fear, disgust, anticipation, and anger. Once the emotions were identified, the different terms used to express these emotions were extracted for a more in-depth reading of the results. This analysis tokenizes the dataset at the word level, meaning a Tweet is considered to be a combination of individual words. Therefore, a single sentence can express mixed feelings such as fear and anticipation. Table 2 summarizes the findings of this investigation. To identify whether feelings changed over time, the dataset was split by month with the sentiment analysis repeated for each month (See Figure 3).

Interview Data Collection and Processing

To address the faculty's experience with OTL, namely, how faculty members at higher education institutions managed and adapted to the changes brought on during the pandemic, we interviewed 30 academicians who were involved in online teaching and learning in HEI during the pandemic. We administered an open-ended, semi-structured questionnaire to 30 academicians, including deans and professors at all ranks who taught online during the pandemic. Overall, these 30 academicians came from 10 institutions across the EMEA region. Notably, none of these institutions had previously implemented a full-fledged online program and only 2 of the 10 institutions provided optional formal training to faculty members prior to the crisis. During the pandemic period, at least one of these institutions provided both technical and pedagogical support for online learning while the remaining institutions provided only technical support to their faculty through the IT departments. The interviews were conducted using WebEx or Zoom and lasted an average of 40 minutes each. Table 1 summarizes the sample characteristics.

The interview protocol received two ethical approvals, one from Durham University and one from the Lebanese American university (DUBS-2020-06-11T10:54:03-wchz36, 11, June 2020 and IRB #: LAU.SOB.JS1.2/Jul/2020). All interviewees gave consent to record the interview. The transcriptions were completed using *Otter.ai* technology. The transcribed interviews represent qualitative data, the analysis of the interviews focused on the different factors that can lead to a successful online teaching experience. The results from the interviews provide a richer insight into the faculty teaching experience during the COVID-19 pandemic.

