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Digital Burnout and Cognitive Errors in Remote Teaching: A Practical Study

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Abstract
This study examined the association of digital burnout with work–life boundary blurring, mental workload and professional cognitive errors among remote teaching university teachers in Algeria. The objective was to check whether digital burnout and the blurring of work–life boundaries are associated with cognitive errors in the workplace, and whether mental workload plays a mediating role in these associations. Methods: This study used quantitative cross-sectional design. The data were collected through a structured questionnaire administered to 150 university teachers from several regions in Algeria. The instrument covered four variables: digital burnout, work–life boundary blurring, mental workload and occupational cognitive errors. Were analysed with the help of Descriptive statistics, reliability analysis, correlation analysis, multiple regression and mediation analysis. The findings indicated a direct relationship between digital burnout and work-life boundary blurring with professional cognitive errors. The two variables were also positively correlated to mental workload. Having a heavy job workload was a significant predictor of professional cognitive errors and partially mediated the associations between independent variables and dependent variable. These findings indicate that the cognitive challenges faced by remote university teachers stem not only from digital tool usage, but also from the cognitive load generated by constant connectivity demands and blurred boundaries between professional and personal life.

Keywords: digital workload; burnout; work–life boundary blurring, cognitive errors, remote teaching; university teachers; Algeria

Résumé
Cette étude a examiné le lien entre l'épuisement numérique, le flou entre vie professionnelle et vie privée, la charge mentale et les erreurs cognitives professionnelles chez les enseignants universitaires pratiquant l'enseignement à distance en Algérie. L'objectif était de vérifier si l'épuisement numérique et le flou entre vie professionnelle et vie privée sont associés à des erreurs cognitives sur le lieu de travail, et si la charge mentale joue un rôle de médiation dans ces associations. Méthodes : Cette étude a utilisé un plan d'étude transversal quantitatif. Les données ont été recueillies à l'aide d'un questionnaire structuré administré à 150 enseignants universitaires issus de plusieurs régions d'Algérie. L'instrument couvrait quatre variables : l'épuisement numérique, le flou entre vie professionnelle et vie privée, la charge mentale et les erreurs cognitives professionnelles. Les données ont été analysées à l'aide de statistiques descriptives, d'une analyse de fiabilité, d'une analyse de corrélation, d'une régression multiple et d'une analyse de médiation. Les résultats ont mis en évidence une relation directe entre l'épuisement numérique et le flou entre vie professionnelle et vie privée, d'une part, et les erreurs cognitives professionnelles, d'autre part. Ces deux variables présentaient également une corrélation positive avec la charge de travail mentale. Une charge de travail importante s'est avérée être un prédicteur significatif des erreurs cognitives professionnelles et a partiellement joué un rôle de médiation dans les associations entre les variables indépendantes et la variable dépendante. Ces résultats indiquent que les difficultés cognitives rencontrées par les enseignants universitaires en télétravail ne découlent pas seulement de l'utilisation des outils numériques, mais également de la charge cognitive générée par les exigences de connectivité permanente et par le flou des frontières entre vie professionnelle et vie privée.

Mots-clés : charge de travail numérique ; épuisement professionnel ; flou des frontières entre vie professionnelle et vie privée ; erreurs cognitives ; enseignement à distance ; enseignants universitaires ; Algérie

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Introduction

Remote teaching has altered nature of academic work in higher education. University teachers of today are juggling lectures, supervision, meetings and administration with assessments and communication across digital platforms. It has opened up greater scope for flexibility in certain aspects of academic work but equally introduced fresh pressures.

But when you are teaching remotely, digital tools are always being used. Teachers can spend extended time designing online courses, conducting virtual classes, responding to emails, grading tasks through platforms and communicating with students and colleagues via multiple digital means! This overuse of technology can gradually lead to a digital burnout or a state of mental and emotional fatigue characterized by low energy due to excessive digital demands. Moreover, the persistent requirement to be available on these platforms will often blur the lines between work and home life, thereby exerting a significant strain on teachers' cognitive resources (Lousada et al., 2026).

