Received: 14 June 2023 | Accepted: 18 February 2024

DOI: 10.1111/napa.12214

ORIGINAL ARTICLE

The missing study groups: Liminality and communitas in the time of COVID-19

Fredy R. Rodríguez-Mejía[1,2] | **Elizabeth K. Briody**[3,6] | **Ethan L. Copple**[4] | **Edward J. Berger**[5]

[1]MEERCat: The Mechanical Engineering Education Research Center at Purdue, School of Engineering Education, Purdue University, West Lafayette, Indiana, USA

[2]Arts & Sciences Division, Northwest State Community College, Archbold, Ohio, USA

[3]Cultural Keys LLC, Troy, Michigan, USA

[4]Department of Anthropology, Oregon State University, Corvallis, Oregon, USA

[5]MEERCat: The Mechanical Engineering Education Research Center at Purdue, School of Mechanical Engineering, School of Engineering Education, Purdue University, West Lafayette, Indiana, USA

[6]Department of Anthropology, Purdue University, West Lafayette, Indiana, USA

Correspondence
Fredy R. Rodríguez-Mejía, MEERCat: The Mechanical Engineering Education Research Center at Purdue, School of Engineering Education, Purdue University, West Lafayette, IN 47907, USA.
Email: rodri663@purdue.edu

Funding information
U.S. National Science Foundation, Grant/Award Number: 1519412

Abstract

We examine the impact of the coronavirus pandemic on teaching and learning in an Engineering School of a large US research university. We focus on the adjustment of instructors as they converted their courses to distance teaching and learning formats (e.g., virtual sessions, online forums) and on bachelor student experiences with those changes. While both instructors and students experienced liminality, the pandemic affected these groups differently. Instructors attempted to form *communitas* with their students by prioritizing their teaching responsibilities, increasing the accessibility of course materials, and being more available to students compared to pre-pandemic times. However, students struggled to adapt to online learning contexts which lacked the sense of togetherness previously offered by in-person classes, study-groups, tutorial sessions, and communal study spaces. Unable to interact with their peers and create *communitas*, learning online proved to be an ineffective "solution." Interacting with classmates and working in study groups are among the practices that can help students adjust to course delivery changes, even if it means those cultural practices go virtual. We argue that higher learning institutions, regardless of type (e.g., R1, R2, liberal arts, community colleges), should strengthen their remote teaching approaches. However, those strategies should incorporate: building strong relationships within and across roles, designing inclusive teaching and learning practices that take the contexts in which students learn into

account, increasing spaces for peer-to-peer learning, and becoming proficient in the technologies needed to teach virtually.

KEYWORDS
distance teaching-and-learning, COVID-19, communitas, liminality

INTRODUCTION

With the pandemic's onset, educational institutions were forced to change their behavior. Distance teaching and learning (DT/L), also known as virtual, online, or remote courses, was the adaptive strategy of choice across US universities. Classroom culture became spatially distributed with instructors and students in many locations but sharing virtual space.

Our interdisciplinary team of anthropological and engineering researchers was curious about how instructors and students modified their teaching and learning practices. We had heard or read about extremely challenging learning environments, complicated by illness, death, new living situations, emotional disruption, and inadequate technology. COVID-19 emerged toward the end of our National Science Foundation RED (Revolutionizing Engineering Departments) grant which focused on transforming the organizational culture of an Engineering School in a Midwestern US university. Since our work had been ongoing for several years, the research foundation was already in place. Yet, the shift in teaching and learning patterns, mediated solely by digital technologies, opened up new opportunities to explore cultural change. The inability to interact with students and colleagues face-to-face captured our collective imaginations, persuading us to discover DT/L strategies and lessons that might be applied to teaching and learning in the future.

This article both describes and illustrates a transitory state beginning in Spring 2020 with the transition from in-person to DT/L, through Summer 2020 when DT/L was fully underway. We apply ritual theory to understand instructor approaches to teaching and student experiences with learning. Because ritual theory emphasizes cultural processes of change, it represents a useful framework for examining reactions to and experiences with the pandemic in higher education. We introduce a model in the findings of the ways in which instructor teaching approaches changed during the transition. We also focus on student learning experiences and the explanation for the variation. Next, we reveal both connections and disengagement between the two groups as they attempted to cope with DT/L. Finally, we use the analysis both to extend our understanding of ritual theory and suggest lessons for pedagogy that build on the importance of relationships and the learning context.

LITERATURE REVIEWS

The basics of ritual theory

In his celebrated book *The Rites of Passage*, van Gennep theorized that life stage rituals (e.g., circumcision, menstruation) could be described in terms of three phases: a period of separation, followed by a transition, and ultimately a reincorporation phase where one begins "acting again, but in a different way" (1960 [1909], 189). The transition period represents a passage; ritual initiates cross the boundary or threshold between one social status or state to another. Liminality (from the Latin *limen-inis* meaning threshold, entrance, or border) is associated with that transition.

Victor Turner elaborated on liminality, defining it as "betwixt and between the categories of ordinary social life" (1974a, 273). A transformation in the lives of ritual initiates gets underway during this liminal transition (Turner, 1967), one that is ambiguous, uncertain, fluctuating, and dynamic. Initiates typically respond by "develop[ing] an intense comradeship and egalitarianism" (Turner, 2007 [1969], 95), or communitas. Paradoxically, although they attend to the "general authority of the ritual elders" (Turner, 2007 [1969], 96), they do so freely, unconstrained by existing cultural rules and obligations. Also, during the transition phase, "'anti-structure,'" or alternative models of the social order, arise (Turner, 1974b, 65) and remain in place until the ritual concludes.

Turner also introduced the notion of "social drama" which he defined as "an objectively isolable sequence of social interactions of a conflictive, competitive, or agonistic type" (1987 33). He identified four phases to these disruptions. First, a breach occurs in which a cultural practice or rule is broken. Second, a crisis follows characterized by "overt conflict and covert antagonisms [that] become visible" (1982, 70). Additionally, cliques form. The redress phase involves interventions that mitigate the breach. Ritual is especially important in this third phase. Finally, reintegration or schism occurs during the fourth phase depending on whether the stakeholders reconcile or agree to differ.

New directions in ritual theory

Liminality and communitas as ground-breaking concepts have led ritual theory down novel paths. After his death, Turner's wife, Edith Turner, continued to explore communitas during liminal periods, variously defining it as "a group's pleasure in sharing common experiences" (Turner, 2012, 2), seeing "each other as themselves" (Turner, 2012, 222), or instances when people's "life together takes on full meaning" (Turner, 2012, 1). People engaged in a collective activity together could find themselves "in flow" (Turner, 2012, 3). While states of communitas are usually transient, they can have an impact in other social contexts (Buechner et al., 2020). For example, some argue that after experiencing communitas, ritual initiates often return to their social lives feeling "refreshed, renewed, reinvigorated, or even dramatically transformed" (Matei & Britt, 2011, 3–4). Communitas could emerge unexpectedly, not solely in rituals but also in aspects of everyday life such as during festivals, in sports, at work, and even during disasters. Similar to Victor Turner, Edith Turner linked communitas with the positive—the concept of joy—with such benefits as "quick understanding, easy mutual help, and long-term ties with others" (Turner, 2012, 3). Endless possibilities for applying ritual theory were within reach.

