





Constant connectivity and boundary management behaviors: the role of human agency

Farveh Farivar^a (D), Farjam Eshraghian^b, Najmeh Hafezieh^c and David Cheng^d

^aTasmanian School of Business and Economics, University of Tasmania, Hobart, Australia; ^bApplied Management Department, Westminster Business School, London, UK; ^cSchool of Business and Management, Royal Holloway University of London, London, UK; ^dResearch School of Management, College of Business and Economics, The Australian National University, Canberra, Australia

ABSTRACT

The surge of remote and hybrid work in the post-pandemic era has reinforced the blurred boundaries between work and nonwork responsibilities. Thus, how people manage the boundaries between work and nonwork domains has become more complicated. This study advances the work of previous studies on constant connectivity by focusing on how employees' perception of constant connectivity might actualize their boundary management behaviors. By adopting affordances for practice perspective, our study focused on contextual factors, including IT/internet policies, informal social norms, and work flexibility, to investigate how these factors could influence employees' perception of constant connectivity. This paper reports a two-phase study. In the first phase, we used sentiment analysis to rank 38 internet use policies of Australian universities, grading their strictness toward ICT/internet use. Next, building on the first phase, we interviewed 28 academics. We identified three perceptions of constant connectivity related to participants' practices, including constant connectivity as a resource for practice, a challenge for practice, and duality for practice. We also found five distinct boundary management behaviors connected to three different perceptions.

KEYWORDS

Work digitalization; constant connectivity; remote working; boundary management; affordances for practice

1. Introduction

Information and communication technology (ICT) has promoted work digitalization and constant connectivity, accelerating organizations' adoption of hybrid working and teleworking (Donnelly & Johns, 2021; Petani

CONTACT Farveh Farivar farveh.farivar@utas.edu.au Tasmanian School of Business and Economics, University of Tasmania, Hobart, Australia.

Supplemental data for this article can be accessed online at https://doi.org/10.1080/09585192.2023.2271835.

2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives
License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.
The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

& Mengis, 2021). Work digitalization refers to a combination of powerful computing, the adoption of cloud technology, and pervasive connectivity (Venkatraman, 2017). Thus, work has become more digital, flexible, universally networked, and hybrid, with more employers enabling their staff to work remotely at least partially (Gohoungodji et al., 2022). However, constant connectivity disturbs organizational boundaries, specifically blurring the boundaries between work and nonwork domains (Farivar & Richardson, 2021). The nonwork domain refers to any nonwork-related activity, responsibility, and interest outside the work domain (e.g., sports, family, friends, entertainment, etc.) (Voydanoff, 2001). Constant connectivity is known as employees' 24/7 access to the workplace through communication technology (Wajcman & Rose, 2011). Constant connectivity allows boundary spanning in both directions: connectivity to work during nonwork time and connectivity to nonwork domain during work time (Büchler et al., 2020). For this study, we are concerned with both directions of constant connectivity.

Remote working and ubiquitous access to the internet on smartphones, personal laptops and work-related computing equipment have led to a mix of nonwork- and work-related internet use during work and nonwork time (Farivar, 2015; Lemmer et al., 2023). This mix of nonwork and work-related internet use is especially prevalent in workplaces where computers are the primary tool (Lemmer et al., 2023). As a result, interest in how employees manage boundaries between domains has gradually increased (Aljabr et al., 2022). However, how employees perceive constant connectivity to actualize boundary management behaviors has received scarce attention (Allen & Martin, 2017; Gardner et al., 2021). Understanding the actualization of constant connectivity is essential for managing boundaries between different roles. Boundary management includes strategies and behaviors employees adopt to separate or integrate roles in their work and nonwork domains.

To understand how employees deal with constant connectivity to manage boundaries, first, we need to explore how employees perceive constant connectivity. Comprehending the perceptual process of perpetual connectivity is a vital stride towards unraveling how technology is being implemented and utilized, particularly in the post-pandemic era, where hybrid work arrangements have blurred boundaries and are widely regarded as the future of work. The flexibility of time and space are two elements of the hybrid model (Gratton, 2021). Before the COVID-19 pandemic, most industries allowed minimal time and space flexibility. However, millions of knowledge workers experienced a sudden shift from being place-constrained to being place-unconstrained, as well as a shift from working synchronously with others to working asynchronously (Gratton, 2021). This sudden implementation of remote work has made it difficult for many individuals to perform their preferred boundary management behaviors. Thus, boundary management must be accurately conceptualized in post-pandemic evolving contexts (Cobb et al., 2022). This study contributes to research and practice by investigating two main questions: (1) How do employees perceive constant connectivity in work and nonwork domains? and (2) How do employees' perceptions of constant connectivity shape their boundary management behaviors?

The first question develops our understanding of employees' perceptions of constant connectivity, which is under-researched. Understanding employees' perceptions of constant connectivity is crucial as constant connectivity relates to high work demands and conflicts between work and nonwork roles, which are among the most significant indicators of employees' health issues (Butts et al., 2015; Cobb et al., 2022). Therefore, mapping these perceptions becomes essential to address and mitigate potential challenges. The second question highlights the interpretation of constant connectivity as an affordance. 'Affordance for practice' approach suggests adopting a technology or artefact can be helpful if users use it appropriately based on their needs/work-related practices and perceptions (Fayard & Weeks, 2014). Most published studies in management journals view employees as passive recipients of technological advancement rather than active players who can react to, contribute to, and shape the future of work meaningfully by using technologies differently. Thus, by exploring links between the perception of constant connectivity and boundary management behaviors, we aim to reveal if employees are active players contributing to work digitalization.

To answer the research questions, we adopted an exploratory approach consisting of sentiment analysis and 28 in-depth semi-structured interviewees with Australian academics. We selected academics as remote working and temporal-spatial flexibility are not new in Higher Education. In addition, this knowledge worker group is more experienced in dealing with constant connectivity compared to some industries that recently precipitated into virtual space due to pandemic restrictions. The contribution of this study is manifested in two crucial ways. First, we expand the current literature on constant connectivity by drawing on affordance theory (Gibson, 1979). The conceptualization of affordance accentuates the role of humans' agency in using technologies and broader social factors (i.e., accepted norms and behaviors in a workplace and workplace policies) that influences the use (Markus & Silver, 2008). Second, we argue that how employees perceive constant connectivity and how their perception shapes boundary management behaviors are vital information to design effective work policies. Balancing work and nonwork roles has

become critical and challenging for employees' well-being (Allen & Martin, 2017). Hence, many employers design work practices such as flexible work arrangements (FWAs) and telecommuting to allow employees to blend work and nonwork roles and, in return, promote positive organizational outcomes (e.g., performance, commitment, satisfaction, etc.) and reduce conflicts between employees' work and nonwork responsibilities (Capitano et al., 2017).

2. Background

2.1. Notion of affordances

Affordance theory, originating from ecological psychology, explains how users with specific capabilities and limitations perceive objects and tools and subsequently make decisions on how to use those objects and tools (Gibson, 1979). Although affordances are inherent within the objects and tools, they depend on how users perceive them to trigger intended actions. Cognitive psychologist Donald Norman developed the concept of affordances by highlighting the impact of relational context on shaping affordances. Norman (2013) suggests affordances are "the relationship between properties of the artefacts and capabilities of the users that establishes the way that the artefact would be used" (Norman, 2013, p. 11). This suggests users can use an artefact differently because 1) they might have different perceptions of the artefact and 2) they have different abilities to use it.

Not only can affordances drive actions, but also, they may restrain actions (Hutchby, 2001). In other words, the affordances of an artefact can also set limits on what it is possible to do "with, around, or via the artefact" (Hutchby, 2001, p. 553). In a nutshell, affordances can provide specific opportunities and enable specific actions but constrain others. In addition to the relational nature of affordances, social context (e.g., accepted norms and behaviors in a workplace) and institutional context (e.g., policies and procedures in a workplace) can influence 'users' perceptions of affordances (Markus & Silver, 2008).

The embeddedness of digital technologies in employees' work reinforces constant connectivity. Consequently, constant connectivity and work digitalization have weakened the boundary between work and nonwork domains and facilitated the micro and macro transitions such as working from home, watching nonwork-related videos and online shopping at work (Farivar & Richardson, 2021). Thus, affordance theory has become more recognized within the HR field. As the work has become increasingly hybrid in an evolving post-pandemic context, we need to understand how people work in IT-enabled workspaces appropriately (Petani & Mengis, 2021). Therefore, in the context of work digitalization and affordances, IT and HR have become partners in dealing with matters such as how ICTs, personally owned or company-provided resources may impact outcomes such as performance, commitment, autonomy, workload and well-being. Constant connectivity is not an IT issue but an affordance closely related to HR that needs to be explored and conceptualized (Doargajudhur & Hosanoo, 2023).

The literature on affordance theory shows this theory covers two approaches: functional and affordances for practice.

2.1.1. Functional affordances vs. affordances for practice

Researchers adopted the functional affordances approach to explain an artifact's inherent properties, capabilities, and functionalities. This approach revolves around what actions or possibilities the technology enables users to perform based on its design and features. In understanding functional affordances, the emphasis is on studying the technical aspects of the technology itself and how users interact with these technical capabilities based on their perceptions (Fayard & Weeks, 2014; Zheng & Yu, 2016). This means the functionalities of affordances are considered fixed. The main shortcoming of the functional affordances approach is that this approach ignores the complex relationship between the technology and agent and the 'possibilities' that emerge from specific context (Markus & Silver, 2008; Volkoff & Strong, 2013; Zheng & Yu, 2016). This approach falls short of considering the 'situated mode' of the contexts where the actor engages with the technology to act. Consequently, this is the main reason the functional affordances approach is limited to unravelling possible actions, restraining other actions and channelling behaviors "in a specific direction".