In a classical university, you have this clear spatial and temporal cut of professional and private sphere. But much of this responsibility has been shifted into the home, through remote teaching. As a consequence, teachers are being contacted about work-related issues outside of working hours, having to plan lessons in their own time or feeling unable to unplug from their jobs.

This circumstances can unsureness the mental work condition. Mental workload is defined as the mental effort required to process information, organize work activities,

maintain concentration, make decisions and respond with multiple tasks at the same time. Training teachers from October 2023 Already, high levels of digital demands and leaking boundaries between work and private life may exceed the cognitive resources available to many teaching professionals. This cognitive saturation can reduce concentration, and result in a drop in performance as the brain bounces between competing tasks, fumbling with having to adapt to the added pressures of an increased volume of digital communication and non-negotiable deadlines (Zheng et al., 2022).

This overload can cause cognitive errors in your work. Some of the academic errors can be: not checking those important emails; mixing up deadlines; misplaced files; missing pieces in students drafts; wrong organisation around the online courses and meetings. While these may appear trivial, they affect overall academic work quality, induce stress and can cut crucial professional efficiency.

The current study is concerned about the experience of Algerian university teachers in remote/ hybrid teaching. It examines to what extent digital burnout and work–life boundary blurring predict professional cognitive errors, as well as the mediating role of mental workload in these relationships.

The central research question is:

The main objective of this research is to investigate whether the extent of digital burnout and work–life boundary blurring predict professional cognitive errors among remote university teachers in Algeria, and if mental workload mediates these relations.

This study was guided by the following hypotheses

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H1: Digital burnout positively predicts the professional cognitive errors of remote university teachers. H2: Work–life boundary blurring is significantly positive predictors of professional cognitive errors of remote university teachers. Hypothesis 3 (H3): Digital burnout positively predicts mental workload. H4: H4: Work–life boundary blurring has a positive effect on mental workload H5: Mental workload will positively predict cognitive errors in the profession. H6: Mental workload mediates the effect of digital burnout on professional cognition errors. Hypotheses H7 a,b: The relationship between work–life boundary blurring and professional cognitive errors is mediated by mental workload.

1. Method

1.1 Research Design

This was a quantitative cross-sectional study. This was attempted to study the associations of digital burnout, work–life boundary blurring, mental workload and professional cognitive errors among university teachers in Algeria.

The magnitudes of digital burnout and work–life boundary blurring are viewed as two independent variables. Dependent variable was professional cognitive errors, while mental workload was the mediating variable.

1.2 Participants

This research is based on 150 university teachers of different regions in Algeria. Participants were recruited from Centre/North, East, West, High Plateaus and South universities.

The male teachers and female teachers who participated were of varying age groups and academic ranks. Participants were experienced with both remote or hybrid teaching and usage of digital tools in academic work.

Participants were from the following regions:

Region	N	Percentage
Centre/North	45	30.0%
East	38	25.3%
West	34	22.7%
High Plateaus	20	13.3%
South	13	8.7%
Total	150	**100%**

The final sample was composed of 80 male teachers and 70 female.

Age Group	N	Percentage
Under 45 years	81	54.0%
45–54 years	52	34.7%
55 years and above	17	11.3%
Total	150	**100%**

Methods academic rank distribution:

Academic Rank	N	Percentage
Assistant Lecturer	30	20.0%
Lecturer B	45	30.0%
Lecturer A	39	26.0%
Professor	36	24.0%
Total	150	**100%**

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1.3 Instruments

MethodThe data were collected using a structured questionnaire including four scales. All items were rated on a 5-point Likert scale from:
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
Higher scores indicated greater levels of the assessed variable.