A special issue on liminality was published in the *Journal of Business Anthropology*. Its view of liminality was expansive: "a fluid state, or situation, where one is constantly moving between different worlds" (McCabe & Briody, 2016, 2). Liminality was not simply a time-limited phase, but an integral and ongoing part of project-based careers of business anthropologists. "Translation" was essential across individuals, groups, and organizations, as was the importance of serving as change agents—both of which entailed degrees of uncertainty, ambiguity, and disorientation. Notably diverging from the work of van Gennep (1960) and Turner (1974a, 1974b), the enduring quality of liminality for business anthropologists did not always yield a "productive, effective, or desirable end state" (McCabe & Briody, 2016, 5). Indeed, one article from the special issue described an 18-month liminal period for the Board of Trustees of an assisted living and nursing care community. This period, associated with three distinct types of liminality including disruptive Board behavior, coalesced in the formation of two waring cliques and never achieved communitas (Briody, 2016).

Our interdisciplinary research team explored the multi-year experience of engineering majors at a research university as a liminal transition. We discovered communitas within the various collaborative work groups in which engineering students participated. Their instructors (likened to elders) strongly recommended informal study groups as the key way to cope

with the demanding workload. This kind of student collaboration paralleled similar interactions in project group work, student organization groups, and career-enhancing opportunities such as internships and co-ops. "The willingness to help and receive help from peers" (Briody et al., 2018, 195) served as the foundation for communitas which was also a relatively easy and efficient way to learn compared to learning on one's own. We discovered that ritual could be understood through the lens of work strategy; consequently, we redefined communitas as "communitas in action" (Briody et al., 2018, 199). A subsequent study demonstrated the "lack of professor centrality to academic help seeking" (Briody et al., 2019, 16). Students engaged in professor avoidance by consistently exhibiting a preference for learning from their peers, the internet, and available problem-solving videos, a practice consistent with the faculty and administration's perspective of the "primacy of research, publications, and funding" (Briody et al., 2019, 18).

The pandemic and higher education

More recently, researchers have examined concepts of ritual in relation to COVID-19 whose arrival inaugurated a social drama. To make sense of the pandemic and its liminality, Bell created a framework consisting of six features: temporality, embodiment, intermediation, mobility, relationships, and identity. Three of these features are particularly relevant to our research:

- "Trust, connection, engagement and care" (Bell, 2021, 82) convey the importance of relationships.
- Our identity, "ideas about who and what we are," (Bell, 2021, 82) shifted as people attempted to adapt to the COVID-19 period.
- Presence and embodiment resulted in "complexities around what is physical and analogue; what is digital and virtual; and what can be remote or imagined as opposed to what can be embodied and present" (Bell, 2021, 81–2).

Other studies found that even though undergraduate students appreciated university efforts to help them cope with pandemic-related changes, students felt that their institutions and instructors neglected their emotional and mental health and did not make significant efforts to connect with those undergoing emotional issues (Reuter et al., 2022). Christopher and her colleagues (2020) advocated cultivating communitas by using specific practices. They argued that an "ongoing caring presence" (2020, 827) was necessary in DT/L both during and beyond COVID-19. They suggested that (1) relationships can be fostered through conversations, (2) learning spaces can be designed as culturally responsive and accessible, (3) teaching practices can be inclusive, and (4) student learning can be fostered.

Identity also featured prominently in this pandemic-related literature. White and McSharry (2021) explored professional identity formation among preservice teachers (i.e., student teachers) as they transitioned from face-to-face teaching and learning to online. Communitas emerged as they experimented with ways to connect with their students such as through video demonstrations or a "prepare, print, drop, and collect system" for students to return their work (White & McSharry, 2021, 324). They found that the liminal space generated by the pandemic led to unexpected creativity and ingenuity. Similarly, Atkinson and his colleagues (2022, 1801) focused on identity formation of PhD students during COVID-19. Feeling "isolated, poorly understood and unsupported" (2022, 1801), these PhD students viewed their doctoral experiences as a vulnerable period of liminality and recommended greater university outreach and attention to them.

An important element of higher education during the pandemic was technology and its impact on instructor-student interaction. Given that emergency remote teaching was the only

type of instruction offered during the pandemic, whether synchronously or asynchronously, many instructors struggled to deliver high-quality courses (Hodges et al., 2020). Previously, some instructors had adopted digitally-enabled teaching strategies, especially if they taught as part of an existing online program. Those teaching with virtual components had a distinct advantage (Lederman, 2020). In a study examining reactions to the DT/L transition, Roy and Covelli (2021) found that the transition was easier for instructors and students who were somewhat proficient with it. An important consideration for successful, digitally-enabled instruction is maximizing simplicity, communicating frequently with students, and being flexible in terms of performance expectations (Ray, 2021). Students generally expressed lower satisfaction with online courses during the height of the pandemic compared to face-to-face courses (Means et al., 2020).

Ritual theory and the literature linking the pandemic with higher education form a backdrop to our research questions. We focus primarily on the ways in which instructors and students were forced to modify their teaching and learning practices during the height of the pandemic:

RQ1: How did instructors respond and adapt to teaching virtually?

RQ2: How did students experience learning virtually?

RQ3: What pedagogical lessons can be derived that position higher education for greater success in the future?

INSTITUTIONAL CONTEXT

Our research site has over 30,000 bachelor students. Each semester, Engineering School (ES) instructors typically teach one or two courses; many secure research grants allowing them to "buy out" time allocated to teaching. Large lectures of about 120 students are the norm for the fundamental ES courses; subsequent courses are much smaller.

The ES major is among the largest and most competitive on campus. Students apply for it while in First Year Engineering. If admitted, students begin the major in their second year and must complete 120 credits to graduate with a Bachelor of Science degree. Throughout their studies, students are advised repeatedly to form study groups with classmates and seek academic help (Briody et al., 2019). By working together in small groups, students have the potential to learn and benefit from each other's knowledge and problem-solving abilities (Briody et al., 2018). Academic assistance is also available in tutorial rooms staffed by Teaching Assistants (TAs) and during instructor office hours. Study groups and ES resources position students to be academically successful in a research-intensive environment.

DATA AND METHODS

Data collection

The primary sources of data included individual and group interviews carried out between June and August 2020. We secured Institutional Review Board (IRB) approval and all interviewees consented. Interviews were audio-recorded and transcribed.

Instructors

All ES instructors who taught at least one summer course in Summer 2020 were part of our sample (see Table 1). Eight of these 11 instructors were full-time faculty and three were lecturers. Nine of these instructors had taught a course in the Spring of 2020 and 6 of these 9 had previous experience with DT/L. Also, at least half of these interviewees had experience with hybrid teaching approaches (e.g., flipped classroom). Instructor interviews lasted 58 min

TABLE 1 Individual interview sample by duration.

	Instructors	Students	Total
Number of individual interviews	11	8	19
Average duration (in minutes)	58	52	55

on average, with a range from 30 to 102 min. The differences in interview length were due to instructor experience with DT/L: the greater their familiarity, the longer the interview.

Our instructor questions were divided into four phases: (1) prior to Spring 2020, (2) during Spring 2020, (3) during Summer 2020, and (4) expectations beyond Summer 2020. The questions pertained to prior familiarity with DT/L, resources used, workload, development of distance learning competencies, synchronous versus asynchronous teaching, issues faced, interactions with students, perceptions of student adjustment, and lessons learned.

At the end of the summer, we conducted one 64-min focus group with five participants; among them were two full-time faculty and three lecturers (some of whom participated in interviews). This discussion focused on how instructors and students adapted to DT/L. We were particularly interested in effective online instructional strategies.

We supplemented the instructor interviews and focus groups with a follow-up survey. It elicited information about instructor time allocation for teaching and other responsibilities prior to and during the pandemic. It asked instructors to describe the extent to which COVID-19 changed their teaching approaches. Six of the 11 instructors responded to the survey.

Students

We requested instructor help in recruiting bachelor student participants from their summer courses. We stressed the volunteer nature of the study and asked for a demographic mix of students. Typically, instructors posted our request or made an announcement; students responded directly to their instructor who then connected those students to us. We conducted eight interviews: three third-year students and five fourth-year students (see Table 1). Their interviews lasted 52 min on average.

