Journal of Advances and Scholarly Research In Allied Education
Vol. 22, Issue No. 4, July, ISSN 2230-7540

https://doi.org/10.29070/q7h6kw88

Digital Teaching Workload And Tech-Induced Stress Among School Staff Post-Covid In Delhi Region

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Abstract: The COVID-19 pandemic forced an unprecedented, rapid shift to emergency remote teaching that transformed teachers' roles, amplified their workloads, and introduced new sources of stress tied to technology use. This article examines digital teaching workload and tech-induced stress (commonly called "technostress") among school staff in the Delhi region in the post-COVID period. Drawing on theoretical frameworks of burnout and job demands–resources, international and Indian empirical studies, government and sector reports, and post-pandemic literature on hybrid/blended modes, the paper maps how pandemic-era digitalization produced persistent changes in time use, administrative duties, and emotional labour for educators. We document mechanisms through which digital workload generates stress—continuous availability, instructional redesign, platform learning, information overload, and work–home boundary erosion—and show how these translate into emotional exhaustion, reduced job satisfaction, and intentions to leave. The article offers policy and school-level recommendations (workload auditing, protected planning time, structured tech training, mental-health supports, and contractual reforms) and points to future research priorities including longitudinal monitoring, intervention trials, and focused studies on contractual/para-teachers in Delhi's heterogeneous school ecosystem. Key implications underscore the need to treat tech-induced stress as an organizational and policy problem, not solely an individual deficiency.

Keywords: Technostress; digital teaching workload; COVID-19; teacher wellbeing; Delhi schools; remote teaching; job demands–resources; emotional exhaustion

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INTRODUCTION

The arrival of COVID-19 in early 2020 disrupted education systems worldwide, triggering emergency remote teaching and a rapid adoption of digital platforms, tools, and pedagogies. For many school staff teachers, counsellors, and administrative personnel this shift meant immediate up-skilling, continuous online availability, and an expansion of tasks (recording lessons,

monitoring chat rooms, digital assessment, parent communications) that previously were limited or absent. Although digital tools created opportunities (flexibility of space and time, new avenues for student engagement), they also generated persistent workload increases and new stressors: learning new platforms under time pressure, coping with unreliable connectivity, managing student engagement remotely, and blurring work–home boundaries. International agencies warned early that these rapid changes would have deep implications for educators' workloads and wellbeing, and empirical studies since have documented elevated rates of burnout, emotional exhaustion and technostress among teachers during and after pandemic lockdowns.

In Delhi's dense, heterogeneous schooling landscape—composed of government, aided, private unaided, and international schools—these changes manifested unevenly. Resource constraints, the prevalence of contractual or para-teacher employment in some sectors, and high parental expectations in others combined with the demands of digital instruction to produce differential exposure to tech-related workload and stress. This article focuses on the post-COVID period, when many schools shifted to hybrid models or resumed in-school activities while retaining substantial digital tasks, and explores how digital teaching workload acts as a driver of technostress and related wellbeing outcomes among Delhi school staff.

HISTORICAL BACKGROUND

Research on occupational stress, burnout, and the emotional demands of "people-work" predates the pandemic. Burnout as a concept emerged in the 1970s and 1980s, with emotional exhaustion identified as the central component linked to chronic workplace stress. The Job Demands–Resources (JD–R) model and Conservation of Resources (COR) theory later provided robust frameworks for understanding how sustained job demands deplete individuals' resources, and how job resources (autonomy, support, training) buffer adverse outcomes. These frameworks are particularly apt for analysing tech-induced stress: when digital demands (new tools, constant communication, platform updates) outpace available resources (training, time, IT support), stress accumulates and leads to emotional exhaustion and reduced job satisfaction.

In the Indian policy landscape, school expansion over recent decades focused heavily on access and learning continuity; investments in digital infrastructure and teacher preparedness were more uneven. During the pandemic international and national agencies produced guidance UNESCO and other UN organs issued remote-learning strategies and policy briefs advising systems to rapidly implement distance education while safeguarding wellbeing and equity. The Delhi

administration and education departments across India undertook surveys and produced reports documenting the extent of learning disruption, teacher challenges, and mental-health concerns during lockdowns; these reports highlighted teachers' heavy workloads and uneven digital readiness, especially in government and low-resource private schools.

