

# Tell Me If You Like It: Dissecting design collaboration between students and clients for technical projects

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## Abstract

This research focuses on understanding the design collaboration process through students' reflections on working with professional clients to design interfaces. This utilizes a qualitative approach to analyze collaboration between students and clients and how these experiences influence students' perception of design, their identities as designers, and their future design work. This provides insights to designers, educators, and other stakeholders—such as non-profit and industry clients interested in leveraging students for design work— structure and organize the collaboration process for maximizing the quality of work output and learning opportunities.

## CCS Concepts

• **Human-centered computing** → Collaborative and social computing; Collaborative and social computing systems and tools; Synchronous editors; Human computer interaction (HCI); HCI design and evaluation methods; Walkthrough evaluations.

## Keywords

collaboration, technical projects, design

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## 1 Introduction

Collaboration has been a pivotal part of most fields within science, technology, and society, in shaping our ideas, concepts, and work. Within design, collaboration is integral- rarely do we find design processes that do not include teamwork, feedback, and iteration to produce the best final product. However, students are typically not taught how to collaborate or what to expect out of collaborations. Many bring their perceptions of class-based team projects into client collaborations, which often requires them to learn best practices through extensive trial and error, sometimes leading to unsuccessful and subpar collaboration experiences. On the other hand, clients- depending on their level of technical expertise- often

have a misguided approach to student-based collaboration. They may either treat students as novices who require supervision or subject matter experts whose decisions go unchallenged. This is true for the field of user experience design, where tools, technologies, and practices change rapidly. As technology demands and business designs change, it is vital to understand “the human system” [1] at play. Through detailing the results of multiple semi-structured interviews with undergraduate students about their collaboration experiences, this study aims to present organized frameworks for successful student-client design collaboration.

## 2 Related Works

Communication and collaboration are fundamental in a designer's daily work [2]. Design collaboration [3] is a design-specific subset of the general collaborative skills, which focus on the sharing and the integration of knowledge and is more complex than individual design practices. This skill often develops in tandem with expertise in design. However, for a skill that is incredibly essential to design work, there lacks a structured framework and parameters for the success of design collaboration [4] in the field of interaction and product design, despite efforts made to formalize the design process [5].

## 3 Methods

This study's research method is a series of four semi-structured interviews, around 60 minutes long, with eight to thirteen open-ended questions. Participants in this study are current undergraduate students and recent graduates with a focus on interaction design and product management, who belong to campus organizations devoted to connecting them to nonprofits to develop software and applications. Professional clients in this study refer to industry partners and non-profit organizations that work with students for capstone project work. During interviews, participants were asked to reflect on their design collaboration experiences with non-profit clients to understand how these collaborations have influenced their understanding of design and impacted their design collaboration skills. The open-ended questions allowed participants to share their personal experiences without bias. This method was chosen to provide in-depth insights into the participants' perspectives and to capture the nuances of their collaborative experiences. Data from the interviews was analyzed to identify common themes and inform best practices for collaboration in design- using inductive thematic analysis.

The primary research question aimed to determine the factors that affected the overall experience student designers and product managers had for the duration of their work for the non-profit. The participants engaged in multiple 10-week-long semesters with

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non-profit organizations to build a project that solved a current challenge they were facing. Participants who were designers engaged in user research, prototyping, and user testing the project. Product managers attended regular meetings with the non-profit representatives to demo their progress, convert client feedback into actionable next steps, and document the processes.

Participants were asked a series of questions to understand their overarching perception of their work, their client, and the collaboration. Initial questions included:

“How was your overall experience working with the client?”

“What was your perception before going into the collaboration?”

To delve deeper into specific aspects, follow-up questions explored the challenges faced during the collaboration:

“What was the biggest challenge while collaborating with the client?”

“What, in your opinion, could have made the collaboration easier or smoother?”

These follow-up questions aimed to uncover detailed insights into the difficulties participants encountered and potential improvements for future collaborations. The recording of the interviews was transcribed for accurate documentation of the participants' answers and coded based on emergent themes surrounding the success/failure of projects, communication, documentation, and constructive feedback. The coding process followed identifying key experiences and themes within the transcribed data from the interviews, analyzing the themes in the context of student and client goals and reporting the themes.

## 4 Preliminary Findings

Contextualizing the data from the initial interviews reveals that students, regardless of their initial approaches, tend to adopt a similar method when collaborating with different clients, especially when facing constraints and conflicts. A primary factor contributing to successful collaborations, though seemingly obvious, was the consistent involvement of stakeholders. Designers frequently reported challenges such as non-profit clients not responding to emails, missing meetings, or failing to maintain consistent communication. Findings highlighted effective collaboration requires stakeholders to openly share insights about the current processes and the needs that warrant a new project. Student designers benefit most when they understand why existing processes are failing, as this information allows them to design optimal solutions.

Another emergent theme is the discrepancy of feedback received from non-profit clients with varying levels of technical expertise. Student designers and product managers navigate either vague or overly detailed feedback, each presenting its own challenges in the iterative process. Participants articulated difficulties understanding clients' specific dislikes about the prototypes, leading to ambiguity due to the lack of standardized communication and feedback expectations. Additionally, many teams emphasized the importance of documenting progress and highlighted that miscommunication between the student team and non-profit clients often led to unnecessary stress. Both product managers and designers stressed the

need for clearer communication regarding deadlines and timelines from the non-profit clients. Documentation and clear, consistent feedback helped teams work on the same page and iterate their deliverables as they navigated their project roadmap.

## 5 Conclusion

Initial results from this research show that successful student collaborations with non-profit clients hinge significantly on effective communication and stakeholder engagement. The variability in feedback quality from clients with different levels of technical expertise highlights the need for a more standardized communication and feedback approach. More qualitative interviews will help highlight more themes surrounding communication and standards. This will lay the foundations for a framework that students and clients could incorporate into their experience design-centered projects for an successful collaboration.

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