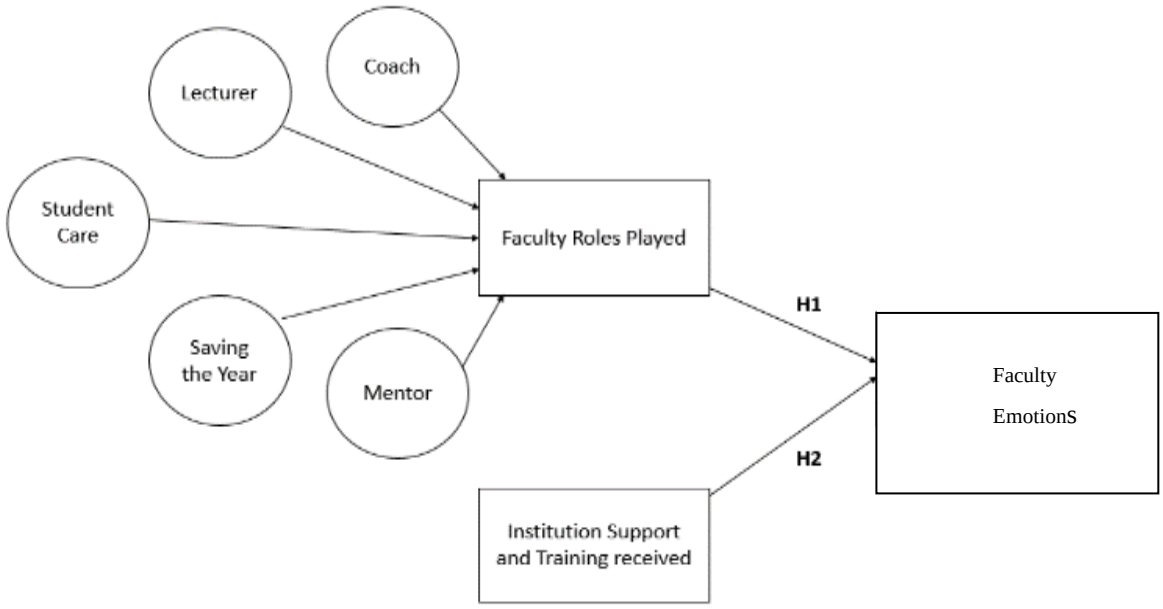
Table 1
Sample Characteristics

Characteristics		**Count**	**Frequency**
Gender	Male	17	57%
	Female	13	43%
Age Group	30~39	2	7%
	40~49	9	33%
	50~59	16	50%
	Above or equal to 60	3	10%
Employment Status	Full Time	29	97%
	Part Time	1	3%
Years of experience	5-10 Years	2	6%
	16-20 Years	20	67%
	20 or more	8	27%
Online Teaching pre COVID-19	Yes	12	40%
	No	8	60%
Quiet place at home	Yes	30	100%
	No	0	0%

The open-ended interview questions included general questions related to (1) online experience and training prior to COVID-19; (2) confidence and willingness to teach online; and (3) feelings about the decision to teach online and how the decision was communicated with specific questions asking about (a) the factors that can lead to a successful online experience; (b) whether faculty were supported by the institution's IT department; (c) whether interviewees believed COVID-19 accelerated the phasing out of face-to-face learning and what would be the acceleration impact; and (d) and whether they would shift to teach online 100% in the future.

The interview transcriptions were uploaded to NVivo, a qualitative data analysis computer software, for thematic analysis. Following Spiggle's (1994) guidelines, the data collected was coded and categorized following specific themes. Different themes emerged and were then integrated under higher-order conceptual constructs. Coding initially led to 137 themes which were consolidated and re-labeled based on redundant codes. The different themes were then consolidated into categories leading to the emergence of the suggested model (see Figure 2). Grounded theory principles were followed by collecting data and analyzing it at the same time. While coding the data on NVivo, comparisons were made with other interviews to evaluate if additional interviews were still needed. According to grounded theory, the sample size of the interviews is flexible (Chun Tie et al., 2019). Within this framework, data collection and simultaneous data analysis allowed for real-time judgments about whether to conduct further interviews. As mentioned by Corbin & Strauss (2007) when data collection is no longer bringing incremental benefit, this means the researcher has reached theoretical saturation and data collection can be stopped. Although data reached the saturation point at the 15th interview, fifteen additional interviews were conducted to ensure no important themes were missed.

Figure 2
Suggested Model



Results

We begin the results section by describing the broader online teaching and learning environment through the analysis of Twitter data. From here we continue to the results emanating from the interviews.

Twitter Results

Results showed that the majority of tweets are associated with positive emotional expressions. As shown in Table 2, trust, anticipation, and joy dominate the total expressions. The most recurrent negative emotional expressions convey sadness and fear.

Table 2
Emotional Expressions in Tweets Posted Between September 2020 and April 2021.

Emotion	**Count**
positive	3492
negative	775
trust	1310
anticipation	1285
joy	1158
sadness	646
fear	560
surprise	234
anger	195
disgust	69

In Table 3, the different terms used by Twitter users to express feelings towards online teaching and learning during the COVID-19 pandemic appear. Focusing on the most prevalent sentiment of trust, we see the most used affective terms are *gain, inspiration, achieve, create, successful*, and *hope*. These tweets were calling for keeping hope and trying to succeed and achieve the best results in OTL through creativity and inspiration:

- Tweet 47- Teaching is complex after the pandemic. Here are some ways to leverage what you know to achieve student engagement…
- Tweet 513 - The best teaching resources on the web … #educator #inspiration #stem #COVID #tutoring #success #parenting #music #teachingideas #life #technology #language #parents #COVID19
- Tweet 1632- Reinvent life and prepare for the future #life #education #onlinelearning #remotelearning #highereducation #COVID19

Anticipation is expressed through terms like risk, prevention, planning, excited, and improve:

- Tweet 1598- The transition to online learning was the culmination of weeks of planning … Learning talks about the transition, challenges; surprises of #COVID19.

