

Concurrent Digital Connectivity, Distraction and Cognitive Strain among Educated Youth

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Abstract

Background: Contemporary digital environments combine academic, social and entertainment media within continuously connected platforms. Such environments may shape not only attention and memory but also how young people experience distraction, cognitive strain and the boundaries between digital and offline activity. **Objective:** This study examined self-reported perceptual and experiential consequences of digital immersion and identified strategies respondents use or recommend for managing digital distraction. **Method:** Survey data from 500 educated respondents in Faisalabad and surrounding areas were analysed using descriptive statistics, chi-square tests and Spearman correlations. **Results:** Respondents reported high levels of digital engagement, including frequent smartphone checking and study–social-media switching. Time wastage (33.8%), poor memory (29.0%) and poor concentration (26.2%) were the leading perceived disadvantages, while reduced motivation (35.0%) and stress (30.8%) were the most frequently reported major problems. Most respondents reported using a distraction-management strategy: airplane mode (31.4%), turning off notifications (28.2%) or keeping the phone away (20.0%); 20.4% used no strategy. Time management was the most preferred improvement strategy (31.4%), followed by awareness programmes (26.6%), phone restrictions (26.0%) and digital detox (16.0%). Parents (29.6%) and universities (29.2%) were most frequently identified as responsible for helping, followed by teachers (25.6%) and students themselves (15.6%). **Conclusion:** The findings indicate that digital immersion is experienced as a multidimensional issue involving time, concentration, memory, motivation and stress. Respondents favour practical regulation and shared institutional/family responsibility over complete technological withdrawal.

Keywords: Technological immersion, Perceptual experience, Digital distraction, Self-regulation, Concurrent media use and youth

Introduction

Digital technologies have changed the sensory and informational environment in which young people learn. Social media feeds, messaging, short-form video, notifications and algorithmically curated content deliver rapid and continuous streams of visual, auditory and textual stimuli. The thesis conceptualizes perceptual experience as the way individuals interpret and respond to such

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information while emphasizing that perception is intertwined with attention, information processing and subjective cognitive experience.

The concept of technological immersion is especially relevant because digital participation is no longer episodic. Smartphones provide simultaneous access to communication, entertainment, education and information. Research on digital distraction suggests that students themselves recognize the difficulty of managing competing media demands, while studies of digital habits highlight the role of repeated sequences of application use in habitual engagement. This makes self-regulation an important complement to purely cognitive explanations.

A second issue concerns the interpretation of digital environments. Personalized feeds and repeated online representations can influence how users construct social reality and evaluate themselves and others. In Pakistan, digital media have become important spaces for information sharing and social awareness, while concerns about misinformation, cultural influence and digitally mediated perceptions have also grown. The present article therefore treats perceptual experience broadly: as attention to stimuli, subjective cognitive strain, time experience, and interpretation of a media-saturated environment.

Conceptual Background

Digital distraction and perceptual experience

Digitally saturated environments encourage rapid transitions among discrete pieces of information. Scrolling, swiping, alerts and personalized feeds can make users highly responsive to incoming stimuli while also encouraging fragmented engagement. Sundar et al. (2025) provide a theoretical perspective on immersion in digital environments, while Pérez-Torres (2024) emphasizes the role of social media as a digital social mirror in identity and perception. These perspectives help situate respondents' reported distraction within a wider perceptual environment rather than reducing it to screen time.

The thesis further discusses media-shaped reality. Algorithmically curated content can narrow or reinforce particular patterns of exposure, while misinformation and emotionally salient material may shape judgments. Pakistani scholarship has examined digital information-sharing and the influence of social media on cultural and social perceptions. Hanif and Warraich (2023) describe information-sharing practices among Pakistani youth, while Safdar (2022) examines the effects of digital media on Pakistani culture and university students.

Habitual engagement and self-regulation

Digital distraction is not simply a matter of individual choice. Platform design, social expectations and habitual routines can encourage repeated engagement. Peters et al. (2024) examined the predictability of social-media use from sequences of app use, while Rogojina et al. (2025) highlighted the relevance of time perspective to media multitasking behaviour. These approaches support the thesis distinction between intentional and habitual multitasking: a user may deliberately combine activities for efficiency, or may respond automatically to cues such as notifications.