On the other hand, the 'affordances for practice' approach suggests that technology for specific human agents unfolds beyond the subject-object dichotomy (i.e., user-technology). This approach considers the social, cultural, and contextual factors that influence users' perceptions and interpretations of the technology, shaping how technologies are used in real-world situations (Zheng & Yu, 2016). Human agency is inherently situational and influenced by society, culture and history; thus, technology is socio-material (Orlikowski & Scott, 2008). Considering the interplay between technology and the broader socio-cultural environment, the affordances for practice approach is particularly relevant in investigating how technologies are employed and how users integrate technology into their daily activities, routines, and practices (Fayard & Weeks, 2007, 2014). This approach provides a more detailed narrative of how actions afforded by technology are actualized in different situations.

Similar to Favard and Weeks (2014), we argue adopting a practice-based perspective and acknowledging the social and cultural factors that impact operations in a specific context can shed light on predicting the potential actions and possibilities. As such, this study aimed to explore the concept of constant connectivity through the lens of affordances for practice, moving beyond functional affordances. We focused on how constant connectivity impacts boundary management, examining our participants' work-related activities and practices, such as teaching and conducting research.

2.2. Constant connectivity and boundary management

Improvements in mobile technologies as a form of ICT and the ubiquitous internet connection have allowed individuals to be connected constantly (Mazmanian, 2013; ten Brummelhuis et al., 2021). ICT has facilitated non-traditional work arrangements or so-called 'remote working, 'teleworking,' 'flexible work arrangements,' and 'hybrid working' (Donnelly & Johns, 2021). In general, flexible work arrangements (FWAs) refer to arrangements that allow employees to perform their work outside the confines of a defined space and time (Putnam et al., 2014). The term flexible work includes three types of flexibility—temporal flexibility, or flexibility in when to complete a task; spatial flexibility, or flexibility in where to complete a task; and operational flexibility or flexibility in how to complete a task (Chen & Fulmer, 2018; Kossek & Lautsch, 2018). Less temporal-spatial segregation means work can be conducted at any time and place, so employees frequently use their homes as their work locations (Daniel et al., 2018).

FWAs have grown in popularity as organizational studies linked them to a long list of benefits for both employers and employees, including better work-life balance (Kumar et al., 2023), high employee engagement (McNall et al., 2010), less voluntary turnover (Choi, 2020), high job satisfaction (Neirotti et al., 2019), employee performance (De Menezes & Kelliher, 2011), high organizational performance and better physical health and fewer somatic symptoms (Shifrin & Michel, 2022). However, adopting FWAs blurs physical and social boundaries (Stopfer & Gosling, 2013). These blurred boundaries obstruct boundary management. Thus, employees face difficulties remaining disconnected from nonwork responsibilities and interests during work (Farivar & Richardson, 2021). Wang et al. (2021) study of social media use at work shows that social media use causes interruptions and, thus, decreases work engagement. In addition, since ICTs have enabled constant connectivity, expectations to be accessible anytime and anywhere have increased (Reinke & Gerlach, The three features of boundaries, including 2022). flexibility, permeability, and boundary management preference, justify employees' control over boundaries (Ashforth et al., 2000; Matthews et al., 2014).

Daniel and Sonnentag (2016) conceptualize boundary management as an individual and contextual factor. At the individual level, the employees' boundary management preferences explain employees' boundary management behaviors, while at the contextual level, flexibility (physical boundary) and permeability (psychological boundary) demonstrate control over boundaries. Boundary management preference reflects the importance of human agency in boundary management. This suggests some people prefer to separate their work tasks and personal life (Matthews et al., 2014). Some others might mix them and complete their work tasks in the evening at home to address some nonwork responsibilities in the afternoon. Thus, employees and employers independently arrange and rearrange physical and psychological boundaries (Daniel & Sonnentag, 2016). Boundary management seems critical in managing work digitalization, resolving the conflict between work and nonwork roles (Aljabr et al., 2022), reducing the turnover rate (Kossek et al., 2006), and improving employees' well-being (Wepfer et al., 2018). The COVID-19 pandemic has resulted in a radical transition to the virtual environment and ever-increasing blurred boundaries that have altered day-to-day work behaviors (Vaziri et al., 2020).

As blurred boundaries can result in different consequences for both employees and employers, developing policies that protect the boundaries seem to become an essential aspect of corporate security policies in recent years. ICT/internet policies stipulate what employees can and cannot do on digital communication platforms such as social media, instant messengers, etc. Internet use policies elucidate the use of filters and firewalls, monitor employees' online activities, and handle internet abuse. Employers may adopt two approaches to designing ICT/internet policies: deterrence or laissez-faire (Kim, 2018). The deterrence approach limits constant connectivity and internet use at work through strict surveillance and filters. On the contrary, the laissez-faire approach promotes policies that boast little to no surveillance of internet use (Kim, 2018).

The presence of strict ICT/internet policy and monitoring practices increases the negative consequences of using these platforms at work and outside the workplace. Restrictive policies that limit personal use of ICTs at work decrease the diffusion and use, but permissive policies are likely correlated with more use of social media communications applications (Bretschneider & Parker, 2016). These policies could direct organizational norms and routines regarding ICT/internet use (Sheer & Rice, 2017). For instance, employees may use instant messengers such as WhatsApp and Facebook Messenger rather than official email accounts as the primary work communication channel if there is no restriction on using public

instant messengers in the ICT/internet use policies. However, strategies such as regulating ICT and internet use are a form of top management intervention that can influence organizational users' decisions about using technology, and users' perceptions of the technology drive the behaviors (Liang et al., 2007). Thus, we need to consider the impact of ICT/internet use policies to investigate how users' perceptions of constant connectivity may impact boundary management behaviors.

3. Research method

This study adopted an exploratory qualitative approach to investigate participants' perceptions and behaviors (Bryman & Bell, 2011). We used semi-structured, in-depth interviews to collect data from academics at universities across Australia. We selected academics working in business schools because academic jobs include flexibility. Academic scheduling enables the integration and segmentation of work and nonwork-related roles (Shockley & Allen, 2010). In addition, there are often flexible working policies for academics regarding where and when they work. This allows academics to choose how much they want to use flexible work arrangements (Shockley & Allen, 2010).

Furthermore, academic tasks, including teaching, research, and administrative duties, have been digitalized radically, increasing the control over job flexibility (Mazmanian et al., 2013). Research suggests that when employees perceive a high level of control and flexibility over their work, they are more likely to use ICT for work more frequently, even during nonwork hours (Schlachter et al., 2018; Senarathne Tennakoon et al., 2013). Hence, we expected that academics report higher levels of blurred boundaries. We obtained ethical clearance from The Tasmania Social Sciences HREC (H0018138) for this study.

3.1. Sampling process

To select interviewees, first, we mapped the ICT/internet policies of Australian universities on a continuum based on the strictness/looseness of the policies. The aim was to control the impact of ICT/internet policies on employees' perception of constant connectivity. We intended to obtain a mixed sample of interviewees working in universities with strict ICT/internet policies or lenient ICT/internet policies. For mapping the policies, first, we used a computerized technique to collect the ICT/internet policies of 38 Australian universities. Using Google Custom Search engine, ISON API, and a custom algorithm developed by Bar-Ilan (2019), Our search scope was limited to websites with "edu.au" domain. Then, we searched for the following keywords "IT policy", "social media policy",

"IT governance policy", "IT use policy", "ICT policy", "ICT use policy", "Social media use policy", "IT acceptable use", "IT Security policy", "Electronic use policy" and "Computing regulations" to extract the ICT/ internet use policies. We used Python programming language and Scrapy library to crawl the universities' webpages and extract policies. We collected 80 policy documents from 38 Australian universities for further analysis.

In the next step, we conducted sentiment analysis to estimate the policies' strictness and leniency levels. Sentiment analysis (or opinion mining) allows researchers to understand the emotion or sentiment behind comments and text and gain actionable insights. Pattern-based sentiment analysis detects patterns of emotions, opinions, subjectivity, moods, and feelings in textual data (Chen et al., 2012). In recent years, the use of sentiment analysis to classify textual data as a positive, neutral, or negative feeling has increased in management studies and practices (Liu, 2020). Businesses often use this technique to monitor customers' feedback and understand customers' sentiments and needs. In addition, this technique enables investigators to examine the strictness and leniency of policies. A negative sentiment indicates strict policies, while a positive sentiment implies lenient policies. Policies are textual, so we need to assign numeric values to them to calculate the sentiment score, which represents detects emotions.

