Knowledge management during emergency remote teaching: an interpretative phenomenological analysis of the transition experiences of faculty members

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Abstract

Purpose – *The study directs attention to the psychological conditions experienced and knowledge management practices leveraged by faculty in higher education institutes (HEIs) to cope with the shift to emergency remote teaching caused by the COVID-19 pandemic. By focusing attention on faculty experiences during this transition, this study aims to examine an under-investigated effect of the pandemic in the Indian context.*

Design/methodology/approach – *Interpretative phenomenological analysis is used to analyze the data gathered in two waves through 40 in-depth interviews with 20 faculty members based in India over a year. The data were analyzed deductively using Kahn's framework of engagement and robust coding protocols.*

Findings – *Eight subthemes across three psychological conditions (meaningfulness, availability and safety) were developed to discourse faculty experiences and challenges with emergency remote teaching related to their learning, identity, leveraged resources and support received from their employing educational institutes. The findings also present the coping strategies and knowledge management-related practices that the faculty used to adjust to each discussed challenge.*

Originality/value – *The study uses a longitudinal design and phenomenology as the analytical method, which offers a significant methodological contribution to the extant literature. Further, the study's use of Kahn's model to examine the faculty members' transitions to emergency remote teaching in India offers novel insights into the COVID-19 pandemic's effect on educational institutes in an under-investigated context.*

Keywords *Knowledge management, Emergency remote teaching, Psychological conditions, Academic adjustment, Higher education*

Paper type *Research paper*

1. Introduction

To combat the COVID-19 pandemic (hereafter, pandemic), nations around the world implemented physical distancing protocols, lockdowns and quarantines (Drosos *et al.*, 2021), resulting in the closure of educational institutes. By the third week of March 2020, schools and higher education institutes (HEIs) in approximately 137 countries were closed due to the pandemic (World Bank Education and COVID-19, 2020), which impacted the pedagogy of approximately 1.5 billion students (UNESCO, 2020; World Bank Education and COVID-19, 2020). Because HEIs are critical holders of knowledge at various levels (Elezi and Bamber, 2022), they were obligated to urgently shift from face-to-face (offline) instruction to online modes of teaching to attenuate this impact. In doing so, HEIs were driven to explore knowledge management (KM) initiatives (Ferreira *et al.*, 2018) by

leveraging innovative information technology (IT) solutions (Del Giudice and Della Peruta, 2016). This action was necessitated by HEIs' endeavors to facilitate digital knowledge sharing in the face of a significantly contemporary and difficult environment (Iqbal, 2021) promulgated by the pandemic.

As part of HEIs' attempts to leverage IT solutions, the incumbent teaching staff or faculty underwent a forced transition to emergency remote teaching (ERT) to ensure the continual learning and engagement of their students. While online teaching is a planned approach, ERT is a sudden and temporary shift of learning to an online environment at an unprecedented speed to deal with a crisis or disaster (Hodges *et al.*, 2020). It has been characterized as "an unplanned practice, with no option than to use any kind of offline and/or online resources that may be at hand" (Bond *et al.*, 2021, p. 18). These faculty were encumbered by a paucity of formal training for teaching in online environments (Gülbahar and Adnan, 2020), where circumstances are different from typical online course development, making the transition tough for them (McMurtrie, 2020). However, as Cutri *et al.* (2020) have discussed, the pandemic created circumstances requiring a rapid, and perhaps improvised, shift for executing knowledge-sharing and management strategies through online teaching for an unforeseen period.

Subsequently, faculty had to quickly adapt, learn and gain knowledge about teaching and learning through online channels (Gupta and Yadav, 2023). In doing so, they encountered numerous challenges, for example, in coordinating class communication, managing teams and monitoring student engagement (Connor *et al.*, 2021; Statista, 2021). These experiences obliged faculty to undertake several academic adjustments to cope with the encountered challenges, as demonstrating innovative performance requires individuals to acquire knowledge (Papa *et al.*, 2020). Such academic adaptations also affected their KM strategies (Raina and Khatri, 2015; Wolfram, 2019), which, coupled with an organization's KM capabilities, have also been linked to increased resilience and the capacity to handle emergencies (Li *et al.*, 2022). There have been several studies on the challenges faced during ERT in the context of the pandemic (e.g. see Anthony and Noel, 2021; Bond *et al.*, 2021; Ferri *et al.*, 2020; Iglesias-Pradas *et al.*, 2021; Klusmann *et al.*, 2022; Whalen, 2020). However, not much is known about HEI faculty learning during transitions (Van Mierlo and Beers, 2020), particularly from the perspective of their psychological functioning and KM practices. We highlight two key knowledge gaps in this regard that form the basis of this study.

First, we find a lacuna in the literature regarding the application of KM practices in HEIs during ERT. While the pandemic was just one disruptive event that has abated, scholars opine that online and remote teaching would be highly impactful in future systems of learning and development with a more blended learning approach (De Paola *et al.*, 2023). HEIs should be better prepared to deal with the challenges of online teaching even during the post-pandemic era (Abad-Segura *et al.*, 2020; Adedoyin and Soykan, 2020). However, facilitating the development of such an approach requires knowledge of inherent KM challenges, such as enabling knowledge transfer (a distinct subset of KM; Tangaraja *et al.*, 2016) and factors hindering the same. Hence, this study calls for the need to understand how the pandemic affected faculty's experience of KM-related challenges and adjustments during the transition to ERT.

Second, while IT solutions can significantly enhance the knowledge sharing and management strategies (Del Giudice and Della Peruta, 2016) that HEIs can adopt, what is less known is how psychological conditions come into play when faculty use IT-enabled solutions. Kahn (1990) has mentioned psychologically meaningful work, psychological safety and the availability of physical, emotional and psychological resources as key enablers of personal engagement at work. An individual having a better utilization of these resources will show higher engagement and better performance. Because faculty are critical stakeholders for HEIs, the success of teaching approaches, particularly ERT, mainly

relies on them. We contend that HEIs' bid to build resilience (Carayannis *et al.*, 2017) and the success of their deployed innovative IT solutions to support ERT in the face of a disruptive event (like the pandemic) are dependent on the faculty's psychological readiness to adapt to change (Luqman *et al.*, 2023). Herein the faculty's psychological condition would be a crucial aspect of their preparedness to demonstrate sufficient task performance and support organizational resilience. Moreover, prior scholarship has found that faculty's psychological functioning is significant because these stakeholders' emotional and motivational experiences impact their classroom performance and, therefore, student learning (Frenzel *et al.*, 2021; Gupta *et al.*, 2022; Raina and Khatri, 2015).

Hence, it is critical for scholars to address this knowledge gap and study the impact of this forced transition from offline teaching to ERT on faculty's psychological conditions, for example, their perceived psychological safety in knowledge-creation activities (Cauwelier *et al.*, 2019). Our proposition is also based on extant research that suggests psychological conditions and capital to be crucial for employees' demonstration of positive organizational behavior (Wu and Lee, 2017), which in our case pertains to HEIs. Thus, this study calls attention to the role of psychological conditions for HEI faculty and deliberates on issues related to the pandemic-induced shift to ERT.

To address these issues and the aforementioned knowledge gaps, this study raises two research questions (RQs):

RQ1. How has the transition to the online mode during ERT affected the psychological conditions of HEI faculty?

RQ2. How did faculty adjust and cope with the transition while leveraging appropriate knowledge management activities to facilitate ERT?

To answer these RQs, a longitudinal study was conducted using interpretative phenomenological analysis (IPA), wherein 40 in-depth interviews (20 respondents, interviewed twice) were taken in two waves over a year to capture the "lived experiences" of representative faculty from HEIs in India. Analyzing the data, this study captures HEI faculty's academic adjustments, perceived identity in ERT environs and KM experiences, establishing their linkages with psychological conditions as discussed by Kahn's (1990) framework.

The findings yield significant connotations for theory advancement in three ways. First, the insights developed into the psychological conditions of HEI faculty offer scholars ways to understand and build mechanisms to support faculty engagement in online teaching environments. Because hybrid learning is expected to continue as a viable pedagogical approach in the future (Pandit and Agrawal, 2021), such insights are expected to yield benefits for developing faculty skills to support hybrid teaching. Second, the findings add relevant perspectives to the areas of teaching pedagogy and KM among faculty, highlighting the varied coping strategies and academic adjustments that faculty leverage to support ERT transitions and facilitate students' continual learning through viable KM practices in a crisis-driven situation. It renders a lens that can be used in the future whenever any need arises to contemplate the adjustments that can be made to normal situations to align with faculty's engagement and needs.

