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Faculty readiness for online crisis teaching: transitioning to online teaching during the COVID-19 pandemic

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ABSTRACT

This mixed-methods study was designed to measure and elaborate constructs of faculty online readiness from pre- COVID-19 pandemic literature. Bringing together the validation of a scale to measure these constructs and insights from a focus group, findings suggest that the negative connotations of risk-taking and making mistakes while learning to teach online seem to have been mitigated by a combination of affective factors such as humility, empathy, and even optimism. Teacher educators explained that transitioning online in a context of a crisis contorts normal longitudinal perceptions of preparation and readiness. This new sense of temporality was connected to unexpected benefits of bringing them into partnership with their students. However, quantitative and qualitative results are interpreted to show that assessing students' equitable access to online learning and managing the demands of scholarship and university-based and academic community service duties are areas in need of attention from professional development designers and policy makers.

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Online teaching; teacher educators; equity; online readiness; crisis online teaching; COVID-19 pandemic

Introduction

The COVID-19 pandemic thrust traditional faculty into online teaching within a matter of weeks (Arum and Stevens 2020; Gülbahar and Adnan 2020). Faculty, including teacher educators, were asked to transition, create, and implement online teaching due to university closures with no choice but to teach online even if they did not feel properly prepared to do so, or formerly had little interest in online teaching (Hechinger and Lorin 2020; McMurtrie 2020). If we are to best support teacher educators in these unprecedented efforts, then attention must be given to developing more robust means of assessing teacher educator readiness to transition their courses online in the context of crisis moments such as the COVID-19 pandemic.

In this study, we draw on the constructs of faculty readiness to teach online identified in the research literature and examine how to measure them. Additionally, we explore how these constructs of faculty online readiness from pre-COVID-19 pandemic time remain pertinent and perhaps fall short when the transition to online teaching is rapid and in response to a crisis. The research questions guiding us in the study are:

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- (1) Can constructs of faculty online readiness based in the research literature be measured on a scale, and can that scale be validated?
- (2) During the COVID-19 pandemic, how do teacher educators make sense of the constructs of faculty readiness based in the research literature?

Implications of findings have the potential to guide faculty development efforts, highlight potential equity issues experienced by faculty, and inform policy decisions impacting faculty's tenure, promotion, and retention during these uncertain times.

We first present the conceptual framework that we use to inform the development of items on the Faculty Readiness for Online Crisis Teaching (FROCT) scale. Next, we describe the context for this current study, data collection procedures, and analytic steps. Then, findings are presented and discussed, and conclusions are drawn.

Reconceptualising faculty online readiness

The assessment of faculty online readiness can be operationalised as a pre-assessment of faculty's preparedness to develop and implement online teaching. Scholars have illuminated various dimensions of readiness (Al-araibi et al. 2019; Carbonell, Dailey-Hebert, and Gijssels 2013; Ertmer 1999; Hew and Brush 2007; Mishra, Koehler, and Zhao 2007; Nicolle and Lou 2008; Rogers 1995). Interestingly, determining faculty's readiness *before* they develop and implement online courses has not been the pattern in higher education. Rather, faculty are asked to develop online versions of their courses with scant formal assessment of their readiness. Certainly, this pattern of lack of formal assessment of faculty readiness has been exacerbated with the abrupt move to online instruction caused by the COVID-19 pandemic.

During the early months of the year 2020, faculty around the world had to transition their courses online under circumstances that typical online course development does not have to face. Those circumstances were (1) a need to rapidly, with little to no preparation, transition instruction online; (2) execute the transition online and subsequent online instruction under traumatic conditions of a pandemic; and (3) pursue extended online teaching with little to no information regarding if this transition to online teaching will be temporary or more permanent. We assert that these three factors constitute crisis online course transitioning and teaching as opposed to conventional online course transitioning and teaching.

We argue that the pivot to online teaching due to the COVID-19 pandemic challenges the focus of previous research and exceeds standard conceptualisations and measures of faculty readiness to teach online. Compounding this fact is the reality that conventional conceptualisations of online readiness do not attend to the affective dimensions of transitioning to online teaching or the cultural issues of doing so within institutions that tend to reward scholarly publications rather than teaching innovations (Cutri and Mena 2020).

Methodology

Study design

In this mixed-methods study, we attempt to first measure the constructs of faculty readiness to teach online identified in the research literature. Second, we endeavour to

understand what it means for teacher educators to be ready for online teaching during a crisis context necessitating a rapid transition to online teaching. In this section, we first detail the steps taken to develop and validate the scale to measure constructs from the research literature on faculty online readiness. Next, the steps taken to pursue the second research question are described

Context of research

The context of this study was a university in the western region of the United States, the Brigham Young University. The teacher education department at the university has approximately 40 teacher educators. During the winter semester of 2020, the entire university was forced to begin online teaching due to the COVID-19 pandemic. Only a handful of these teacher educators had ever done blended learning before and only one had taught their course entirely online. The university provides resources for blended and online teaching such as access to course learning management systems, online learning resources, and optional professional development opportunities to learn to teach online.