The most common method for quantifying a text's sentiments is to use a dictionary of negative, neutral, or positive words to see how many negative and positive words it contains. In addition to the number of words and their type, sentiment algorithms analyze the strength of words and the context in which they are used. For example, the following statement, "Some reasonable non-commercial personal use may be allowed, but as a privilege and not a right, and if that privilege is abused, it will be treated as a breach of this Policy." represents a negative sentiment and consequently receives a negative score. In contrast, the following sentence, "Debate [on social media] is healthy, but always be sure to do so in a logical and calm manner." indicates a positive emotion and sentiment, so it receives a positive score. Finally, an example of a neutral sentiment is, "Like all University assets and services, the information and communication technologies in all their various forms should be used in an efficient, lawful and ethical manner.". Algorithms used in sentiment analysis explore the lexicon of words, idioms, and phrases in a document to quantify the sentiment scores between -1 and 1. A score close to -1 signifies a negative sentiment or emotions, while scores close to 1 represent a positive one. A score of zero denotes a neutral sentiment.

Figure 1 shows that the sentiment analysis graded the overall universities' ICT/internet use policies between -0.33 and 0.08. This suggests

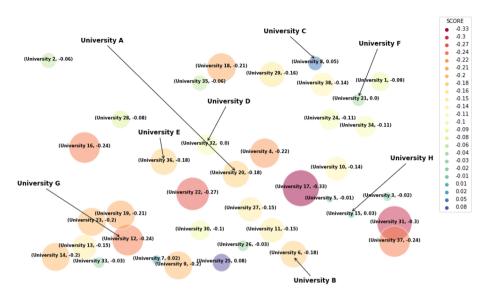


Figure 1. Sampling process (Sentiment analysis).

most Australian universities have strict ICT/internet use policies, and even those with scores above 0 do not have a strong positive attitude toward ICT/internet use.

Based on the sentiment analysis results, we selected eight universities (A with a sentiment score of -0.18, B with a sentiment score of -0.18, C with a sentiment score of 0.05, D with a sentiment score of 0, E with a sentiment score of -0.18, G with sentiment score of -0.24, and H with a sentiment score of 0.03). The rationale for selecting theses universities was to include universities with lenient, neutral and strict ICTs/ internet use policies in our sample. We explored the web pages of Business Schools at these universities and then sent interview invitations to 167 full-time academic staff. We excluded casual/part-time staff and research fellow academics as this group has limited flexibility in their work arrangements. In total, 28 accepted the invitation and were interviewed, as shown in Table 1.

Twenty-eight semi-structured interviews were conducted in 2019 and 2020. Interviews lasted 25-60 min. In addition to following a prepared interview guideline, we adopted a flexible approach to improvise in the case of incomplete answers and use leading questions whenever necessary. The interviews were composed of three sections. In the first section, participants were asked to describe how they use ICTs for work and nonwork purposes by answering several questions.

The second part was allocated to factors influencing their boundary management behaviors and their use of ICTs at work and in nonwork domains. Some examples are "Have you felt that there are specific norms about ICT use in your school?", "Are there any political, cultural,

Table 1. Participants' information.

No.	ldentifier	University	University sentiment toward ICT/ internet use	Interviewee role	Gender	Years at the institution	Perception of Constant Connectivity
1	Int1.A	University A	Negative	Senior lecturer	Male	15	Resource
2	Int2.A	University A	Negative	Senior lecturer	Male	11	Resource
3	Int3.A	University A	Negative	Lecturer	Female	2	Duality
4	Int4.B	University B	Negative	Senior Lecturer	Male	9	Challenge
5	Int5.B	University B	Negative	Senior Lecturer	Male	13	Challenge
6	Int6.B	University B	Negative	Lecturer	Male	2	Resource
7	Int7.B	University B	Negative	Associate Professor	Female	6	Challenge
8	Int8.B	University B	Negative	Lecturer	Male	16	Challenge
9	Int9.C	University C	Positive	Lecturer	Male	2	Resource
10	Int10.C	University C	Positive	Senior Lecturer	Male	11	Challenge
11	Int11.C	University C	Positive	Lecturer	Female	3	Resource
12	Int12.C	University C	Positive	Lecturer	Female	1	Duality
13	Int13.D	University D	Neutral	Lecturer	Female	2	Resource
14	Int14.D	University D	Neutral	Senior Lecturer	Female	2	Duality
15	Int15.D	University D	Neutral	Senior Lecturer	Male	3	Duality
16	Int16.D	University D	Neutral	Lecturer	Female	3	Challenge
17	Int17.D	University D	Neutral	Senior Lecturer	Female	9	Challenge
18	Int18.D	University D	Neutral	Lecturer	Female	2	Duality
19	Int19.D	University D	Neutral	Lecturer	Female	2	Resource
20	Int20.E	University E	Negative	Lecturer	Male	3	Duality
21	Int21.E	University E	Negative	Lecturer	Female	3	Challenge
22	Int22.E	University E	Negative	Senior Lecturer	Female	15	Resource
23	Int23.E	University E	Negative	Senior Lecturer	Female	16	Resource
24	Int24.E	University E	Negative	Lecturer	Female	4	Duality
25	Int25.F	University F	Neutral	Associate Professor	Male	16	Resource
26	Int26.G	University G	Negative	Lecturer	Female	6	Resource
27	Int27.G	University G	Negative	Senior Lecturer	Female	13	Resource
28	Int28.H	University H	Positive	Associate Professor	Male	10	Duality

institutional or philosophical barriers to using ICT at work?" and "Did you have any training or receive any specific email or announcement about the internet and social media use policies at your university?", Finally, we requested participants explain their experience with remote working and their strategies to deal with constant connectivity (see Appendix).

3.2. Data analysis approach

A professional service transcribed the recorded interviewees, and two researchers checked the accuracy of the transcriptions. We used thematic analysis and pattern coding to address the research questions. We adopted Miles et al. (2014) approach to analyze interviewees in-depth. For this purpose, the coding process was iterative (Miles et al., 2014). We conducted the interviews and analyzed the data simultaneously to revise the questions and the literature review. We started the coding process by focusing on whether academics were aware of the ICT/internet policies at their workplace, how they perceived constant connectivity, and which communication technologies they used at work. The iterative coding

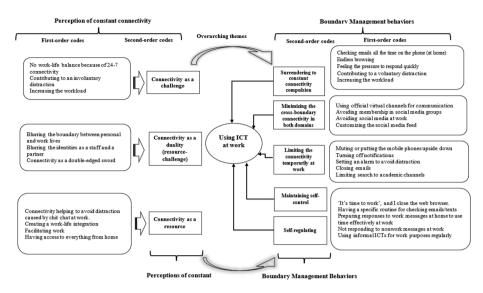


Figure 2. Constant connectivity and boundary management behavior.

approach and constant comparison between the emerging codes help researchers identify the differences and similarities. Then, we applied pattern coding for the second-order analysis (Miles et al., 2014) to identify the conceptual patterns in our data and understand the dynamics between these factors. We used extensive memo writing alongside pattern coding to increase the validity of our findings. The coding structure is displayed in Figure 2.

3.3. Trustworthiness

In qualitative studies, validity and reliability are discussed under trustworthiness, explaining credibility, dependability, conformability, transferability (Elo et al., 2014). Credibility is considered internal validity and consistency, which shows how well data is collected. Several methods can be adopted to increase the credibility of qualitative studies, including prolonged engagement with participants, persistent observation in the field, using peer researchers, negative case analysis, researcher reflexivity, and participant checks (Morrow, 2005). Following Cho and Trent (2006) suggestion, we used the lens of researchers and participants to improve the credibility of our data. Thus, we emphasized documenting the process and protocols during the interviews as the interviewer took additional notes while the interviewees verbalized their thoughts. The self-awareness of the researcher was also essential to improving the credibility of the data (Elo et al., 2014). Thus, two researchers (peer-researchers technique) analyzed the first five interviewees as pre-interviews to determine whether the interview questions were suitable for obtaining rich data regarding our research questions. Then, we continued to collect data.

Regarding the participants' lens, we adhered to Hammersley and Atkinson (1995) suggestion and allowed interviewees to change or elaborate on their verbal comments after every interview. It gave them opportunities to reword or clarify their responses. The sampling strategy is another method to justify the credibility of the data. In this study, as explained above, we used sentiment analysis to increase the thoroughness of our data. Thoroughness is a validity criterion in qualitative studies that refers to the adequacy of the data (Elo et al., 2014). To achieve conformability, which refers to the extent to which other researchers can confirm the results of a study, we asked an external auditor who was not part of the research team to analyze ten transcripts (one-third of the whole data). The cross-check between the external auditor's findings and our interpretation of the data showed that our findings were valid. Finally, transferability dimensions emphasize the stability of findings over time and whether the results are transferable to other contexts (Nowell et al., 2017). The transferability of the results depends on transparency. Thus, we reported direct quotes from transcriptions to increase transparency.

4 Findings

The primary practices in higher education are teaching and research. Analyses showed that our interviewees' interaction with constant connectivity created several possibilities for their practices (teaching and research), such as collaboration and teamwork, promotion and publicity, continuous access, concentration versus distraction, student support, and spatial and temporal flexibility.

4.1. Perceptions of constant connectivity for practice

Our interviewees viewed constant connectivity in different ways, including i) constant connectivity as a resource for practice, ii) constant connectivity as a challenge for practice, and iii) constant connectivity as a duality of resource-challenge for practice.