Negative emotions such as sadness, fear, and anger are expressed through terms like struggle, devastating, loss, isolation, risk, quarantine, disruption, and fighting:

- Tweet 77- And once again online uni. I know it's for the best but let the struggle begin …

- Tweet 339- Stay home safe doing online or remote learning! Don't risk your life on campus! #COVID19 #pandemic #SocialDistancing #StayHome #Masks #remotelearning #onlinelearning #college …

Table 3
Different Terms Used to Express Feelings

Feelings	Terms used to express feelings
Anger	disruption, bad, fighting, inequality, loss, unfair, painful, distracting, devastating, scream, anxiety, killing, failing, broken, death, confusion, struggle, crazy, threaten, lonely, insane, violence, terrible, battle.
Fear	risk, quarantine, struggle, force, confusion, devastating, pandemic, emergency, scream, loss, failing, assault, outcry, challenge, problem, emergency, awful, infectious, difficult, pain, worse.
Sadness	struggle, devastating, loss, isolation, doubt, pandemic, terrific, overwhelmed, bad, disaster, weary, lonely, disappointed, painful, awful, restrict, disability.
Disgust	hypocrite, disappointed, death, provoking, disgraceful, homeless, disease, unbearable, infectious, unhealthy.

Anticipation	risk, prevention, planning, excited, improve, tomorrow, expect, coming, prevail, ready, inspiration, progress, preparation, production, advocacy, vision, independence, brilliant, longing.
Surprise	sudden, alarming, surprising, emergency, unprecedented.
Joy	inspiration, good, excited, bounty, success, thankful, laughter, hope, freedom, proud, love, companion excellent, passion, resources, generous, safe, wonderful, helpful, happy, joy, delighted, peace.
Trust	gain, inspiration, achieve, create, successful, hope, resources, proud, feet, improve, journey, generous engaged, independence, progress, organization, inspiration.

The results in Table 2 show that positive emotions dominate the investigated tweets during the COVID-19 pandemic and these emotions served in part to mitigate the negative impact of the crisis. Other studies have shown that students experiencing positive emotions throughout a flu pandemic retained higher trust in their college health center (Kim & Niederdeppe 2013). In fact, in times of crisis, fostering positive emotions can contribute to raising trust and effective coping, decreasing physiological arousal in the short term, and the risk of depression in the long term (Fredrickson, 2001; Kim & Niederdeppe, 2013).

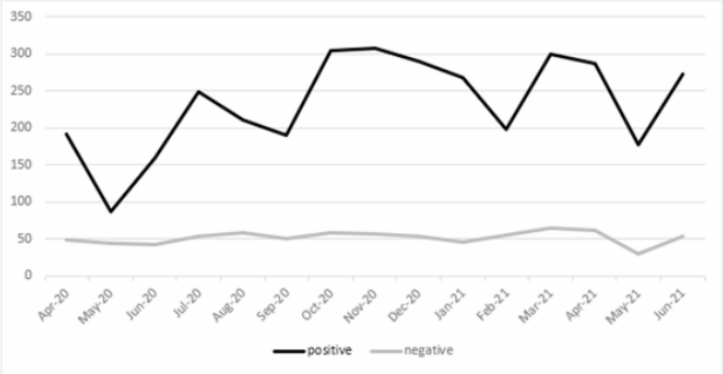
A recent study on collective emotions in tweets related to multiple topics including political, everyday life changes, and the pandemic; the COVID-19 pandemic showed that while positive emotions remained stable during the pandemic, negative expressions reflected an early, strong upsurge of anxiety then a high level of sadness and anger three weeks after the COVID-19 outbreak and onwards (Metzler et al., 2022). In our case, negative expressions remained relatively stable, whereas positive emotional expressions were constantly changing. As shown in Figure 3, between April and May 2020 these expressions were decreasing, and then they increased between May and July 2020. This pattern of decrease and increase is seen between July and October 2020 as well as January and June 2021. The emotions mostly contributing to this pattern are joy, trust, and anticipation.

We believe the variation of emotional expressions relates to worldwide COVID-19 lockdown measures. For instance, in most countries, the first lockdown started in March 2020 and ended in June 2020; Figure 3 reflects this change as an increase in positive emotions between June and July. These fluctuations also align with the different times schools announced their online teaching plans relative to the semester starts. It is interesting to note that when the positive tweets decreased there was no similar increase in the negative tweets thus the total number of tweets to these hashtags drops in these periods.