Participants

Thirty university professors participated in the study. Our sample distribution included 16 female (53.3%) and 14 male professors (46.7%), 25 caucasian, four Hispanic-Latino and one Native American. Regarding the age of the respondents, seven (23.3%) were between 35 and 40 years old, 11 (36.6%) ranged from 41 to 55, and 12 (40%) were senior teachers in their 50s to their 60s (or older). The reported years worked as a teacher educator were the following: 1–9 years as teacher educators accounted for 9 (30% of the sample); 10–20 years: 13 (43.3%); 21 to 40 years: 7 (23.3%).

The subject areas taught were: bilingual education, children literature, early childhood, classroom management, curriculum, disabilities and attention to diversity, moral education, educational relationships, equitable teaching and learning, mathematics, motivation, multi-cultural education, physical education, and teacher education (teachers' beliefs, knowledge, preparation and professional development). Finally, the level of experience with online teaching reported by these faculty was also considered. Twenty-two considered themselves beginners (73.3%) as they had taught less than 4-h online prior to the COVID-19 pandemic, and eight (26.6%) reported to have an intermediate or expert level accounting between 5 and 25 h teaching online pre-pandemic.

A subset of six teacher educators, from the 30 that took the FROCT survey, were selected from the teacher educators who indicated a willingness to participate in a focus group. The six teacher educators were chosen using purposeful sampling with attention to the criteria of their availability and willingness to participate and their ability to communicate experiences and opinions in an articulate, respectful, and reflective manner (Palinkas et al. 2015). Additionally, we sought a representation of genders, ethnicities, and professional rank that was reflective of the group of 30 who took the FROCT (Please see [Appendix B](#) for a list of focus group participants' rank, subject area taught, gender, and race).

Table 1. Participating experts in the FROCT scale validation process.

Expert	Gender	Age	Area of research	Subjects they teach	Country
Expert#1	Female	49	Education, Maths, online learning	Calculus, Matrix modelling, Design of educational programmes	Mexico
Expert#2	Female	39	Online learning	Literacy and online learning	USA
Expert#3	Male	49	Online and blended teaching	Online and blended teaching, instructional design.	USA
Expert#4	Female	66	Teacher Education and online learning	Philosophy of Education and distance education methods	Russia

Instrumentation

Cutri and Mena (2020) establish a critical conception of faculty online readiness and assert that any scale attempting to measure faculty online readiness must be capable of attending to both the affective and cultural factors identified in the literature. In this current study, drawing on Cutri and Mena (2020) work, we designed, validated, and implemented the Faculty Readiness for Online Crisis Teaching (FROCT) scale, available online at <https://docs.google.com/forms/d/1hWwdf8EnIM33lvg2hNT2hccm73v23Qq5efiaHiXFolo/edit>. We designed the FROCT to attend to affective and cultural factors and the difference between traditional online course development and transitioning courses online in crisis contexts such as the COVID-19 pandemic. Findings from the validation and implementation of the FROCT are presented in the findings section of this article.

Data collection and analysis

The Delphi technique (Bravo and Arrieta 2005; Keeney, Hasson, and McKenna 2006) was used to guide the creation and empirical validation of the scale. The Delphi technique includes an iterative consultation process divided into three stages: (1) preliminary considerations; (2) the developmental stage; and (3) testing. The preliminary considerations stage consisted of identifying in the literature the constructs of interest. Guided by the themes identified by Cutri and Mena (2020), we revisited the literature that they reviewed and identified 11 constructs of faculty readiness (Please refer to Appendix A). We then developed items to measure various aspects of these constructs identified in the literature. For the development stage, we followed the following steps: (1) contacting experts on the topic and establishing a review panel of four experts; and (2) determining questions and items format for the FROCT scale.

The testing stage consisted of statistically checking the initial scale's psychometric properties through feedback from the expert panel. We first analysed the interrater degree of agreement by calculating Kendall's W statistics (validity). Kendall's W is basically a normalisation of the Friedman's test (Siegel 1956, 234). Four experts in educational technology from three countries independently rated the 32 items from 1 = totally disagree to 5 = totally agree by each (see Table 1)

The experts were chosen by their level of expertise in the field (all senior professors with more than 15 years of research experience) and their publication records in the areas of online and blended teaching and all have experience working with pre- and in-service teachers.

Each item was scored in three predefined dimensions: (1) content adequacy: the extent to which the theme of the item reflects an important content of the domain of study; (2)

clear formulation: the use of a language that can be easily understood; (3) fitness for purpose. A second analysis statistically tested the reliability of the instrument by calculating Cronbach's Alpha (Cronbach 1951).

The third author then reviewed the results of the testing stage in conjunction with the original constructs and revised the items on the scale accordingly (Please see [Appendix A](#) for a list of themes, constructs, and corresponding scale items). Next, the authors reviewed the 11 identified constructs of faculty online readiness and the corresponding items on the scale and categorised them into four themes: (1) comfort with risk; (2) identity disruption; (3) teaching norms; and (4) equity and tenure norms. These four themes were categorised into two domains called affective factors domains and a domain called cultural factors.

