Emergency support for faculty: Adherence to best practices in designing, developing, and implementing virtual training during a pandemic

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Abstract

COVID-19 disrupted face-to-face instruction across university campuses world-wide. As universities struggled, instructional design teams stepped in to assist. At one southeastern university in the US, an instructional design team, with support from instructional systems analysts, responded by creating online instruction for faculty and facilitating training during the summer months in 2020. Literature outlining multiple perspectives and best practices for online instruction prior to the onset of the COVID-19 pandemic is robust; however, provides little to no guidance for implementing empirically based practice during a time of worldwide crisis. Many educational institutions recognised the need to provide a timely response to ensure continuity and quality of education yet lacked a framework or model from which to follow. This mixed methods study reviews best practices for designing and implementing virtual training for faculty and determines to what extent best practices were followed for this shift during a time of crisis. The use of a survey and semi-structured interviews with the instructional design team and instructional systems analysts resulted in four themes: prioritising faculty needs, responsiveness to faculty, lack of time, and difficulties collaborating across departments. Alignment to pre-pandemic best practice literature is provided to demonstrate the response of one university to the pandemic. Implications for instructional design teams and future research directions are presented.

Practitioner Notes

1. Instructional design teams are well-equipped to assist academics with creating and implementing online and hybrid delivery modalities; however, they are less likely to be prepared to assist on a large scale and with a short timeframe.
2. Prior to the pandemic, instructional design teams worked to adhere to evidence-based best practices in order to meet the needs of their universities but lacked time during the worldwide crisis.
3. Instructional design teams may benefit from having an instructional continuity plan in place, that is revisited and updated frequently, in preparation for emergency remote teaching situations.
4. Higher Education Institutes would benefit from investigating their own instructional design practices in emergency remote teaching.

Keywords

Emergency support for best practices, virtual training, instructional design, professional learning, pandemic, web-based instruction

Introduction

The onset of the COVID-19 panic in March of 2020 shook the curricular and pedagogical foundations that institutions of higher education (IHE) have rested upon for decades. IHE decision-makers were forced to devise ways to continue to deliver upon their educational missions while simultaneously incorporating emerging information related to the effects of COVID-19 and its impacts on the health and safety of students, faculty, and staff in real time. For instruction, this meant an abrupt shift away from traditional face-to-face and hybrid (e.g., delivered at least 50% online with the remaining percentage delivered face-to-face) courses to the almost exclusive use of online remote modes of delivery (Hodges & Fowler, 2020). This shift is what Hodges et al. (2020) refer to as emergency remote teaching (ERT). ERT is:

> a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated. The primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis. (p. 6)

As faculty struggled with the uncertainty and challenge of creating and adapting both courses and content for online delivery (including instructional plans, syllabi, and assessments), instructional design teams provided expertise and support (Xie et al., 2021). Instructional design teams assisted and trained faculty to transition to the online environment, a shift that most IHEs were ill-equipped to make given the circumstances, especially when compared to the well-thought out and carefully designed transitions that occurred in times of non-ERT (Borrego, 2010; Xie et al, 2021).

Although existing research highlights strategies for instructional design implementation and professional development in non-ERT contexts (Baran & Correia, 2014; Elliott, 2017), there is a small but emergent body of literature surrounding the transition from a traditional learning environment to a predominately online-based learning platform within a truncated emergency timeline (see for example, Al-Naabi et al., 2021; Mohmmed et al., 2020; Xie et al., 2021). Because the demands placed on faculty support teams during ERT require them to operate much differently than in non-emergency situations (Hodges et al, 2020; Xie et al, 2021), the purpose of this study was to explore how instructional design teams utilised research-informed best practices during ERT to illuminate if non-ERT best practices were consistent with their actions during the crisis context.