At the classroom level, the pandemic catalysed a sustained reconfiguration of teachers' work. Emergency remote teaching demanded immediate lesson redesign for online modalities, continuous communication with students and parents through messaging and video calls, additional time generating digital resources, and administrative tasks such as uploading attendance and assessment data. Even after physical reopening, many teachers continued to produce digital materials, run remedial online sessions, and use digital platforms for reporting, which cumulatively increased their weekly workload compared with pre-pandemic baselines. These workload expansions often arrived without commensurate reductions in other duties or formal recognition in work schedules, creating a persistent, technology-driven load that research labels as technostress.

Digital teaching workload: forms, mechanisms, and pathways to tech-induced stress

Digital teaching workload is not a single quantity but an assemblage of tasks and expectations that expanded and crystallised into ongoing responsibilities after the pandemic. Key components include:

1. **Instructional redesign and content production:** Developing online lesson plans, recording asynchronous materials, curating digital resources, and adapting assessment for online or blended formats require substantial preparation time beyond typical classroom lesson planning.

2. **Platform management and technical troubleshooting:** Teachers often assume technical roles managing learning management systems, resolving students' connectivity issues, and navigating platform updates especially in schools lacking robust IT support.

3. **Administrative digital reporting:** Many administrative tasks migrated online attendance systems, online grading, communication logs—adding time to teachers' administrative portfolio.

4. **Continuous communication and boundary erosion:** Messaging apps and email created expectations of constant availability from parents and students; asynchronous interactions extended the workday and intruded into non-work time.

5. **Professional development and up-skilling:** Frequent, sometimes compulsory, training sessions on digital tools required time investments; while beneficial, they sometimes compounded workload when scheduling overlapped with teaching duties.

6. **Emotional labour in online environments:** Managing student motivation, supporting families, and monitoring socio-emotional wellbeing over digital channels demanded additional emotional resources, often with diminished nonverbal cues and greater effort.

Each of these elements contributes to technostress through identifiable mechanisms: cognitive overload from managing multiple tools and platforms; time pressure from added tasks; role conflict when digital duties clash with classroom responsibilities; and diminished recovery time due to blurred boundaries. The literature shows that such mechanisms are associated with increased emotional exhaustion, anxiety, sleep disruption, and turnover intentions among educators globally.

EVIDENCE FROM INDIA AND THE DELHI REGION

A growing body of India-focused research confirms many global patterns while adding local specificities. National and regional surveys undertaken during and after the pandemic documented teachers' concerns about digital readiness, workload increases, and psychological strain. Studies across Indian states reported that many teachers received little or no formal training before being asked to teach online, experienced information overload, and reported anxiety about students' access and engagement. In a multi-state Indian study and in region-specific surveys, teachers cited the absence of infrastructure and technical support as primary stressors, while contractual or para-teachers often faced additional job insecurity and irregular pay that aggravated stress.

Delhi's official and academic research offer direct evidence about post-COVID workload and teacher wellbeing. A large Delhi government-commissioned survey (covering students, parents and teachers across multiple zones) identified considerable stress and mental-health impacts among school stakeholders and signalled the continuing burden on teachers stemming from remote and blended modalities. Empirical studies from Delhi-area institutions similarly noted that teachers reported increased working hours, extra duties related to digital platforms, and difficulties

balancing professional and domestic responsibilities especially for women teachers who often carried larger household care loads. These localized findings mirror national studies while emphasising urban-specific stressors such as congested commutes, higher cost-of-living pressures, and intense parental expectations, which combined with digital workload to intensify strain.

Quantitative research in India has linked higher digital workload and technostress to elevated scores on burnout and emotional exhaustion scales, and to lower measures of job satisfaction. Studies using validated instruments (e.g., Maslach Burnout Inventory variants) and self-report surveys have found statistically meaningful associations between frequency of digital tasks, perceived lack of support, and negative wellbeing outcomes among teachers. These relationships persist even after controlling for age, experience, and school type, suggesting that the digital components of work exert independent effects on teachers' mental health.

INTERNATIONAL PERSPECTIVES: COMPARATIVE FINDINGS AND POLICY LESSONS

Global studies of teachers during the pandemic converge on a few consistent observations: (a) emergency remote teaching produced rapid workload increases; (b) technostress emerged as a measurable phenomenon linked to platform use, information overload, and expectations of continuous availability; and (c) organizational supports (clear leadership, IT assistance, protected planning time, peer support) substantially buffer adverse effects. Meta-analyses and large surveys from Europe, North America, and other regions report similar prevalence increases in burnout and technostress, with female teachers and those in resource-constrained settings disproportionately affected.