A focus group with a subset of survey participants was then conducted to further explore the face validity of the items and answer the second research question, how teacher educators make sense of the constructs identified in the literature. This mixed-methods approach (Creswell 2013) allows us to connect the overall quantitative patterns with personal experiences of faculty online readiness to more fully understand teacher educator readiness for transitioning to online teaching during a crisis situation such as the COVID-19 pandemic (Creswell 2013, Johnson and Onwuegbuzie 2004).

Prior to the focus group meeting, a worksheet was distributed to participants that highlighted select constructs of online faculty readiness from the literature and the items from the scale that corresponded to the constructs. The focus group was conducted online via Zoom in order to comply with social distancing regulations due to the COVID-19 pandemic. The first and third authors attended the focus group. The first author served as the facilitator. The third author took notes during the focus group by annotating each item with related comments, insights, questions, and recommendations that arose as the participants moved through the constructs from the literature and the corresponding items on the FROCT. Additionally, the third author identified patterns within participants' comments, insights, questions, and recommendations. This was the first analytic pass at the focus group data.

The first author also took notes during the focus group, and then went back and coded them according to the patterns that the third author identified as she annotated each item during the focus group discussion. The first author marked time stamps of quotes from the recorded focus group that illustrated the patterns identified by the third author and that were used to code the first author's notes. Select illustrative examples were then transcribed.

Ethical considerations

Respondents were informed about the purposes of the research; data usage and anonymity were guaranteed for all of them. The instrument elaboration followed the Codes of Ethics by the Brigham Young University (USA) and University of Salamanca (Spain).

Findings

This section is organised around our research questions. Quantitative analyses are used to validate the FROCT scale as a measure of the constructs of faculty online readiness from

the literature to be used in a survey in times of crisis. Then, illustrative qualitative examples from the focus group data are identified and shared to show teacher educators' insights and interpretations of the constructs of faculty online readiness during the COVID-19 pandemic.

Quantitative findings

Validation of the instrument

The psychometric properties tested for the FROCT scale were interpreted to show positive results backing it as a validated instrument to be applied in other educational contexts. Regarding the validity process, we obtained moderate agreements among the three experts in the three dimensions evaluated: content adequacy, clear formulation, and fitness for purpose (see Table 2).

Initial 20 respondents were identified to test the scale for reliability. A score of $\alpha = 0.71$ informs us that the items are internally consistent, and the correlations of the items are generally high. General agreement is reached in assuming that acceptable values of alpha would range from 0.70 to 0.95 (Nunally and Bernstein 1994; De Vellis 2003).

FROCT preliminary results

Once validated, the scale was embedded in a survey and distributed to 30 teacher educators. Regarding the four themes of the scale items, we found that mean scores were generally high in all except for in the theme of equity and tenure norms (please refer to Table 3).

On items categorised under the theme of 'comfort with risk' the respondents obtained a mean score of 3.9 indicating their comfort with tackling unknown modes of teaching, departing from known teaching practices, and fear of failure. Similar results occurred with the dimension of 'teaching norms.'

As explained above, respondents were asked to rate themselves in terms of their experience teaching online. The majority of them considered themselves beginners with less than 4-h online prior to the COVID-19 pandemic. Regarding the relationship between teachers' experience teaching online and their FROCT scale scores, we found statistically significant differences (Please see Table 4).

Table 2. Kendall's W non-parametric statistic.

Dimensions	Kendall's W	Chi-square	Df	Interpretation
Content adequacy	0.334	45.460	34	Moderate agreement
Clear formulation	0.411	55.830	34	Moderate agreement
Fitness for purpose	0.306	40.364	33	Moderate agreement

Table 3. Mean scores and sd in the responses to the FROCT scale (n = 30).

	Mean	Std. Deviation	Min.	Max.
1. Comfort with risk	3.9083	.42666	2.88	4.88
2. Identity disruption	3.3917	.82703	1.75	5.00
3. Teaching norms	3.8944	.65138	2.50	4.83
4. Equity and tenure norms	2.20	4.40	3.4800	.59097
Total	3.17	4.22	3.7217	.32327

Table 4. Relationship between online teaching experience and the scores in the four dimensions.

Themes	Level of exp.	N	Mean	SD	Std. Error	Mean Rank
Comfort with risk	Beginner	22	3.9205	.38681	.08247	15.30
	Intermediate	4	4.3125	.12500	.06250	25.38
	Expert	4	3.4375	.42696	.21348	6.75
	All	30	3.9083	.42666	.07790	-
Identity disruption	Beginner	22	3.4886	.93056	.19840	16.48
	Intermediate	4	3.1875	.12500	.06250	13.38
	Expert	4	3.0625	.51539	.25769	12.25
	All	30	3.3917	.82703	.15099	-
Teaching norms	Beginner	22	3.7727	.61624	.13138	13.82
	Intermediate	4	4.7500	.16667	.08333	28.13
	Expert	4	3.7083	.53359	.26680	12.13
	All	30	3.8944	.65138	.11893	-
Equity and Tenure norms	Beginner	22	3.4364	.59725	.12733	14.91
	Intermediate	4	4.1000	.20000	.10000	25.38
	Expert	4	3.1000	.34641	.17321	8.88
	All	30	3.4800	.59097	.10790	-
Total items	Beginner	22	3.7016	.26946	.05745	14.93
	Intermediate	4	4.1848	.06522	.03261	28.00
	Expert	4	3.3696	.20851	.10426	6.13
	All	30	3.7217	.32327	.05902	-

The Kruskal-Wallis test showed statistical differences in three dimensions out of four: comfort with risk ($H = 9.08$; $p = 0.01$; $df = 2$), Teaching norms ($H = 9.71$; $P = 0.00$; $df = 2$), and Equity and Tenure norms ($H = 9.71$; $p = 0.02$; $df = 2$).