Due to the ERT context, this instructional design team needed to quickly prepare faculty to engage in new online teaching strategies through problem solving and immediate hands-on application centred in practical experience. Given the context-driven nature of the training development and design, the design team's approach was underpinned by a pragmatic orientation where "truth is what works at the time" (Creswell & Creswell, 2017, p. 11). Pragmatism is grounded in social situations and action to develop solutions or practical understandings to educational experiences and concerns

(Dewey, 1900/1990). The pragmatist paradigm also applies to research design where researchers seek to understand the nature of the practical application within the context (Patton, 2015). Pragmatism, therefore, framed how we theoretically examined the instructional design team's pedagogical approach to their teaching and learning environment in response to the crisis.

This study additionally responds to Al-Naabi and colleagues' (2021) call for further research on professional development programming during ERT. While this current project was framed by non-ERT best practices, Al-Naabi's recent contribution to faculty professional development in ERT presented an opportunity to build upon the current literature as the pandemic unfolded causing a recent upswing in ERT-focused research. We sought to better understand the relationship between existing research-based strategies and a south-eastern US university's design and delivery of virtual training for faculty in response to a worldwide crisis. The following research question formed the groundwork of this study:

> *What role did research-informed best practices play in the design and implementation of online training courses for faculty during ERT due to the COVID-19 pandemic?*

Literature review

Instructional Design and Development teams are responsible for ensuring the university is offering innovative instruction that is effective for all modes of teaching, including online or web-based instruction (Xie et al., 2021). These teams may include (but are not limited to): directors, assistant directors, designers, project managers, specialists, graphic artists, multimedia specialists, programmers, technical typists, and additional support staff. While faculty create the content for each course, they can work with instructional designers to help determine the goals and objectives of the course and generate ideas for making the course more effective, efficient, and creative (Li & Shearer, 2005; Vaill & Testori, 2012). In addition to improving the quality of instructional pedagogy in the online setting, instructional designers also work to increase the amount of content delivered asynchronously, a task that faculty often struggle with and, in turn, require support and mentorship from instructional design teams to accomplish (Northcote et al., 2015). Instructional design teams therefore have to further consider faculty willingness to interact with technology as they craft virtual learning opportunities (Tawfik et al., 2021). Despite the wide-ranging roles and tasks associated with instructional design, and within instructional design teams, the literature provides robust and informative ways to improve the design and delivery of content to faculty. The following literature review highlights best practices that inform instructional design, which not only establish an overview of the field, but also drive our conceptual framework.

Best practices

When moving to online instruction, Northcote and colleagues (2015) suggested that instructional design teams should utilise best practices to develop programming that supports faculty and extends their learning thresholds. Existing literature points to a variety of strategies with those goals in mind during times of regular instruction, e.g., non-emergency contexts. As part of their "Excellence in

Online Education Initiative," Vaill and Testori (2012) outlined three phases to consider when training faculty to shift to online instruction: orientation, mentoring, and ongoing support. Brack et al. (2005) noted that being responsive to faculty needs and their overall learning process is a main objective of instructional design and added that programming for faculty should incorporate short, responsive, and targeted self-directed learning activities to increase faculty knowledge and self-efficacy. These recommendations along with those noted below contribute to a body of literature focused on best practices and strategies for instructional design.

Cooperation, collaboration, and support

Cooperation, collaboration, and support at all levels including the overall infrastructure is pivotal in the design and implementation of training programs. Some scholars have pointed to the need for institutional support and a strong infrastructure to best support instructional design training (Al-adwan & Smedley, 2012; Borrego, 2010). Indeed, Northcote et al. (2015) found that issues with institutional infrastructure created the largest issues for participants in their study. Infrastructure, in these instances, refers to the ability to fully function (e.g., internet connectivity, employees, budget). Miglani et al. (2018) further noted the importance of incorporating stakeholders' views into instructional design trainings and added that incorporating relevant technology (Massive Open Online Courses; MOOCs) and quality control (learning more than technical skills, learning how to problem-solve, reducing high rates of drop-out from MOOC's) were also helpful in developing these trainings. They stressed that the cooperation and collaboration among designing units was important when creating online training.