Third, Bond *et al.* (2020) mentioned only that a small fraction of studies on online education are grounded in a theoretical framework in comparison to pre-pandemic studies. By adopting Kahn's (1990) framework as a theoretical basis, this study extends the theory's application and offers grounded insights into the chosen phenomenon – HEI faculty's transition experiences to ERT during the pandemic considering their psychological conditions. Coupled with the novel methodological design (i.e. a two-wave longitudinal design and the use of IPA), this study offers a solid theoretical advancement in this area. Through this approach, the study also answers the calls raised by scholars (e.g. Klusmann *et al.*, 2022) to capture the overall adaptation of faculty to the unprecedented situation

created by the pandemic and use a longitudinal study to examine faculty experiences during ERT (Emir *et al.*, 2023).

The remainder of the manuscript is structured to present information in the following sequence. Section 2 presents a brief literature review on ERT, KM and Kahn's framework of engagement, which is followed by a discourse on the adopted methodology in Section 3. Section 4 then presents a detailed discussion of the findings of the analysis. We conclude the study in Section 5 by presenting the theoretical and practical implications, limitations and directions for future research.

2. Literature review

2.1 Emergency remote teaching

While effective online education is an outcome of a systematically planned instructional design (Hodges *et al.*, 2020), the sudden shift to ERT in the wake of the pandemic created significant tension and professional vulnerability for faculty as it generated new conditions in institutions with well-established structural and cultural norms (Cutri *et al.*, 2020). Faculty were compelled to embrace digital teaching to maintain the continuity of education (Lederman, 2020), and this development came hand-in-hand with the additional requirement of committing additional time and effort to develop requisite skills (Nambiar, 2020).

It is perhaps unsurprising, then, that faculty faced numerous issues during the transition to ERT, including teacher-student disconnect, lack of interaction, inability to engage learners, technical issues and so on (Jensen *et al.*, 2020). For example, Bozkurt (2020) studied 31 countries and found psychological pressure and anxiety, alternative assessment and evaluation methods and surveillance and data privacy concerns as the main challenges that faculty faced during the pandemic-induced interruption of education. Similarly, García-Morales *et al.* (2021) reported that during the pandemic, some HEIs faced challenges in digitally transforming their educational approach due to limitations in the technological capabilities of their faculty. Such discussions highlighted the need for developing further insights into the factors that facilitate or hinder faculty's online teaching experiences (Cutri and Mena, 2020).

In the Indian context, only a few studies have focused on examining the faculty perspective of the transition to ERT. For instance, Selvaraj *et al.* (2021) discussed the merits and demerits of ERT from the dual perspective of teachers as well as learners. Similarly, Mishra *et al.* (2020) conducted an early study to capture the perception of students and teachers about online teaching and studied its implementation in a university environment. Further, while studying readiness for online teaching among faculty in Indian HEIs, Paliwal and Singh (2021) found inadequate competencies in course design, communication and time management. However, the authors also found that faculty had sufficient technical competencies to handle online teaching. Gupta and Yadav (2023) identified several factors, namely, technical support, faculty capacity building, course design and social support, that can improve the education and learning of management students in the post-pandemic era.

However, such discussions mainly highlight issues such as faculty competence and the opportunities to attain digital competence (König *et al.*, 2020). We contend that these studies are limited in their theoretical scope and merely present a bird-eye view of the ERT scenario in India without holistically considering the faculty's approach to coping with the identified challenges or KM practices that helped them through the transition. Further, the studies have not focused on the psychological conditions of faculty in response to the pandemic and shift to ERT. This knowledge gap is compounded by the little attention that the extant research has paid to understanding faculty well-being, learning behavior and perceptions regarding the disruptions caused by the pandemic, especially in contrast to students as a sample (Bond *et al.*, 2021). Hence, this study addresses this gap to examine

the pandemic-induced ERT shift from the faculty perspective while considering their psychological conditions as well as the coping strategies adopted to adjust to ERT.

2.2 Knowledge management practices

According to a 2018 report by Gartner, KM acts as a collaborative and integrative approach to the creation and use of the intellectual assets of an organization (Mizintseva and Gerbina, 2018). It can be understood as a function of learning orientation, knowledge sharing, organizational memory and knowledge reuse (Farooq, 2019). Scholars have posited KM to be a necessity in dynamic business environments that gives a competitive advantage to organizations (Kordab *et al.*, 2020; Mårtensson, 2000; Ogutu *et al.*, 2023; Tan and Wong, 2015) as KM practices enable value creation, which underlies the development of relationships with stakeholders (Farooq, 2019). Indeed, organizations can derive significant benefits from deploying effective KM practices, especially by leveraging IT advancements, for example, through the use of predictive data analytics (Barão *et al.*, 2017).

Multiple scholars have put forth characterizations for the processes and themes involved in KM. For instance, according to Maier and Moseley (2003), the KM process includes:

- knowledge identification and creation;
- knowledge collection and capture;
- knowledge storage and organization;
- knowledge sharing and dissemination; and
- knowledge application and use.

Similarly, Heisig (2009) has divided KM into the following activities:

- knowledge transfer;
- creation;
- application;
- storage;
- identification; and
- acquisition.

However, overarchingly, it can be stated that KM itself has four key objectives: the acquisition, storage, retrieval and utilization or application of knowledge (Mårtensson, 2000; Girard and Girard, 2015). Such KM activities have been posited to significantly improve the quality of higher education (Kim and Bang, 2021). For instance, Khoa and Huynh (2023) proposed that KM in HEIs helps by accomplishing the three objectives of enhancing task quality and efficiency, developing human resources at different levels and extending an organization's field knowledge base.

2.3 Kahn's framework of engagement

Kahn (1990) discusses three psychological conditions, namely, psychological meaningfulness, psychological availability and psychological safety, and relates the concept of these conditions with personal engagement and disengagement at the workplace. In this study, we have used Kahn's framework of personal role engagement rather than the more popular concept of work engagement, which is considered to be too acontextual and unrealistic to capture employees' lived experiences at work (Purcell, 2014). On the other hand, Kahn's (1990) conceptualization of personal role engagement as a profound and gratifying psychological state connected to the expression of the authentic self at work is more in line with ideas of situated human agency

(Saks and Gruman, 2014). The three psychological conditions mentioned by Kahn (1990) are comprehensive as well as parsimonious enough to give a better understanding of the antecedents of engagement (Crawford *et al.*, 2014). Figure 1 details how the framework is leveraged in this study.

Kahn's (1990) framework delved into how people's perceptions of self and the context in which they worked affect their levels of personal engagement and disengagement. Since its inception, this model has been widely used in the study of employee engagement (e.g. Fletcher *et al.*, 2018). For example, Wahyu (2015) discussed the mediating effect of psychological conditions on the associations between supervisor and coworker relations and employee engagement. Similarly, Danner-Vlaardingerbroek *et al.* (2013) highlighted the mediating role of psychological availability between the negative and positive work-related residuals or spillovers and marital behavior. Lemon and Palenchar (2018) also undertook a phenomenological study based on Kahn's personal engagement model to examine how public relations may benefit an organization's internal communication by better understanding how employees view and experience engagement.