In the dimension of comfort with risk, the expert teacher educators who reported experience with online teaching scored significantly lower than the intermediate or experts ($x = 3.43$ vs. $x = 4.3$ and $x = 3.9$). Please, refer to Table 4. On the items categorised under the theme of teaching norms, the teacher educators with intermediate level of online teaching experience scored higher ($x = 4.75$) than beginner ($x = 3.77$) or experts ($x = 3.70$). The same occurred on items categorised under the theme of equity and tenure where intermediate level teachers showed higher mean scores ($x = 4.10$ vs. $x = 3.43$ for beginners and $x = 3.10$ for experts). Overall, teacher educators who classified themselves as beginner and intermediate level regarding their experience teaching online obtained higher scores on the FROCT scale than teacher educators who were classified as experts based on their level of experience teaching online.

Qualitative findings

Making sense of affective factors of faculty online READINESS

The qualitative portion of this mixed-methods study was analysed to show the insights and interpretations from teacher educators as they made sense of the constructs of faculty online readiness from the research literature during the COVID-19 pandemic. The first theme of constructs in the research literature identified by Cutri and Mena (2020) was comfort with risk. Risk was operationalised as tackling an unknown mode of teaching, departing from known teaching practices, and fear of failure. The constructs and corresponding items in this theme were grouped under the domain of affective factors. Appendix A shows the constructs and the corresponding with the Theme Comfort with risk.

Trying new things. The construct ‘Willingness to try new things’ was associated with two items (#1 I am willing to implement novel teaching practices [e.g. online, blended, etc.] and #2 I am comfortable when I teach outside of my regular mode of delivery [e.g. in-person, online, blended]). These items sparked a discussion in the focus group that is best captured by one participant calling the experience of transitioning their class online a ‘creative challenge.’ David elaborated, ‘We like opportunities to try new things It necessarily is less easy to know how the technology would work in the moment, and it is harder to adjust in the moment. I am not as nimble which makes risks greater.’ The notion of liking opportunities to try new things can be seen to evidence a type of hope that their efforts to meet the challenges of rapidly transitioning to an online format during a time of crisis will result in good online teaching. Interestingly, similar sentiments of willingness to and anticipation to creatively engage in novel teaching practices (e.g. online, blended, etc.) were echoed by participants from the pre-tenure level to the level of full professor. In essence, the participants in the focus group demonstrated willingness to revise their teaching to adapt to an online or blended format and even hope that they could do a good job. These affective dimensions of willingness and hope combined resulted in what could be called a sentiment of optimism displayed by focus group participants. That being said, the participants fully acknowledged that meeting the challenges of the rapid transition to online teaching during a pandemic was not easy.

An exchange between two participants revealed an affective factor identified in the literature and represented by items on the scale.

Tabitha [Teaching online] positions us as more vulnerable, and so we can have empathy for our students.

David It is humbling (in a good way) to be at a loss for words and pedagogy during a class.

Tabitha Yes. I think it can make our students feel they are more partners in learning since they have greater expertise in some things than we do.

David Agreed. Technology is a great equaliser

Tabitha admits that learning to teach online makes her more vulnerable than she normally feels as an experienced teacher educator and full professor. She identifies this sense of vulnerability as the foundation of her ability to have empathy for students who, as learners, often feel more vulnerable than do their professors. Salmon (2011) describes how having empathy for students learning to learn online can benefit faculty who are learning to teach online.

Humility, or as David puts it, ‘humbling (in a good way)’, is an effective factor also identified in the literature as a key component of faculty online readiness. Sockman and Sharma (2008) suggest that faculty transitioning their courses online assumes a humble stance towards online teaching. Both of these participants speaking in this exchange have the rank of full professor signifying expertise in their fields and in their teaching. This example illustrates an affective factor that Johnson et al. (2014) raise regarding faculty members’ identity as seasoned experts potentially being compromised as they venture into the new practice of online teaching. Additionally, both participants seem to demonstrate an ability to resolve stress related to no longer being within their area of expertise which is an effective factor of faculty online readiness that Golden (2016) raises. However, it

could be that their positions as full professors enable them to take risks without worrying about how negative student comments might impact their tenure advancement.

Sharing power and experiences. A story shared by another participant illustrates a response to being outside of one's area of expertise. Cindy told a story of teaching synchronously online when she ran into a technical difficulty. She explained to the class that she didn't know how to fix it. Then, she said that one of her students spoke up and said, 'Try this Dr. W.' and proceeded to solve the technical problem. Cindy demonstrated humility and vulnerability by telling the class that she did not know how to resolve the technical problem. Her humility prompted her student to take up the role of being a partner with her in the class. This example illustrates the exact point that Tabitha mentions above that being out of one's area of expertise has the potential to position students as partners in learning because they are often more technology savvy than professors who have never taught online before.