1.3.1 Digital Burnout

Digital burnout was operationalized with six items related to mental exhaustion, stress, overload and fatigue in the context of academic work surrounding digital technologies. These included experience, such as being exhausted from online teaching, feeling pressured by digital platforms and facing overload due to electronic communication.
Example items included:

- feel mentally exhausted after teaching online using digital tools.
- I feel overwhelmed by the volume of digital messages related to my work.
- Teaching online platforms add more stress to my job.

1.3.2 Work–Life Boundary Blurring

We assessed work–life boundary blurring based on six items of the difficulty between separating professional from personal life while engaging in remote teaching conditions.

These included topics such as work interruptions during personal time, messages outside of formal working hours, and challenges in detaching oneself from academic work.
Example items included:
"I regularly receive work-related messages outside of official working hours."
"I find it difficult to disconnect from academic work during my personal time."

2.3.3 Mental Workload

Mental Work Load was defined by 6 items that assess the cognitive effort, multitasking ability, time pressure, concentration demands and mental overload. They were contextualised to the remote academic work.
Example items included:
"Remote teaching requires a high level of cognitive effort."
"I am frequently forced to juggle multiple digital tasks simultaneously."

1.3.4 Professional Cognitive Errors

Cognitions relating to professional errors were assessed though the Wiseman cognitive failure questionnaire, a 6-item measure of low level cognitive failures in academic tasks spanning attentional lapses (e.g. They tended to forget, mix things up, leave out details and screw up the organisation of what they compiled.

Example items included:
I forget to respond to important academic or administrative notices.
I mix up online meeting links, documents or deadlines.
Some examples of "I miss key information in students' work.

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1.4 Data Analysis

Several statistical procedures were used to analyze the data. Descriptive statistics were then computed to provide an overview of the overall range and nature of each variable. Second, we performed a reliability analysis with Cronbach's alpha to evaluate the scales' internal consistency. Third, we conducted the Pearson correlation analysis to determine the correlations of study variables. Fourth, using a multiple regression analysis, we tested the direct influences of digital burnout and work–life boundary blurring on professional cognitive errors and mental workload. Mediation analysis was finally conducted to explore whether mental workload was the mediating variable between the independent variables and professional cognitive errors.

2. Results

2.1 Reliability Analysis

The reliability coefficients indicated acceptable internal consistency for the four scales. The values of Cronbach's alpha ranged from. 81 to. 85, proving that the items utilized to measure each variable were consistent enough.

Variable	Number of Items	Cronbach's Alpha
Digital Burnout	6	.81
Work–Life Boundary Blurring	6	.85
Mental Workload	6	.83
Professional Cognitive Errors	6	.81

Such results mean that the questionnaire had the appropriate reliability and reproducibility and allowed one to assess relationships between variables as well.

2.2 Descriptive Statistics

Table 2 presents descriptive statistics of digital burnout, work–life boundary blurring, mental workload and professional cognitive errors among the participants.

Variable	Mean	Standard Deviation	Minimum	Maximum
Digital Burnout	3.06	0.66	1.50	5.00
Work–Life Boundary Blurring	3.10	0.72	1.33	5.00
Mental Workload	3.11	0.68	1.67	4.83
Professional Cognitive Errors	3.10	0.67	1.17	4.50

Digital burnout: The average score shows that university teachers experienced a moderated level of fatigue associated with the use of digital tools. This indicates that digital teaching was not viewed as a totally negative experience, but it still described a source of cognitive and psychological strain.

Work–life boundary blurring was also moderate. This result indicates that remote teaching made it challenging to delineate between academic responsibilities and personal life.

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The high average suggests a number of teachers were required to work outside the normal limits of time and place.

Mental workload also arrived at a medium level This indicates participants considered remote teaching to be cognitively engaging. Results indicated that the teaching technique of an online class requires focused attention on the task, working collaboratively with colleagues, and continuously monitoring these interactions.

Cognitive failures in work were also experienced at a medium level. It suggests there were intellectual slips in academic work, but they weren't extreme. These mistakes might indicate the challenge of juggling multiple digital commitments simultaneously.