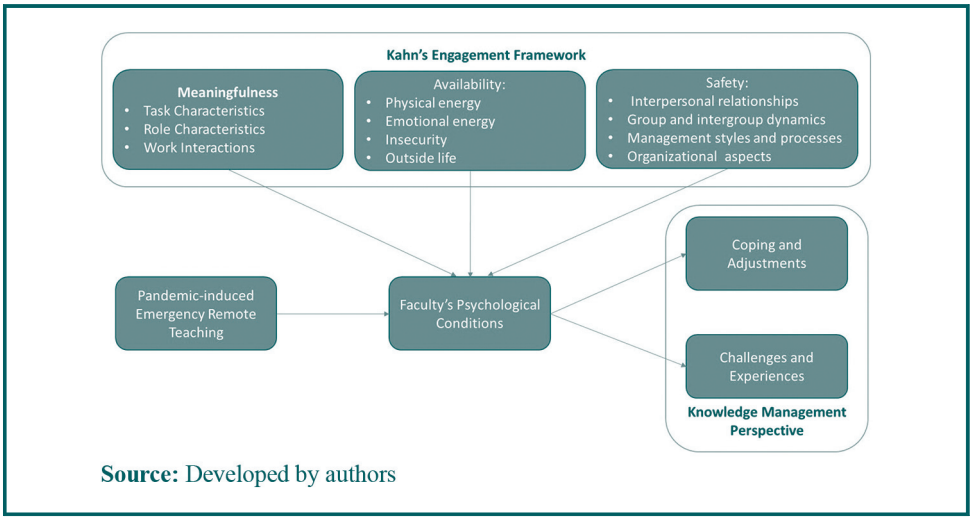
Kahn's framework has also been used by multiple scholars to examine faculty engagement in HEI contexts. For example, Pieters and Auanga (2019) used this framework to study the work engagement of schoolteachers in Namibia, while Chikoko *et al.* (2014) used psychological conditions to predict engagement among faculty at a South African university. Marques and Janik (2016) used it to examine the impact of psychological conditions on organizational citizenship behavior. These studies suggest that Kahn's framework would be appropriate for examining faculty experiences and their engagement with their tasks during ERT.

3. Methodology

3.1 Study design

This study used a constructivist research paradigm, which, according to Creswell and Poth (2018), helps in understanding data from the participant's perspective while considering the influence of interactions in their environment. It is a viable paradigm as this study was conducted longitudinally (i.e. in two waves over a year) and adopted an exploratory qualitative design to understand faculty experiences during ERT. Further, the IPA approach

Figure 1 Kahn's engagement framework and psychological conditions as leveraged in this study



Source: Developed by authors

was used, which differs from other qualitative methodologies like ethnography and grounded theory as it tries to study phenomena from the perspective of those who have experienced them (Christensen *et al.*, 2010). Essentially, IPA focuses on elucidating the reality of an individual's account of their *lived experiences* of a phenomenon (Moustakas, 1994), wherein the individual's perception and feelings become the object of the study. IPA is appropriate for this study, which intended to capture the lived experiences of the respondents by allowing them to freely express their perceptions and feelings (Patton, 2002).

To assess and evaluate the fitness of findings elucidated through IPA, Smith *et al.* (2009) suggested that their presentation should be comprehensive, transparent and related to current literature, which requires the use of suitable and rigorous guidelines. Thus, this study was guided by the consolidated criteria for reporting qualitative research (COREQ; Tong *et al.*, 2007), which establishes a set of standards for judging the thoroughness of reporting for studies using qualitative designs, such as focus groups and interviews (Booth *et al.*, 2014). Prior scholars have also used a similar approach for reporting their studies (e.g. see Romaniuk *et al.*, 2022; Singh and Srivastava, 2023). Booth *et al.* (2014) have suggested that COREQ favors a more realistic and pragmatic paradigm for reporting qualitative findings. The COREQ checklist consists of 32 criteria prescribed under three domains: research team and reflexivity, study design and analysis and findings. We have preferred it over the TREND (transparent reporting of evaluations with nonrandomized designs) standard as the COREQ checklist promotes the transparent reporting of interviews, thereby improving the reporting rigor, comprehensiveness and credibility.

3.2 Participant selection

Scholars (e.g. Smith *et al.*, 2009) recommend that IPA-based studies include a small number of purposively selected respondents. Thus, purposive sampling was initially used to reach out to respondents experienced with the phenomenon of interest (Creswell and Plano Clark, 2011), which is ERT in this study's context. The criteria for the selection of respondents were the availability and willingness of the faculty members to express their feelings openly and reflect on their experiences (Bernard, 2002). The authors focused on recruiting participants (i.e. faculty) from management or business schools (B-Schools) based in India.

India has one of the largest education sectors in the world with approximately 40 million students enrolled in higher education in 2020; it is estimated that the sector will surpass a valuation of US$225bn by 2025 (India Brand Equity Foundation, 2022). B-Schools were selected as their pedagogy follows a more hands-on approach, for example, through the use of case analyses, field studies, management games, simulations and so on, and it requires more involvement from students and faculty. The pedagogy in these B-Schools is primarily based on traditional methods of teaching focused on face-to-face delivery. Even though online and distance courses have existed for some time, the introduction of online classes in the higher education sector has only been considered in the past few years (Pandey, 2022), wherein challenges such as the digital divide and infrastructural capabilities have been posited to create significant barriers for providing online education to the masses (Mishra *et al.*, 2020). However, the faculty had no recourse but to undertake the shift to ERT during the pandemic and were essentially obligated to quickly adopt digital tools and technologies to facilitate ERT (Dhawan, 2020). Indeed, it can be said that the massive scale at which ERT was implemented could be equated to a large-scale social experiment (Muthuprasad *et al.*, 2021). Hence, India can be considered an interesting and relevant context in which to examine HEI faculty's transition experiences to ERT.

To identify relevant participants, the authors leveraged the National Institute Ranking Framework developed by the Ministry of Education in India to identify relevant B-Schools. The authors then accessed the public databases of the top 20 institutes to find faculty's

official emails. A brief about the study objectives and design was then shared with 100 faculty through these email IDs, requesting their consent for participation. Of these, 15 consented to participate. Further, the authors integrated a snowball sampling approach with these initially identified respondents, who recommended colleagues potentially willing to participate in this study. Five more participants were identified through the snowball approach, and the final sample size for this study comprised 20 respondents. The respondents (see Table 1) were mostly female (65%), with an average age of 42 years and an average teaching experience of about 15 years.

3.3 Data collection

Data were collected in two waves over a year and comprised a total of 40 interviews with the same 20 respondents. Given the restrictions posed by the pandemic, in-depth telephonic interviews with two of the study's authors were used to collect data. The interview duration ranged from 20 to 40 min, and each was audio-recorded with the respondents' consent. During the interviews, respondents were encouraged to freely narrate their lived experiences during ERT. Although IPA has an idiographic influence, it does not restrict generalizations, but it does require researchers to delve into deeper discussions with respondents (Smith *et al.*, 2009). Hence, intermittent exploratory questions asking for clarification or examples were made during the interviews. Moreover, the authors also maintained notes to record their observations during the interviews (e.g. see Finlay, 2014).

The first wave of 20 interviews was conducted over three months (October 2020–January 2021). Given that ERT had been instituted at a large scale in India by August 2020 (Muthuprasad *et al.*, 2021), this period was intuitively considered to have given faculty sufficient time to transition to ERT. In this wave, the authors focused on understanding the impact of ERT on the psychological conditions of the faculty members. The questions (see Appendix 1), focused on discussing the faculty's experience with ERT, for example, their perceptions regarding the

Table 1 Respondents' profiles

					Online/Remote teaching		
Respondent code	*Gender*	*Age (years)*	*Teaching experience (years)*	*Designation*	*Pretransition exposure*	*Time spent on online teaching (hours/day)*	*Pretransition comfort*
R1	Female	40–50	10	Assistant Professor	Yes	4–5	Somewhat comfortable
R2	Male	40–50	21	Professor	Not much	6–7	Quite comfortable
R3	Female	40–50	15	Professor	No	3–4	Not comfortable
R4	Female	50–60	13	Professor	Yes	3	Quite comfortable
R5	Female	40–50	18	Associate Professor	Yes	3–4	Quite comfortable
R6	Female	40–50	20	Assistant Dean	No	5–6	Comfortable
R7	Male	30–40	3	Assistant Professor	No	2–3	Not comfortable
R8	Female	40–50	15	Assistant Professor	Yes	3–4	Somewhat comfortable
R9	Female	40–50	23	Associate Professor	Yes	2	Somewhat comfortable
R10	Female	40–50	10	Assistant Professor	No	6–7	Not comfortable
R11	Male	40–50	8	Assistant Professor	No	Not sure	Not comfortable
R12	Female	40–50	11	Associate Professor	No	3–4	Not comfortable
R13	Male	40–50	17	Associate Professor	No	3–4	Somewhat comfortable
R14	Female	40–50	25	Associate Professor	Yes	6–7	Comfortable
R15	Male	50–60	27	Professor	Yes	2–3	Quite comfortable
R16	Female	40–50	24	Associate Professor	No	2–3	Somewhat comfortable
R17	Male	50–60	19	Associate Professor	No	2–3	Somewhat comfortable
R18	Female	40–50	16	Associate Professor	No	6–7	Quite comfortable
R19	Male	40–50	21	Associate Professor	No	2–3	Somewhat comfortable
R20	Male	40–50	21	Professor	No	2–3	Uncomfortable

Note: R = respondent
Source: Developed by authors

conduct of online classes, prior digital knowledge, the digital infrastructure they were used to, challenges faced and the organizational support received during this transition. Theoretical saturation (Miles and Huberman, 1994) was reached at the 18th respondent, but two more interviews were carried out to ensure that no new information was received.