Mestan (2019) likewise pointed out that a lack of clarification on terminology and expectations between the institution and designing units could cause collaborative issues as unit coordinators approached their work from different interpretive stances. Mestan examined the experiences of the instructional design team in shifting traditional content delivery to Web-based delivery along with levels of student satisfaction; student satisfaction being defined by Mestan as the degree to which a student would like to see the incorporation of additional online learning (e.g., "not much at all," "somewhat," "a lot"). This large-scale study resulted in student satisfaction overall, but also highlighted a lack of understanding of what "blended learning" included for both the design team and students. Mestan recommended sufficient design and technical support for faculty and students to achieve a high-quality result in this shift.

Project planning and preparation time

Adequate time to plan and prepare underpins quality instructional design and scholars recommend using organisational strategies to best facilitate the timeline. Vaill and Testori (2012) argued for careful in-depth planning of faculty development to support "excellence in online education" (p. 112) and Borrego (2010) promoted a phased planning and implementation process of *plan-do-study-act* to provide high quality transitions (p. 61). To avoid problems, missed deadlines, and additional costs, Li and Shearer (2005) recommended the need for implementing a project plan-of-action that includes major milestones in the program planning. In order to streamline processes, Penn State University instructional designers suggested the following: "create project management Gantt chart;

create mini-Website for the project management; provide detailed course outline form with a sample; provide a lesson content template with examples; and make a regular communication plan" (Li & Shearer, 2005, p. 431). Li and Shearer also recommended that the project plan be an iterative and flexible process that is continually reassessed and updated.

Scholars have also underscored the necessity of having enough time to not only plan for faculty online development, but to also train faculty in the shift to online instruction (Keengwe & Georgina, 2012; Vaill & Testori 2012). Much of the research on the best practices for shifting traditionally face-to-face faculty to web-based learning focuses on the instructional design team spending months and even years to complete this task. Vaill and Testori (2012) stated that faculty training "should not simply consist of a single workshop or training session" (p. 112) and that continued support is essential to faculty professional development. Keengwe and Georgina (2012) showcased this best practice in their ongoing training program. They implemented a one-week training for faculty that focused on the content of course delivery and then after the initial implementation, the training continued, incorporating aspects that were beneficial: in-depth group discussions, hands-on learning opportunities, and the opportunity for faculty to develop content and showcase it during the training.

Mitigating faculty resistance

Often faculty are hesitant or unmotivated to shift to online instruction (Ananchenkova & Ponomareva, 2015) for myriad factors including, but not limited to, self-efficacy (Northcote et al., 2015); lack of clarification as to what such a shift entails (Mestan, 2019); and technical savviness (Vaill & Testori, 2012). Conceptual perspectives related to reducing resistance and increasing user interaction include effort expectancy, extraneous cognitive load, and pedagogical usability (Nokelainen 2006; Shield & Kukulska-Hulme, 2006; Tawfik et al., 2021; van Merriënboer & Sluijs-Mans, 2009). Hillman and Corkery (2010) acknowledged that to assist instructional design teams with helping unmotivated faculty, expectations for course delivery should be cohesive and clear. With these expectations, they also suggested that instructional designers begin faculty trainings by demonstrating ways to use the online templates via online tools and webinars. Northcote et al. (2015) on the other hand, found that while their participants positively responded to online course alignment in terms of learning objectives, assignments, and assessments, they were resistant to learning online pedagogy, navigating teacher-student connections in the online space, and trusting in the efficacy of online instruction in general. Therefore, it is ultimately important to consider design strategies that recognise and support faculty self-efficacy through clear and concise presentations that also demonstrate hands-on application to experientially understand the use of technology and online instruction.

Conceptual framework

The literature leading up to the COVID-19 pandemic provides an overview of best practices that scholars have argued are essential to designing and implementing an effective shift to providing quality online instruction. This study looked to these research-informed strategies as a conceptual

framework to examine the reality of a crisis-induced shift to online instruction as it occurred in real time. Table 1 presents a list of identified best practices as informed by the literature.