4.1.1. Constant connectivity as a resource for practice

The first group perceived constant connectivity as a resource that empowered them and contributed to performing their teaching and research practices. Our analysis shows that constant connectivity was perceived as a resource for several reasons. First, some interviewees argued that

constant connectivity facilitated spatial and temporal flexibility as one of the main dimensions of their teaching and research practices since they could access resources available on campuses (e.g., library resources, recording facilities, and journal subscriptions) on weekends through Universities' virtual private networks (VPN). For example, one participant explains how ubiquitous connectivity allowed her to mark students' reports over holidays and support her PhD students during weekends:

During the [holiday] periods when there's a lot of marking and lots of...I've got a couple of PhD students I'm supervising...and if there's anything important with them, I do use weekends to work on that as well. (Int22.E, Female, Senior Lecturer)

Collaboration and teamwork emerged from our analyses as a crucial dimension of research practice. Among the various aspects discussed, interviewees highlighted that benefiting from constant connectivity to expand professional networks is a necessary and fundamental step in developing research practice.

You build collaboration, build networking, which at the end of the day will benefit what you're doing. (Int13.D, Female, Lecturer)

Regarding research practice, analyses also revealed interviewees use constant connectivity to establish multidisciplinary teams, amplify research impact, and increase opportunities for securing research grants.

... looking for a social scientist to team up with a project group that wanted to write a tender. (Int26.G, Female, Lecturer)

More importantly, collaborations with scholars living in other cities or continents were a major challenge without constant connectivity and ICT.

I have access to them [instant messengers] on my desktop...I find it useful for connecting to collaborators on a daily basis. (Int1.A, Male, Senior Lecturer).

In addition, our interviewees emphasized that actively disseminating their work and promoting their research findings played a crucial role in the research practice that became possible through constant connectivity:

If I'm gatekeeping research participants, I'll spread the news about my research project through my networks. You know, friends first. (Int19.D, Female, Lecturer)

Consequently, our participants discovered that constant connectivity through the use of social networking platforms is essential for promoting their research and institutions and fostering external collaborations.

Our interviewees also found constant connectivity in the form of using social networking platforms is necessary to promote their research and institutions and entice external collaborations:

These platforms create an opportunity for you to promote...your research. Promote your institution...also to let other people know what type of work you're doing, what type of research you're doing...and also to enable you to link up with other scholars, other researchers. (Int13.D, Female, Lecturer)

This group of interviewees pointed out that "short-term distraction" would be productive for research and teaching practices. For example, after a relatively long time of sitting in front of the screen, reading academic papers or even looking for teaching materials, a moment of diversion from the main work could positively impact their research and teaching endeavours:

It happened to me quite a lot when I'm just getting into something and it's... really...not useful, nonsense. And I don't know why I'm sitting there, continuing to read it...but um...I need some sort of a distraction. (Int6.B, Male, Lecturer)

Therefore, they perceived constant connectivity as a resource for teaching and research practices. It allowed them to energize and freshen their minds by spending time on nonwork-related online activities (e.g., social media or gaming platforms). The constant connectivity afforded them to take short breaks and decrease their stress level, as indicated by the following interviewees:

It's definitely a time-out. It's a time when my brain can...not have to think. Quite often, I get...like it's humorous what I look at. (Int26.G, Female, Lecturer)

I see it more as a positive. If these platforms are there and you're at work, you don't feel like doing something and you just need something to get over it, social media is a very good platform to get through that. It's a good way to de-stress for ten to twenty minutes. (Int13.D, Female, Lecturer)

Interviewees who perceived constant connectivity as a resource did not perceive digital distraction as an intrusion to their teaching and research practices. On the contrary, they felt constant connectivity empowered them to alleviate stress and boredom. This result is consistent with Farivar et al. (2022) findings that all digital distractions do not lead to negative consequences.

Additionally, this group saw continuous access to scholarly materials and their workplace as a necessary dimension of their research and teaching practices. Therefore, they did not perceive constant connectivity to the workplace as a negative aspect of digitalization. An interviewee provided a good example when she explained her remote access to teaching materials during the weekend helped her organize her lectures on Monday and put her mind at ease without damaging her work-life balance.

4.1.2. Constant connectivity as a challenge for practice

The second group of interviewees held a markedly distinct perspective on constant connectivity, as they did not consider 'promotion and publicity, 'short-term distraction,' and 'continuous access' as fundamental dimensions of their teaching and research practices. They admitted that controlling connectivity was challenging for their teaching and research practices. The analysis revealed that the second group preferred a more selective and traditional approach to connectivity as they perceived unrestricted/unlimited constant connectivity. For example, the following interviewee considered 'short attention span' and 'involuntary distraction':

I think you get distracted a bit more easily...just when you do work...I think it's one of those problems that people have relatively short attention spans. (Int7.B, Female, Associate Professor).

Another interviewee noted that 'continuous access to' a wide range of scholarly materials was not necessary for her research practice. When she intended to work, such access could interrupt her work fellow and lead to involuntary distraction:

I'll type in what I'm looking for and I'll get distracted by all the other articles. So...I do that...if I'm doing my research, it happens a fair bit. (Int21.E, Female, Lecturer)

Hence, constant connectivity, which enabled continuous access, was perceived as a challenge to their research and teaching practices. In this group, interviewees emphasized the importance of 'student support', particularly addressing students' queries, as a critical aspect of their teaching practice. However, they were unhappy about how constant connectivity resulted in a new possibility of receiving students' emails anytime and being expected to support students beyond regular working hours.

The assessment is due at 11:59 pm... I'm getting students emailing me at the last minute needing an extension, or they can't submit, or they submitted the wrong file, or I can't see the article, so...we get bombarded so often.... You need to respond to that. (Int8.B, Male, Lecturer)

Furthermore, another interviewee explained constant connectivity raised her colleagues' and students' expectations unrealistically due to the possibility of being available and accessible even after working hours. Consequently, these raised expectations resulted in intensified work pressure, work-life conflict, and an unpleasant extra workload:

There's an unspoken expectation that you need to respond. Both from the staff as well as students. I think it's students more so...the rise in demand...and a lot of unrealistic expectations...it's interesting when senior management says, 'we need to keep work-life balance, but certain expectations don't allow us to keep work-life balance. (Int16.D, Female, Lecturer)

This group also perceived constant connectivity created a new possibility as raising the expectations regarding student support led to 'involuntary distraction', which might potentially exert adverse effects on their teaching practice:

I always get distracted with emails ...When I see a notification, I think 'what is this person after?'. It's not just on one computer; it's on my phone as well...I do respond to emails...in fact, I respond to so many emails...one of my units at the moment has over 300 students enrolled. Across locally and offshore. And I'm being bombarded with students enquiring for extensions. (Int8.B, Male, Lecturer)

One interviewee believed that the availability of constant connectivity was so powerful and irresistible that it would be uncontrollable in contemporary work arrangements.

Even if I try to switch off the phone, I'll still want to go and check...I can't help it. (Int5.B, Male, Senior Lecturer).

In contrast to the first group, the second group did not view promotion and publicity as favorable. While the first group considered using connectivity to promote their work constantly as beneficial and crucial for forming collaborations, the second group did not attach the same significance to this aspect. Instead, they expressed concerns that other scholars sharing their research and achievements could create unnecessary pressure for them. As social media as a form of constant connectivity provided a platform for other researchers to promote their work, this is another reason that this group found constant connectivity a challenge for their practices.

I just feel that there is more work to do, and sometimes it could create some... anxiety...So, when I see what other people are doing, and I see that I think... oh...I haven't done that...do I need to do that? (Int17.D, Female, Senior Lecturer).

4.1.3. Constant connectivity as a duality for practice

The third group's perspective on constant connectivity for their teaching and research practices lies at the intersection of the first group's positive perceptions and the second group's negative ones, blurring the boundary that separates these contrasting viewpoints.

This group had a positive view toward spatial and temporal flexibility (i.e., remote work and working out of hours) caused by constant connectivity. Thus, they perceived constant connectivity as a resource for teaching and research practices.

It helps me! Because I don't have to go to work every day. Technology helps me to do my job from home. I only have to be at university when I am teaching. Sometimes I take my laptop...do a few hours...it also helps my mental health... But it doesn't mean that I'm unhappy with that...if an email comes in at 9 pm, I still have to answer. (Int3.A, Female, Lecturer)



However, unlike the first group and similar to the second group, they did not appreciate the distraction enabled by the constant connectivity. For example, the following interviewee chose to work from home whenever it was possible to avoid any distraction:

There are still colleagues...they want to talk and catch up and drop in...these can break some workflow for me. So, to avoid those distractions I work from home. (Int28.H, Male, Associate Professor)

This group argued constant connectivity metaphorically resembled a "double-edged sword". While it empowered them to benefit from spatial and temporal flexibility of teaching and research practices, constant connectivity increased digital distraction and needed extra effort to be managed carefully. Some members of this group leaned toward the enabling aspects of constant connectivity (as a resource for practice). In contrast, others highlighted its contributions to intensifying the challenging dimensions of their practice. However, all confirmed both the dark and bright sides of constant connectivity. For instance, the following participant points out how constant connectivity provided the opportunity for her to work remotely while it contributed to her involuntary distraction:

I'm pretty sure that social media is nothing new in terms of distraction; that's my opinion. But for work-life balance, it's more because I can easily access my work from home because it's all cloud-based. ((Int12.C, Female, Lecturer)

Likewise, another interviewee acknowledged the positive impact of constant connectivity on the promotion and publicity aspect of his research practice. However, he also recognized the potential challenge of involuntary distractions that could arise from spending time on social media.