The second wave was conducted with the same respondents seven months after the end of the first wave, that is, between August and November 2021. This wave focused on probing the respondents further about the challenges they faced with ERT, the coping mechanisms that they had developed and the academic adjustments they had made to facilitate ERT implementation and maintain student engagement. Subsequently, the questions (see Appendix 2) related to the respondent faculty's experiences regarding aspects such as effective assessment techniques, changes in their pedagogy, digital infrastructure and readiness, the handling of challenges encountered and managing work-life balance. The questions for both waves were developed considering Kahn's model. The interviews were transcribed verbatim immediately after the interaction in both waves to best capture the respondents' feelings and intended meanings.

3.4 Data analysis

In line with Smith *et al.* (2009), the data were analyzed thoroughly and by accounting for minute details. Since Kahn's (1990) model was taken as a theoretical background for the study, themes were decided *a priori* based on the three psychological conditions identified by the model, and the data analysis was conducted with a deductive approach.

The analysis comprised a three-phase coding process. In the first phase, open codes that focused on identifying core concepts were assigned to the transcribed interview data independently by two authors. In the second phase, the open codes were grouped under axial codes based on the relationships between different open codes. Finally, selective coding was done to refine and integrate these axial code categories with those of Kahn's psychological conditions, thus triangulating them with the literature. During the process, the authors referred to a third author to resolve any conflicts or uncertainty about the codes and their groupings. Further, the authors made all possible attempts to bracket their subjective biases to ensure that their own perspectives did not impact the analysis (Smith *et al.*, 2009).

The findings discussed in the following section reflect the aggregate themes developed in the last phase of the coding process. Table 2 details example codes from each phase and their integration into the final themes.

4. Discussion and findings

The study was conducted in two waves. The first wave had the objective of understanding the impact that the forced transition to the online mode during ERT had on the psychological conditions of the faculty members (Kahn, 1990). The second wave focused more attention on the challenges faced, coping strategies used and adjustments made by the faculty in this transition. The findings in the subsequent sections explicate the major takeaways from both waves through eight subthemes that emerged under the three psychological conditions (discussed in Section 2.3), and Table 3 presents a brief description of the study findings *vis-à-vis* Kahn's (1990) framework. Overall, this study contends that the factors discussed in the subsequent subthemes may be viable predictors of faculty engagement with work during ERT.

4.1 Psychological meaningfulness

The findings suggest that the psychological meaningfulness experienced by faculty was impacted negatively with respect to the learning curve, personal touch and most importantly, the faculty's role or identity.

Table 2 Sample codes and data structure for themes

Sample open code	*Examples of axial code*	*Selective code (subtheme as in the study)*	*Final theme*
■ Software usage cumbersome	Technology-related	Learning	*Psychological meaningfulness*
■ Technical glitches			
■ Resistance in keeping camera on			
■ Problem in assessment	Assurance of learning related		
■ Learning in the hand of students			
■ More focus on pedagogy to ensure engagement	Pedagogy related		
■ Recapitulation of previous class by students			
■ Degree of technicality in subject	Subject-related		
■ Level of students taught			
■ Missing personal gestures	In-class interactions	Personal touch	
■ Divided attention in break-out rooms			
■ Missing query handling after the class hours	Beyond-the-class		
■ Need to share contact details and timeslot for doubt clearance			
■ Looking into the work of students	Control over the class	Faculty identity and role	
■ Control over class taken away			
■ Attendance and punctuality issues			
■ Avoidance of giving classwork			
■ Eye problem and strain	Physical health issues	Resources leveraged	*Psychological availability*
■ Postural issues			
■ Waste of time and energy			
■ Stress and anxiety about their success in new approach	Emotional exhaustion		
■ Emotional burnout			
■ Helplessness due to redundancy of prevalent pedagogical tools in ERT			
■ Uncertainty about transfer of learning			
■ Mitigation by prior exposure to online teaching			
■ Mental exhaustion due to learning new platforms for ERT	Cognitive health		
■ More time in planning to develop engaging pedagogical approach			
■ Increased workload taking time away from research			
■ Blurring of professional and personal space	Neglect of family obligations	Maintaining work-life balance	
■ More demands from the employer for extended working hours	Work spillovers		
■ No weekends			
■ Discussion with peers	Faculty-faculty interaction	Intragroup and intergroup relationships	*Psychological safety*
■ Restrictions on social-connectedness due to virtual environment	Faculty-students' interaction		
■ Impact on peer learning	Student-student interaction		
■ Teamwork affected			
■ Creation of virtual boundaries			
■ Provision of technological and financial aid for infrastructure	IT support and infrastructure	Organizational support	
■ Sessions on online teaching	Training		
■ Workshops from experts			
■ Camera off	Maintaining discipline	Organizational norms	
■ Attendance			
■ Proactive culture and standardized norms	Culture		
■ Minor adjustments for genuine absence from class			

Source: Developed by authors

4.1.1 Learning. Our findings equate learning to the *task characteristics* aspect of psychological meaningfulness – a pivotal deliverable for faculty. The respondents showed mixed feelings toward the impact of the pandemic and its inducement of ERT on their learning and related deliverables.

Table 3 Brief description of findings

Kahn's conditions	*Associated aspects*	*Emergent subthemes in the study*	*KM practices during academic adjustments in ERT*
Psychological meaningfulness	Task characteristics	Learning	■ Quick adaptation to new pedagogy, tools, platforms ■ Rapid training and learning
	Role characteristics	Teacher's identity or role	■ Adapting to changes by learning new technology platforms, tools and pedagogy ■ Opportunity to leverage their domain knowledge and teaching experience
	Work interactions	Personal touch	■ KM practices that provide collaboration and communication using emails, phone calls, WhatsApp and special online sessions for doubt clearing even in remote settings and then opening the session with that doubt
Psychological availability	Physical energy/ emotional energy	Resources leveraged	■ KM using prior exposure to online teaching ■ Using available resources to manage physical health and well-being ■ Sharing resources
	Outside life	Maintaining work-life balance	■ Learning to use preexisting material from the internet to reduce preparation time
Psychological safety	Interpersonal relationships Group and intergroup dynamics	Intragroup and intergroup relations	■ Regular knowledge sharing, peer collaboration and learning
	Management styles and processes	Organizational support	■ Support by offering avenues for sharing knowledge, resources and best practices in the form of infrastructural and IT requirements and skill-based demands
	Organizational aspects	Organizational norms	■ Clear communication ■ Proactive culture and standardized norms

Source: Developed by authors

4.1.1.1 Experiences and challenges. For some respondents, the sudden need to prepare online teaching materials and equip themselves with the tools of online teaching resulted in heightened investments in terms of class preparation. Additionally, learning to use various online teaching platforms, quiz tools and digital devices was new to many faculty, who indicated that "using the software [was] cumbersome" [R19]. An allied issue that hampered faculty's task deliverables related to technical glitches with the online platforms, like connectivity issues and students' hesitance in keeping their cameras on during classes. For instance, [R12] discussed how "assessment [was] definitely a problem" due to technical issues. However, a few respondents, including [R1], also opined that "I just do my job and learning is in the hands of students. The learning curve has been impacted negatively," thus acknowledging that their efforts may not have had the potential to negate such impact. The findings reflect prior research that suggests that the transition from offline to online teaching may result in a power shift leading to more autonomy for students (Redmond, 2015), thus hampering faculty's task deliverables to a certain degree.