While the prevailing positive sentiment in this corpus of tweets is surprising, it serves to point to the way in which the teaching and learning community as a whole sought to use their privileged teaching/learning role to provide knowledge and mentorship. This, in many ways, at the global scale reflects what each individual faculty member found at the micro-scale, as noted in the interview results highlighted in the next section.

Figure 3

Negative and Positive Emotions Expressed in Twitter Hashtags Between April 2020 and June 2021



Interview Results

According to the interviewees, faculty were not consulted if they wanted to teach online as this was a crisis and there was no time for any negotiations. Decisions were imposed top-down. Faculty members who were asked to teach online were living uncertainties. From the 30 interviewees, 27 had no caring role at home and 3 had caring roles. Table 5 summarizes the most frequently occurring themes across all interviews and the number of interviews in which each theme was mentioned.

Table 5

Interview Themes

Group	Theme	Overall Frequency of Occurrence	Number of Interviews in which Mentioned
Online teachers will have to play several roles	Faculty role	22	13
	Faculty training	17	13
Online Pedagogy	Advantages of online	20	10
	Faculty adaptation	24	11
Barriers to OTL	Emotional distress/faculty concerns	94	16
	Student concerns	14	11

Broad overarching themes emerged from the data collected, including emotional distress as the most frequent theme among faculty concerns, along with COVID-generated acceleration of digital transformation, and characterization of faculty's disruptive and challenging journeys. These first-order themes then led to second-order themes such as online teachers' roles, online pedagogy, barriers, and challenges. The different themes were helpful to understand the various tangible and intangible aspects associated with OTL. For example, lack of resources and the use of technology are tangible aspects, while the faculty experience and roles are intangible aspects.

From this reading, a codebook of 22 codes was generated and then analyzed to highlight existing patterns and shared characteristics resulting in six themes.

"Faculty role" and "faculty training" gave more information on the role of faculty in teaching online during COVID. The categories "advantages of online" and "faculty adaptation" contributed to faculty satisfaction and increased the chances that they would continue to teach online even post-pandemic. "Emotional distress" and "student concerns" detailed the negative impact of the online experience during the crisis.

When asked the question "How did you approach your students online?" most interviewees mentioned that their first email was comforting, telling the students not to worry and that all will be okay; this highlights the coaching and mentoring role played by faculty.

Interviewee 1 who is a 54-year-old female, full-time Associate Professor, and a resident in the EMEA region with no online teaching experience pre-COVID-19 explained:

> I was asked to teach my class online at the same time when both my kids had their online school classes. So, we were 3 using the bandwidth at the same time, hearing each other's classes, and we were among the few lucky families who had 3 different devices to use. Many of my students told me they had to share and take turns in using one laptop! I felt sorry for them. I had to find ways to relieve my students from the stress they were facing because of uncertainties and the lack of resources. I first sent a comforting email telling them I am here to support them and to help them finish their course successfully. I spent time talking to them about their well-being, we are in this together and it shall pass, we will overcome the challenges I said. I even gave them my mobile number, I regretted this later [laugh] as I was bombarded day and night with their messages. But I felt I am not only their teacher. I had another role to play; I was their mentor and coach.

Another faculty member, a 60-year-old female, living alone in the EMEA region with no caring role said she would not teach online if she had the option not to. Specifically, she said that:

> I felt my role was no longer only teaching; I had to learn how to use online platforms such as "Teams," how to use Zoom, how to use WhatsApp, and all these things I dreaded using before. I had to find ways to engage my students during very challenging times. That was not an easy task. I have taught accounting for so many years in a classroom using a board and my markers. My course is not designed to be taught using a screen and a keyboard. This experience raised a flag that to teach a course online you need to design it differently. I am glad I will not have to do that as I will be retiring soon.