Many of the student questions concerned their experiences with DT/L prior to Spring 2020 through Summer 2020. Key areas of focus included their adjustment to an online environment, ability to connect with their instructors and/or TAs, interactions with classmates, strategies used to master their coursework, and their satisfaction with DT/L.

We conducted a single focus group with students at the end of the summer term. It lasted 50 min and consisted of four individuals—three second-year students and one fourth-year student—none of whom participated in the individual interviews. The questions focused on how the online summer courses compared to courses taken in the past, how students navigated the transition to DT/L, variation in workload, and preferences for in-person versus DT/L.

Data analysis

We used content analysis to identify themes and patterns in our interviews (Bernard et al., 2017). Two of us coded the individual and group interviews independently using NVivo 12 and then compared the codes to resolve any discrepancies. The findings were reviewed by a third team member who had conducted several interviews. While completing the coding, three of us held weekly meetings to discuss the emergent patterns, ensure consistency in our assessments, and reconcile any differences in the coding.

We used Draw.io software to create figures demonstrating relationships and the relative importance of key codes. The line width connecting the topical boxes, which represent our codes, was proportionally adjusted for each topical box using built-in tools. The different line widths denote diverse levels of relationship strength between two given topical boxes.

We presented our results twice: once to the ES head in August 2020 and once to over 65 faculty and staff at the ES forum in December 2020. Attendees at the forum used our presentation as a springboard for sharing their own DT/L experiences, which supported our findings and recommendations.

Findings

We begin by describing the strategies instructors implemented to shift their 2020 courses from in-person to virtual, highlighting the challenges they faced. We also document students' experiences with these changes, both positive and negative. Finally, we compare some key connections and overlapping themes across the two groups, presenting them in both visual and written formats.

Transitioning from in-person to DT/L (Spring 2020)

The 2020 spring semester began as any other semester in recent years. Instructors and students gathered in ES spaces to engage in teaching and learning experiences. Part way through spring break, ES instructors and students learned that the break would be extended by 1 week. This period became a visible marker in time, allowing the university to shift to online systems for the balance of the semester.

ES instructors had to work quickly to convert their courses to a digitally assisted format. One instructor commented: "There was no thinking; there was just doing. It just kind of happened so fast." Another with online teaching experience stated, "I'm still not comfortable with (the online format). It's difficult…even after doing it for so many years to not see the faces and the expression of the students because many of them don't have internet that's good enough to support their video. They just leave it off." Nine of the 11 instructors interviewed experienced this shift of seeing their students in class, to seeing black boxes with the names of their students; alternately, they posted content online for their class to watch at their own convenience. (The remaining two instructors did not teach during Spring 2020.) Along with this online shift came a myriad of technical, time, and communication challenges since only 6 of the 9 instructors in Spring 2020 had prior DT/L experience.

For students, the walk to ES was traded for opening a laptop. Students often had little interaction with their professors or peers while adjusting, now logging in from home. Many suffered from some burnout, struggled academically, and were dissatisfied with the rapid course conversion. However, they acknowledged the enormous challenge of transitioning courses and exams online.

Shifting approaches to teaching (Summer 2020)

Increased attention to teaching and learning quality and student wellbeing

Instructors prepared more for DT/L than for previous courses they had taught. At least 7 of the 11 instructors indicated an increase in workload. Since at least five instructors were new to teaching online, attempts to improve teaching quality were apparent.

1. Most instructors (nine out of 11) were *more available to students outside of class* compared to pre–pandemic times. As one instructor explained: "I offered many additional office hours so that the students had as much access to me as possible…." Similarly, professors worked with TAs to ensure student awareness of academic assistance options: "In addition to making it a group project, I also required (the students) to…have a WebEx meeting with the TAs weekly, which again helped with that connection, making sure that they were at least talking to each other at least once a week."
2. At least seven out of the 11 instructors *solicited feedback from students* about their wellbeing and how the class was working for them and used that input to implement changes in the course format. One instructor explained, "(I sent) additional surveys, getting feedback. I had an FAQ to-do list that…(the students) could anonymously submit questions through and I would address those."
3. Instructors *used multiple pedagogies to expand student engagement* by employing a mix of in-class problem-solving, discussion boards, reflection time, and virtual tutorial sessions. As one professor commented, "My style has been to write things with them, solve problems with them so that they can ask me questions."
4. Six of the eleven instructors stated that they *adjusted academic expectations*. One commented, "It was okay to relax a little bit in terms of academic rigor and to really put focus on, 'Are they doing okay? Are we all doing okay? Are we all staying connected?'" Similarly, another remarked, "(It was important being) fair…at the same time being compassionate—(given) that students could be experiencing challenges."

Instructor differences by DT/L experience

For those instructors with no prior experience creating lecture videos, the process was cumbersome and laborious: "…recording things is definitely a challenge compared to in-person, because…it's just easier to…recover from mistakes when you're in person and therefore it's less of a concern of messing something up…." Likewise, instructors who were not native English speakers were especially cautious when recording their lectures or discussions, with some requesting technical assistance to create high quality videos. Other instructors found using an asynchronous format worked best:

> I recorded my videos…and put them online so that they would be online a couple days in advance and would be there permanently so (the students) could go back and review them as well…I didn't really know how many students went home to India or China…so I needed to make it asynchronous so that they can watch it whenever it was convenient for them.

Another reported, "I live out in the country, I don't have high-speed internet, (and) I have… a three-year-old daughter who was home with me. And so, my work time got shifted to times when she was asleep." These same instructors also exhibited greater academic flexibility with their students, worked hard to make their courses engaging—both in how they structured and delivered course content—and actively sought reactions to the class format, style, and structure.

By contrast, the video-recording process was not an issue for instructors with prior DT/L experience. They seemed to exude a high degree of confidence. This group exhibited less academic flexibility with students and were not as interested in student feedback. In fact, these instructors expressed greater concern with student academic dishonesty compared to those without prior DT/L experience. We assume that instructors with prior DT/L were operating

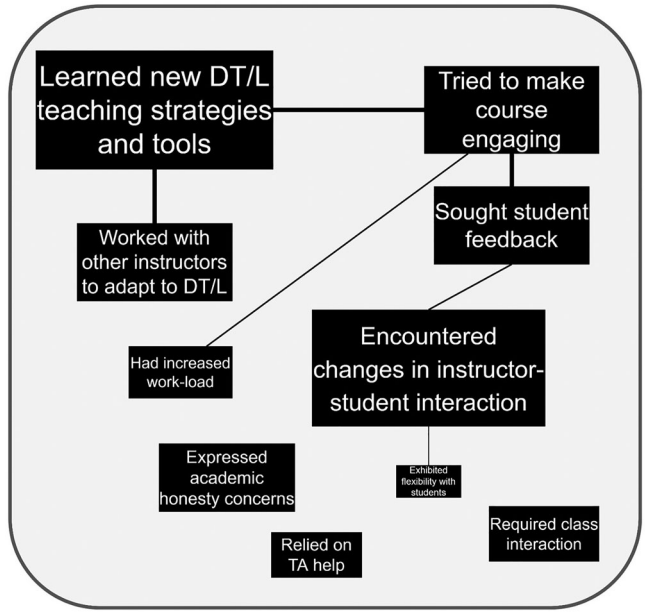

FIGURE 1 Instructor approach to DT/L.

as they typically would in prior semesters and as such were not concerned with the DT/L technical aspects. Instead, they focused on other elements of the teaching/learning process. Responses to the follow-up survey were consistent with the interviews: only 3 out of the 6 instructors indicated that they concentrated on teaching.