However, some faculty also noted positive learning experiences due to the shift to ERT, mentioning benefits such as reduced distractions *vis-à-vis* offline classes, the effective delivery of modules and higher student engagement levels. Such benefits encouraged some respondents to add variety and make a greater effort to add value to their content and improve their pedagogy. In the words of [R8], "I think earlier the focus was on content but in online mode, the more concern or focus was on the pedagogy specially designed to ensure engagement." One point of difference between negative and positive experiences was deduced to be the degree of technicality in a course's subject, for example, statistical or financial subjects. For instance, [R2] surmised that for technical subjects, "now the role is

more of a facilitator in guiding students. For technical subjects, it [ERT] is quite effective." Many faculty found theoretical subjects easier to teach on the online platform as compared to numerical or mathematics-based subjects.

Thus, the findings indicate that faculty learning and task deliverables could be contingent on specific task-related factors such as subject requirements and the level of students taught. It suggests that further research on explicating such task-related factors is required as such knowledge could be used to develop measures for enhancing online or hybrid teaching in the future. Such opinions show that the forced transition to ERT may have had unexpected benefits for some faculty in terms of their task deliverables – an area that may be further evaluated through targeted research.

4.1.1.2 Coping strategies and adjustments. To ensure students' continued learning, the respondents mentioned making several adjustments to their teaching style, including ensuring students' Web cameras were switched on during class timings, asking students questions in a random manner to ensure their presence and attention to the lecture and sharing class materials in advance. Some faculty also conducted their classes purely in discussion mode and held quizzes in the middle of lectures, which assured them that students were attentive in class and following the delivered content appropriately. For instance, [R3] stated, "I started the class with the recapitulation of the previous class, where 50% of the recapitulation was done by students." Similarly, [R11] shared, "I used to involve students in class by assigning responsibilities, performing activities such as panel discussions, role plays, etc., which helped to comprehend the understanding to the students on the topic."

The utilization of these adjustment tactics suggests that faculty paid significant attention to KM strategies for generating knowledge through rapid adaptation to new pedagogy, tools and platforms supporting ERT. This adaptation included the faculty's own learning, which involved knowledge transfer and the acquisition of tools facilitating ERT. The findings above are supported by limited prior literature that discusses faculty's use of a mix of audio, visual and textual means to address students' queries and engagement levels (Peimani and Kamalipour, 2021). For instance, Kang and Zhang (2020) suggested forum-based online teaching as an effective pedagogical measure that aligns with the respondents' use of discussion-oriented classes to facilitate student learning and engagement.

4.1.2 Personal touch. This subtheme relates to the aspect of *work interactions* in the original model and was categorized under two dimensions of experiences:

1. in-class and beyond-the-class differences; and
2. faculty-student interactions.

Respondents indicated both dimensions to be adversely affected by the pandemic-induced ERT, which aligns with Nambiar's (2020) findings regarding faculty's reported experiences regarding a lack of personal touch in online classes.

4.1.2.1 Experiences and challenges. In terms of the first dimension – in-class and beyond-the-class differences – respondents, including [R10], indicated that ERT diminished personnel connections in the classroom: "personal gestures are missing [. . .] for me moving in the class and walking around while taking the class and looking into the eyes brings a personal connect [. . .] this virtual environment creates a barrier." To further illustrate, in the adjustments they made, such as using breakout rooms to facilitate discussion, faculty reported experiencing the problem of having to divide their attention among groups, which also limited the personal touch that ERT classes facilitated in terms of the entire class's integration in a discussion. In the words of [R1]:

> Breakout rooms force students to discuss and participate [. . .] and are an advantage. But the problem here is you can enter one group at a time, and you cannot monitor all [students] at once. In some cases, like in the presentation and management games, interactions are suffering due to the online [ERT] mode.

In terms of the second dimension, faculty raised concerns about the limited nature of faculty-student interactions available in the ERT mode wherein they missed engaging in guidance and development-related talks with the students. For example, [R3] discussed "Students coming after you as you move out of the class to clear doubts and all those interpersonal touches are missing, and I did miss [it] a lot initially." Similarly, [R9] opined that the "personal touch is missing, and we were required to spend more time with students to keep that personal touch and connect alive." In their opinion, such a lack of interactivity affected students' class participation and created an extra onus on the faculty to maintain student engagement through digital means, such as emails.

4.1.2.2 Coping strategies and adjustments. The lack of personal touch in the online mode was difficult to replace, but faculty tried to compensate for it by conducting extra online sessions, for example, doubt-clearing sessions. As another solution, [R5] said, "I shared my (contact) number with students along with a time slot, for instance, 3 pm to 5 pm, where they could call me in case of any doubt." Similarly, [R10] asked "students to share their problems and doubts through e-mail and WhatsApp. I then used to open the session by discussing those doubts." Thus, to compensate for a missing personal touch, faculty created alternative channels for communication and community support to facilitate knowledge sharing. They made academic adjustments by focusing on embedding knowledge in processes, products and/or services available to them for connecting with students. For example, as an innovative way of engaging in KM activities, [R11] shared that she "gave assignments in which the students had to record a role play or some related activity and then play it in the class. This made the class more innovative, interesting, and engaging. It also resulted in low absenteeism in class." Such means highlight the importance of KM practices that provide collaboration and communication, even in remote and ERT settings.

4.1.3 Faculty identity or role. This subtheme aligns with Kahn's (1990) discussion of role *characteristics* and discusses faculty's perception regarding ERT's impact on their roles. The findings suggest that faculty experienced a definitive role change that influenced their identity in the classrooms, which correlates with prior contentions regarding a change of faculty identity as seasoned experts during ventures into online teaching (Johnson *et al.*, 2014).

4.1.3.1 Experiences and challenges. The findings suggest that respondents predominantly agreed that their role and identity in the classroom had undergone a significant change in the shift from offline to the ERT mode – going from facilitating discussion and study modules to policing online classrooms for discipline and engagement. For example, [R15] explained that it was easier to conduct physical classes as one can "look into the work of students that cannot be done [in] online [mode]." Similarly, [R10] remarked, "I am a teacher who prefers to have control over my class and that was entirely taken away. I never get to know whether whatever I am speaking is going in a black hole or what?"

The difference was mainly attributed to the focal change in the approach to teaching resulting from the incorporation of multiple tools and techniques to facilitate ERT. It also created an unanticipated role enlargement for faculty, who now carried the burden of monitoring the class for disciplinary as well as engagement-related issues. Monitoring classwork in the online mode was also reported as a challenge, and because of this, a few respondents avoided giving classroom work. For instance, [R5] shared, "I avoided giving such works and rather gave them as homework. They had to be prepared or read the case for their next class, where I used to ask questions randomly." Some respondents also indicated that IT integration to support ERT had resulted in a diminished level of control over the classroom, which affected the faculty's role and identity in class. In the words of [R1]:

> The control has decreased because students make excuses with respect to IT infrastructure or network issues. For example, sometimes we don't realize that some students have left the class. Cameras are not switched on and judging their body language is a problem. There have been punctuality issues, and there was an incident where I called out the name of a student thrice and

then I removed him from the class, but then other students supported him on the basis of network issues, and I had to again allow him in the class.

4.1.3.2 Coping strategies and adjustments. While the respondents deliberated on their perceivably altered roles in the ERT-driven classroom, the adjustments they made to account for the changes mostly pertained to their maintaining control over the learning flow, student participation and concentration. For instance, [R2] and [R9] asked "random questions to students who had their cameras off" and for students to "share their worksheets there and then," respectively, to maintain class control. Some faculty mentioned that while they created breakout rooms to encourage students' discussion, they entered these rooms randomly to monitor student activities and task focus. Such adjustment tactics, in the faculty's opinion, enhanced students' concentration on task progression and completion and improved class attentiveness.

Further, respondents also shared that they made changes to assessment tools to ensure their relevance in the classroom, such as giving application-based rather than concept-based questions to students. This change allowed faculty to leverage their domain knowledge and teaching experience while interacting with students (e.g. see Mishra *et al.*, 2020), thereby maintaining their perceived relevance. For instance, [R10] discussed that such an adjustment worked well "because of my 25+ years of experience. With a glance at the answers, I can easily tell if it is copied from somewhere or students have written it by themselves."

4.2 Psychological availability

This theme refers to faculty's readiness to operate in the "new normal" teaching environment of ERT that was created in the wake of the pandemic. Two subthemes emerged from the analysis that focused attention on the (a) resources that faculty leveraged to support their task execution, and (b) maintaining the work-life balance.