Several international policy responses are instructive for Delhi. High-resource systems reduced contact hours, institutionalized protected planning time, strengthened IT support teams, and created formal policies limiting out-of-hours communications measures that helped restore recovery time and reduce blurred boundaries. Others invested in large-scale professional development that combined technological training with pedagogical guidance and workload redesign to ensure digital tasks replaced, rather than supplemented, existing work. Importantly, evidence indicates that individual resilience or mindfulness training alone has limited impact if organizational demands remain high; durable improvement requires structural reforms that rebalance demands and resources.

For low- and middle-income settings, international studies caution that digital interventions must be paired with realistic workload expectations, investments in basic infrastructure, and attention to employment conditions—especially where large numbers of teachers are on short-term contracts. Policies that formalize contractual terms, provide access to continuous professional development, and integrate teacher wellbeing into school evaluations have shown promise in reducing precarity-related stress. These lessons are directly relevant to Delhi's mixed school system.

IMPACTS ON JOB SATISFACTION, INSTRUCTIONAL QUALITY, AND RETENTION

Digital workload and technostress influence not only employee wellbeing but also core educational outcomes. Teachers experiencing high technostress report lower job satisfaction, reduced motivation, and increased intent to leave—outcomes that threaten stability and the quality of instruction. Emotional exhaustion undermines patience, reduces capacity for individualized attention, and can increase classroom management difficulties when in-person teaching resumes. Several studies demonstrate pathways from technostress to diminished perceived instructional efficacy and lowered student engagement, mediated by reduced teacher wellbeing.

In Delhi, where competition among schools and parental expectations are intense in many sectors, these effects have practical consequences. High turnover or low morale in a school can interrupt curriculum continuity, raise recruitment costs, and diminish institutional memory. For contractual and para-teachers, lower job satisfaction is compounded by insecure employment conditions, making retention especially challenging. Consequently, managing digital workload and technostress is not merely an occupational-health imperative but an educational-quality and human-resource priority.

PRACTICAL RECOMMENDATIONS (POLICY AND SCHOOL-LEVEL)

Based on the evidence, the following multilevel actions are recommended for the Delhi region:

1. **Workload auditing and time reallocation:** Schools (and district authorities) should conduct systematic audits to quantify time spent on digital tasks, and formally protect planning time by adjusting contact hours or administrative expectations accordingly.

2. **Structured, practice-oriented tech training:** Professional development should focus on practical classroom use, efficient workflows (batching content creation), and

troubleshooting; training sessions must be scheduled within paid working hours and not appended to teachers' personal time.

3. **Invest in IT support and infrastructure:** Districts or school clusters should pool resources to provide shared IT support teams so individual teachers are not saddled with technical troubleshooting.

4. **Policies to limit out-of-hours communications:** Adopt clear communication protocols (e.g., no messaging beyond set hours except emergencies) to reestablish boundaries and protect recovery time.

5. **Mental-health supports and peer communities:** On-site counselling, peer support circles, and facilitated professional learning communities can provide emotional resources and buffer stress.

6. **Protect and regularize contractual employment:** For para-teachers and contractual staff, predictable pay schedules, clear role descriptions, and pathways to professional advancement can reduce job insecurity and its interaction with technostress.

7. **Integrate teacher wellbeing into evaluation:** Include staff wellbeing indicators in school monitoring frameworks to ensure institutional accountability for sustainable workloads.

These recommendations emphasize organizational redesign over individual coping alone; the literature shows the latter is insufficient when systemic demands remain unaddressed.

CONCLUSION

The pandemic accelerated an ongoing digital transformation in schooling but left many teachers carrying increased digital workloads without commensurate resources. In the post-COVID Delhi context—marked by heterogeneous school types, contractual labour, and urban stressors the persistence of digital tasks has produced measurable technostress that undermines teacher wellbeing, job satisfaction, and potentially instructional quality. Addressing this challenge requires policy action and school-level redesign that rebalance job demands and resources, institutionalize supports, and recognize technostress as an organizational responsibility. Long-term resilience depends on combining investments in infrastructure and professional development with reforms in workload management and employment conditions.