Table 1:
Identified best practices

Research informed best practices
Develop a Gantt Chart or visual plan of action
Prioritise faculty needs
Responsive to faculty needs
Adequate time to design project
Incorporate stakeholders
Collaboration
Cooperation
Make a regular communication plan

Note. These best practices were informed by and synthesised from the existing literature in the field (Al-adwan & Smedley, 2012; Brack et al., 2005; Borrego, 2010; Li and Shearer, 2005; Mestan, 2019; Miglani et al., 2018; Northcote et al., 2015; Vaill & Testori, 2012).

The above practices framed the research design, methods, and findings of this study. However, as the discussion and implications will show, the findings were put into conversation with the current research in the field that comments on and interfaces directly with ERT practices in relation to the ongoing pandemic crisis.

Method

In alignment with our pragmatic framework, this study integrated an explanatory sequential mixed methods design (quan $\rightarrow$ QUAL) that utilised data collected from an initial survey to inform a deeper, qualitative phase of inquiry (Creswell & Creswell, 2017; Patton, 2015). Initial survey results were used to craft interview themes and protocol items. The use of an explanatory sequential mixed-methods design allowed the researchers to enter the qualitative phase from a more informed position and ask questions that were relevant to the situation and context of the participants. Findings from both phases were integrated once all analysis was complete to make sense of the totality of the data.

Data collection

Two methods of data collection informed our study. The quantitative survey consisted of 15-items that examined the presence of or extent to which best practices, informed by the extant literature, were utilised during the design and implementation of the training sessions (Al-adwan & Smedley, 2012; Ananchenkova & Ponomareva, 2015; Bennett & Lockyer, 2004; Borrego, 2010; Hillman & Corkery, 2010; Keengwe & Georgina, 2012; Li & Shearer, 2005; Mestan, 2019; Miglani et al., 2018; Northcote et al., 2015; O'Neill et al., 2004; Rogo & Portillo, 2015; Vaill & Testori, 2012). Survey

items interrogated for the presence and/or frequency of selected best practices related to instructional design during the design and delivery of the virtual trainings for faculty. Representative items from the survey included: "As a team, we all worked together collaboratively", "Did your team have a regular plan for communication during the creation of this project?", and "Did you, or someone else on the team, prepare a detailed course outline form?".

The survey was distributed via Qualtrics to all members of the instructional design and informational technology teams at a south-eastern university in the US (N = 21), with nine completing the survey. Qualtrics is a web-based platform which allows collection of anonymous survey data. Demographic information was not collected to maintain confidentiality. The descriptive data from the quantitative survey informed the perspective of the researchers heading into the qualitative phase and, more specifically, the creation of the interview protocol. Demographic information was not collected to maintain confidentiality. No member of the research team had access to the identity of any of the participants.

The qualitative interviews were conducted using a semi-structured protocol. Five participants— every member of the instructional design team—participated in the individual interviews lasting an average of 26 minutes. The questions centred on the experiences of individuals during the design and implementation of the training sessions. For ethical adherence, the Principal Investigator (PI) was the only member of the research team who knew the identities of those participating in the interview portion. The PI solicited and conducted all interviews, using the video portion only for transcription purposes. The videos were then destroyed after the process of member-checking.

Data analysis

The research team utilised NVivo software to inventory and analyse the data. A procedural coding method was used to deductively code the transcribed interviews (Saldaña, 2021). Procedural coding is a prescriptive approach that allowed the researchers to utilise a list of deductive codes (see Table 1), consisting of a synthesised set of best practices identified within the literature, to identify the presence of best practices within the corpus of the interview data. The procedural coding method was further adapted to allow for the identification of the presence of positive examples of the use of best practices and negative examples.