Insights revealed in graphical form about instructors

Figure 1 illustrates elements of the predominant instructor approach to DT/L. It displays our codes, the two largest of which are *Learned new DT/L strategies and tools* and *Encountered changes in instructor-student interaction*. We classified 32 and 31 segments of text respectively into each of these codes. Other salient codes included *Tried to make course engaging* (22 mentions), *Use of asynchronous lectures* (15 mentions), and *Sought student feedback* (13 mentions). The remaining codes had fewer segments of text. While we did see differences between instructors with previous DT/L experience and those without, there was still a notable overlap. Figure 1 reveals the interaction and connection of ideas and experiences, rather than a distinct dichotomy.

A second feature of Figure 1 involves the connections among codes, depicted in three levels of line thickness. We see a strong connection between *Tried to make course engaging* and *Sought student feedback* where instructors repeatedly and directly mentioned the other topical area. Much of the text associated with one of our codes was also captured by another code. Quotations may connect two or more topic areas such as an instructor discussing learning new software for DT/L after receiving advice from another instructor. For the thickest of lines, at least seven instances of connections across topics emerged, compared to a medium thickness with five to six instances, and the thinnest lines with three to four instances. (When the number of cases fell below three mentions, we did not illustrate the connections to ensure the graphic was legible.)

Figure 1 also highlights how the summer instructors described the changes they encountered in shifting to DT/L. It shows how their own terms and concepts are linked, presenting an aggregated, high-level, emic view. Beginning at the top left, we learn the basics of the instructor narrative.

- Some instructors had to learn how to teach online using the available tools and often relying on advice from seasoned DT/L instructors.
- Others worked to make their courses as dynamic and interesting as possible by putting in extra time and energy and by relying on TAs to attend to student concerns and solicit and gather student input.
- Instructors faced changes in their interactions with students, with some showing flexibility toward students struggling to learn online or experiencing negative social and health-related effects of COVID.
- Instructors sought to keep students connected to each other by requiring class interactions and discussions.
- Some instructors expressed academic honesty concerns, coping as best they could. Figure 1 offers a blueprint emphasizing both the saliency of instructor DT/L strategies as well as the diversity of scenarios they encountered. It illustrates their liminal state of the transition into pandemic teaching.

Evolving student experiences (Summer 2020)

Students enrolled in summer courses that were taught 100% remotely. Instructors used a combination of teaching approaches (e.g., asynchronous vs. synchronous lecture delivery) which affected students differently based on their circumstances (e.g., returning home to a different time zone, having a daytime job).

Negative experiences

Students had mixed experiences with DT/L, with 8 of the 12 (67%) reporting some positive and negative feedback (see Table 2). Two students reported only having positive experiences while two reported only having negative experiences. This mixed experience suggests students had their own specific views of the courses, instructors, and outcomes. Sixty-three percent of all comments (187/296) were negative (see Table 2). A student enrolled in three classes might make positive comments about one course and negative comments about the other two, resulting in both positive and negative views.

Two major narratives of the student experience appeared. The negative experience is captured in comments such as: "Going to online—it was not good" or "I'm just fed up with the online learning." Nine of the 12 students shared more negative than positive comments (See Table 3). Excluding focus group members who shared fewer individual comments overall, there were at minimum six, and at maximum 17 more negative than positive comments. Concurrently, some students emphasized a positive experience in selected courses. One student mentioned instructor accessibility: "They've bent themselves backwards, and I really appreciate what they've been doing." Those providing more positive than negative comments offered two or three more positive than negative comments. Table 3 highlights the mixed, but overall negative DT/L response.

Of the 12 students interviewed, 10 pointed to the *poor DT/L conversion*. One student rhetorically asked, "Why am I paying this ridiculous amount of money to go to (college) when I could've legitimately watched a YouTube video and get the exact same experience?" Another

TABLE 2 Student assesment of DT/L attributes.

Attributes	Category	Students (*N*=12)	Mentions
DT/L conversion worse than in-person	Negative	10	36
Issues with exam re-formatting	Negative	4	8
Dissociated from classmates and course	Negative	11	41
Experienced difficulty getting help	Negative	9	35
Experienced burnout and re-balanced life	Negative	10	37
Difficulty adapting online and grades falling	Negative	9	30
Satisfied with DT/L conversion	Positive	10	28
Satisfied with course flexibility	Positive	11	29
Found class engaging and organized	Positive	6	18
Summer courses went better than spring	Positive	3	3
Improved grades and adjusted to DT/L	Positive	6	12
Interacted with classmates	Positive	9	19

Abbreviation: DT/L, distance teaching and learning.

TABLE 3 Evaluation of student responses.

Student	Overall	Positive responses	Negative responses	Net count
1	Negative	7	26	−19
2	Negative	12	14	−2
3	Negative	20	37	−17
4	Negative	7	24	−17
5	Negative	8	14	−7
6	Negative	6	24	−18
7 (FG)	Negative	7	9	−2
8 (FG)	Negative	4	7	−3
9 (FG)	Negative	4	7	−3
10 (FG)	Equal	6	6	0
11	Positive	15	12	+3
12	Positive	7	5	+2

Abbreviation: FG, focus group.

indicated that he was "missing content" in his lab courses: "We did not physically conduct the lab experiment. We watched it go play-by-play as if we were doing it…To write a lab report after not physically doing the lab and not having the experience of that was, in my opinion, incredibly difficult."

Eleven of the 12 students identified a *lack of peer interaction*, indicating that they did not communicate with others in at least one course. One remarked, "Everyone's alone. I don't know any other student in the class. I don't know even if there's any other students in the classes." Another commented that DT/L "emotionally, was rather draining" and felt anxious due to the realization he was "very alone."

Nine students mentioned *difficulties getting academic help*. Students recognized the necessity of getting help prior to due dates and that last-minute questions, reasonably, would not be answered on time. One student stated, "If I had a question, then it was really hard to find resources that weren't specific to the class. (For instance,) is this (engineering mechanism)

rotating this way or rotating that way?…I could ask a question on the discussion board…but if it were 6:00 p.m., then wouldn't really expect an answer." Another discussed his fears of using online communication stating, "It can be a little weird and feel like you're interrupting online sometimes. In person, it's a lot more of an immersive experience…."

Ten students discussed *burnout* and related concepts. One student remarked, "When you get burnt out, there's no coming back…You're going at a certain momentum, and when that momentum stops, it's hard to pick it up—at least in online" while another stated, "In person, I feel like I get some energy boost from being there and I can use that to get things done, whereas online, it just made me feel more tired." Since many students returned home, they had the challenge of re-balancing their lives. One student said, "I have a three-year-old brother and dog who need attention so a lot of times I'd spend my afternoons doing that."

Three-quarters of students noted their *falling grades*, while others stated that "more work (was required) to keep the grades the same." Difficulties were also tied to altered schedules, routines, and studying. One student reported, "I definitely did fall off on comprehension." Due to academic honesty concerns, instructors changed many exam formats. Some students had multiple choice or short answer exams, while others had longer take-home exams. One student lamented the short answer, right-or-wrong tests: "They weren't doing any partial credit."

Positive experiences

Eighty-three percent of students described some degree of satisfaction with online learning from at least one of their courses. Positive comments emphasized a high degree of *instructor and course flexibility*. Professor accessibility, accommodations for students struggling to adapt to the new format, and empathy were among the characteristics students appreciated. This flexibility was noted positively by four students with one describing: "Sometimes he would email during the test and be like, 'Hey, how are you guys doing?…Do you need more time?' Several students were like, 'Yeah, we'd really appreciate more time.'…He'd extend the deadline during the test, which was also very considerate." Some students also enjoyed the flexibility of asynchronous lecture-based courses—especially in summer when "You can watch them—whenever."