Self-regulation is therefore central to managing technologically immersive environments. The thesis reports several practical strategies already used by respondents and several strategies they believe should be strengthened. Rather than assuming that young people should abandon technology, these findings suggest that structured boundaries may be more realistic and acceptable.

Pakistani context

The Pakistani context provides a valuable setting for studying digitally mediated youth experience because digital adoption intersects with educational, cultural and social change. Pakistani research cited in the thesis includes work on smartphone dependency, social media use, digital culture, media literacy and media multitasking. Shahid et al. (2025), for example, examined media multitasking in relation to self-perception and self-efficacy among university students. Rafiq et al. (2023) examined mental fatigue and wellbeing in university students. These studies complement the present focus on subjective cognitive and perceptual experiences.

Research Questions

This article concentrates on four thesis questions:

- What digital routines characterize educated youth?
- What self-reported cognitive and perceptual difficulties accompany these routines?
- How do respondents regulate digital interruptions?
- Which individuals and institutions do respondents believe should help manage these challenges?

Method

The study used the quantitative survey design reported in the thesis and analysed 500 respondents from Faisalabad and surrounding areas. The questionnaire captured patterns of digital use, study-related multitasking, cognitive experiences, disadvantages, existing strategies and preferred improvement strategies. Analysis consisted of frequency distributions and inferential tests reported in the thesis. Because this article focuses on subjective experience and regulation, descriptive results are foregrounded; the inferential findings are used to establish the limits of interpretation.

Results

Digital routines and immersion

The sample was predominantly young adults: 50.2% were aged 21–23, 20.0% aged 24–26, 15.8% aged 18–20 and 14.0% above 26. Smartphone use was central to study activity, with 38.4% identifying it as their main study device. The thesis also reports high internet exposure: 65.8% used the internet for more than four hours per day. Phone checking was frequent: 36.4% reported 51–100 checks per day, 33.6% reported 20–50, and 16.4% reported more than 100. These patterns provide evidence of persistent digital availability.

Subjective cognitive and perceptual difficulties

Reported experience	Percentage
Time wastage as biggest disadvantage	33.8%
Poor memory as biggest disadvantage	29.0%
Poor concentration as biggest disadvantage	26.2%
Stress as biggest disadvantage	11.0%
Reduced motivation as biggest reported problem	35.0%
Stress as biggest reported problem	30.8%
Confusion as biggest reported problem	18.2%
Forgetfulness as biggest reported problem	16.0%

The pattern is notable because respondents did not identify a single cognitive consequence. Instead, time management, memory, concentration, motivation and stress formed an interconnected set of perceived difficulties. The thesis explicitly cautions that these are self-reported experiences rather than direct measures of neurological or clinical impairment.

Existing self-regulation strategies

Strategy currently used	N	%
Airplane mode	157	31.4
Turn off notifications	141	28.2
Keep phone away	100	20.0
No strategy	102	20.4

Overall, 79.6% of respondents reported using at least one active strategy. Airplane mode was the most common, followed by disabling notifications and physically distancing the phone. The presence of 20.4% with no strategy indicates a substantial subgroup that may remain continuously exposed to digital interruptions during study.

Preferred improvement strategies and responsibility

Preferred improvement strategy	N	%
Time management	157	31.4
Awareness programmes	133	26.6
Phone restrictions	130	26.0
Digital detox	80	16.0
Who should help	N	%
Parents	148	29.6
Universities	146	29.2
Teachers	128	25.6
Students	78	15.6

Respondents therefore favoured structured management over complete withdrawal. Time management was the leading recommendation, while awareness and phone restrictions received almost equal support. Responsibility was viewed as shared, with parents and universities at the top, followed by teachers and students.