Referring to the experience of rapidly transitioning to online teaching for faculty and online learning for students, Mandy said, 'We are all in the same boat.' Mandy's statement echoes the affective factor of empathy that Salmon (2011) identifies as necessary for faculty online readiness.

Mandy also shared an experience in which she longed for the balm of empathy:

When teaching online, there is no opportunity to decompress with a colleague next door. Instead, I feel isolated with my anxiety about events from the classroom. For example, when we had a good, but emotionally exhausting discussion about George Floyd's death and racial inequality. Teaching online, I had no physical opportunity to comfort one student who was emotional during our discussion. With online teaching, where is the professor space to talk about the hard and heavy stuff that happens in our classes? We can't just leave it at the office, because we are teaching from home.

This desire to commiserate and find empathy from colleagues about teaching experiences seems to be one of the ways that Mandy sought to resolve stress related to no longer being within one's area of expertise (Golden 2016). Additionally, Mandy was also feeling stressed about teaching particular content matter in an online format.

The issue of how to teach particular content matter online was also strongly echoed in comments by Beck and Cindy who respectively teach maths education and physical education. Cindy described spending a great deal of time speaking with one of her colleagues in physical education about how to teach badminton online. Cutri and Whiting (2018) highlight the importance of consistent opportunities for collaboration among colleagues who teach similar content areas during the process of transitioning courses online.

The second theme in the research literature identified by Cutri and Mena (2020) that relates to affective factors was identity disruption. Identity disruption was operationalised as instances when traditional faculty roles and sense of identity are disrupted as faculty transition to online or blended versions of their courses. Appendix A shows the constructs affiliated with this theme and the corresponding items from the FROCT scale.

Being myself online. The construct 'Sense of Self as a Teacher Educator' was associated two items (#9 Online teaching challenges my sense of who I am as a teacher educator and

#10 Online teaching will compromise the teaching persona and presence that I usually maintain during in-person instruction.). These items ignited a strong response from the participants. They pointed out that the items assumed that one's identity would either stay the same or be negatively impacted by teaching online. Two of the participants believed that they were perceived better online by students as opposed to their in-person responses from students. David stated, 'I haven't put my finger on it yet, but I feel that I am perceived a little better ... I do things differently and they respond And it has improved my sense of self as a teacher educator.' Johnson et al. (2014) describe faculty who have not yet established a comfortable way of working in the new online environment. However, David seems to have unintentionally stumbled upon a way of working online that suits him and his students.

Mandy explained that her resting face, or the expression that she unintentionally has on her face when not expressing any particular emotion, has, in the past, been interpreted by students as appearing uninterested. However, when teaching online, she reports worrying less about her resting face because the students 'don't look at my face as much. They don't rely on my facial cues as much.' Mandy did, though, note that she doesn't get to read her students' facial cues either which was a trade-off.

Cindy and Tabitha both said how grateful that they were that they got to have their students over multiple semesters. Both felt that because they had previously established relationships with their students in person during a previous semester, that they did not experience much disruption to their ability to be themselves while teaching online. Many teacher educators do not have the option of having the same students as a group for more than one class. But, for Cindy and Tabitha, it seems that this helps them mitigate any potential discontinuities between who they are as in-person instructors and who and how they will be as online instructors (Johnson et al. 2014).

Changing levels of experience. Items #11 and #12 elicited a discussion of temporality during the COVID-19 pandemic (#11 Online teaching makes me feel like a novice teacher educator again rather than an experienced professional and #12 I am interested in learning from experts in online teaching to transition my course and content to an online format [e.g. entirely online, blended, etc.]). Participants spoke adamantly about their belief that all conditions and plans change so rapidly during the pandemic. For these participants, the past, present, and future do not have the same sequenced longitudinal perspective that they perhaps did pre-pandemic. Participants described that their experiences and levels of comfort teaching online can literally feel like they change in short increments of time. For example, Luis said, 'All of our opinions are changing so quickly.' He described being very worried about his student evaluations of his teaching for the spring 2020 term in which he had little time to transition to online teaching. However, after he saw that his evaluations were not so bad, he gained confidence teaching online, 'I would have expected something bad in terms of student reviews, but now that I have done it ... it seems fine.'

Other participants agreed that transitioning in a context of a crisis (a pandemic) changed the meaning of feeling prepared. Some spoke of participating in a three week (1-h synchronous per week) professional development on online teaching that was offered by the college as an option for those interested. There was an experience of rapid succession due to the fact that some were taking the professional development

either simultaneously while teaching online spring term or would start teaching online summer term in a week or so after the professional development ended. Participants had to almost immediately implement what they were learning rather than iterate select elements of the professional development into their courses.

Given the crisis context (a pandemic) of these participants' transition to online teaching, their experiences and levels of expertise could not be thought of, let alone measured, longitudinally as they perhaps would have been pre-pandemic. Participants expressed that when things are changing so rapidly and the future of what higher education classes will look like is uncertain, it is hard to even have a point of reference for their sense of self as experienced professionals. The crisis of transitioning to online teaching because of the COVID-19 pandemic forced the concept of online readiness to collapse into 'forced readiness' as one participant described it.