Six students noted positive experiences with *engaging and organized courses*. One student discussed her professor's response noting, "(Students) praised (him) a lot with how (he) handled it—just organization was pretty key, just being clear in what the expectations were." Another student reflected, "(He was) very enthusiastic about trying to make in-class time as interactive as possible…(There were) times where he would go off on things where, 'This is something that we're talking about in class and here is a personal experience'…which helped (create) a bit more of a connection there." Three of the eight students enrolled during both the spring and summer semesters noted obvious differences: "It was better than the spring because we knew (what) it was going to be."

Nine students (75%) discussed their positive *interactions with classmates* during the pandemic, often stemming from assigned group projects: "After that kind of working together on the labs, it was easy to just use those same channels." Such interactions also emerged with discussion boards and when students knew others in their classes.

Identifying patterns by course

We conducted an additional analysis and separated student statements by course (See Table 4), although no clear pattern emerged. Student preferences were shaped by their specific circumstances (e.g., relocating home, summer employment). Disruption of routines

TABLE 4 Salient student experiences by summer course.

Student statements	Measurement & control systems		Machine design		Basic mechanics I	
	Students (6)	Mentions	Students (2)	Mentions	Students (4)	Mentions
Dissatisfied with some aspect of remote teaching	6	14	1	6	3	7
Struggled with lack of in-person and on-campus routines and dynamics	6	33	2	4	4	16
Lamented the lack of student group work	3	3	0	0	3	5
Satisfied with the interaction opportunities offered by technology tools	1	1	2	6	1	1

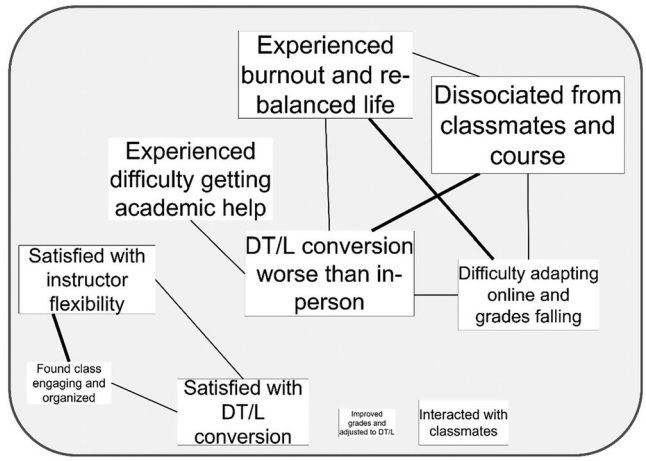

FIGURE 2 Student experiences with DT/L.

and dynamics was what students emphasized. All indicated some disconnection or difficulty adapting to the DT/L environment due to the lack of in-person, communal learning settings (e.g., tutorial rooms) and face-to-face peer and instructor interactions. The same sense of separation was evident in their statements lamenting the lack of group work in those classes that did not offer such an option (6 of 10 students). Within a third-year class in which students engaged in group work, both students interviewed were satisfied with the class community, whereas students in the other courses had lower rates of satisfaction with student interaction.

Insights emerging in graphical form about students

Figure 2 represents the results of our content analysis of student interviews. Much like Figure 1, our codes are illustrated by font size; strength of connections among codes is captured through line thickness. Two student narratives emerge from their data. The dominant student narrative emphasizes dissatisfaction with DT/L and dissociation from classmates and instructors. Its largest code, *Dissociated from classmates and course*, is aligned with the most salient result from Table 4: *Struggled with lack of in-person and on-campus routines and dynamics*. Two other large codes in Figure 2, *DT/L conversion worse than in-person* and *Experienced burnout and re-balanced life*, are aligned with the largest code *Dissociated from classmates and course*. This dominant student narrative can be explained in this way.

- With the shift to online, in-person peer relationships disappeared.
- There were no longer options to work with peers in person—particularly in completing homework assignments or in preparing for exams. Chance encounters with classmates in the ES building vanished.
- These changes were linked with other consequences including difficulties in getting academic help and lower grades.

A second, smaller student narrative also appears in Figure 2. A few students found the DT/L summer course experience to be satisfactory, at least with respect to instructor flexibility and conversion to DT/L. They appreciated professors' efforts to adjust to pandemic conditions and problem-solve around them. Although not explicitly connected, other positive codes are grouped at the bottom. (Two codes were removed due to their relative, small size.)

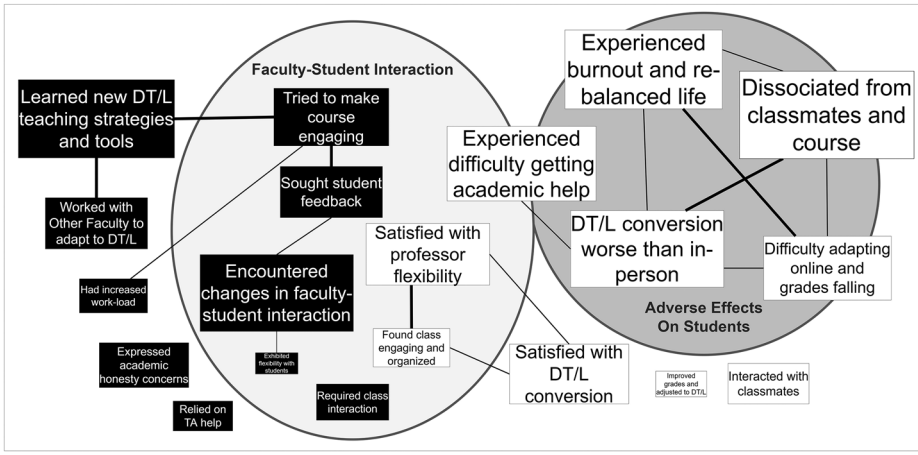

FIGURE 3 COVID-19 disruptions in DT/L.

Key connections between instructors and students

Overlapping themes

Some ES instructor and student ideas coincided—such as *student-to-student communication and interaction*. Students often noted the difficulties of being isolated from their peers, indicating that their online community was "not even close" to that of in-person. Instructors discussed their efforts to connect students through group projects, discussion boards, and synchronous sections: "I wanted to see if I could somehow foster more engagement with myself and the TAs and getting (the students) assistance…and that's why I'm using the (course) blog."

Class engagement was another area of overlap. Instructors discussed attempts to change their course preparation, style, and organization. One professor indicated he "tried to de-robotize" his online course delivery. Students appreciated these efforts. One instructor was praised "just (by) being clear in what (the) expectations were and when stuff was (due)."

Several professors noted their desire to improve *course flexibility* while students valued this flexibility. One instructor reported trying to remain fair while "being compassionate that students could be experiencing challenges…that we (professors) are not." One student emailed his professor stating he could not finish the homework. Later in the semester the professor emailed a practice exam and wrote, "If you do this, this is going to substitute your grade for the homework." The student complied and reported, "I got 100 in the homework!"

Instructors and students voiced concerns about *workload*. Seven of the 12 instructors emphasized its upsurge. In responding to the follow-up survey, one instructor commented, "(The) pandemic changed my teaching significantly…I had to prerecord all my lectures. I had to write all new homework problems and did Zoom monitoring of exams. I put in at least twice the time as compared to previous semesters teaching (the same class)." Students discussed how the isolation, and other challenges caused burnout and negative sentiments towards coursework.

Insights evident in graphical form about instructors and students

Figure 3 represents a juxtaposition of Figures 1 and 2; all earlier insights apply. Certain themes overlap both groups (e.g., instructor flexibility with students, engaging course), while only the students voiced concern about the difficulty of getting academic help.

Figure 3 illustrates two broad instructor-student narratives. The first narrative, *Instructor-Student Interaction*, is found in the light gray bubble; it identifies specific instructor behaviors and student responses to them.