You may see posts on social media about things that you're researching or from other researchers, so you want to find out more about that. It can be helpful, and it definitely can be distracting. (Int2.A, Male, Senior Lecturer).

Based on the duality perception, constant connectivity blurs the boundaries between nonwork and work domains by facilitating flexibility in teaching and research practices. This has both positive and negative consequences for this group. On one side, constant connectivity enhances self-promotion as a crucial aspect of their research practice. On the other side, it risks privacy preservation in their personal lives. They argued that the work-related use of social media could have increased users' visibility to potential recruiters and other universities. Still, they also had concerns about the privacy of posts, as stated in the following quote:

Whenever I use social media, I kind of use it from the perspective that anything I post online could potentially be seen by a recruiter, or...it needs to be suitable for a job interview, or else I don't post it online...I assume that everything I post online is public. Even if it's behind privacy settings...It's more of a...not so much...my university would...not like it...it's more that I just assume that nothing online is private...data could be accessed. (Int15.D, Male, Lecturer)

Another duality angle suggests that constant connectivity facilitated engagement with the community, which could have led to collaboration as an essential aspect of the research practice. However, maintaining the profiles and posts is time-consuming and requires much effort, which could be spent on the research practice.

You need to be this superhero where you have that public profile, and you're also writing and also engaging with community. You're doing all these things, and you've also got your career...actually maintaining your profile on social media...I see that as part of our job. (Int18.D, Female, Lecturer)

4.2. Boundary management behaviors

After sorting employees' perceptions into three groups, we explored the quotes to uncover if each group reported different boundary management behaviors. We found that workplace social norms shape employees' boundary management behaviors, the flexible nature of work, the sense of digital surveillance, and employees' perception of constant connectivity.

4.2.1. Actualization of constant connectivity as a resource for practice at work

As Figure 2 shows, participants who perceived constant connectivity as a resource for their teaching and research practices reported two boundary management behaviors to benefit from constant connectivity at work i) maintaining self-control or self-policing and ii) self-regulating. By referring to 'self-policing' and 'self-control', the interviewees made a conscious decision. They developed a stable framework to manage unintended/uninvited digital distractions caused by constant connectivity at work. This point is reflected in the following quotes:

I restrict myself. Self-policing! You know? You internalize it. (Int20.E, Male, Lecturer)

They [digital communication technologies] are a little distracting, but I can also control myself and ignore them if I'm doing something that needs all my attention...I do tend to reply pretty promptly to stuff. (Int19.D, Female, Lecturer)

This group of participants also stressed that although constant connectivity could be a source of digital distraction to perform their teaching and research practices, they managed it without issue. In addition to self-policing, their boundary management behavior included self-regulating

how to use emails, social media platforms, and online academic channels. Self-regulation is the ability to follow internally planned actions without external support or reward (VandeWalle et al., 1999). Self-regulation is an adaptive capacity demonstrating the ability to control thoughts, emotions, and actions (Orhan et al., 2021).

With emails, I decide when and where to respond to them. For example, I knew we have a meeting, so I put a notification up, but if I don't know who send an email to me, I will ignore it...I've learned to manage them because if you don't, it's distracting, and you just can't get through your work. (Int22.E, Female, Senior Lecturer)

Similarly, another interviewee explains how she responded to emails to manage the digital distraction:

What often happens is I'll try to be a bit...it's a weird way of doing it...but I pre-answer some emails to be sent out first thing on Monday... I tend to have a very specific work task...and it would usually be...what I try to do is not look at the email. (Int23.E, Female, Senior Lecturer)

We also found that interviewees who saw constant connectivity as a resource for practice tended to use both official and public ICT technologies at work more frequently and effectively. For example, they used instant messengers for board meetings and communications, social media for reducing stress and increasing productivity, instant messengers over official emails for daily work-related communications at work unless a recorded copy or email trail was required, social media for self-promotion and networking with scholars and collaborators around the world. In other words, they instead use informal, public, and popular ICT channels than their employers' official ICT channels. Finally, this group of interviewees had a favourable view regarding digital surveillance and viewed ICT/internet use policies as cybersecurity tools.

We had an attack a few months ago. It was on the news. Have you heard about it? It was horrible. Universities must have strong firewalls and internet use policies. (Int2.A, Male, Senior Lecturer)

4.2.2. Actualization of constant connectivity as a challenge for practice at work

Unlike the first group, participants who perceived constant connectivity as a challenge for their teaching and research practices reported suffering from guilt due to using ICT for nonwork-related purposes at work (Lim, 2002), which we call 'surrendering to constant connectivity compulsion'. The analyses suggest that this group failed to control and manage ICT/ internet use in both domains. For example, one interviewee explains how she got trapped in doing another task while marking students' assignments: It's very difficult to control. Because of all of this...intelligence, they pop up things [during the search for teaching materials] that you might be interested in. And it's really difficult to resist clicking on it. (Int16.D, Female, Lecturer)

Then, she explained that the source of the issue could be poor time management, as academics might end up juggling different tasks while using technology. In other words, she suggested constant connectivity could interfere with task prioritization; therefore, a challenge for her teaching practice:

I think it's also time management...A couple of times I was checking some student references...and it was leading on to a very interesting topic. I thought that I could use them as a case study in my teaching! So, my task was supposed to be marking the assignment, but I ended up looking for teaching materials for updating my lectures! (Int16.D, Female, Lecturer)

One interviewee explains this pressure as an urge to respond to messages, as ignoring them will not solve the problem of needing to respond.

Especially on instant messenger. You feel like you need to respond...even if you don't. It's still hanging there. Like, oh, there's something I need to respond to. (Int16.D, Female, Lecturer)

A similar sentiment came from interviewees who admitted checking work-related emails during non-working hours due to pressure from informal workplace norms.

I always check my work emails at home when I see a notification. I feel I have to respond immediately ...These days, it is expected to answer emails quickly. (Int4. B, Male, Senior Lecturer)

The analysis confirms that this group's negative perception of constant connectivity and the actions adopted to actualize the perception led to a conservative use of ICT compared to the first group. For example, they preferred more official channels designated by their universities, such as official emails for correspondence and WebEx for meetings. In other words, the second boundary management behavior was 'minimizing the connectivity at work. We also found that this group had an unfavourable opinion of digital workplace surveillance. This group of interviewees highlighted their scepticism regarding freedom of speech on the internet and the potential negative consequences that could arise in their workplace if they shared their honest opinions online. Due to not valuing the dimensions of teaching and research practices being facilitated by constant connectivity, such as flexibility and promotion, and having a negative perception of constant connectivity, this group of participants preferred to avoid the digital environment entirely or had severe difficulties managing it. Although most of them were present on social media,



they were neither active nor producing any meaningful content, as indicated by this interviewee:

Part of the reason why I haven't engaged with LinkedIn or Twitter as much is beside the fact that I don't really understand Twitter, but it's how...like...my employer might not like what I post. And, as a result, what will they do to me because I shared something they don't like? (Int21.E, Female, Lecturer)

4.2.3. Actualization of constant connectivity as a duality for practice at work

The data analysis also identified two specific boundary management behaviors adopted by members of the third group to actualize their perception of constant connectivity for teaching and research practices at work (see Figure 2). This group believed that constant connectivity positively contributed to some dimensions of their teaching and research practices. However, they also acknowledged that constant connectivity was the source of the digital intrusion, such as 'involuntary distraction' that could hinder the performance of their research and teaching practices. Thus, they adopted several behaviors and temporary solutions to take advantage of what they call 'positive aspects of constant connectivity for their practices but limit internet use at work. They adopted tactics including muting notifications, putting mobile phones upside down, and avoiding reading emails and text messages during work.

To avoid [answering instant messages]. I set a 45-minute alarm in the phone, and in that time, I do not touch my phone. That's what I try to do...The point is, that I cannot see my phone, so...It's upside down and on mute. Because I know that I will get distracted. (Int3.A, Female, Lecturer)

I've actually turned off all alerts, so I might go into social media accounts once or twice a day...It's my decision. And I've done that deliberately because it was just 'Bing! Bing!' all day long, and I wasn't getting any work done. (Int18.D, Female, Lecturer)

To help address the perceived challenges, they also adopted specific boundary management behaviors to use informal ICTs for work-related activities at work: using social media platforms (e.g., LinkedIn, Facebook, Twitter) to engage with students and collaborators, using social media to self-promote their research, and using instant messengers (e.g., WhatsApp, Facebook Messenger) to send work-related messages to their colleagues.

In LinkedIn we have a group. I'm a member...receive some updates, we can also post things about our school there...being a member of the tutor LinkedIn...it is recommended. They expect students to be engaging with you. (Int3.A, F, Lecturer)

I use Twitter, um...and...so...and LinkedIn. So...I use them...from a professional or networking thing... It's mostly like, academic-related stuff. Or it's promoting things that I'm doing or talking about what I'm doing in the classroom. (Int18.D, F, Lecturer)

As the quotes above show, interviewees who perceived constant connectivity as a duality for their teaching and research practices still tried to benefit from the positive side of constant connectivity for practice but believed the adverse effects of it for practice must be managed and controlled. This group also viewed digital surveillance as compelling and legitimate if universities focused on cyber security and protecting employers' as well as employees' identity/image.