4.2.1 Resources leveraged. Aligning with Kahn's (1990) discussion on *physical, cognitive and emotional resources* that affect individuals' psychological availability to complete tasks while staying engaged, the respondents highlighted the particular significance of physical and cognitive resources, which were depleted the most during the transition to ERT.

4.2.1.1 Experiences and challenges. A few respondents discussed how during the transition to ERT and the demands thereof, they experienced health issues such as eye problems and strain, and ergonomic issues due to prolonged sitting and the extended screen time that ERT inherently required. Further, respondents also opined that their perceived greater depletion of physical resources contributed to their experiencing higher emotional exhaustion from stress and anxiety about delivering the required content while dealing with technical, disciplinary and monitoring-related issues. Such stress also often led faculty to experience an emotional burnout. For example, [R1] discussed experiencing "a little bit of anxiety due to the sudden shift and the challenge of learning new technology," while [R7] shared that "I have to spend some time as monitor or police [person] to keep hold of students in keeping their camera on, sit properly, etc. It wastes a lot of time and energy."

Additionally, faculty's cognitive skills were challenged during the transition of learning modes, and becoming familiarized with the latest platforms and tools to get ERT teaching going smoothly was a challenge reported by several respondents. The use of prevalent pedagogical tools like teaching cases and management games that were appropriate in offline teaching could only be used in a limited manner in ERT. Subsequently, the ERT transition required faculty to spend more time in planning and structuring their lectures and module content to develop a more participative pedagogical approach and align with the technological platforms being used for ERT – thus requiring more cognitive resources. For instance, [R4] shared that "All the teaching materials that we had prepared for group

activities and management games went obsolete. We had to start from scratch in developing tools that could fit in the online mode." Faculty also had to devise new ways to engage students, for example, by using break-out rooms and finding video cases that could be used in the ERT teaching mode, which caused faculty significant stress in ensuring that the developed content was suitable for the new teaching environment.

Moreover, while delivering the updated content, some faculty experienced stress and uncertainty about the success of this updated approach. For instance, [R2] opined that "Some stress is partly because of long screen time and secondly due to the confusion whether the learning has transferred or not." Similarly, [R7] expressed, "I was not at all prepared for the shift; rather, I was worried about the delivery of [a] technical subject." Such cognitive load issues also negatively impacted their research deliverables. For example, [R10] deliberated on the increased workload that class preparation had caused and its impact on other tasks by stating, "So much of time was going into preparing and teaching per se [. . .] it impacted our personal research." This finding also echoes prior research (e.g. see Bussmann *et al.*, 2017), which highlighted that transitioning to online courses took away time from faculty's research and scholarly activities, a key deliverable with a significant impact on their academic careers.

Further, the analysis suggests that faculty's prior exposure to online teaching methods mitigated their insecurity to some extent, even though technical factors continued to play a role in their comfort with the ERT transition. For example, while [R1] opined that "It is never a problem to learn new technology but there was medium comfort" due to prior exposure, [R3] mentioned that "Despite having so much teaching experience, I used to go blank due to technology-related factors." However, some respondents also revealed that they found ERT more congenital to expressing their thoughts as this mode forced them to focus on the content and delivery. Thus, overall, it may be surmised that while most faculty experienced a significant drain on their resources (physical, cognitive and emotional), which led to their experiencing vulnerability and insecurity, some faculty found confidence in delivering content in the ERT mode.

4.2.1.2 Coping strategies and adjustments. In response to the drain on resources, most respondents made adjustments and adopted coping strategies to support their physical health, for instance, by making "proper seating arrangements" [R1; R15]. A few respondents also discussed taking on specific forms of exercise such as "stretching" [R4; R11], "yoga" [R5; R14] and "meditation" [R6], while some [e.g. R2; R9; R16] shared that they were unable to cope with their health-related issues. Further, respondents emphasized that the measures they took to develop skills for new pedagogical and assessment tools were time-intensive adjustments. It was an unsurprising finding as prior research has indicated that developing skills for online teaching, and online assessments in particular, can often lead to uncertainty and a lack of confidence for faculty (Bojovic *et al.*, 2020). For this adjustment, respondents leveraged three avenues:

1. engaging in self-learning by looking at online resources available on platforms like YouTube;
2. leveraging peer learning for knowledge sharing; and
3. taking advantage of training provided by organizations (discussed in Section 4.3.2).

For instance, respondents [R8] and [R13] mentioned using "YouTube videos and materials on the Internet" to supplement their course delivery, which eased their anxiety about content delivery. Some respondents also shared that they leveraged the knowledge of colleagues who had previously taught online courses to decide their own course details and delivery.

4.2.2 Maintaining work-life balance. While discussing the availability of resources and their effect on transitioning to ERT, the respondents highlighted their impact on maintaining a

good work-life balance and discussed how they learned to become flexible while handling course-related disruptions due to technology. This issue is linked with the *outside life* aspect discussed by Kahn (1990).

4.2.2.1 Experiences and challenges. The analysis brought attention to how the pandemic-induced environment, including the shift to ERT, contributed to "the blurring of professional and personal space" [R9]. "Work-life balance was a big issue faced" [R3] by faculty, most of whom commented on the nearly absent demarcation between work and family obligations. For example, [R4] shared that "[there was] no weekend or weekday demarcations, and [there is] a sense from the employer that working from home renders the liberty to ask for working on weekends too." The demands created by the forced transition to ERT, such as prolonged working hours, improper time schedules and blurred boundaries between work and personal time, could be considered major factors that led to the depletion of faculty's resources discussed in the previous subsection (i.e. 4.2.1). This finding also supports Srivastava *et al.*'s (2021) contention about the need to integrate work and life as one of the reasons for COVID-induced stress.

4.2.2.2 Coping strategies and adjustments. As a coping mechanism to balance work-life demands, most faculty remarked about using protective measures to limit exhaustion from prolonged screen time, limiting screen time after work hours and ensuring that they took an appropriate number of breaks during work hours. For instance, [R7] and [R4] shared that they "took short breaks in between," while [R11] remarked, "I used antiglare glasses while using the screen." Such tactics and adjustments helped preserve their physical, cognitive and emotional resources to use during their personal times.

To maintain a better work-life balance, respondents tried various tactics such as "follow[ing] the routine they had before the pandemic" [R2] or participating equitably in "the household chores such as mopping, cleaning, etc." [R11] with other family members. However, some respondents found it difficult to maintain the balance, citing stress over possible decrements in work performance. In the words of [R19], "I can't help it, I faced this problem till the end. I can't compromise the quality of work I do. So, for me maintaining work-life balance was difficult." It seems as if the faculty's own self-efficacy beliefs and performance expectations (Tseng and Kuo, 2014) played a role in their ability to develop a work-life balance. It would be viable to explore the association between these factors in future research to understand how a faculty member's personal performance expectations can influence their readiness to operate in crisis-oriented or demanding environments while maintaining a proper work-life balance.

4.3 Psychological safety

The analysis shows that faculty maintained mixed, albeit predominantly positive, beliefs regarding their perceived safety for self-expression during the pandemic-induced ERT mode. These beliefs are discussed across three dimensions:

1. intragroup and intergroup relationships;
2. organizational support; and
3. organizational norms.

The first dimension represents *interpersonal relationships* and *group and intergroup dynamics,* while the latter two represent *management style and processes* and *organizational aspects* as discussed by Kahn (1990).

4.3.1 Intragroup and intergroup relationships. In terms of workplace relationships, the interviewees showed a mixed response wherein they opined positively about faculty-peer interactions but negatively about faculty-student ones.

4.3.1.1 Experiences and challenges. The analysis indicates that faculty leaned heavily on their peers to share knowledge on new materials (i.e. pedagogical structure and content),

techniques and tools to maintain student engagement. Indeed, "discussing the issues with peers and how they were handling this situation" [R1] helped many faculty cope with the dramatic transition whereby those with prior exposure to online teaching trained their peers with less or no knowledge of the same.

