INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS

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Thesis Title:
Design for Motivation to Facilitate the Adoption of Assisted Self-Production in Emerging Economies (Rural and Semi-Urban Context)

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SHORT ABSTRACT

This research explores the evolution and potential revival of "Making" practices in emerging economies, with a focus on India. Historically, Making was essential for survival, but the Industrial Revolution alienated societies from these practices. India's colonial past, where it was deindustrialized to serve British markets, delayed the decline of Making practices compared to the West. Following economic liberalization in the 1990s, cheaper imports led to a reduction in local making activities, contributing to environmental and social issues, including mass migration to urban areas and loss of traditional skills.

In response, scholars suggest reviving Making in rural and semi-urban areas to foster local production, sustainable methods, and entrepreneurial opportunities, echoing the Western Maker Movement. However, Making in emerging economies differs significantly, driven by resource constraints and traditions rather than self-actualization. This research proposes a new concept, "Assisted Self-Production" (ASP), to define practices that utilize local tools and materials, often outside formal markets, and benefit from knowledge-sharing platforms.

The study addresses three research questions: identifying characteristics of Making culture in emerging economies, understanding how design can facilitate its adoption among youth, and evaluating a framework's effectiveness. Acknowledging the complex socio-cultural context, the research employs an Interpretivist perspective and Design Inclusive Research (DIR) methodology, emphasizing ground research and interdisciplinary insights. ASP practices are analyzed through Practice Theory, which categorizes Making as skills, materials, and symbolic images. Findings reveal that these communities engage in Making out of necessity or tradition, using local resources and simple tools, often with significant cultural value.

To encourage adoption among younger generations, who have drifted from these practices, the research adapts behavior change models, specifically the COM-B (Capability, Opportunity, Motivation) model, and focuses on intrinsic motivation. It culminates in the "Catalyst" framework—a structured, motivation-centered design tool to help designers embed values like Competence, Autonomy, and Relatedness into products, making them appealing for adoption.

This framework underwent a multi-phase evaluation: pilot testing, designer use cases, expert reviews, and efficacy testing in a school workshop. Results indicated that products designed using Catalyst fostered higher engagement and craftsmanship in participants compared to control products. This research contributes new tools, including a motivation-based design method, Mokken Scale Analysis for refining user research, and an Excel toolkit for studying rating analysis.

While the current study focuses on the adoption of ASP in emerging economies, the framework has broader potential for motivating sustainable behaviors, from conscious consumerism to green living. The research emphasizes that addressing global challenges often requires behavior changes rather than new technologies, positioning Catalyst as a valuable tool for fostering such shifts in behavior