Following multiple rounds of collaborative coding, codes were grouped into larger thematic categories noting negative examples across the categories leading to the creation of a code map. Code maps are useful to organise data and assign labels to emerging themes. The last stage of analysis overlapped with the writing process as the researchers returned to their theoretical framework to make sense of the emergent themes and develop a narrative of findings.

Findings

The design team encountered the complex and challenging task of designing and implementing multiple virtual trainings for faculty during the COVID-19 pandemic. Although the design team was not following an explicit list of research informed best practices, they ultimately utilised several

during the design and delivery of their online training modules. However, the roles these best practices played varied from their traditional roles outlined in the literature due to the emergency shift to online instruction. In the ERT context, the design team focussed primarily on 'prioritising faculty needs' and being 'responsive to faculty needs' as detailed in the themes below. The unique context presented by the pandemic created overwhelming challenges which impacted adherence to other best practices as discussed in the following themes related to 'lack of time' and 'collaboration.'

Prioritising faculty needs on multiple levels

The first finding indicated that design team members were not only aware of the alignment of project goals with faculty needs, but that they took it upon themselves to ensure that those needs were met within the turbulent context in which the trainings were being created and delivered. Participant 3 explained, "we went from about 15% of courses in the university that were online to 100% in two weeks. Likewise, all five design team members repeatedly described their goal as preparing faculty to become quickly proficient and confident in flipping their classrooms to a virtual format in light of the "storm" that Participant 3 referenced:

> *It was clear that we had walked into a storm that none of us asked for and I could not live at peace without providing faculty with opportunities to find a way forward. To ask them to do that absent of sort of a unique—if not additional—support, just seemed to be almost criminal. It was just unfair.*

The design team essentially framed themselves as educational first responders in this unforeseen and dramatic transition. Participant 2 added, "I needed to meet the needs of faculty because they were being thrown into a situation that they had very little prep for" and Participant 4 stated, "The most important thing was to meet the faculty needs" in relation to the emergency context.

Targeting the material to the faculty solely as a response to the pandemic, however, was not always the driving motive. Participant 2 felt that the faculty had needed this training all along and the pandemic-created urgency for virtual instruction was their way to finally move forward with providing the training. They stated:

> *We can't let this crisis go by without taking advantage of it. They all now know they need this training. We just need to offer it and give them the motivation to take it because this will jumpstart us in a way that we otherwise might take a year and a half to get to.*

Like the other design team members, Participant 2 felt the same sense of urgency to prepare faculty for emergency online instruction, however, they noted a long-standing need to target the training to faculty. The pandemic was just the opening they needed to better train faculty in online instruction, and they were going to harness the current situation to drive the change that they saw as a much-needed catalyst for the institution.

Responsiveness to faculty needs

The pandemic further coloured the design approach as the team felt that the content needed to be as flexible and easy to utilise as possible to enable faculty to become proficient at "surviving" online teaching. In their roles, the team members had an understanding and willingness to make the content—and also, themselves—as flexible as possible. This design team was tasked to conduct the online training, but they felt responsive to the faculty in terms of positive mindset, learning at various skill levels, learning both synchronously and asynchronously, and engaging with the design team through interactive discussions and message board support. Participant 1 explained:

> *I wanted to see our faculty improve their level of confidence when it comes to using these tools and teaching online period...my main concern was just helping faculty feel better. So, just being encouraging, making sure everybody felt better about having to do this was super important to me.*

Participant 2 felt that they were "able to meet people at all different levels of experience" by having interactive office hours and making the content as responsive as possible. The design team was acutely aware of the typical needs of faculty as it related to content delivery and troubleshooting.