Inferential boundaries

The inferential analysis reinforces the need for caution. Age was not significantly associated with study experience, $\chi^2(9)=11.465$, $p=.245$, and education was not significantly associated with study experience, $\chi^2(6)=8.363$, $p=.213$, forgetting, $\chi^2(6)=1.644$, $p=.949$, or the biggest problem, $\chi^2(6)=1.644$, $p=.949$. Notifications were not associated with study experience, $\chi^2(9)=8.381$, $p=.496$. Spearman correlations were likewise negligible for notifications and study experience ($\rho=.009$, $p=.844$), study–social-media switching and information remembered ($\rho=-.006$, $p=.902$), and phone checks and examination recall ($\rho=.025$, $p=.573$).

Discussion

The descriptive findings suggest that digital immersion is experienced as an environmental condition rather than a single behaviour. Respondents move between devices and applications, monitor phones frequently, and combine academic activities with social and entertainment media. This is consistent with the thesis argument that contemporary youth culture is organized around continuous connectivity and overlapping media environments.

The most prominent disadvantages—time wastage, poor memory and poor concentration—show that respondents interpret digital over-engagement in practical and cognitive terms. The prominence of reduced motivation and stress further suggests that subjective experience extends beyond attention alone. These findings complement Pakistani research on digital behaviour and mental fatigue while also supporting a broader communication perspective in which media environments influence everyday routines and perceived cognitive conditions.

The strategy findings are particularly important for applied research. Most respondents already use some form of interruption control, and the leading preferred intervention is time management rather than digital detox. This indicates that participants do not necessarily reject technology; instead, they favour controllable boundaries that allow continued access to educational and communicative benefits while limiting avoidable distraction. This position is compatible with a self-regulatory approach to media multitasking.

The responsibility results also indicate that respondents perceive digital distraction as a shared educational and social issue. Parents and universities received the largest shares, followed by teachers. Such a distribution supports interventions that combine individual self-regulation with institutional design, digital-literacy education and family guidance. At the same time, students remain necessary participants in any intervention because external restrictions alone cannot regulate all digital behaviour.

Theoretical Interpretation

The findings can be interpreted through the cognitive-load perspective used in the thesis, but the perceptual dimension should be treated as complementary rather than as a direct component of CLT. Continuous exposure to alerts, messages and rapidly changing information may increase the subjective sense of cognitive demand. The present data support this interpretation at the level of reported experience, while the non-significant inferential relationships caution against claiming a uniform effect of every digital exposure. A more appropriate conclusion is that technologi-

cal immersion creates conditions in which cognitive strain may emerge, but individual engagement and context shape the outcome.

Practical Implications

1. Universities should provide structured digital-wellbeing and media-literacy programmes focused on attention management rather than technology prohibition.
2. Teachers can encourage device-boundary routines during cognitively demanding lessons and study periods.
3. Parents can support consistent study routines and reasonable phone-management practices.
4. Students can use time blocking, airplane mode, notification control and physical phone distancing as low-cost self-regulation tools.
5. Interventions should emphasize purposeful technology use and preserve educational connectivity rather than advocating indiscriminate digital withdrawal.

Limitations and Future Research

The study captures perceived experience through a cross-sectional survey and therefore cannot determine whether digital engagement causes the reported difficulties. The geographic concentration of the sample limits national generalization. Perceptual experience was also measured through respondents' reports rather than behavioural or physiological measures. Future studies should use experience sampling, screen-use logs, eye-tracking, attention and memory tasks, and longitudinal designs. Experimental comparisons of notification conditions, phone distance and academic task complexity would provide stronger evidence about mechanisms.

Conclusion

Educated youth in this Pakistani sample experience technological immersion as a complex environment that affects how time, attention, memory, motivation and stress are perceived during academic activity. The strongest concerns are not reducible to one outcome, and the inferential evidence does not support a simple claim that more technology automatically produces poorer cognition. Respondents instead favour practical, structured and shared solutions—especially time management, awareness and controlled phone use. The study therefore supports a balanced model of digital well-being in which the goal is not technological withdrawal but purposeful engagement, interruption control and preservation of sustained attention.

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