2.3 Correlation Analysis

The positive relationships between all study variables were found in the correlation matrix.

Variables	1	2	3	4
Digital Burnout	1			
Work–Life Boundary Blurring	.46	1		
Mental Workload	.58	.44	1	
Professional Cognitive Errors	.44	.44	.47	1

Coworkers may experience more digital burnout than other team members as a result of their mental workload and professional cognitive mistakes. In haikus:More digital fatigue higher mental workload, more professional cognitive errors.

The researchfound a positive correlation between work–life boundary blurring, mental workload and professional cognitive errors. This means that more tricky boundaries between work and life were related to higher cognitive load and more lapses of the mindon the job.

There were significant positive correlations of mental workload with professional cognitive errors. This implies that the cognitive demands in the classroom are more likely to describe their errors as related to attention, memory, organization or task management.

2.4 Regression Analysis

The regression model 1: professional cognitive errors why digital burnout and work–life boundary blurring.

Predictor	**B**	**p-value**
Digital Burnout	.30	< .001
Work–Life Boundary Blurring	.30	< .001

The model accounted for 27% of the variance in cognitive errors in professional role. Digital burnout and work–life boundary blurring have both positive predictors. Hence, H1 and H2 were accepted.

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The second regression model studied the impact of digital burnout and work–life boundary blurring on mental workload.

Predictor	B	p-value
Digital Burnout	.48	< .001
Work–Life Boundary Blurring	.22	.003

Percentage of variance explained in mental workload by the model = 38% Digital burnout had the stronger effect, implying that digital fatigue primarily related to perceived cognitive load. There was also a meaningful positive influence of work–life boundary blurring on mental workload. As a result, H3 and H4 were supported.

The final regression model analyzed mental workload and how that impact on cognitive errors at work when we controlled for digital burnout and the blurring of work–life boundaries.

Predictor	B	p-value
Digital Burnout	.18	.041
Work–Life Boundary Blurring	.24	.003
Mental Workload	.25	.004

The model accounted for predicting 31% of variance in professional cognitive errors. Professional cognitive errors were significantly positively predicted by mental workload. Therefore, H5 was supported.

Digital burnout regression coefficient being reduced after adding mental workload indicates that some of the digital burnout effects on professional cognitive errors may act through mental workload. The same pattern was found for workfield–life boundary blurring, although its direct effect remained significant.

2.5 Mediation Analysis

Results: The mediation analysis indicated that mental workload was a partial mediator between digital burnout and professional cognitive errors. It showed a significant indirect effect in a positive way.

The relationship between work–life boundary blurring and professional cognitive errors was also partially mediated by mental workload.

Relationship	Indirect Effect	95% Confidence Interval	Result
Digital Burnout → Mental Workload → Professional Cognitive Errors	.12	[.04, .23]	Significant
Work–Life Boundary Blurring → Mental Workload → Professional Cognitive Errors	.06	[.01, .13]	Significant

These results confirm H6 and H7. These demonstrate that digital burnout and the blurring of work–life boundaries play

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dual roles (both direct and indirect) in magnifying professional cognitive errors through mental workload.

3. Discussion

It is a cross-sectional study of university teachers delivered in Algeria that aimed to examine the relationship between digital burnout, work-home interaction and professional cognitive errors. The findings provided evidence for the importance of mental workload as a psychological mechanism connecting digital and organisational pressures in the workplace with cognitive difficulties in academic contexts. In addition, these results underscore that added digital fatigue and fading temporal boundaries result in cognitive overload, which threatens instructional efficacy and educator well-being (Pasha et al., 2025; Pimentel, 2022, p. 5).