However, this situation was anything but typical. The design team went beyond the normal best practice of simply making the content responsive to the needs of faculty. They invested an inordinate amount of their time and energy ensuring that faculty had a holistic set of resources to draw upon from within and outside of the content including the design team themselves. Participant 4 described working "crazy hours" and "60-70-hour weeks all summer." Participant 4 continued to explain that the other team members were also "working so hard all of the time" because it was a matter of "just getting it done...and the only way to get that amount of work done was to cut into your personal time in a significant way." Participant 5 expressed that the team was glad they made the content so responsive in terms of the discussion support boards, but in order to "reply to answers, or to questions, very quickly," they often worked non-traditional and long hours. The instructional design team reviewed all discussion posts, responding to each question within an efficient time period. They explained that a few of them would reply to questions even at 10 pm or 5 am, but felt their efforts were appreciated by faculty who were also still working and "posting questions or engaging in discussions at that time as well." Design team members were happy knowing that they were responsive to the faculty. However, they also recognized that even though that had been their goal, it was too much and as Participant 4 concluded, "it's not sustainable."

Challenges related to a lack of time

The best practice strategy 'length of time to design the project' was discussed by the entire design team in negative terms. None of the team members felt they had enough time to design and prepare the training course. Participant 4 described the lack of time, in contrast to the amount of work, as "just the amount of time that we had…to do it all. It was just a tremendous amount of work, and we didn't have very many people to work on it." Participant 3 added, "We were all of a sudden asked to take on more than we were prepared to do."

Overall, the participants expressed that they felt the lack of time significantly limited their ability to explicitly think about planning and the best practices involved. Instead, as Participant 1 explained, "It just sort of turned into a survival thing." Participant 4 added that the program design "could have been better if we had more time to think it through" and Participant 5 felt they didn't have time to think about the goal and were more so in a sink or swim situation because "it was everything in a rush" with no time to "prepare for it." Participant 5 continued:

> So, I don't think I actually thought too much about the goal. To me, it was really creating the best product possible, given the time frame that we had, right? We knew it was probably not going to be perfect, but we really did our best to do the best training possible for faculty, given the timeframe that we had.

The design team felt they created the best training program possible to meet the needs of the faculty in the emergency context despite not "having all the information [needed] to make the best decisions possible" as Participant 5 added, and that the very nature of the crisis greatly impacted their ability to spend adequate time on planning their design.

Not all the team members, however, saw the crisis-induced lack of time as the main issue. Participant 1 instead felt that the lack of time would have been more manageable in terms of project design if all the team members had project management training and understood the work involved in pre-planning (i.e., quickly creating the plan of action and then "clarify[ing] who is doing what"). For Participant 1 it came down to determining the most important objectives and then delineating and delegating out responsibilities. Participant 1 added that the need for a systematic approach where "everybody knows [what] they need to do by when, especially when there's a crunch sort of thing going on" would have allowed for them to better achieve this best practice even during a crisis.

Interestingly, concerns related to project design and management might have been mitigated using a Gantt Chart. However, the quantitative results showed that, of all the best practices assessed for, the use of a Gantt Chart (as supported by Penn State University) was the one best practice that was not utilised during the design or implementation of the project.

Difficulties in collaborating

The design team had mixed reactions with how they were able to communicate, design, and implement the training as a cohesive whole across all stakeholders. Although two-thirds of respondents agreed or strongly agreed with the statements "as a team, we all worked together collaboratively," those sentiments were indicative of within-team dynamics. The qualitative findings told another story as it related to their struggles with the best practices of collaboration and cooperation across departmental lines.

Participants primarily discussed their coordinating efforts with other units frequently using the term "disconnect" to describe their experiences. Participant 2 noted that there were often differences across infrastructural units related to purpose and objectives. For example, they outlined an issue related to recording synchronous meetings, which for the design team was necessary for

instructional purposes, but for IT security there were different considerations at play regarding recordings. Participant 2 added, "There unquestionably was a disconnect between security, IT security, and that part of IT that deals with academic affairs." Participant 5 added that there were problems specifically related to "coordination with a different team...we've learned, we do need to communicate better and coordinate better with our friends in IT. And that's something that we've been working on too—on both ends."

