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Compassion in Digital Divides: Challenging Device Performance and Institutional Blind Spots in Chinese University Online Learning

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Research Domains

Student Access and Experience (SAE)

Abstract

The unexpected shift to online education in the COVID-19 pandemic exposed deeper digital inequalities than the simplistic “have/have not” device binary. This study explores how Chinese first-year university students and educators reflect on these divides in 20 qualitative interviews. Participants reported disparities in access but also in the number, performance, and stability of devices. Smartphones, documented as cognitive distractions or “distraction machines”, became moralised even as they served as lifelines for academic survival. Yet, institutional policies construed phone use as disengagement, disregarding students’ constrained realities and reinforcing digital stigma. These framings were internalised by lecturers and peers, reinforcing perceptions of academic disinterest rather than necessity. This misrecognition diminished student agency in online examinations requiring dual screens or special software. The study calls for a more attuned and contextualised understanding of digital inclusion in universities, one that looks beyond presumptions and into the everyday lives of digitally marginalised students.

Full paper

In 2020, the outbreak of the Covid-19 pandemic compelled universities across the globe, including those in China, to transition to online teaching in a matter of days (Guo, 2021; Binah-Pollak and Yuan, 2022; Gu, Tao and Zheng, 2023). This emergency shift exposed deep digital inequalities beyond a simple “have/have not” binary. The performance, quantity and network stability of students’ devices varied significantly. Smartphones, while considered essential by many, were simultaneously criticised as “distraction machines” (Kuznekoff and Titsworth, 2013; Prabu *et al.*, 2015), which obscured the reliance of disadvantaged learners on mobile access.

The prevailing institutional assessment and management practices were predicated on the assumption of dual- or multi-device, multi-platform engagement. This has the effect of penalising those users confined to a single (Abou-Khalil et al., 2021; Binah-Pollak and Yuan,

2022; Gu, Tao and Zheng, 2023), low-end device and thereby reinforcing a digital stigma. Although prior work has examined technology diffusion and efficacy, little attention has been paid to the contextual blind spots and moral judgments embedded in institutional technology practices in Chinese higher education.

To address this gap, we conducted semi-structured retrospective interviews with 15 first-year students from the 2020 and 2021 cohorts and with five faculty members who taught them. Braun and Clarke's (2006) thematic analysis with comparative coding was then applied. This study focuses on disparities in device configuration, smartphone stigmatisation, and institutional technological blind spots. The objective is to develop a more empathetic, context-aware framework for digital inclusion and to inform post-pandemic equity policies in higher education.

Findings

Rural students' ability to multitask online is hampered by two structural barriers: the limited performance of low end mobile devices and chronically unstable network connections. In contrast, urban peers enjoy a higher spec hardware and reliable bandwidth, which institutions implicitly endorse as the norm. Meanwhile, smartphones are widely moralised as "distraction machines," and any perceived lapse in engagement is blamed on student slacking rather than on material constraints-intensifying the stigma faced by those with only basic devices. Institutional policies around formatting, scheduling, and attendance are likewise modelled on urban centre standards, further sidelining rural learners who lack the assumed technological and temporal resources.

Discussion

This study reveals a triad of structural inequalities in the transition to online education: differences in device performance and network stability limit rural students' ability to multitask online; the moralising narrative of the smartphone obscures disadvantaged groups' reliance on mobile learning; and institutional norms that assume a multi-device, multi-terminal scenario exacerbate the digital stigma of a single, low-end device user. These findings challenge the stereotypical assumption that 'technology use equals learning engagement' and highlight the contextual and power dimensions of technological practices. Specifically, the passive adaptation of rural students and the invisible advantages of urban students create a new digital stratification; the moral judgement of teachers and administrators on mobile phone use further weakens empathy for resource scarcity; and the 'multi-device assumption' in institutional design shifts the costs of adaptation to disadvantaged students. The study calls for the introduction of contextualised assessment in digital inclusion strategies to optimise the allocation of resources and support mechanisms; the consideration of single-device limitations in teaching and assessment to avoid using 'device availability' as the sole criterion; and the de-stigmatisation of technology through training to reconfigure the framework of educational equity based on the real needs of students. Future research could combine quantitative surveys and longitudinal

tracking to examine the effectiveness of interventions and deepen understanding of the power structures of digital practices.

Conclusion

From a retrospective standpoint, this study shows reflective digital inequalities in the realm of online education within higher education during the pandemic. The utilisation of entry-level devices and unstable networks served to impede the learning abilities of rural students. The stigma of smartphones served to obscure underlying resource deficits. Moreover, the institutional framework surrounding multi-device assumptions served to exacerbate digital exclusion. In order to achieve true educational equity, the construction of contextualised digital inclusion frameworks is essential. Such frameworks should include the establishment of technology compensation and support mechanisms for disadvantaged students, the incorporation of multi-device constraints into teaching and learning assessments, the dismantling of technology moralisation bias, and developing cross-platform, resource-efficient teaching and learning platforms. Future research could combine large-scale quantitative surveys with longitudinal follow-up studies to evaluate the effectiveness of interventions and further illuminate the power dynamics underpinning digital practices.