Interviewee 10 was a young faculty member, a 37-year-old male, with 5-10 years of experience, from the Americas, not living alone with no caring role who considered online to be the future of education. He mentioned:

> As this is the future, we need to embrace this new pedagogy and develop our roles that will no longer be restricted to teaching. As a faculty member, I believe I have to enhance my mentoring and coaching skills. I have also started learning some design skills so I can adapt my course to be taught online more interactively and interestingly. I think the university should invest in developing online courses post-COVID. They need to learn from this experience and be ready for the change. It is clear that hybrid is the future post-COVID, and we will see more and more universities offering online programs. Also, countries that have been resilient in accepting such programs will have to adapt and legislate that soon.

Interviewee 30, a 58-year-old male from the Asia Pacific, who held a Deanship position said:

> AI will even be used in the near future to help faculty in the many roles they will be playing and in giving instant feedback to students and answering their basic questions instantaneously. Each faculty will help their online assistant.

Most of the interviewees in our sample (19 out of 30) did not teach online before the COVID-19 pandemic. However, 25 of them would teach online in the future if they had the option not to and 28 out of 30 believe that the future will be hybrid.

In terms of institutional support, interviewees described the need for faculty training in the online environment. The pandemic caught universities by surprise, and most of them did not provide appropriate faculty support such as faculty training to face the crisis and successfully move their courses online. Interviewee 25, a 60-year-old male Dean in the EMEA, mentioned that:

> We saw this (the lockdown) coming even before the government. So we decided to move forward our semester break and use it to train our faculty on how to use the online platform in preparation for the upcoming crisis. I can proudly say that we were able in my school to train 95% of the faculty to be ready. And they were!

This was not the case with all other interviewees. Most responses revealed a rigorous workload on administration and IT staff during the sudden shift. When asked the question, "How were you asked to move online?" Most said that there was no prior consultation as this was a crisis. When asked about their feelings about such a sudden shift, most said there was no other way to try and help the students and they had to adapt, but if they had proper training this shift would have been smoother. The question about how they approached students online triggered faculty to talk more about the need for training. Most interviewees did not have prior online training and that was a challenge. Interviewee 1, a 54-year-old female with no prior online teaching experience pre-COVID, said:

> After 26 years of experience, learning a new skill all by myself is not easy. I was overwhelmed I was not able to start my online class on time because of technical difficulties. I felt behind, and I wondered what my students will think of me! I did not want them to say that I was an old, outdated professor. I needed support and

> since I did not have proper training, I called the young IT guru faculty members who shared with me some tips. IT staff were also very helpful but very overwhelmed with all the enquiries they were receiving. I just wish I knew how to use Teams before the crisis.

Interviewee 11, a 46-year-old male described his normal teaching routine that did not include the use of any technology:

> Suddenly I had to stop going to my classrooms, seeing, and talking to my students, writing on the white board…I was expected to do the same but virtually. I was not ready, and it took me a lot of time and effort to adapt.

Interviewee 4, a 74-year-old male, described the training offered to faculty members as follows:

> At the university level we were offered general training on how to use the online platform. But faculty needed to know how to specifically deliver their own subject online. Teaching economics online is different than teaching marketing for example. The general training was done online as we could not physically access the university premises and that also was challenging for me. Faculty members were expected to teach their lessons during normal times and keep regular office hours for students to contact them. They were also asked to give regular feedback and discuss any issues with their students.

Interviewee 2, a 58-year-old male, shared his concerns about not being able to appropriately use annotations online, or even to find appropriate tools to engage the students. He said, "I believe having appropriate training would make me feel more confident in this virtual environment."

In most cases training came after the start of the online course. Interviewee 16, a 58-year-old male, said:

> We didn't have time for training did we. This caught us by surprise. Friday March 20 the initial long lockdown came into effect with measures in place to restrict movement domestically. All nonessential movement was prohibited with permission to leave the houses to shop for food and medicine, or to go to work with the required permits issued by authorities. Schools and universities had to close, so we did not have much time to prepare. But we did it with no trainings at first. Training followed once classes started online a month later.

All interviewees in the sample did not have full training on how to teach online. This was one of the main challenges they faced as they had to learn using different platforms and familiarize themselves with online teaching technology in a very short time relying on themselves and the peer networks they had before the pandemic. In general, a positive attitude dominated with the interviewees who, despite the challenges, wanted to ensure students came first and adapted to the change.