This disconnect largely correlated with insufficient time to adequately prepare, plan, and communicate across groups. Indeed, positive responses regarding collaboration, cooperation, and an overall view of coordination, primarily surfaced with discussions regarding their individual design team with whom they were closely connected. However, a broader examination of the data showed that the farther the coordination efforts moved beyond the insular team, the more strained collaboration and communication became across groups, which appeared to be directly in connection with time constraints. The data suggest that these best practices would have been more positively incorporated into the design and implementation of the training sessions had there been more preparatory time.

Discussion

Instructional design teams typically help faculty develop more effective, efficient, and creative content (Li & Shearer, 2005). The extant literature has identified a number of best practices that aid in that pursuit during times of normalcy (e.g., Mestan, 2019; Miglani at al., 2018; Northcote et al., 2015; Vaill & Testori, 2012). However, the role of instructional design teams during ERT was anything but normal. Given that, this study — conducted within the context of ERT — analysed how an instructional design team pragmatically operated in response to the COVID-19 pandemic. Specifically, this study juxtaposed the use of previously identified best practices, against the backdrop of ERT and an instructional design team's real time response to institutional needs and priorities, to determine if those previously identified best practices were utilised and, if so, what their use looked like. The findings of this study shed new light on the adherence to established best practices during ERT when design and implementation is pragmatically informed by the nature of the experience (Patton, 2015). Based on these findings, instructional design teams can benefit from having an instructional continuity plan in place, which should be revisited and updated frequently (Li & Shearer, 2005).

The instructional design team's explanation of their work during the ERT detailed holistic accountings of best practices (and challenges) found in the literature rather than specific, concrete examples (use of a Gantt chart, use of a website). Overall, the instructional design team prioritised faculty needs which meant increasing their self-efficacy in online instruction in preparation for the immediate shift to 100% virtual instruction. While this response aligned well with non-ERT best practices of prioritising and responding to faculty needs (Brack et al., 2005; Northcote et al., 2015; Vaill & Testori, 2012), the findings show that the ERT context created a heightened sense of empathy with the plight of the faculty amongst the instructional design team and is consistent with other work emerging from the pandemic including the three lenses presented by Sumer et al (2021):

technical, pedagogical and social. This empathetic view caused team members to approach their roles almost as instructional 'first responders' where they logged long and untraditional work hours to actively respond to faculty while they were learning. The design team's response and willingness to put in extra work effort to best support faculty mirrors findings from Xie et al. (2021) who noted that their instructional designer participants also took on tasks outside of their normal workload to better connect with and support faculty during the emergency remote teaching context.

A significant challenge that the instructional designers in this study faced was related to coordination and communication with units outside their small team particularly in the face of limited planning time. Scholars previously underscored the importance of collaboration across designing units during times of regular instruction (Mestan, 2019; Miglani at al., 2018; Northcote et al., 2015) and this became even more of an issue during a crisis. The partnering teams did not have time to fully understand the needs, roles and limitations of the participating units nor did they have time to focus on collaborative planning and communication. This lack of time impacted the cohesiveness of the training sessions and created a stressful environment as team members attempted to build faculty training programs and to help instructors succeed in the online environment. The findings suggest that collaborating units should begin to work closely with each other in anticipation of future coordinating projects. They should not wait for a time of crisis to establish a solid working relationship. Instead, it is crucial that they learn each other's needs, roles, and limitations beforehand. They should also establish communication and collaboration protocols to follow when working together. When a crisis hits, they will then be ready to collaborate and help faculty. Recognising the difficulty this team experienced when collaborating across departments is a theme that helps inform future practice.

The work of Al-Naabi et al. (2021) on supportive elements provided a useful perspective from which to view our current findings. Several of the findings from this study, relevant to the work of individuals and teams, intersected their five "support considerations for the success and effectiveness of professional development provisions during ERT", that come from an institutional perspective (p. 13). For example, the development of policies and procedures to support faculty training, professional development, and instructional design activities during ERT would improve all four themes related to best practices we identified. Al-Naabi et al. (2021) also identified the need for institutions to create and foster a collaborative environment towards professional development prior to ERT. Given that the current study identified instructional design difficulties in collaboration, the significance of this institutional support is self-evident.