I understand universities need firewalls and monitoring mechanisms to protect information and their image; looking after protecting employees is also important. There should be some training to enhance our skills to deal with nasty messages or comments by students or anyone. (Int21.E, Female, Senior Lecturer)

5. Discussion

Digitalization has enhanced work flexibility and blurred the boundary between work and nonwork activities. Constant connectivity is an affordance created by work digitalization in the twenty first century that has led to spanning boundaries of work and nonwork to incorporate aspects of the other domain. Research to date has provided many insights into the impact of digital technologies on work arrangements and work-life boundaries (Aljabr et al., 2022; Farivar et al., 2022; Gardner et al., 2021). Moreover, the extant literature on affordances (Markus & Silver, 2008) has also emphasized the role of human agency in materializing and using technology. However, there is still a limited understanding of how perceptions of constant connectivity for specific (work) practices might shape or realize boundary management behaviors. This is what we examined in this paper. In particular, adopting the lens of affordance for practice, we aimed to foreground the active role that knowledge workers play in how they perceive constant connectivity for practice and how their perceptions lead to boundary management behaviors. Table 2 summarises our findings.

5.1. Actualizing boundary management behaviors

This study found that knowledge workers perceive constant connectivity as a resource for practice, a challenge for practice, or a duality of resource-challenge for practice. As Table 2 shows, we also showed that each perception drives different boundary management behaviors. Thus, this research contributes to the body of knowledge by considering the active role of knowledge workers (human agency) in managing the blurred boundaries of work and nonwork and theoretically explaining how knowledge workers act on their perceptions of constant connectivity for practice (Fayard & Weeks, 2014; Markus & Silver, 2008; Zheng & Yu, 2016).

Table 2. Summary of findings.

Perceptions of constant connectivity	Boundary management Behaviors	Example			
As a resource	self-policing	"I restrict myself. Self-policing! You know? You internalize it."			
	self-regulating	"With emails, I decide when and where to respond to them. For example, I knew we have a meeting, so I put a notification up, but if I don't know who send an email to me, I will ignore it."			
As a challenge	Surrendering to the constant connectivity compulsion	"It's very difficult to control. Because of all of this intelligencethey pop up things [during the search for teaching materials] that you might be interested in. And it's really difficult to resist clicking on it."			
	Minimizing the connectivity at work	"I was too naïveI thought my laptop was mine, and my emails were private. But I learnt it in the hardest way; employers read our emails. I lost my previous job because I emailed a colleague and wrote my real opinion about our manager After that, I've never used university emails to talk with my colleagues. Everything that I do on this laptop is totally work-related" (Int10.C, Male, Senior Lecturer)			
As a duality	Limiting the connectivity temporarily at work	" I turn my cellphone so I can't see its screen and notifications when I am working on my research. I check messengers during lunch" (Int24.E, Female, Lecturer)			
	Limiting the cross-boundary connectivity in both domains	"I log off from university email when I am at homeI only check university emails at work" (Int12.C , Female Lecturer)			

We uncovered that 'limiting connectivity temporarily' and 'limiting the cross-boundary connectivity in both domains' are mainly adopted by knowledge workers who see constant connectivity as a duality (resource-challenge) for their work practices. Through these behaviors, these knowledge workers try to balance the benefits and challenges of constant connectivity for performing their work practices by adjusting the boundaries and integration without creating a disconnection between domains.

Moreover, 'maintaining self-control' and 'self-regulating' are chosen by knowledge workers who perceive constant connectivity as a resource for practice, while 'surrendering to the constant connectivity compulsion' and 'minimizing connectivity at work' occurs among knowledge workers who view constant connectivity as a challenge for practice. Our findings support Farivar et al. (2022) conceptualization of digital intrusion versus digital distraction. We found that not all digital distractions driven by constant connectivity led to perceptions of its negative impact on work practices. Employees who perceived constant connectivity as a resource for practice used digital distraction as a coping mechanism to take short breaks and refresh their minds, which would positively contribute to their work.

On the contrary, if employees viewed constant connectivity as a challenge for practice, they reactively tried to avoid and minimize ICT use or surrendered to the force of constant connectivity, in some cases, to avoid the resulting pressure. They also experienced digital intrusion that could negatively impact their performance in both work and nonwork domains. As a result of such experiences, knowledge workers could exercise some level of control over boundaries (Matthews et al., 2014).

5.2. The role of ICT/internet policies and norms

Our findings confirm that knowledge workers do not necessarily pay attention to organizational ICT/internet use policies when deciding how to actualize their perception of constant connectivity for practice except when the negative consequences of using ICTs is severe, such as losing the job for expressing opinions freely on social media. Further, employees are more likely to rely on their intuition, informal norms, and common sense of restriction on constant connectivity and use of ICTs. However, their perception of constant connectivity for practice forms different opinions about ICT/internet use policies. We found that employees who viewed constant connectivity as a resource for practice were more likely to focus on positive aspects of ICT/internet use policies, like their strong impact on cyber security. On the contrary, employees who perceived constant connectivity as a challenge for practice concentrated on negative and limiting aspects of ICT/internet use policies. They were concerned that their participation in the virtual world would conflict with their employers and negatively impact how they perform their work practices. Finally, employees who assessed constant connectivity as a duality of resource-challenge for practice believed ICT/internet use policies should protect employers and employees.

Gadeyne et al. (2018) quantitative results show employees might perceive constant connectivity as social pressure to be always available and connected to work. Similarly, our findings highlighted the role of social norms rather than ICT/internet policies in forming boundary management behaviors. For instance, several interviewees indicated that once they receive notifications related to students' emails or texts, they feel an urgency to read and respond to students because it is a norm in their organizational culture. Due to this social pressure, they preferred to set up their work emails on their phones and check their work emails after working hours and on weekends. Nonetheless, in our case, despite the policy documents being transparent and having strict language, the knowledge workers did not consider these policies on how to use technology.

5.3. Theoretical contributions

This study makes two main contributions to the literature. First, it contributes to the work-life literature by analyzing how knowledge workers

manage work flexibility and the blurred boundaries between work and nonwork regardless of digital interruptions. Our findings confirmed boundary management behaviors are formed based on the employees' perceptions of constant connectivity for practice. By considering the affordances for the practice approach, this study investigates the new possibilities caused by constant connectivity instead of focusing on technical features. For example, when constant connectivity was adopted in the Education sector to facilitate teaching practices, no one considered the possibility of how it might result in distraction. Our findings show that constant connectivity can be a distraction, depending on how users use it in their practices.

The results show that one of the most adopted strategies for constant connectivity was actively self-regulating to take advantage of constant connectivity as a resource for practice and fulfil work and nonwork responsibilities. Our findings about the impact of self-regulation on managing constant connectivity provide new insights into Orhan et al. (2021) research. Orhan and his colleagues found that digital distractions deplete employees' self-regulation power and break down self-control. On the contrary, we found that employees who consider constant connectivity a resource for practice use self-regulation and self-control to manage the dark side of constant connectivity, like digital distractions. Therefore, boundary management behavior is not just about separating the work and nonwork domains but rather about how knowledge workers initiate strategies to manage the blurredness of these domains.

Second, our study contributes to the recent discussions in human resource management regarding the need for a more focused approach to understanding how technology is embedded in organizations and employees' work practices (Petani & Mengis, 2021). In this respect, we respond to this call by taking up an affordance for practice perspective and considering the role of human agency in perceiving and actualizing affordances of digital technologies used for work and nonwork purposes in either domain. Our study found that neither technological features nor organizational policies determine how employees use digital technologies. The three perceptions of constant connectivity for practice and their associated boundary management behaviors demonstrate that the individual user's agency plays a crucial role in technology enactment.

Third, this study found that social norms could be more critical than ICT/internet use policies in forming employees' perception of constant connectivity. We found no connection between employees' perception of constant connectivity for practice and the level of strictness/leniency in ICT/internet use policies. We had mixed participants in each group working in universities with negative, neutral, and positive sentiments toward ICT/internet use at the workplace. This study shows that the organizational context as the social setting plays a crucial role in employees' perceptions of constant connectivity, which consequently shapes boundary management behaviors. The organizational context in our study includes social norms at work as well as work flexibility.

5.4. Practical implications

Our findings have practical implications to help managers and leaders deal with the negative aspects of constant connectivity for practice. These findings are arguably even more relevant following the outbreak of the COVID-19 pandemic, which has produced a surge of remote working and made the work and nonwork boundaries even more blurred. First and foremost, our study suggests that the availability of ICT/internet use policies is not as effective in controlling and managing ICT use at work as organizations envisage. On the contrary, behavioral/social norms at the workplace and how employees perceive constant connectivity are critical in controlling ICT use. Therefore, organizations need to study ICT-related social/behavioral norms in the workplace as well as how their employees perceive constant connectivity before designing any ICT/internet policy.

Second, managers need to understand that the availability of a policy does not guarantee awareness of the policy. In addition, an email including links to the policies does not necessarily increase employees' awareness of policies. Our data showed that many interviewees did not know about their employers' ICT/internet use policies. In addition, we found that even among those who were aware of the ICT/internet policies, social norms and their perceptions controlled their boundary management behaviors. Thus, our findings are applicable in training programs as this study suggests the best way to deal with negative aspects of constant connectivity is 'modifying the norms and perceptions'.