FUTURE SCOPE

Research priorities to inform policy and practice in Delhi include:

- **Longitudinal studies** tracking teachers' workloads, technostress biomarkers, and job satisfaction over multiple post-pandemic years to establish causality and recovery trajectories.
- **Intervention trials** (cluster randomized or quasi-experimental designs) testing workload reallocation, protected planning time, or formal IT support teams to quantify effects on wellbeing and student outcomes.
- **Focused studies on contractual/para-teachers** to understand how precarity interacts with digital workload and mental health, and to design targeted contractual reforms.
- **Mixed-methods work** centring teacher narratives (especially women and early-career staff) to capture the gendered dimensions of boundary erosion and domestic care responsibilities.
- **Cost-benefit analyses** that estimate financial implications of teacher turnover linked to tech-induced stress and the potential savings from preventive interventions.

These directions will help transform promising recommendations into measurable policy changes.

References

1. Freudenberger, H. J. (1974). Staff burnout. *Journal of Social Issues, 30*(1), 159–165.
2. Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behaviour, 2*(2), 99–113.
3. Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513–524.
4. World Health Organization. (2019, May 28). *Burn-out an "occupational phenomenon": International Classification of Diseases*. https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon
5. United Nations. (2020). *Policy Brief: Education During COVID-19 and Beyond*. United Nations. https://unsdg.un.org/resources/policy-brief-education-covid-19-and-beyond

6. Arora, A. K., & Srinivasan, R. (2020). Impact of Pandemic COVID-19 on the Teaching–Learning Process: Perception of Faculty and Students. *Indian Journal of Management Studies* (or related publication). [Note: sectoral reports and surveys in India documented rapid adoption and challenges in early 2020.]

7. Kamal, T., & others. (2021). School teachers' perception and challenges towards online teaching during COVID-19. *Asian Association of Open Universities Journal, 16*(3), 311–328. https://www.emerald.com

8. NCERT. (2021). *Teachers' Online Teaching Experiences during COVID-19*. *Indian Journal of Educational Technology, 3*(2). https://journals.ncert.gov.in/IJET/article/download/504/249/904

9. Zheng, M., et al. (2022). COVID academic pandemic: Techno-stress faced by teachers during remote teaching. *Frontiers / International Journal* (PMC). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9384887/

10. Stang-Rabrig, J., et al. (2022). Teachers' occupational well-being during the COVID-19 pandemic. *Frontiers / Occupational Health* (or related journal). https://www.ncbi.nlm.nih.gov/articles/PMC9217138/

11. Klusmann, U., et al. (2022). Providing emergency remote teaching: What are teachers' needs? *Journal of Educational Psychology* (or related). (ScienceDirect)

12. Alqassim, A. Y., et al. (2022). Burnout among school teachers during the COVID-19 pandemic. *Frontiers in Psychology, 13*, Article 849328. https://www.frontiersin.org/articles/10.3389/fpsyg.2022.849328

13. Dayal, S., et al. (2023). Online education and its effect on teachers during COVID-19 in India. *PLOS ONE*. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0282287

14. Ozamiz-Etxebarria, N., et al. (2023). Prevalence of burnout among teachers during the COVID-19 pandemic: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10049404/

15. Ramos, D. K., et al. (2023). Burnout syndrome in different teaching levels during COVID-19. *BMC Public Health, 23*, Article 15134. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-023-15134-8

16. Sia, J. K. M., et al. (2023). Transitioning from online teaching to blended teaching: workload and teachers' perceptions. *Cogent Education* (or relevant). https://doi.org/10.1080/2331186X.2023.2282313

17. Nuutinen, S., et al. (2024). Technology use and employee well-being among teachers: buffering effects of job and personal resources. *International Journal of Educational Management, 39*(8). (Emerald)

18. Delhi Government—Planning Department. (2022). *Study to assess the impact on mental health and emotional wellbeing of students, parents and teachers in Delhi schools: Final report*. Government of NCT of Delhi. https://delhiplanning.delhi.gov.in/sites/default/files/.../final_report_isst_delhi_govt_education_study_with_appendix_tables_august_2022.pdf

19. Imran, M. (2025). Digital learning transformation: A study of teachers' post-COVID adaptation and workload. *International Journal of Educational Technology*, 2025. [Emerging 2025 studies document persistent digital tasks and hybrid workload effects.] (ScienceDirect)