Discussion and Conclusion

This study examined how institutional support and faculty roles combined to yield various OTL outcomes during the COVID-19 crisis and what the implication of those outcomes might be in the future. More specifically, the sudden move from face-to-face teaching to online delivery of material due to the COVID-19 pandemic had and will continue to have an influence on the broader OTL experience. In an attempt to understand this rapid transition through the faculty member lens, we first contextualized the rapid shift to OTL by extracting different emotional expressions manifesting on Twitter. These expressions provided insights into how the online community felt about the overall experience. After drawing a generic understanding, we applied a traditional interview method to gain a deeper understanding of the faculty experience. We examined the different roles faculty had to play during the pandemic and the institutional support that was given to them. Interview results aligned with the general emotions expressed on Twitter during the pandemic. For instance, while Twitter data showed that the most expressed emotion was trust, the interviews indicated, in accordance with previous research (Ersin et al., 2020; Wright et al., 2023; Yao et al., 2020), that faculty played different roles such as mentoring, coaching, and supporting their students—all roles that help in building trust. Moreover, the interviews showed that faculty expressed concerns about uncertainties and in parallel, the tweets expressed emotions associated with uncertainty—anticipation was the second most frequent emotion in the dataset. The interviews showed that emotional distress due to a lack of preparedness is one of the barriers to OTL, and similarly the online community expressed fear and sadness. These results confirm literature which suggests that faculty in OTL need to have the support and the resources in order to be confident with the online teaching experience (Krishan et al., 2020; Majewska & Zvobgo, 2023).

Aside from the alignment between the emotions manifest in the tweets and the experience expressed by faculty through the interviews, we can draw two primary conclusions relative to the future of OTL in higher education in the post-pandemic era. First, younger faculty and those more comfortable with technology are happy to embrace OTL and believe that hybrid teaching is the way of the future. This result is not particularly unexpected. Second, in contrast, is the revelation that nearly all faculty members—even those who were not comfortable with technology prior to the crisis—are willing to teach using this modality in the future. This finding, while unexpected, can be explained. Overall, the faculty interviewed noted that while their institutions dictated the transition without negotiation, there was institutional support for the transition—even if late or limited. This support coupled with the positive, supportive emotions reflected by the OTL community on social media seems to have helped faculty view the experience positively. Furthermore, the discovery by faculty that they could effectively play the multiple roles of mentor, coach, and educator online likely led to a feeling of achievement and positive view of OTL for the future.

This brings us to the key recommendations emanating from this work. Faculty need to have training in the skills to succeed in the online environment and maintain appropriate academic knowledge and communication with their students to overcome any challenges and hurdles. It is the continued provision of well-designed technological support that is critical to the maintenance of OTL as a long-term strategy within higher education. Future research could examine the design of OTL support for faculty focussing on specific facets of both the teaching

and learning experience such as hybrid learning or artificial/virtual reality-enabled learning and the differential impacts of faculty training levels relative to different student groups.

In this study, positive emotion and the capability of faculty to adapt and move on during the crisis by playing different roles despite the limited support given by their institutions could serve as a lesson for any possible future crisis. Education is delivered by the faculty to students, meaning that any change or implementation of a new mode of teaching and learning must include appropriate, positive communication. To prepare for future crises, universities should look back and reflect on what engendered positivity during the crisis and what didn't.

Limitations and Suggestions for Future Research

This study includes interviews with 30 faculty members from business schools in different universities working during very challenging times. Scholars are encouraged to collect data from a more diverse population in other schools and disciplines. Furthermore, a longitudinal study would serve to capture the retrospective view of faculty with the aim of determining when the "freezing" phase of change management occurred, what changes froze, and what changes have since thawed.

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All R Scripts used for analysis are available upon request from the corresponding author; study data is in some cases proprietary or confidential, sharing may be possible in some cases – requests should be directed to the corresponding author.

Two ethical approvals were granted prior to the data collection, one from Durham university where one authors was doing her doctorate and one from the Lebanese American university where the same author was working:

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