The initial significant relevant result is the positive associations between digital burnout and professional cognitive errors. Teachers who scored higher on the digital fatigue questionnaire were also more likely to report that they wrote messages only to forget what they meant, confused deadlines, forgot details or lost track of online tasks. Remote teaching usually involves multiple fronts of contact with screens, platforms, emails and digital communication channels; this explains that result. However, when these demands begin to accumulate they may reduce the teacher's ability to refocus their attention and/or organise information effectively. Also, the extra management and educational responsibilities in online learning contexts pose cognitive burden which lowers resources for adaptive emotion regulation thus increasing teachers' likelihood (Buda & Kovács, 2024; Yang & Du, 2024, p. 51) of digital burnout.

Digital fatigue could hit work performance not through inability, but through exhaustion of cognitive means. Teachers are often adept at the use of digital platforms but can suffer burnout due to mental overload from these being too voluminous, disparate or permanent. For this reason, professional cognitive errors should not be treated as evidence of ineptitude. Or they could simply represent the cognitive expense of functioning within a hyper-digital age. Additionally, these digital workload fatigue is exacerbated by the need for teachers to always be available, hence to switch between instructional and administrative work in a less formalised but more flexible professional environment (Kottwitz et al., 2021, p. 511; Kumar & Pal, 2024).

The second important finding was the positive relationship between work-life boundary and professional cognitive fallibility. They found that teachers who reported greater difficulty separating their work and personal lives were more likely to experience cognitive slips while working. One excellent example of this is the pressure to be ever-present Teachers have mental attachments to work for long periods due to academic messages, corrections, meetings, and administrative requests intruding into personal time. As a result, the disintegration of the psychological bounds between personal and professional life expands cognitive exhaustion, which creates perpetual mental pressure that determines how often job mistakes manifest (Kottwitz et al., 2021, p. 511).

This is especially relevant in the case of distance education as home is at once personal and professional. All in the same physical space, where the teacher can create lectures, respond to students, attend meetings, grade assignments and deal with family duties. Overlapping these two situations can lead

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to role conflict and mental fragmentation Instead of smoothly transitioning from one role to another, the teacher may need to juggle multiple roles. This can lead to errors in planning, communications & execution of the task. This permeability leads to chronic technostress, with teachers trying to balance continuous digital communication while also needing to engage with their home environment (Mordi et al., 2023, p. 1277).

The third finding highlights the role of mental workload in. Results showed that digital burnout and the blurring boundary between work and daily life predicted mental workload. Not only does this mean teachers were subject to digital fatigue and boundary blurring but it also meant that academic work was perceived as more cognitively taxing. Digital burnout affected mental workload much more strongly, which suggests that it is the pressure of technology that puts the greatest cognitive load on teachers in remote teaching. Moreover, the constant demand for accessibility creates an expectation of perpetual cognitive activity, which disrupts the mental distancing required to recover well from daily stressors (Mascarenhas et al., 2023, p. 2).

This finding is significant because it indicates that one important factor in remote teaching, beyond technical or organisational matters. This is also a mental problem. Teachers need to consider information from several sources, respond to numerous actors, handle digital content, resolve technical issues, maintain student engagement and comply with academic deadlines. They all need to be held for a long time and mentally drained as well. The mental load becomes greater than the cognitive resources of the teacher available. This ongoing cognitive load, in fact, is perpetuated by the

pressure to be permanently connected which reduces the time that a person needs to rest and refresh their cognitive capital (Mascarenhas et al., 2024 p. 752; Morska et al., 2022 p.36).

The fourth key finding was that mental workload was a predictor of cognitive errors in performance settings. That is, the probability of cognitive errors will be strongly influenced by teachers with a high mental demand level. Attention and memory are critical in the academic setting to meet deadlines, prepare lessons, assess students, plan meetings and ensure that communications are not inaccurate. When the mental load is too high, they may start to become less efficient. As a result, teachers have struggled to redesign their instruction or felt overwhelmed with information overload, contributing to low job satisfaction and emotional exhaustion (Sharma & Yadav, 2025).

