From Empathy to Cognition: A behaviourally - Informed Pedagogical Framework for Experiential User Experience Research in Design Education

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Abstract:

This study presents a pedagogical framework designed to enhance cognitive flexibility and empathy and contextual understanding in undergraduate user experience (UX) design education through immersive community-based learning. Conducted over a longitudinal period of three years, the research engaged students at the institute in contextual inquiry, ethnographic fieldwork, and user-cantered participatory immersion across diverse regions in India - including rural, semi-urban and urban settings. These settings offered rich and distinct socio-cultural diversity and terrain-specific challenges.

Using a mixed-method approach, including the observations, student surveys, select in-depth interviews, and systematic performance based analysis of design artefacts, the study observed measurable improvements in students' metacognitive awareness, empathetic reasoning, and need-finding skills- core constructs in UX problem-space framing and user-cantered design.

Two original pedagogical tools emerged: The C.E.R.C.L.E. rubric (Cognition, Empathy, Reflection, Context, Learning, Engagement) to assess cognitive and behavioural outcomes, and the I.D.E.A.L. model (Immerse, Design, Engage, Assess, Loop) to guide cyclical curriculum integration. These frameworks foreground actionable strategies for embedding immersive learning into UX pedagogy.

The findings highlight how experiential learning, when aligned with behavioural insights and reflective practice, cultivates socially responsive, cognitively agile, and ethically grounded designers. This work contributes a replicable model for design education, aligned with growing demands for inclusive, adaptive and context-aware UX practice.