Making sense of cultural factors of faculty online readiness

The remaining themes in the research literature identified by Cutri and Mena (2020) relate to cultural factors of faculty online readiness. Cultural factors are operationalised as cultural norms of academia such as the types of behaviours and practices normally rewarded in higher education. The third theme in the research literature identified by Cutri and Mena (2020) is teaching norms. [Appendix A](#) shows the constructs affiliated with this theme and the corresponding items from the FROCT survey.

Tempting to revert. Discussion of items #13 and #14 (#13 I am comfortable with students relying LESS on direct instruction from me to learn class learning objectives and #14 I am willing to lessen the amount of traditional teacher-directed instruction [e.g. lecturing with slides, textbook reading, etc.] that are common when teaching in-person) revealed a temptation for participants. They acknowledged that there was an impulse for them to enact a more direct instruction mode when having to rapidly transition their courses online due to the COVID-19 pandemic. Luis explained, 'I have already lessened the amount of direct teacher instruction in my courses, but I think that what you are asking here is if I am willing to lessen the amount of direct instruction compared to what I used to teach or in response to moving to the pandemic stage of teaching.' Mandy said, 'I've had a lot of students tell me about professors who before the pandemic were very hands-on and interactive. But afterwards, they created more work for students to do to make up for the time that they were not meeting in class.' The articulation of previously standing commitments to consciously avoid a heavily teacher-focused pedagogy was echoed strongly by other participants. Their prior acknowledgement that they were tempted to revert back to some predominately teacher-centred pedagogy highlights the strain that transitioning to online teaching in a crisis situation can put on teacher educators' teaching philosophies and practices.

In their discussion of items #15 and #16 (#15 Instead of relying on synchronous instruction, I imagine creating opportunities to increase student autonomy regarding when and how they learn [e.g. student self-pacing of learning and selection of learning material] and #16 I imagine creating opportunities to increase student autonomy regarding what they choose to learn from a selection of topics chosen by me [e.g. choice boards]), participants acknowledged that some people might not even know what the term 'synchronous instruction' as opposed to asynchronous instruction even means.

Participants also reported that for their online classes during the spring and summer terms (the terms directly following the forced transition to online teaching during winter term 2020 when universities were closed due to the COVID-19 pandemic), they were under external constraints regarding the mode of delivery they could use for their online teaching. Tabitha explained that amongst the other instructors for the class she teaches, they decided that ‘Everyone needed to be on the same page’ and so they all taught their sections of the class in the same way. Another participant, David, said that he was told by the chair of the department that he could only teach his class synchronously, and so he has never even considered developing asynchronous materials and activities. These instances of external contexts and limitations being imposed on these teacher educators could be a response to several different factors including a pre-emptive move to avoid ineffective online teaching (e.g. recorded lectures) or ignorance regarding the possible benefits of increasing student autonomy through asynchronous instruction modules (e.g. choice boards).

Assessing online is hard. Participants also discussed their desire to know more about how to do formative and summative assessment of student learning while teaching online. Cindy expressed her frustration with formal assessments entirely online using online proctoring services:

I get an email from a proctor with a video clip of a student who might be looking at some notes on the side. And you’ve got to determine by looking at the student’s face if they are cheating or not. It is the most bizarre thing—like a spy cam.

This participant went on to ask the other focus group participants for ideas regarding how they handle formal assessments, and many shared their strategies. The conversation concluded with an affirmation regarding how valuable it is to be able to discuss these types of issues with colleagues whose professional opinions and practices you value. However, all agreed that outside of this focus group, while all working remotely from campus, they had not had opportunities to just chat informally with colleagues to express frustrations and concerns and get ideas to address them.

Participants’ reflections on items #17 and #18 (#17 It is important to use instructional time to foster and nurture relationships with students in online classes and #18 I feel prepared to attend to students in an online setting who are having difficult times in their lives) revealed additional frustrations with notions of assessment. In this portion of the discussion, participants were referring to assessing students’ well-being and attending to their needs. Participants expressed commitment to the importance of doing so but admitted that they did not know how to do it in an online setting. Several issues were raised including the importance of non-verbal body language and the value of informal before and after class interactions with students. David gave these examples, ‘Maybe it is eye contact or a fist bump, but something where you are acknowledging someone in a more emotionally intimate way that acknowledges what is going on and creates that connection. I haven’t been able to figure that out yet.’ Mandy told of when she could tell that a student was on the brink of tears, but the only way that she could think to attend to the student would have been to call her out in front of everyone by inviting her into a breakout room or asking her to not leave the zoom classroom after class until she had spoken to her. The conclusion of the participants’ discussion of being able to do the

important work of attending to the emotionality of students, especially during times of crisis such as a pandemic and widespread racial tensions, was that they were struggling to create what Mandy called ‘an emotional geography online.’

Identifying equity issues is hard. The fourth theme in the research literature identified by Cutri and Mena (2020) is equity and tenure norms. [Appendix A](#) shows the constructs affiliated with this theme and the corresponding items from the FROCT scale.