- Most instructors expended considerable effort in implementing strategies to make the best out of a bad situation. They recognized the various COVID-related stresses that their students were experiencing, including the shift to DT/L, and did what they could to offset these challenges (e.g., increasing time for office hours, communicating extensively via emails, instructing TAs to be attentive to any worrying changes in student behavior).
- At least some students viewed these instructor efforts positively and were satisfied with their professors' flexibility and/or found the class engaging, although many other students reported finding it difficult to get academic help.

The second student narrative is depicted in the dark gray bubble. It is labeled *Adverse Effects on Students* and documents the disruption in learning that students suffered.

- Student reaction to the summer courses was largely negative. They found DT/L, including the conversion to virtual, difficult. Burnout and lower grades resulted.
- The collaborative model of learning was no longer in place. Students were forced to learn largely on their own, isolated from the immediate, and often impromptu insights, from peers in a face-to-face setting.

Taken together, these two broad instructor-student narratives portray both the challenges of DT/L and its uneven effects. New to most instructors, DT/L required time and practice to gain proficiency and yet both were in short supply. Instructors were forced to acquire some technical knowledge to present course content. This preparatory effort, along with the increased workload and other concerns related to course management, are depicted in black boxes outside the two bubbles. Yet, acquiring the basics was only a part of the effort. It was critical to "connect" with and "read" the students through a largely unfamiliar medium which made it difficult to assess how well students were understanding the material. The professors' increased availability, flexibility, and attempts to create engaging courses could not substitute fully for peer-to-peer learning that routinely occurred in-person. When students' collaborative learning model broke, no suitable alternative emerged. No one voiced concerns that the study groups, along with other collaborative student learning, had disappeared. As summer days turned into weeks and then months, student isolation from peers was cumulative.

Idea exchange and validation

Once we realized that study groups and other forms of peer-to-peer learning had ceased, we developed and distributed a one-page summary of our insights to the ES Head and other engineering administrators. It summarized all collaborative work in which students routinely engaged (e.g., study groups, project teams, student-organization activities), explaining that these groups were often established informally based on a range of factors (e.g., proximity in classroom seating, enrollment in same classes, studying near tutorial rooms). Regarding study groups, we reported that before the pandemic, students spent between one-third to one-half of their time working together on average, using peers as a resource pool. Our recommended solution for fall semester was to create ways for students to interact and participate in virtual or hybrid study groups, particularly in second- and third-year courses. We believed this solution would help mitigate risks to student achievement and improve student outcomes.

The ES Head's response to our summary was immediate and supportive. He scheduled a time for us to discuss related issues (e.g., assigning virtual group work, designing virtual tutorial rooms), shared our document with all ES instructors, and asked us to present our findings and recommendations in an open forum which occurred in December 2020. Some instructor comments at the forum suggested student reticence in engaging virtually with their peers. For example, many students did not want to turn on their videos in their synchronous Zoom classes, interact with their classmates in breakout groups, or participate in course blogs. Moreover, while attendance in face-to-face classes was high at the outset of the fall "where students can come and see their peers," there was "a steady decline in attendance (so that) by the end, it was down to one-half or one-third…." In addition, students "could come and work in the (ES) building, but very few students did."

These reported patterns of disengagement are not necessarily inconsistent with peer-to-peer learning. Interacting with peers virtually is not a substitute for in-person collaboration; students are generally not willing to risk making an error in front of peers they do not know. At least 2 of the 6 instructors who commented at the forum freely stated they believed students were meeting in study groups; the remaining four instructors did not comment. We suspect that students identified study group partners when their fall courses started and found no downsides if they did not attend class in person, particularly since the lectures were recorded. We also speculate that during COVID-19, a greater number of students preferred working in pre-arranged study groups, rather than in large, spontaneous groups in the ES building.

DISCUSSION

Structural differentiation

We begin by focusing on the structural aspects of ritual theory. Van Gennep (1960) and Victor Turner's (1974a, 1974b) work are directly relevant as instructors and students transitioned from in-person teaching and learning to a period of upheaval, or social drama, marked by uncertainty and fear and DT/L. In analyzing our data, we noticed it veered away from salient structural features of this classic literature.

The first contrast we identified was that COVID-19 affected everyone largely simultaneously, *requiring all to participate in the transition*. The elders, who orchestrated rituals from a distance, can be likened to the instructors in our sample. Yet, these instructors found themselves embedded within a liminal system alongside far younger ritual initiates, confirming Bell's (2021, 82) observation: "We are all in this together." There was little chance of opting out. Both instructors and students shared something in common, a sharp contrast with the pre-pandemic academic environment.

A second structural difference pertained to *some shift in instructor and student roles*, though not a categorical shift. It was still the case that instructors had an obligation to teach, while students had to fulfill the course requirements if they wanted to earn course credits. However, we found that many instructors modified or relaxed course sessions and requirements (e.g., use of "flipped classroom," reduced workload), encouraged by university mandates to demonstrate flexibility in their teaching and grading strategies. With the university closure, students living in university dormitories, including international students, returned home. Once there, evidence of role changes materialized due to isolation from their student community along with changes in their daily schedule; some also experienced new parental expectations (e.g., sibling childcare, part-time work). These patterns are generally consistent with Turner's view that "former rights and obligations are suspended" (1974b, 59), due to the "dissolution of normative social structure"—the emergence of "anti-structure" (1974b, 65).

A third differentiator concerned where the teaching and learning activities occurred. Ritual initiates were unable to be in the same physical space together. Instead, teaching involved either (a) virtual, synchronous options when instructors and course participants assembled, or (b) virtual asynchronous options which allowed instructors and course participants to create or review the lecture on their own schedule. Bell's reference to the themes of "presence" and "embodiment" (2021, 81–2) is useful in *emphasizing the swing in higher education from in-person to virtual work*. It also simultaneously launched a sense of confusion and ambiguity as instructors had to learn new ways of teaching and students had to develop new strategies for absorbing knowledge. The existing ritual of teaching and learning tied to university courses had been turned on its head. DT/L connects directly to the third phase of social drama involving "the application of redressive or remedial procedures" (Turner, 1987, 34) since DT/L emerged as a new ritual form.

A fourth structural contrast focused on the function of technology. While some technology had been integrated into course delivery (e.g., instr7uctional videos, electronic discussion boards) *prior* to the pandemic, teaching and learning course content was solely dependent on technology during the pandemic. Moreover, the burden of *acquiring proficiency in the technology* fell primarily to one group of ritual initiates, the instructors, as the emerging folklore documents (e.g., Bruening, 2020). Because the majority of instructors lacked DT/L experience, they had to invest significant time and effort—immediately—in learning to use the technology (e.g., develop virtual lectures, create engineering problem-solving videos) as depicted in Figure 1. This finding is consistent with the work of Hodges and his colleagues (2020).

Relational discrepancy

We now turn to the dynamics of ritual theory. Communitas is the central relational feature of the liminal transition. Victor Turner characterized ritual-initiate relationships as grounded in qualities of solidarity, equality, and inclusivity (Turner, 2007). Edith Turner described communitas in terms of joyful interactions in which people expressed their feelings and found meaning and authenticity in exchanges with others (Turner, 2012).

Neither of Turner's definitions apply to our sample. It was largely impossible for students to build an egalitarian spirit with each other because the conditions for establishing and cultivating it (e.g., physical proximity, ways to connect with classmates) were not in place. When students reported feeling alone and isolated, frustrated, and struggling with their courses—including the virtual format and communication (see Figure 2)—they were unable to rely on their peers. (This egalitarian spirit also did not and would not happen between instructor and student due to their asymmetrical relationship.) The "togetherness" and "seamless unity" of communitas in Edith Turner's view (Turner, 2012, 3) contrasts with the intermittent and sporadic human contact related to DT/L among our ritual initiates, all of which was mediated by technology.