However, the safety dimension had an adverse impact on the dimension of group relations as the virtual environment created restrictions on social connections and interactions among group members and peers, which resulted in inhibiting the holistic development of students. Most faculty also opined that ERT adversely affected their relationships with students due to reduced interaction opportunities *vis-à-vis* offline teaching. Some respondents also indicated that student-student relations were also affected to a certain degree as "peer learning was negatively impacted" [R5]. Because peer learning and group interactions form a critical part of managerial training delivered through B-School education, the faculty opined that their class delivery and learning through teamwork suffered a setback during the forced transition to ERT due to reduced opportunities for true collaboration and interaction in the classroom using interpersonal activities. In the words of [R6], "In online mode, everyone is together in the same room and is yet, not together. They are in silos where they are separated by virtual boundaries."

4.3.1.2 Coping strategies and adjustments. Peer learning formed the primary coping strategy for most respondents in ensuring that they felt safe to develop their roles and teach in an uncertain environment, namely, ERT. This coping strategy has also been discussed by prior scholars, who suggest that colleagues teaching the same content can collaborate to prepare and execute courses in an online medium (Cutri and Whiting, 2018). Only three respondents did not face any problems as they were using Zoom and Google Meet prior to the lockdown, thereby highlighting the importance of previous exposure to online platforms in helping faculty cope with ERT.

Further, respondents went beyond their organizations and tapped resources and learning available from peers and their personal social circles. For instance, [R3] solicited the help of a friend, whom he used to conduct a dry run of all the tools that he intended to use over Zoom. According to him, "This was to save me from any goof-ups during the class." Likewise, [R7]'s spouse was familiar with the software and guided her on how to use it. These examples demonstrate that the KM practices of regular communication, training and access to resources can build a feeling of security and confidence among faculty, which aligns with the supposition of Toor (2020), who suggested peer feedback as a core technique that can assist in building communities over online platforms. The importance of peer learning was also evident in a case in the USA, where, following the onset of the pandemic, a Facebook group called "Pandemic Pedagogy" gained immense popularity in the teaching fraternity for sharing experiences and seeking guidance on teaching online (Schwartzman, 2020).

To encourage student-peer learning, faculty leveraged instant messaging and other digital means (e.g. WhatsApp, email) to help set up coordination and communication among class participants. It was a viable strategy because, in a class where students do not know each other and are not connecting face-to-face in a physical setting, it is difficult to establish camaraderie and social bonding (Connor *et al.*, 2021).

4.3.2 Organizational support. Most faculty expressed a positive opinion about the support their organization provided them during the transition to ERT in terms of IT infrastructure, IT support and training.

4.3.2.1 Experiences and challenges. Many faculty mentioned that there were "sessions on online teaching" [R8] and skills development, for example, on "tools and techniques" [R8]. For instance, [R1] discussed how their organization's "IT Support facilitated this whole transition. [The] organization also rendered all the support with respect to training and

workshops from veteran experts," while [R15] concurred to state that their employer "provided all the technological and monetary/financial support for infrastructural aids."

4.3.2.2 Coping strategies and adjustments. The IT team of the organization played an important role. The reason for such extended support could be attributed to the fact that the respondents came from B-Schools – an educational sector with high competition wherein ranking and student intake are affected by infrastructural and IT-related aspects (Kumar, 2019). HEIs provided rapid training and learning to faculty to help them understand how to use quizzes, polls and various features of virtual meeting platforms that were being used to facilitate ERT. Such organizational support highlighted knowledge acquisition and skill development as KM practices that our respondents' employers focused on to facilitate their transition.

4.3.3 Organizational norms. While organizational support was seen as a positive aspect, the respondents indicated that organizational norms were insufficient in supporting ERT transitions wherein many rules were flouted by students.

4.3.3.1 Experiences and challenges. While discussing dwindling class attendance, [R12] mentioned that "it was difficult to do class monitoring in online mode." Similarly, [R20] brought up the challenge of maintaining discipline during ERT mode as "cameras are shut down, [it is] difficult to judge the body language, students' leaving the class in between; all such disciplinary issues are present in [an] online class." However, in B-Schools that thrived on having a proactive culture and standardized norms, ERT was seen as a good approach. [R6] also felt that her organization's systematic way of planning and delivery norms helped as "whenever we teach a new subject, we have to plan how to do so, the same context can apply to the online mode of teaching too."

4.3.3.2 Coping strategies and adjustments. Technological disruptions were unavoidable and were faced by faculty members as well as students, so respondents mentioned creating communication rules regarding the same to facilitate their classes. For instance, [R1] discussed how "Students dropping out of the session due to technical glitches cannot be avoided. So, I consider the situation if a proper explanation is sent by students on time," which resonated with most of the respondents. Another respondent [R9] stated, "In case of technical issues, things continued without making a fuss. I myself dropped out of class twice. Although login for the class was closed in a timely manner, if the student dropped out of the class in between, then only the student was allowed to enter." Also, minor adjustments were made in case of genuine absence issues when students informed faculty of their problems on time. For example, [R9] discussed how "one of my students was in the village at the time of lockdown; there were only certain places where the internet used to work. So, I have considered her situation every time." These coping strategies that faculty adopted suggest that KM practices may be more successful when a clear communication of organizational norms is established, setting clear expectations on the roles and responsibilities of everyone.

5. Conclusion

While the pandemic affected institutions worldwide, its impact on HEIs and education has been relatively under-examined, particularly from the perspective of faculty, who faced a rapid and forced transition to the ERT mode. Little is known about these stakeholders' experiences with ERT in HEIs, particularly considering the effect of this transition on their psychological functioning, KM practices and pedagogical challenges. This study considered such a knowledge lacuna as a critical issue considering the immense role that HEIs play as knowledge holders (Elezi and Bamber, 2022) and the critical role that faculty can play in promoting knowledge sharing among fellow academicians as well as students (e.g. see Hosen *et al.*, 2023).

Subsequently, this study raised two RQs focused on explicating the effect that the forced transition had on faculty's psychological conditions and the coping strategies they adopted

to adjust to this transition following appropriate KM practices. In response to the first RQ, the findings indicate that the ERT transition during the pandemic had a significant detrimental effect on faculty's psychological conditions in terms of meaningfulness and availability. Herein, challenges related to a reduced personal touch, changes in perceived roles or identities, the depletion of leveraged resources and difficulties maintaining a work-life balance were especially highlighted by the respondents. Contrarily, there were mixed feelings among faculty regarding their learning experiences and positive ones regarding their perceptions of organizational support and group dynamics that assisted these faculty in making the ERT transition and maintaining their engagement with work tasks. These findings reflect practitioner reports regarding faculty's experienced challenges during the pandemic. For instance, a survey by Statista (2021) discussed low personal interaction, attendance issues, low peer learning and poor connectivity as the main challenges faculty faced with pandemic-induced online teaching.

Further, in terms of the second RQ, the respondents discussed a wide range of KM practices and other activities regarding knowledge sharing and acquisition that helped faculty cope with the experienced challenges and make adjustments to support their work execution, for example, in maintaining student learning and engagement. This study shows that faculty's psychological functioning during the ERT transition was grounded in factors operating at the individual as well as the group and organizational levels, such as prior exposure to online teaching, existing IT infrastructure and peer learning opportunities. These are relatively novel findings considering the study context (i.e. B-Schools in India) and the psychological conditions of faculty, which have not seen much research in the past (e.g. see Ariani, 2015; May *et al.*, 2004). Hence, the study yields insights with significant connotations for both theory and practice, which are discussed in the subsequent sections.

5.1 Theoretical implications

The study findings raise three important implications for advancing theoretical knowledge in the fields of education, information systems and organizational psychology. First, the findings reveal that KM practices are a viable engagement tool for faculty and can help them cope with unprecedented as well as incidental changes in their environment. Coupled with these practices' primarily positive effects on faculty's psychological conditions, the findings raise implications for conducting a more thorough mapping of the KM practices that can assist faculty in their daily routines and operations. A viable avenue for theoretical advancement in this direction could be to examine how such psychological conditions and KM practices influence faculty's perceived emotional states and sense of psychological power in the workplace (e.g. see Luqman *et al.*, 2023). Such investigation could yield insights to assist scholars in developing supportive and intervening measures to support faculty's work execution and performance, particularly in dynamic environments.