Items #19 and #20 (#19 It is important to adjust my course assignments and requirements to accommodate students’ potential inequitable access to online learning necessities (e.g. internet access; device access; safe place to learn, etc.) and #20 I feel prepared to identify students’ potential inequitable access to online learning necessities (e.g. internet access; device access; safe place to learn, etc.) elicited strong concern from the participants regarding their students. Luis related an experience with a student who had to keep turning off their camera. The student later explained to him that they did not have enough data to have their camera on during the whole class. Luis expressed frustration about not knowing how to collect information from students about their equitable access to internet data, devices, etc. He raised the issue that, particularly in higher education, we do not have the type of socioeconomic status data on our students that perhaps k-12 teachers often have to determine students’ needs. Luis went on to explain that when the COVID-19 pandemic forced all university instruction to go online, he did not have the internet at home. Because he had the financial means to do so, he quickly got the internet connected at home so that he could teach online. However, neither the department nor university ever formally inquired regarding if faculty had access to the internet at home, necessary devices, or a productive place to teach from home. The assumption that university students and professors all have equitable access to the necessities of online teaching and learning can lead to unproductive circumstances.

David shared a recent teaching experience illustrating the complexities of attending to equity issues:

I made a joke about one student’s bandwidth in terms of internet access because she is always frozen on the screen when I put them in small groups and stuff. It takes her like an extra minute to rejoin the class after being broken into small discussion groups. I joked and told her that she was walking really slowly back to class and she was joking along with me about it. But then I thought, ‘Gosh, what am I doing?!’ Maybe it is an economic issue or a bandwidth issue and here I am making light of it and calling her out in front of the class. How could I have been so dense to not think that this was inappropriate? But, it did not occur to me. I just thought it was a glitch on my screen. She’s just always there, and I’m like ‘Are you going to go to the small group or not?’ And then, boom she finally catches up and enters the small group breakout. Dealing with that and other equity issues is tough in a space where we really can’t speak confidentially to students unless we single them out and ask to speak to them after class.

Despite the fact that David is an experienced teacher educator and college administrator, he has not been prepared regarding how to assess and address student equity issues regarding online learning. Other participants echoed this lack of preparation and similar experiences of coming to attend to equity issues only after unfortunate experiences.

Tabitha spoke of the difficulty of assessing the equity issues involved in teaching online. Though she was glad that through technology students were able to attend class, she expressed frustration:

When they come to physical class, they are there, and you can hook them in. But, when they are not, you are like ok, is it a bandwidth issue or medical or what? I know I had a few students with medical issues who often did not turn their video on during class. I'm like ok, I'm glad that they are here. I think that they are here, but I'm not sure if they are here, but what do you do about it?

Tabitha's quandaries allude to larger questions of how to identify which factors are within the students' control and therefore they should be held accountable for their engagement and performance in class and which type of factors are beyond their control. And for factors beyond students' control that negatively impact their participation and achievement in class, what should teacher educators do? How can teacher educators ensure that they are only holding students accountable for their actual learning and not for issues beyond their control, such as bandwidth, that interfere with their learning?

Transitioning to online teaching is just one of the challenges. Discussion around the three items related to tenure and promotion can perhaps be best summarised by the statement from Mandy who is a tenured professor:

I don't really know how it will affect me, but I know it is cutting into my writing time. I am spending a lot more time this summer in webinars and doing PD to learn the technology. It could impact my students learning, but really I don't know how it will go until it goes.

Beck, who was only in his second semester teaching at the university when the COVID-19 pandemic forced the transition to online teaching, echoed the same uncertainty that tenured Mandy did: 'Is it pushing me back? I don't know because I am new to this whole thing in the first place. It is just experiencing what is happening right now.' The similarities of responses from a tenured teacher educator ('I don't know how it will go until it goes') and an untenured teacher educator ('It is just experiencing what is happening right now') attest to the sweeping and unprecedented experience of transitioning to online teaching in the context of a crisis like the COVID-19 pandemic.

David was quick to assert that the actual task of transitioning courses online is just one piece of the larger context in which teacher educators are currently working. He raised issues such as not being on campus for the last 4 months, not interacting regularly with colleagues, and conferences not happening as factors beyond the actual tasks and complexities of transitioning to online teaching. This perspective highlights the importance of acknowledging and carefully considering the crisis context in which the current vast transition to online teaching has occurred and is continuing to occur in the broader cultural contexts of academia.

Conclusions

This mixed-methods study explored the constructs of faculty online readiness from the research literature in the context of a rapid transition to online teaching caused by a crisis (the COVID-19 pandemic). In the quantitative portion of this study, we developed and validated a scale (Faculty Readiness for Online Crisis Teaching [FROCT]) to measure pre-

pandemic constructs of faculty online readiness during an era of crisis. The qualitative data in this study were used to examine how a group of teacher educators made sense of these constructs during the pandemic. We assert that finding analysis of the quantitative data and qualitative data together expand pre-COVID-19 pandemic understandings of faculty online readiness.