Instructors

Despite the inability to achieve communitas among the ritual initiates, our data revealed a pattern not previously reported in the literature. Other COVID-era literature claims that communitas was achieved (Christopher et al., 2020; White & McSharry, 2021). While we hold a different view, we did find that most instructors *repeatedly attempted to build human connections with their students* (See Figure 1), in comparison with the pre-pandemic period. These connections, evident in both instructor and student interviews, appeared during their online course sessions, virtual office hours, and electronic discussion forum as the instructor-student

Interaction narrative portrayed in Figure 3 reveals. Indeed, instructor motivation and effort seem to be the drivers behind the answers to RQ1: How did instructors respond and adapt to teaching virtually?

To address RQ1, we found that most instructors worked to relax power and status differences between themselves and their students. Instructors typically began interacting with their students in a more personal way, soliciting feedback on their wellbeing, and frequently requesting input on how the course was going. Such behaviors were not widespread pre-pandemic: for example, ES culture was characterized by professor avoidance when it came to academic help seeking (Briody et al., 2019). Attempts to reduce the asymmetry in instructor-student interactions represented a pivotal change in the teaching ritual.

Second, we learned that instructors became much more teaching-centric. They were not only more cognizant of how they delivered content, but they sought to keep their students on track academically by making their courses and the communications around them more engaging: devoting class time to solving engineering problems with students, encouraging greater interaction during the course, and offering individual appointments and longer office hours. A few instructors required the formation of project groups for completing assignments—which necessitated some collaboration.

Thus, the COVID-19 period at ES became associated with a more student-oriented, teaching-centric culture, despite it being a large research university; priorities about the relative value of research and teaching simply changed places. The organizational culture also played a role through leadership decisions which compelled instructors to devote more time to teaching, learn or review how to use online teaching platforms, and participate in teaching-centered conversations and training workshops. Instructors typically demonstrated a greater holistic orientation toward their students—what Christopher and her colleagues (2020, 824) refer to as "caring pedagogy"—rather than focusing largely on the mastery of course materials. We cannot confirm whether instructors believed they were both creative and innovative in DT/L (Turner, 2012; White & McSharry, 2021). However, by increasing opportunities for interaction and offering different support channels, instructors were able to maximize the chances of teaching relatively successfully in a digitally enabled format (Ray, 2021).

Of course, implementing DT/L among instructors was not uniform. We unveiled a high level of variation due to individual situations and experiences with remote teaching. In fact, the end of the Spring 2020 semester represented a technology-learning transition within the extended liminal transition. As the literature describes, instructors with no previous DT/L experience had a steep learning curve when converting their in-person classes to remote formats while those experienced in DT/L enjoyed the benefits of efficiency (Lederman, 2020; Roy & Covelli, 2021). However, we discovered a much more complex picture. While instructors with no prior DT/L experience had a difficult time with the transition, they also exhibited a higher level of involvement with their teaching approaches and their concern for student wellbeing and learning compared to those with prior DT/L experience. We speculate that those instructors with previous DT/L experience operated largely under the assumption that their students would be able to function in their online classes similarly to pre-pandemic times.

Students

Now we turn to RQ2: How did students experience learning virtually? Like their instructors, students experienced uncertainty and liminality. However, their overall DT/L experience was likely more drastic, as evident in Figure 2. A high proportion relocated, including internationally, so that they were removed from campus life. Their day-to-day routines and living circumstances were vastly different: their relationships with their university peers were suspended, they had to learn to study solely on their own, and many acquired new household responsibilities upon returning home. While ES students clearly appreciated instructor flexibility and efforts to make

the coursework engaging, the majority of student responses to DT/L emphasized the negative aspects.

The most salient change that affected every student was the profound sense of disruption of their previous in-person study practices and routines (see Figure 2). Students were vulnerable and burned out (Atkinson et al., 2022; Reuter et al., 2022) and did not report using strategies that were innovative (Turner, 2012; White & McSharry, 2021). It was as if the formation of their identity as an engineer had been put on hold (Bell, 2021), at least temporarily.

Gone were the key sources of academic help available to them in-person (Briody et al., 2019), notably their peer-to-peer, collaborative learning strategies in which students essentially acted as extensions of their professors and TAs to each other. Whether students met in small groups or the tutorial rooms, they worked as a collective to help themselves and their peers succeed. Study groups, representing students' primary work strategy, enabled them to participate actively in a face-to-face shared experience that demonstrated "communitas in action" (Briody et al., 2018, 199). Pre-pandemic, students infrequently encountered difficulties in academic help seeking because their daily schedules were better aligned, compared to Summer 2020 when multiple time zones were in play and spontaneous virtual encounters were rare. The empty campus in Summer 2020 signaled a halt to in-person communitas in the ES; virtual study groups did not emerge as a substitute, as depicted in the Adverse Effects on Student narrative in Figure 3. Repercussions from the pandemic had broken the cultural backbone of how ES students learn. The transition to the DT/L solution did not incorporate *all* essential ES cultural features for students to perform successfully. Applying DT/L to ES courses as a form of redress did not have the hoped-for effect. Indeed, DT/L was not a ritual instituted by the university that dealt effectively with the social drama of the pandemic—at least not at the time of our study.

We did discover certain DT/L features that helped mitigate learning disruptions for a minority of global students—those used to taking online courses. For them, being able to interact with classmates via forum posts worked reasonably well. Encountering flexible instructors was a bonus. In general, the learning process for them seemed easier by comparison (Roy & Covelli, 2021).

Despite the structural and relational misalignment of our sample with the tenets of ritual theory, its framework and features were of interest to us as we examined instructor and student challenges during a tenuous and uncertain time. Van Gennep's three stages and Turner's emphasis on liminality and social drama set the foundation for the analysis and were vital in producing insights. Communitas may be attempted and may be realized, although specific circumstances must be in place to support it.

CONCLUSION

We had the advantage of having studied ES culture in previous years. Our understanding of it, characterized by the relative importance of research on the instructor side and a high sense of collaborative learning among students, enabled us to witness a complex cultural transformation. Instructors typically adopted a more teaching-centric and relationship-oriented attitude with their students in comparison to previous years. Students, unbeknownst to their instructors, were trying to cope with the adverse effects of having lost access to study groups and thus, "communitas in action." Yet, no one seemed to realize the importance of helping students create a way to learn and study with their peers virtually. In effect, no one was focused on solving the most important problem. DT/L challenges did not have to be as onerous on students as they were.

RQ3 asks: What pedagogical lessons can be derived that position higher education for greater success in the future? The first obvious lesson is that *building relationships across roles can be of significant benefit*. Instructors and students are inextricably tied together in the system of higher education. Instructor efforts to demonstrate care and concern for their students made a "numbing" and "nervewracking" period better; in fact, they created a lasting impression as evident by the repeated statements of appreciation students made to us. Students can reciprocate by coming to class prepared and participating actively in discussions. When relationships are strong and healthy, mutual respect figures prominently and can serve as a motivator for both instructors and students to strive for success.

A second lesson involves *awareness of the contexts in which students learn*. Course content delivery must go beyond processes of teaching and include *how* students learn. Information such as "To whom do you go for academic help?" can be gathered verbally from students or via an anonymous survey. Then, instructors will be better-positioned to implement a combination of strategies (e.g., study teams, project teams, online forums) to ensure alignment with student preferences and individual learning styles.

A related lesson, particularly if DT/L is involved, pertains to *peer-to-peer learning*. Given that instructors routinely suggested students form study groups, it is surprising that no one noticed that these groups were not functioning during the pandemic. When courses are virtual, students can gain additional knowledge and skills when interacting with each other (e.g., study groups, review sessions). Explaining a concept or how to solve a problem to another student helps cement what students know. They also are able to listen to the way their peers understand the material and learn from them. When DT/L is in place, it is best to take an active role in assigning students to study groups, rather than leave it to chance, and to gather feedback from participants on how those groups are working.