5.5. Limitations and future research

Our research is not without limitations. First, since this is one of the first studies to examine the dynamics of employees' perceptions of constant connectivity in association with contextual factors (e.g., work flexibility and an organization's social norms), further research is needed. Future studies may uncover other boundary management behaviors if different contextual factors are present. For example, IT- use and security policies might be very stringent in some organizations, such as healthcare or law enforcement, due to the nature of data or work practices, and employees might go through specific training. Although there might still be the use of personal devices or accessing work systems from home, employees might show other boundary management behaviors due to such

contextual factors. Second, we conducted this research within academia following other relevant studies (e.g., Aljabr et al., 2022; Wajcman et al., 2008). Further research is required to study this phenomenon in other organizational contexts and sectors. For example, employees' perceptions might differ within inflexible organizations (e.g., the automotive industry) or born-digital organizations such as Spotify and Netflix. Thus, further studies are required to investigate how constant connectivity may be perceived in different industries for different practices in those industries.

Third, although we found the role of social norms at work in boundary management behaviors was more substantial than the impact of ICT/ internet policies, we did not distinguish between different social norms. Different social norms at work can cause different boundary management behaviors, which need further investigation. For example, in some sectors, there might be more flexibility towards information sharing and deadlines, or in other sectors and organizations, dealing with customers' complaints urgently could be a norm that might require ubiquitous access and ongoing monitoring of systems and influence employees' boundary management behaviors. Finally, in the present study, we could not investigate the impact of age on employees' perceptions, as all academics who responded to our interviewee invitations were between 40-and 50 years of age. Although constant connectivity is increasingly being incorporated into the everyday routines of older adults, younger and older adult users may perceive constant connectivity differently and adopt different boundary management behaviors, so we suggest further studies are required to examine the dynamics between age, contextual factors, constant connectivity and boundary management behaviors.

6. Conclusion

In this paper, we reported on knowledge workers' experiences and perceptions of constant connectivity for practice. We concluded that three perceptions of constant connectivity trigger specific boundary management behaviors, including constant connectivity as a challenge for practice, resource for practice, or duality of challenge-resource for practice. Specifically, we found that the impact of social norms on shaping boundary management behaviors is more potent than official workplace policies except when the negative consequences of ignoring the policies are severe (i.e., losing their jobs).

Data availability

The data supporting this study's findings are available on request from the corresponding author.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Farveh Farivar (D) http://orcid.org/0000-0001-8413-8143

References

- Aljabr, N., Chamakiotis, P., Petrakaki, D., & Newell, S. (2022). After-hours connectivity management strategies in academic work. *New Technology, Work and Employment*, 37(2), 185–205. https://doi.org/10.1111/ntwe.12217
- Allen, T. D., & Martin, A. (2017). The work-family interface: A retrospective look at 20 years of research in JOHP. *Journal of Occupational Health Psychology*, 22(3), 259–272. https://doi.org/10.1037/ocp0000065
- Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *The Academy of Management Review*, 25(3), 472–491. https://doi.org/10.2307/259305
- Bar-Ilan, J. (2019). Data Collection from the Web for Informetric Purposes. In Glänzel, W., Moed, H. F., Schmoch, U., Thelwall, M. (Eds.), Springer Handbook of Science and Technology Indicators (pp. 781–800), Cham: Springer.
- Bretschneider, S., & Parker, M. (2016). Organization formalization, sector and social media: Does increased standardization of policy broaden and deepen social media use in organizations? *Government Information Quarterly*, 33(4), 614–628. https://doi.org/10.1016/j.giq.2016.09.005
- Bryman, A., & Bell, E. (2011). Business research methods. Oxford University Press.
- Büchler, N., ter Hoeven, C. L., & van Zoonen, W. (2020). Understanding constant connectivity to work: How and for whom is constant connectivity related to employee well-being? *Information and Organization*, 30(3), 100302. https://doi.org/10.1016/j.infoandorg.2020.100302
- Butts, M. M., Becker, W. J., & Boswell, W. R. (2015). Hot buttons and time sink: The effects of electronic communication during nonwork time on emotions and work-nonwork conflict. *Academy of Management Journal*, 58(3), 763–788. https://doi.org/10.5465/amj.2014.0170
- Capitano, J., DiRenzo, M. S., Aten, K. J., & Greenhaus, J. H. (2017). Role identity salience and boundary permeability preferences: An examination of enactment and protection effects. *Journal of Vocational Behavior*, 102, 99–111. https://doi.org/10.1016/j.jvb.2017.07.001
- Chen, H., Chiang, R. H. L., & Storey, V. C. (2012). Business intelligence and analytics: From big data to big impact. *Management Information Systems Quarterly*, 36(4), 1165–1188. https://doi.org/10.2307/41703503
- Chen, Y., & Fulmer, I. S. (2018). Fine-tuning what we know about employees' experience with flexible work arrangements and their job attitudes. *Human Resource Management*, 57(1), 381–395. https://doi.org/10.1002/hrm.21849
- Cho, J., & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative Research*, 6(3), 319–340. https://doi.org/10.1177/1468794106065006
- Choi, S. (2020). Flexible work arrangements and employee retention: A longitudinal analysis of the federal workforces. *Public Personnel Management*, 49(3), 470–495. https://doi.org/10.1177/0091026019886340



- Cobb, H. R., Murphy, L. D., Thomas, C. L., Katz, I. M., & Rudolph, C. W. (2022). Measuring boundaries and borders: A taxonomy of work-nonwork boundary management scales. Journal of Vocational Behavior, 137(9), 103760. https://doi.org/10.1016/j. jvb.2022.103760
- Daniel, S., & Sonnentag, S. (2016). Crossing the borders: The relationship between boundary management, work-family enrichment and job satisfaction. The International Journal of Human Resource Management, 27(4), 407-426. https://doi.org/10.1080/0958 5192.2015.1020826
- Daniel, E., Di Domenico, M. L., & Nunan, D. (2018). Virtual mobility and the lonely cloud: Theorizing the mobility-isolation paradox for self-employed knowledge-workers in the online home-based business context. Journal of Management Studies, 55(1), 174-203. https://doi.org/10.1111/joms.12321
- De Menezes, L. M., & Kelliher, C. (2011). Flexible working and performance: A systematic review of the evidence for a business case. International Journal of Management Reviews, 13(4), 452–474. https://doi.org/10.1111/j.1468-2370.2011.00301.x
- Doargajudhur, S. M., & Hosanoo, Z. (2023). The mobile technological era: Insights into the consequences of constant connectivity of personal devices by knowledge workers. Information Technology & People, 36(2), 701-733. https://doi.org/10.1108/ITP-08-2021-0593
- Donnelly, R., & Johns, J. (2021). Recontextualising remote working and its HRM in the digital economy: An integrated framework for theory and practice. International Journal of Human Resource Management, 32(1), 84-105. https://doi.org/10.1080/09585 192.2020.1737834
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative content analysis: A focus on trustworthiness. SAGE Open, 4(1), 215824401452263. https://doi.org/10.1177/2158244014522633
- Farivar, F., Esmaeelinezhad, O., & Richardson, J. (2022). Digital intrusions or distractions at work and work-Life conflict. New Technology, Work and Employment, 37(3), 363-380. https://doi.org/10.1111/ntwe.12235
- Farivar, F., & Richardson, J. (2021). Workplace digitalization and work-nonwork satisfaction: The role of spillover social media. Behaviour & Information Technology, 40(8), 747–758. https://doi.org/10.1080/0144929X.2020.1723702
- Farivar, F. (2015). Online social networking and work-family balance: Friends or foes? Curtin Business School, Curtin University.
- Fayard, A.-L., & Weeks, J. (2007). Photocopiers and water-coolers: The affordances of informal interaction. Organization Studies, 28(5), 605-634.
- Fayard, A.-L., & Weeks, J. (2014). Affordances for practice. Information and Organization, 24(4), 236-249. https://doi.org/10.1016/j.infoandorg.2014.10.001
- Gadeyne, N., Verbruggen, M., Delanoeije, J., & De Cooman, R. (2018). All wired, all tired? Work-related ICT-use outside work hours and work-to-home conflict: The role of integration preference, integration norms and work demand. Journal of Vocational Behavior, 107(8), 86–99. https://doi.org/10.1016/j.jvb.2018.03.008
- Gardner, D. M., Lauricella, T., Ryan, A. M., Wadlington, P., & Elizondo, F. (2021). Managing boundaries between work and nonwork domains: Personality and job characteristics and adopted style. Journal of Occupational and Organizational Psychology, 94(1), 132–159. https://doi.org/10.1111/joop.12339
- Gibson, J. J. (1979). The ecological approach to visual perception: Classic edition. Houghton Mifflin.
- Gohoungodji, P., Bernadine N'Dri, A., & Matos, A. L. B. (2022). What makes telework work? Evidence of success factors across two decades of empirical research: A system-



