SIMULATING THE STUDIO: HOW DESIGNERS ORCHESTRATE AI ACROSS UX AND PRODUCT WORKFLOWS

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***Abstract.** This article explores the shift in UX and product design from manual execution to AI orchestration. Through a reflexive case study, we examine how solo designers use tools like ChatGPT, Perplexity, and Claude to simulate multidisciplinary studios. Findings show 60% faster creative output alongside challenges in governance and equity. A roles-and-tools framework is presented that positions design orchestration within the broader AI augmentation paradigm, distinct from replacement narratives.*

Generative AI is reshaping UX and product design. Where professionals once executed tasks manually, solo designers now orchestrate AI tools to simulate cross-functional teams. A concept increasingly discussed by designers [5], »simulating the studio» refers to a solo designer's practice of using AI agents to replicate the core functions of a multidisciplinary team-researcher, writer, prototyper, and strategist.

»Simulating the studio» concept refers to a solo designer's practice of using AI agents to replicate the core functions of a multidisciplinary team-researcher, writer, prototyper, strategist. Unlike traditional collaboration models that treat AI as isolated tools, this framework emphasizes the designer's role as a conductor of an integrated AI ecosystem.

A solo designer's project illustrates AI's transformative potential: summarizing 50+ pages of interviews into themes, generating 4 product concepts, and brainstorming and validating ideas 60% faster than traditional methods (see Table 1).

Table 1 – Mapping the Solo Designer's Workflow: Human Roles and Corresponding AI Agents

Phase	**Designer role**	**AI Agent(s)**
Problem Framing & Discovery	Define goals, gather signals, synthesize context	Perplexity, Claude (for framing, market/academic research, context building)
Research Synthesis	Analyze interviews/data, identify patterns, extract insights	Claude, ChatGPT (for transcript summarization, theme clustering)
Ideation & Concept Development	Generate ideas, explore flows, structure product vision	ChatGPT, Claude (for concepts, flows, visual exploration)
UX Writing	Draft and refine microcopy, create variants	ChatGPT, Claude (for iterative copywriting, tone testing, localization drafts)
Prototyping	Visualize states, review layouts, UX reviews	ChatGPT (for structure and interaction logic)
Communication & Testing	Prepare presentations, explain rationale, summarize feedback	ChatGPT, Claude (for rationale writing, deck summaries, feedback synthesis)
Documentation & Handoff	Create specs, document flows, package rationale and decisions	ChatGPT, Claude (for structured specs, dev notes, documentation templates)

The 60% efficiency improvement was measured by comparing time-to-completion metrics for research synthesis, concept iteration, and prototyping tasks between traditional and AI-orchestrated workflows (see Figure 1), with independent quality assessment confirming comparable deliverables. In a consumer-facing app

initiative, the designer used Perplexity and Claude for logic, ChatGPT and Claude for tone and structure, and ChatGPT for concept visualization.

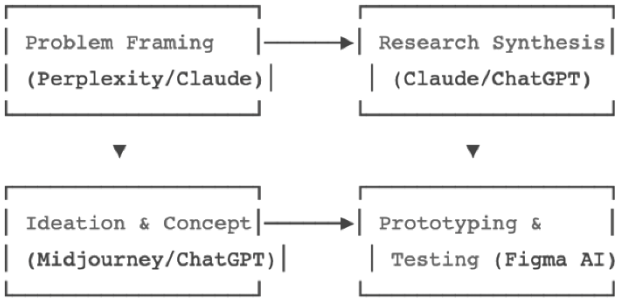

Figure 1 – AI Orchestration Workflow Phases

Key practices included switching tools based on strengths, iterating prompts 4-5 times per task, and maintaining continuous human oversight. While efficient, this method has limits in domains requiring deep expertise or where AI tools lack quality training data, suggesting hybrid workflows are more effective for specialized contexts.

Unlike team-based workflows that rely on sequential handoffs, AI orchestration allows for continuous iteration across phases – a shift that deserves further exploration in design research.

Designers in Southeast Asia and Eastern Europe often adapt to limited access with creative improvisation. These regional adaptations suggest that orchestration is shaped not only by tools, but also by local context, infrastructure, and access. Scaling remains difficult due to uneven infrastructure and tool availability. UNCTAD [1] reports that 118 countries are excluded from major AI governance initiatives, while 100 firms – mostly in the US and China – control 40% of global AI R&D.

New frameworks like the EU AI Act emphasize the need for orchestration strategy, ethical oversight, and hybrid workflows. Designers must move beyond efficiency, taking responsibility for the ethical and strategic dimensions of AI-driven decisions.

Future research should examine how orchestration practices evolve globally and how to measure the value of AI-human collaboration in design. The shift from execution to orchestration redefines the UX role. Designers now coordinate AI workflows, ensure quality, and safeguard ethical standards – ensuring technology enhances, rather than replaces, human creativity.

As the designer's value shifts from execution to orchestration, new paradigms of creative leadership are likely to develop.

References

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