The conditions of what one participant referred to as ‘forced readiness’ actually brought about optimistic sentiments from the participants regarding their rapid transition to online teaching. Participants’ willingness to revise their teaching for online delivery and their sense of hope that their efforts would result in good online teaching are examples of such optimistic sentiments. Another example that sparked enthusiasm in participants’ were their enriching experiences sharing power in their classrooms with students whose technological expertise surpassed their own and gaining a sense of empathy for their students as learners through the process. Such optimistic sentiments do not appear in the pre-pandemic literature identifying affective domains of faculty online readiness. We assert that the construct of optimism might be productively considered as part of the affective domains of faculty online readiness.

Regarding the cultural domains of faculty online readiness, the participants struggled with assessment issues in the theme of teaching norms. The area that teacher educators seem to be the weakest was equity and tenure issues. These areas are clear foci that professional development and policy should attend to.

Participants asserted that the conditions of transitioning to online classes during a crisis rendered a longitudinal perspective on readiness and expertise almost useless. This revised perspective on thorough preparation leading to readiness merits further research. However, we do assert that this new temporality during a crisis context should be considered in future conceptualisations of faculty online readiness. Additionally, this finding should be taken under advisement when teacher educators’ teaching is assessed.

The limitation of this study is the small sample size. However, despite the small number of participants we have identified helpful information. Through quantitative analyses, we have shown that constructs of faculty online readiness can be measured in a valid and reliable manner. The FROCT has the potential to be used to provide baseline data assessing faculty’s readiness to transition to online teaching. Then, professional development programs and other resources can be planned in accordance with the results. Through the qualitative findings, we expand prior conceptualisations of faculty online readiness. Findings from this mixed-methods study can be used to shed light on the pertinence of the pre-pandemic constructs of faculty online readiness and highlights important areas of future research, professional development, and policymaking considerations.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendices

Appendix A

List of Themes, Constructs, and Items

Theme	Constructs	Items
Comfort with risk	Willingness to try new things	#1 I am willing to implement novel teaching practices (e.g. online, blended, etc.). #2 I am comfortable when I teach outside of my regular mode of delivery (e.g. in-person, online, blended).
	Confidence to be flexible and creative	#3 I can imagine myself trying new teaching technologies in my class before I personally have fully mastered them. #4 I can imagine creating new methods of teaching that utilise the affordances of online teaching.
	Fears and Concerns	#5 I have strategies to help manage any fears and concerns I might have when I teach outside of my regular mode of delivery (e.g. in-person, online, blended). #6 I can acknowledge any fears and concerns in a safe professional environment when I teach outside of my regular mode of delivery (e.g. in-person, online, blended).
	Feeling in Limbo	#7 I have not yet established a comfortable way of teaching online (e.g. entirely online or blended). #8 I would rather return to my regular mode of teaching (e.g. in-person, online, blended)
Identity disruption	Sense of Self as a Teacher Educator	#9 Online teaching challenges my sense of who I am as a teacher educator. #10 Online teaching will compromise the teaching persona and presence that I usually maintain during in-person instruction.
	Sense of Self as an Experienced Professional	#11 Online teaching makes me feel like a novice teacher educator again rather than an experienced professional. #12 I am interested in learning from experts in online teaching to transition my course and content to an online format (e.g. entirely online, blended, etc.).
Teaching norms	Traditional Teaching Methods	#13 I am comfortable with students relying LESS on direct instruction from me to learn class learning objectives. #14 I am willing to lessen the amount of traditional teacher-directed instruction (e.g. lecturing with slides, textbook reading, etc.) that are common when teaching in-person.
	Student Autonomy	#15 Instead of relying on synchronous instruction, I imagine creating opportunities to increase student autonomy regarding when and how they learn (e.g. student self-pacing of learning and selection of learning material). #16 I imagine creating opportunities to increase student autonomy regarding what they choose to learn from a selection of topics chosen by me (e.g. choice boards).
	Emotional Work	#17 It is important to use instructional time to foster and nurture relationships with students in online classes. #18 I feel prepared to attend to students in an online setting who are having difficult times in their lives.
Equity and Tenure norms	Equity Issues	#19 It is important to adjust my course assignments and requirements to accommodate students' potential inequitable access to online learning necessities (e.g. internet access; device access; safe place to learn, etc.). #20 I feel prepared to identify students' potential inequitable access to online learning necessities (e.g. internet access; device access; safe place to learn, etc.).
	Tenure and Promotion Issues	#21 Transitioning my courses to another mode of delivery (e.g. online or blended) will negatively impact my university-based and academic community service duties. #22 Transitioning my courses to another mode of delivery (e.g. online or blended) will negatively impact my student professor ratings? #23 Transitioning my courses to another mode of delivery (e.g. online or blended) will negatively impact my scholarship productivity.

Appendix B

Participants in the Focus Group

Participant Pseudonym	Rank	Subject Area	Gender	Race
Beck	Assistant professor	Maths education	Male	White
Cindy	Associate professor	Physical Education	Female	White
Luis	Assistant professor	Bilingual Education	Male	Latino
Mandy	Associate professor	Adolescent Developmental	Female	White
David	Full professor	Moral Dimensions of Education	Male	White
Tabitha	Full professor	Classroom Management	Female	White