- atic and critical review. International Journal of Human Resource Management, 34(3),
- Gratton, L. (2021). How to do hybrid right. Harvard Business Review, 99(3), 65-74.
- Hammersley, M., & Atkinson, P. (1995). Ethnography: Principles in practice. Routledge.
- Hutchby, I. (2001). Technologies, texts and affordances. Sociology, 35(2), 441-456.
- Kim, S. (2018). Managing millennials' personal use of technology at work. Business Horizons, 61(2), 261-270. https://doi.org/10.1016/j.bushor.2017.11.007
- Kossek, E. E., Lautsch, B. A., & Eaton, S. C. (2006). Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work-family effectiveness. Journal of Vocational Behavior, 68(2), 347-367. https://doi.org/10.1016/j.jvb.2005.07.002
- Kossek, E. E., & Lautsch, B. A. (2018). Work-life flexibility for whom? Occupational status and work-life inequality in upper, middle, and lower-level jobs. Academy of Management Annals, 12(1), 5-36.
- Kumar, S., Sarkar, S., & Chahar, B. (2023). A systematic review of work-life integration and role of flexible work arrangements. *International Journal of Organizational Analysis*, 31(3), 710–736. https://doi.org/10.1108/IJOA-07-2021-2855
- Lemmer, K., Jahn, K., Chen, A., & Niehaves, B. (2023). One tool to rule? A field experimental longitudinal study on the costs and benefits of mobile device usage in public agencies. Government Information Quarterly, 40(3), 101836. https://doi. org/10.1016/j.giq.2023.101836
- Liang, H., Saraf, N., Hu, Q., & Xue, Y. (2007). Assimilation of enterprise systems: The effect of institutional pressures and the mediating role of top management. MIS Quarterly, 31(1), 59-87. https://doi.org/10.2307/25148781
- Lim, V. K. G. (2002). The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. Journal of Organizational Behavior, 23(5), 675-694. https://doi. org/10.1002/job.161
- Liu, B. (2020). Sentiment analysis: Mining opinions, sentiments, and emotions. Cambridge University Press.
- Markus, M. L., & Silver, M. S. (2008). A foundation for the study of IT effects: A new look at DeSanctis and Poole's concepts of structural features and spirit. Journal of the Association for Information Systems, 9(10), 609–632. https://doi.org/10.17705/1jais.00176
- Matthews, R. A., Winkel, D. E., & Wayne, J. H. (2014). A longitudinal examination of role overload and work-family conflict: The mediating role of interdomain transitions. Journal of Organizational Behavior, 35(1), 72-91. https://doi.org/10.1002/job.1855
- Mazmanian, M. (2013). Avoiding the trap of constant connectivity: When congruent frames allow for heterogeneous practices. Academy of Management Journal, 56(5), 1225-1250. https://doi.org/10.5465/amj.2010.0787
- Mazmanian, M., Orlikowski, W. J., & Yates, J. A. (2013). The autonomy paradox: The implications of mobile email devices for knowledge professionals. Organization Science, 24(5), 1337–1357. https://doi.org/10.1287/orsc.1120.0806
- McNall, L. A., Masuda, A. D., & Nicklin, J. M. (2010). Flexible work arrangements, job satisfaction, and turnover intentions: The mediating role of work-to-family enrichment. The Journal of Psychology, 144(1), 61-81. https://doi.org/10.1080/00223980903356073
- Miles, M., Huberman, A. M., & Saldana, J. (2014). Qualitative data analysis: A methods sourcebook. Sage Publications, Inc.
- Morrow, S. (2005). Quality and trustworthiness in qualitative research in counseling psychology. Journal Counseling Psychology, 52(2), 250-260. https://doi. of org/10.1037/0022-0167.52.2.250
- Neirotti, P., Raguseo, E., & Gastaldi, L. (2019). Designing flexible work practices for job satisfaction: The relation between job characteristics and work disaggregation in dif-



- ferent types of work arrangements. New Technology, Work and Employment, 34(2), 116-138. https://doi.org/10.1111/ntwe.12141
- Norman, D. A. (2013). The Design of Everyday Things: Revised and expanded edition, Basic Books.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. International Journal of Qualitative Methods, 16(1), 160940691773384. https://doi.org/10.1177/1609406917733847
- Orhan, M. A., Castellano, S., Khelladi, I., Marinelli, L., & Monge, F. (2021). Technology distraction at work. Impacts on self-regulation and work engagement. Journal of Business Research, 126, 341-349. https://doi.org/10.1016/j.jbusres.2020.12.048
- Orlikowski, W. J., & Scott, S. V. (2008). 10 sociomateriality: Challenging the separation of technology, work and organization. Academy of Management Annals, 2(1), 433-474. https://doi.org/10.5465/19416520802211644
- Petani, F. J., & Mengis, J. (2021). Technology and the hybrid workplace: The affective living of IT-enabled space. International Journal of Human Resource Management, 34(8), 1530–1553.
- Putnam, L. L., Myers, K. K., & Gailliard, B. M. (2014). Examining the tensions in workplace flexibility and exploring options for new directions. Human Relations, 67(4), 413-440. https://doi.org/10.1177/0018726713495704
- Reinke, K., & Gerlach, G. I. (2022). Linking availability expectations, bidirectional boundary management behavior and preferences, and employee well-being: An integrative study approach. Journal of Business and Psychology, 37(4), 695-715. https://doi. org/10.1007/s10869-021-09768-x
- Schlachter, S., McDowall, A., Cropley, M., & Inceoglu, I. (2018). Voluntary work-related technology use during nonwork time: A narrative synthesis of empirical research and research agenda. International Journal of Management Reviews, 20(4), 825-846. https:// doi.org/10.1111/ijmr.12165
- Senarathne Tennakoon, K. L. U., Da Silveira, G. J. C., & Taras, D. G. (2013). Drivers of context-specific ICT use across work and nonwork domains: A boundary theory perspective. Information and Organization, 23(2), 107-128. https://doi.org/10.1016/j.infoandorg.2013.03.002
- Sheer, V. C., & Rice, R. E. (2017). Mobile instant messaging use and social capital: Direct and indirect associations with employee outcomes. *Information & Management*, 54(1), 90-102. https://doi.org/10.1016/j.im.2016.04.001
- Shifrin, N. V., & Michel, J. S. (2022). Flexible work arrangements and employee health: A meta-analytic review. Work & Stress, 36(1), 60-85. https://doi.org/10.1080/02678373 .2021.1936287
- Shockley, K. M., & Allen, T. D. (2010). Investigating the missing link in flexible work arrangement utilization: An individual difference perspective. Journal of Vocational Behavior, 76(1), 131–142. https://doi.org/10.1016/j.jvb.2009.07.002
- Stopfer, J. M., & Gosling, S. D. (2013). Online social networks in the work context. In Cary Cooper, (Ed.), The psychology of digital media at work (pp. 45-65). Psychology Press.
- ten Brummelhuis, L. L., ter Hoeven, C. L., & Toniolo-Barrios, M. (2021). Staying in the loop: Is constant connectivity to work good or bad for work performance? Journal of Vocational Behavior, 128, 103589. https://doi.org/10.1016/j.jvb.2021.103589
- VandeWalle, D., Brown, S. P., Cron, W. L., & Slocum, J. W.Jr (1999). The influence of goal orientation and self-regulation tactics on sales performance: A longitudinal field test. Journal of Applied Psychology, 84(2), 249–259. https://doi.org/10.1037/0021-9010.84.2.249



- Vaziri, H., Casper, W. J., Wayne, J. H., & Matthews, R. A. (2020). Changes to the workfamily interface during the COVID-19 pandemic: Examining predictors and implications using latent transition analysis. The Journal of Applied Psychology, 105(10), 1073-1087. https://doi.org/10.1037/apl0000819
- Venkatraman, V. (2017). The digital matrix: New rules for business transformation through technology. LifeTree Media.
- Volkoff, O., & Strong, D. M. (2013). Critical realism and affordances: Theorizing IT-associated organizational change processes. MIS Quarterly, 37(3), 819-834. https:// doi.org/10.25300/MISQ/2013/37.3.07
- Voydanoff, P. (2001). Conceptualizing community in the context of work and family. Community, Work & Family, 4(2), 133-156. https://doi.org/10.1080/713658928
- Wajcman, J., Bittman, M., & Brown, J. E. (2008). Families without borders: Mobile phones, connectedness and work-home divisions. Sociology, 42(4), 635-652. https:// doi.org/10.1177/0038038508091620
- Wajcman, J., & Rose, E. (2011). Constant connectivity: Rethinking interruptions at work. Organization Studies, 32(7), 941-961. https://doi.org/10.1177/0170840611410829
- Wang, B., Liao, Y., Chen, M., Zhang, L., & Qian, J. (2021). Work and affective outcomes of social media use at work: A daily-survey study. International Journal of Human Resource Management, 34(5), 941-965.
- Wepfer, A. G., Allen, T. D., Brauchli, R., Jenny, G. J., & Bauer, G. F. (2018). Work-life boundaries and well-being: Does work-to-life integration impair well-being through lack of recovery? Journal of Business and Psychology, 33(6), 727-740. https://doi. org/10.1007/s10869-017-9520-y
- Zheng, Y., & Yu, A. (2016). Affordances of social media in collective action: The case of free lunch for children in China. Information Systems Journal, 26(3), 289-313. https:// doi.org/10.1111/isj.12096

Appendix

Interview tool

- How and why do you use information communication technologies such as instant messengers, online chats, emails, blogs, and social media at work and outside work?
- 2. How often do you check your personal emails or respond to them when you are working?
- Would you check your work emails during non-working hours or weekends? 3.
- How often do you check your social media accounts daily (at home and at work)?
- How do you deal with non-stop connectivity to the internet at work and home?
- Would you respond to a text message on messaging apps immediately at work? What if it is nonwork-related?