Second, the evident importance of maintaining a work-life balance considering the resources leveraged by faculty, their own perceived identity and performance expectations in changing circumstances raises implications for examining these issues in greater detail. While work-life balance is an important issue for every employee, research has begun to highlight that academicians are at great risk of experiencing burnout and wellness-related issues (e.g. see Heinz Housel, 2021), especially in the wake of the pandemic (Koster and McHenry, 2023). Thus, focusing on issues identified through the findings as being associated with faculty well-being and psychological fitness could yield important insights through targeted research.

Third, while most respondents indicated that the forced transition to ERT had a negative effect on various aspects related to their psychological conditions, some aspects were reported as being positively influenced. For example, organizational support and faculty-peer group dynamics were discussed as being positive – which suggests that this transition may have had a silver lining in establishing better linkages between faculty and their

organizations. It may be beneficial to investigate how, and if, the pandemic fostered more robust organizational citizenship pursuant to the level of support offered by HEIs. Such investigations may also reveal how organizational change readiness or change management strategy may be used as tools to foster faculty engagement, not just in major crises but also in phases of incremental changes implemented by HEIs.

5.2 Practical implications

The study findings also raise three key implications for B-School administrators, IT administrators and faculty. First, faculty are critical stakeholders in the education system, including B-Schools because they are knowledge holders and imparters responsible for shaping the future workforce (Statista, 2021). Because B-Schools, in particular, require faculty to engage in robust interactions with students to impart managerial training for both technical and theoretical subjects, it is of utmost importance that these HEIs consider developing optimal environments that support faculty's psychological and functional operability while also accounting for their well-being. To this end, B-School (and other HEI) administrators could consider imparting regular training, re-skilling and upskilling sessions for the faculty to stay updated on the latest technological platforms and tools to support knowledge sharing, for example, learning management systems and social networking platforms that are popular among the student community. Such endeavors could help build effective communities of practice and learning that can support both offline and online teaching environments (e.g. see Ge *et al.*, 2010). Prior scholars, such as Ferri *et al.* (2020), also recommend building communities to institutionalize common knowledge so that it can be retrieved by faculty during online teaching.

Further, administrators should also consider updating and regularly communicating their organizational norms, especially codes of conduct, for virtual as well as offline classes with faculty and students. As hybrid learning is expected to continue being a viable pedagogical approach, updated and focused communications regarding such norms would be highly beneficial in fostering improved group dynamics between faculty and students. They may also conduct regular well-being sessions wherein faculty may be apprised of organizational support measures to assist in developing and maintaining a good work-life balance, for example, through the use of on-premises counseling services provided by work psychologists. Such initiatives would eventually lead to better performance and satisfaction for all stakeholders of the education system, and faculty in particular (e.g. see Sahibzada *et al.*, 2020).

Second, IT administrators in HEIs should be encouraged to continually update their infrastructure and vendor partnerships (e.g. for Wi-Fi) that boost the HEI's readiness to adopt technological advancements. Moreover, these IT administrators and support staff should ensure that even regular offline classes are supported with the best possible IT services, for example, through learning management systems and Moodles that work with minimum technical glitches, regular server maintenance and efficient Wi-Fi connections that can support high traffic.

Further, the IT support staff could also conduct training sessions to apprise faculty of the latest technological trends that can assist in building stronger course content and delivery mechanisms, such as Canva or Slides Carnival (for building academic presentations) and Elicit (an artificial intelligence tool that can act as a research assistant). Such initiatives find roots in KM practices but go beyond a single community (e.g. of academicians) to involve collaboration between different stakeholders to develop shared knowledge and solutions by filling knowledge gaps (Hölscher, 2018).

The final implication of this study's findings pertains to faculty themselves, who should be encouraged to give due importance to their well-being, especially in the face of the demanding nature of their vocations. Similarly, Mehrotra and Mehrotra (2021) have

highlighted the importance of developing self-care capabilities to deal with occupational and personal stress faced in the new normal post-pandemic environment. While B-School administrators should also ensure faculty well-being (as discussed in the preceding text), they should also encourage the faculty to avail themselves of these services (e.g. see Agarwal and Mehrotra, 2023), which could subsequently enhance their job satisfaction. To this end, the faculty could also develop peer-support groups with colleagues, which could assist members facing job-related stress or burnout symptoms. Such groups could provide early intervention and support for faculty well-being, not just in crisis-driven situations but also in daily routines when dealing with challenges related to online or offline teaching.

5.3 Limitations and directions for future research

Despite the attempts made to ensure the robustness of this study, it is subject to certain limitations that should be addressed by scholars in the future. First, the small number of purposively selected respondents from specific institutes and the temporal placement of the study limit the findings' generalizability. Future research should consider expanding the theoretical scope to examine transitions to online teaching and psychological conditions with a bigger sample size collected through more probabilistic means.

Second, while this qualitative study provides novel insights into faculty's psychological conditions during the ERT transition, future research should focus on validating such findings by conducting empirical studies that examine the link between the post-pandemic teaching environment and engagement or disengagement with work. It would also be beneficial to study how such engagement or disengagement correlated with the career outcomes of the faculty members (performance, career satisfaction, research acumen, etc.). Finally because our analysis was deductive in nature, some insights may have been lost due to the focus on specific predetermined issues and questions. An inductive approach that examines faculty response to crisis situations may reveal more nuances regarding factors that support or diminish faculty's psychological conditions. Future scholars could consider adopting an inductive approach built on post hoc assessments of faculty's transitions to ERT and continued engagement in hybrid learning modes. Further, the focus on psychological conditions should be expanded in further research to also consider elements of role dynamics, and individual elements such as personality traits, which could also affect how faculty respond to crisis-oriented situations and hybrid learning modes.

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Appendix 1. Interview questions (first wave conducted between October 2020 and January 2021)

1. Demographics:
   - Age:
   - 30–40 years, ii. 40–50 years, iii. 50–60 years, iv. 60 years and above.
   - Teaching experience (in years):
   - Gender: Male/Female/Other
   - Going back to the time when this transition was initiated, how comfortable were you with online teaching tools?
   - Prior online teaching exposure: Yes/No/Not much
   - Designation:
2. Which roles do you perform as part of online teaching: Teaching/Assessments/Evaluations/Coordination
3. On average, how many hours a day do you spend on online teaching tools/interfaces?
4. How has your pedagogy changed during ERT? How effective was it? If not, why not?
5. How has your role/identity as a teacher changed during this forced transition from offline to online teaching due to COVID-19? (Referring to control over the class, presence, commandment and personal touch)
6. How has the virtual environment changed the classroom dynamics?
7. What challenges did you find in assessment over the online platform? How did you feel?
8. Has online teaching impacted the value you were delivering to the class? Has the meaning of work changed in any manner before and after this transition?
9. Did you feel ready to undergo this transition both physically and mentally? Did it result in any kind of stress?
10. How has it affected your personal life and goals?
11. What measures did you adopt to overcome or cope with these challenges?
12. What were the sources of learning that helped you transition during ERT?
13. What challenges did you find in assessment using the online platform? How did you feel?
14. What support did your organization provide you during this transition from offline to online mode of teaching? Has it helped you in any way?

15. Does the online mode of teaching render you the scope to showcase your opinions, ideas and beliefs in the way you used to before the transitions?
16. How were the classroom norms flouted during ERT?

Appendix 2. Interview questions (second wave conducted between August 2021 and November 2021)

- What steps have you taken to ensure maximum learning during ERT?
- How did you ensure that the assessment in class was fair or unbiased? How did you make an accurate or holistic assessment as most of the time the students kept their cameras in switch-off mode?
- Did you feel that using software and learning to use so many apps/platforms to teach was cumbersome? If yes, how did you deal with it?
- How much time did you take to adapt to this sudden shift?
- What changes in pedagogy did you make to ensure student engagement?
- How did you compensate for the missing personal touch and ensure interactions with students?
- How did you handle situations where you faced challenges due to technology?
- How did you monitor the work of students given as part of classwork in an online mode?
- You might have been exposed to some health issues due to spending more time sitting and working on your laptops, e.g. posture, eye-sight, etc. How did you cope with them?
- What steps did you take to maintain a work-life balance?
- How do you manage your workload of classroom preparation with personal research?
- How have your peers and students helped you in adapting to ERT?
- How did you manage discipline in the virtual classroom?
- Do you still use/intend to use some of the online teaching techniques even in offline classes?
- If given a choice, would you prefer online or offline teaching now?

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