Mediation analyses provides a more refined map of the relationships among the variables. This analysis revealed that mental workload significantly mediated the link between digital burnout and professional cognitive errors. This suggests that digital burnout might be a part of the reason, since this short-attention information overload results in increased cognitive errors. Cognitive overload from digital work can leave less cognitive reserve for attention, planning, and memory among teachers. As a result, this makes them more vulnerable to professional cognitive mistakes. A tendency towards over-commitment to work exacerbates this cycle, as the lack of psychological letting go that prevents recovery after high cognitive loads increases perceived mental load, enhancing its mediating role in these cognitive failures (Mascarenhas et al., 2023, p. 2).

Regarding professional cognitive errors, work–life boundary blurring partially mediated the relationship

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between mental workload. This means that blurred boundaries may exacerbate cognitive errors, at least in some measure due to the greater investment of cognitive effort needed to manage and navigate the overlap within roles and responsibilities. Without clear boundaries between work and home life, teachers may find themselves trapped in the crosshairs of academic versus non-academic expectations. This constant multi-tasking tends to overwhelm us mentally and increase the chances of making mistakes. But this continuing cognitive burden leads to a longer-term decline in the health of the professional. Released resources exist continuously, but the teacher provides every time more elaborate pedagogical activities. Such an additional burden further depletes the limited cognitive resources that are allocated to information processing; consequently, it augments the mediating role of those mental requirements in determining how digital burnout and boundary permeability are linked to continued underperformance (Pasha et al., 2025).

Equally important is the partial availability of the mediation. This suggests that part of the relationship is mediated by mental workload. Adding mental workload to the model did not attenuate the direct effects of digital burnout or boundary blurring on professional cognitive errors. This means there'd likely be other simpler mechanisms involved too. Successful professional cognitive errors could also come from factors such as emotional fatigue, lack of motivation, sleep disruption/resilience recovery, digital distraction and/or organisational pressure. For instance, overcommitment serves as a significant moderator by amplifying the perception of imbalance between efforts exerted and rewards reaped in the occupational context, thus

making people less likely to recover adequately from work and increasing their vulnerability to burnout (Huyghebaert-Zouaghi et al., 2018, p. 610).

The results have some implications for the Algerian universities in practical terms. Firstly, institutions must realise that remote teaching is more than just having access to digital platforms. Next, it calls for the cautious management of digital workload. Once Teachers have to use too many tools at once, reply messages through different channels and be available around the clock, the digital environment becomes a burden instead of a support.

Second, the digital fragmentation that universities face should be reduced. Leveraging different platforms for teaching, communication, evaluation & administration could compound with confusion and cognitive load. A more digitized system would allow teachers to operate with greater efficiency. Reduce unnecessary mental load through clarity of processes, stable systems and structure from the way communication channels are organised.

Third, it is important for academic departments to clarify their rules on communication during non-work hours. Remote Teaching Is Not a 24/7 Job This is a concern when messages are sent to teachers at all hours of the evening, on weekends or even during their time away from work. Norms of clear communication can protect time for recovery and a lesser drain on mental resources. The principle of transparency should be applied to the development of workload models to ensure a clear and fair distribution of tasks, as well as adequate technological support so that burnout can be avoided among teaching staff over the long term (Fynn & Walt, 2023,p.9; Mosleh et al., 2022,p.482).

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Training programs must not be restricted to technical skills, however. Teachers know their way around digital tools, yet handle issues with digital overload. Trained on time management, digital organization techniques and boundary management strategies to reduce cognitive load. This kind of support may enhance both teacher well-being and academic performance. Moreover, universities need to create an environment of professional support by providing psychological counselling services and implementing mentoring programs in aid of assisting faculty with the potential stressors related to contemporary academic positions (Thuan et al., 2023, p. 81; Virtanen & Parpala, 2023, p. 7).