This study's primary focus was on the use (or challenges related to the use) of best practices during ERT, however from a pragmatic standpoint, it is impossible to ignore the influence that context had on the use and/or lack of use of said practices. Institutional support consideration elements could serve to enhance the best practices that were employed or decrease the challenges that the instructional design team faced whether singularly or holistically. For instance, the difficulties in collaboration experienced by the instructional design team throughout ERT, both within and across departments, would have been alleviated through the development of working relationships "to facilitate social learning and practice-based approaches to learning in professional development programmes during ERT" (Al-Naabi et al., 2021, p. 14). While this study explored how these

elements manifested in the actual work of those designing, developing, and delivering the professional development, the similarities between the best practices that the instructional design team in our study instituted, and the challenges they acknowledged, further supported the need for institutions to prepare for emergency remote teaching *prior* to a crisis-impacted environment.

Limitations

As with all research, this study is not without limitations. The response rate for the survey was 43% — somewhat low for web-based survey responses. We used efforts to increase participation such as sending out a reminder email two weeks after the initial email but were unable to provide compensation for participants. One result is that our overall participation for the survey was low. During this time, a member of the collaborating team also ended their employment. These items may have reduced participation. In addition, the teams were likely impacted by the pandemic throughout their work and home lives, also leading to reduced participation. Finally, although participant names are removed for confidentiality, the pressure to report their experience positively due to members of university leadership interest in the study may have impacted reporting. Further research with higher rates of response may allow for greater generalisability of the data.

Implications

The findings from this study add to the growing body of literature related to instructional design and the response of IHEs during ERT. In particular, this study helps to illuminate the chaotic nature that instructional design teams found themselves in during ERT and how they pragmatically navigated those circumstances to develop and design faculty training. From this portrait, the need for team, departmental, and institutional planning for these types of scenarios through the proactive development and implementation of supports in preparation of the unforeseen seems paramount. Furthermore, the empathetic reactions of the design team draw attention to the role of human relations within the instructional design sphere. While such a strong empathetic response may not occur at such a level outside of non-ERT contexts, being able to relate to and understand the position of faculty as they learn new teaching expectations is crucial. Therefore, we recommend that instructional design teams explicitly address strategies for connecting with and responding to faculty in both non-ERT and ERT training environments in ways that will not overwhelm the workload requirements of the design team, but still create a sense of empathy with the learners.

Given the findings, IHEs should consider the role that they play in ensuring that instructional design teams have the support that they need to engage in "best practices" to operate with efficiency and effectiveness. As Al-Naabi et al. (2021) noted, "Design and support are interrelated, and higher education institutions should take both into consideration. Failing to address one of them or prioritising one over the other, might contribute to failure of a planned professional development programme" (p. 14). We suggest that IHEs retroactively investigate what worked and did not work in their own contexts. By viewing the work of instructional design teams through the lens of best practices, this study highlights the disparity between the best-case scenario and what actually occurred during emergency remote teaching.

In sum, our findings contribute a better understanding of how instructional design team members, both individually and collectively, navigated ERT through the analysis of best practices. In light of recent findings related to the pandemic, we can begin to integrate the previous understanding of what best practices looked like in non-ERT contexts with how they actually played out in real time to help both instructional design team members and institutions prepare. The pandemic highlighted the critical role that instructional design teams play in delivering professional development, improving content delivery, and informing pedagogical innovation at IHEs. By critically and honestly assessing what the institutional response looked like versus a best-case scenario, we hope that instructional design teams can anticipate the challenges of ERT as they relate to functioning at full capacity and efficiency *rather* than expecting that what has always worked will continue to do so in times of uncertainty.

Conflict of interest

The authors declare that there is no conflict of interest or funding to report.

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