

Limited resources, unbounded practices: An experiment in collective hands-on learning

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Architectural design education produces an abundance of material output—drawings, models, prototypes, installations—while simultaneously generating significant amounts of waste. Leftover, discarded, or partially used materials accumulate across campuses and educational settings, often treated as expendable byproducts of learning. This paper presents a pedagogical experiment designed to cultivate awareness of material value, lifespan, and circularity in developing contextually responsive design solutions.

The project “reserve” is a small-scale 1:1 application that seeks to establish both a physical and pedagogical framework for reserving, storing, and reactivating materials within architectural education. The term “reserve” denotes both a spatial repository and an educational practice of designing with waste and/or available materials for context-sensitive interventions. Through a hands-on workshop series, the project “reserve” aimed to foster emancipatory and collective design processes that utilize existing resources at technical and spatial levels.

Framing material availability as a starting point rather than a restriction, the project encouraged the harvesting of found materials across the campus to compile a material inventory. Exploring the potential of this inventory, design ideas evolved in response to material behavior, uncertainty, and unforeseen constraints. Construction details were closely informed by material properties and the collective assembly process, incorporating improvised and ad hoc solutions that fit emerging on-site conditions.

Rather than resisting limitations and uncertainty, the project embraces them as integral to architectural thinking and practice. Within this framework, making becomes a critical mode of inquiry for exploring and negotiating through which spatial, material, social, and ethical questions are explored and negotiated. By engaging students in iterative cycles of designing, making, failing, and reflecting—often collectively—the project positions unpredictability, urgency, and incompleteness as productive conditions. This approach cultivates critical judgment, resilience, and adaptability, enabling students to fit their design processes within complex, open, and dynamic situations, rather than seeking fixed or final solutions.