Fifth, university administrators must consider the cognitive load associated with remote academic work when delegating tasks. Online teaching is not about transferring face-to-face teaching to a digital format. That takes planning, and skill in technical management and communication. The invisible work needs to be uncovered in those workload assessments. Finally, universities should also place high priority on advocating for sustainable job allocation policies that manage staff-student ratios and set output goals that are realistic so that they actively prevent burnout (Yusoff et al., 2024, p. 136).

The results also speak to the teachers themselves. Teachers can set guidelines for digital communication, structure platforms and files logically, plan times of disconnection, and rank tasks by importance as well as deadlines. These strategies can decrease mental load and the chance of cognitive errors. Educators should look for and reach out to personal support networks, as well as professional ones, as a

means of strengthening resilience in the face of the ongoing stressors imposed by remote teaching (Audette-Longo et al., 2023, p).

Professional cognitive errors of remote university teachers should be viewed as determined in context, and the general findings. These are not one-off errors by individuals. They relate to the increased digital demands, work–private life borderless and size of mental overload. This implies that reducing such errors takes place through changes both in individuals and at the institutional level.

4.1 Practical Recommendations

A few practical recommendations can follow the results.

First, universities are advised to implement standardized operating hours for digital communication. This would reduce to some extent the feeling that teachers are expected to be on call at all hours.

The second thing is reducing the platforms for teaching and communicating with admin. One could harmonise the confusion and improve upon management with an integrated system.

Third, online teaching time-table have to allow some realistic amount of time for preparation and recovery. Teachers need time to both teach online courses and prepare the material, troubleshoot technical issues and give feedback.

Fourth, departments should refrain from making routine administrative requests after working hours. This would also serve to safeguard the line between professional and personal life.

Fifth, universities should ensure psychological and organisational support for teachers suffering from digital fatigue. This support could be in the form of workshops on

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managing workload, training on digital well-being and peer-support groups for academic professionals.

Sixth teachers need help developing their strategies to reduce digital overload such as; organisation of your files digitally; use of task lists, batching similar tasks and reducing unchecked notifications.

4.2 Limitations

This study suffers from a number of limitations. First, the cross-sectional design does not lend itself to strong causal claims. The relations found between the variables are simply associations and are not necessarily causal partnerships.

Secondly, the study relied on self-report measures. The participants assessed their personal experience of burnout, boundary ambiguity and mental load & cognitive mistakes. These impressions may be moderated by individual differences or mood, memory, or response tendencies.

Thirdly the research was conducted just on the university teachers in Algeria. These findings are case-specific but not easily generalisable to other groups or systems.

Fourth, mental workload was only expounded as a mediating variable. Other factors may also account for the association between digital pressure and cognitive errors including emotional exhaustion, sleep quality, job satisfaction, technological competence, social support and organisational climate.

Implications for Future Research In future research, longitudinal designs may be used to investigate how digital worker burnout, boundary blurring and mental workload as well as cognitive errors evolve over time. Future studies can also consider comparisons between remote, hybrid and in-

person teaching contexts. Moreover, qualitative interviews could provide more nuanced understanding of teachers experiences in digital overload, as well as their managing the work–life boundary.

Conclusion

The study aimed to examine digital burn-out and work–life boundary blurring as predictors of professional cognitive errors among remote university teachers in Algeria. It was also investigated the mediation of mental workload.

The results demonstrated positive associations for digital burnout and work–life boundary blurring with respect to professional cognitive errors. More digital fatigue and the formability to separate work from home predicted cognitive errors on school working.

Results also showed that mental workload was a significantly mediating factor. Experiencing digital burnout and blurred boundaries overbearing mental burden, translating into mistakes typed on a working computer. Hence, among others, the mental effort because of digital tasks relying on time and the managed interactions from multiple devices are some factors helping to explain cognitive failures in remote times.

The study underscored that remote teaching management should be considered not simply a technological process but also as a cognitive and an organisational challenge. Decreasing digital overload, protecting work-life boundaries and promoting the management of teachers mental workloads can positively influence teacher well-being as well as prevent job-related impairments.

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