A fourth lesson entails *gaining proficiency in the technologies needed to teach virtually*. Technology represented a key challenge at the outset of the pandemic to instructors who had never taught virtually. Training is now available for instructors to develop effective online content that maximizes student learning. The Association of College and University Educators (ACUE), for example, offers year-long, evidence-based teaching courses that help instructors design online courses. This instruction facilitates instructor-student and peer-to-peer engagement, effective use of recorded micro-lectures and module-organization strategies, the integration of visualization tools, and the creation of inclusive virtual classroom practices, among many others.

COVID-19 has been a test case for higher education DT/L. While many prefer in-person courses, we found that some students could manage reasonably well with virtual learning. Virtual courses can deliver value especially when (1) instructors use technology effectively, (2) students are able to be productive learners by working individually, and (3) in-person is not an option due to specific circumstances (e.g., geographic distance, personal schedules, health/mobility conditions). Furthermore, fostering a sense of communitas can add significant value to students' learning experiences, including DT/L. By creating online spaces where students can share common experiences, feel like they are working together to address similar challenges, and interact with one another in more meaningful ways, universities can begin to address an often-neglected aspect of higher education.

DT/L has the potential to help improve higher education's reach and effectiveness. Many universities are developing or expanding their online global programs. In addition, scientists have warned that future pandemics are on the rise. DT/L offers a way to mitigate these risks and do so more successfully in future rounds, particularly if DT/L becomes institutionalized in the culture.

ACKNOWLEDGMENTS

We thank our study participants for sharing their time and viewpoints with our team. We also thank our colleagues and journal reviewers for their invaluable suggestions which have greatly

improved our article. Research for this paper was supported by the National Science Foundation under Grant No. 1519412. For one author (EJB), this material is based upon work supported by (while serving at) the National Science Foundation. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

ORCID

Fredy R. Rodríguez-Mejía https://orcid.org/0000-0001-6593-5446

REFERENCES

Atkinson, Michael, Adrienne Brodie, Kafcaloudes Phillip, McCarthy Sidrah, Monson Ebony A, Sefa-Nyarko Clement, Omond Shauni, et al. 2022. "Illuminating the Liminality of the Doctoral Journey: Precarity, Agency and COVID-19." *Higher Education Research & Development* 41(6):1790–804.

Bell, Genevieve. 2021. "Pandemic Passages: An Anthropological Account of Life and Liminality during COVID-19." *Anthropology in Action* 28(1):79–84.

Bernard, Russell, Amber Wutich, and Gery W. Ryan. 2017. *Analyzing Qualitative Data: Systematic Approaches*. 2nd ed. Thousand Oaks, CA: SAGE Publications.

Bernstein, Jonathan. 2011. *Manager's Guide to Crisis Management*. New York, NY: McGraw-Hill.

Briody, Elizabeth K. 2016. "Guiding Change as President of the Board of Trustees: Learning from the Liminal Drama of It All." *Journal of Business Anthropology* Special Issue Spring(2): 105–37.

Briody, Elizabeth K., Edward J. Berger, Elizabeth Wirtz, Anthony Ramos, Gireesh Guruprasad, and Edward F. Morrison. 2018. "Ritual as Work Strategy: A Window into Organizational Culture." *Human Organization* 77(3): 189–201.

Briody, Elizabeth K., Elizabeth Wirtz, Angela Goldenstein, and Edward J. Berger. 2019. "Breaking the Tyranny of Office Hours: Overcoming Professor Avoidance." *European Journal of Engineering Education* 44(5): 666–87.

Bruening, Michael. 2020. "I Will Survive, Coronavirus Version for Teachers Going Online." Streaming video. https://www.youtube.com/watch?v=CCe5PaeAeew, accessed September 16, 2023.

Buechner, Barton, John Dirkx, Zieva Dauber Konvisser, Deedee Myers, and Tzofnat Peleg–Baker. 2020. "From Liminality to *Communitas*: The Collective Dimensions of Transformative Learning." *Journal of Transformative Education* 18(2): 87–113.

Christopher, Roberta, Lila de Tantillo, and Jean Watson. 2020. "Academic Caring Pedagogy, Presence, and Communitas in Nursing Education During the COVID-19 Pandemic." *Nursing Outlook* 68(6):822–29.

Hodges, Charles, Stephanie Moore, Barb Lockee, Torrey Trust, and Aaron Bond. 2020. "*The Difference between Emergency Remote Teaching and Online Learning*." Educause Review, March 27, 2020. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning.

Lederman, Doug. 2020. "Faculty Confidence in Online Learning Grows." Inside Higher Ed, October 5, 2020. https://www.insidehighered.com/digital–learning/article/2020/10/06/covid-era-experience-strengthens-faculty-belief-value-online.

McCabe, Maryann, and Elizabeth K. Briody. 2016. "Working in Liminal States: Fluidity and Transformation in Organizations." *Journal of Business Anthropology* Special Issue Spring(2): 1–12.

Matei, Sorin, and Brian Britt (Eds.). 2011. *Virtual Sociability: From Community to Communitas.* Indianapolis: InterAcademic Press by Ideagora.

Means, Barbara and Julie Neisler, with Langer Research Associates. 2020. Suddenly Online: A National Survey of Undergraduates during the COVID-19 Pandemic. San Mateo: Digital Promise.

Ray, Ayesha. 2021. "Teaching in Times of Crisis: Covid-19 and Classroom Pedagogy." *Political Science & Politics* 54(1): 172–73.

Reuter, Peter R., Bridget L. Forster, and Bethany J. Kruger. 2022. "How Students at a University in Florida Experienced and Coped with COVID-related Restrictions." *Educational Research: Theory & Practice* 33(3): 50–63.

Roy, Sudipta, and Bonnie Covelli. 2021. "Covid-19 Induced Transition from Classroom to Online Mid Semester: Case Study on Faculty and Students' Preferences and Opinions." *Higher Learning Research Communications* 11: 10–32.

Turner, Edith. 2012. *Communitas: The Anthropology of Collective Joy*. New York, NY: Palgrave Macmillan.

Turner, Victor. 1967. *The Forest of Symbols: Aspects of Ndembu Ritual*. Ithaca, NY: Cornell University.

Turner, Victor. 1974a. *Dramas, Fields, and Metaphors: Symbolic Action in Human Society*. Ithaca, NY: Cornell University.

Turner, Victor. 1974b. "Liminal to Liminoid in Play, Flow, and Ritual: An Essay in Comparative Symbology," *Rice University Studies* 60(3): 53–92.

Turner, Victor. 2007. *The Ritual Process: Structure and Anti-structure*. New Brunswick, NJ: Aldine Transaction.

Turner, Victor. 1982. *From Ritual to Theatre: The Human Seriousness of Play*. New York, NY: PAJ Publications.

Turner, Victor. 1987. *The Anthropology of Performance*. New York, NY: PAJ Publications.

van Gennep, Arnold. 1960. *Rites of Passage*. London, UK: Routledge and Kegan Paul.

White, Irene, and Majella McSharry. 2021. "Preservice Teachers' Experiences of Pandemic Related School Closures: Anti–structure, Liminality and Communitas." *Irish Educational Studies* 40(2): 319–27.

How to cite this article: Rodríguez-Mejía, Fredy R. Elizabeth K. Briody, Ethan L. Copple, and Edward J. Berger. 2024. "The missing study groups: Liminality and communitas in the time of COVID-19." *Annals of Anthropological Practice* 48: 107–29. https://doi.org/10.1111/napa.12214