

Exploring Collaboration between Designers and Educational Researchers to Improve Interdisciplinary Research Methods



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Introduction

The goal of this project was to better understand how collaborations between designers and educational researchers work, and foster future collaborations by inspiring the early establishment of interdisciplinary research teams.

Educational researchers explore how experiences affect learning outcomes, while designers are trained to engage in an iterative research and development process to create intentional experiences with the user in mind.

The observation, documentation, and analysis of these preliminary workshop discussions will act as a guide in developing future studies and a framework for collaboration between these groups.

Goal of the project is to understand:

- Collaborations between the design and education disciplines,
- Issues that arise in their discussions, and
- Strategies that are successful in sharing ideas and brainstorming.

Design: A word with many meanings...

The word 'design' has been adopted by many disciplines. Within these diverse academic fields, 'design' has come to represent concepts that involve the generation of something new and intentional. Within the field of education, a publication may use the term 'designed' to refer to any artifact (e.g., lesson plan, document, study, computer application) that was created for the purpose of the research.

Why is this important?

When a designer or design team is included in the early phases of an educational research study, they can help the research team build the study experience from the ground up. Designers are trained to take into account both the needs of their client (the research team) and the needs of the end user who will experience the created 'product' (e.g., students, teachers).



Research questions

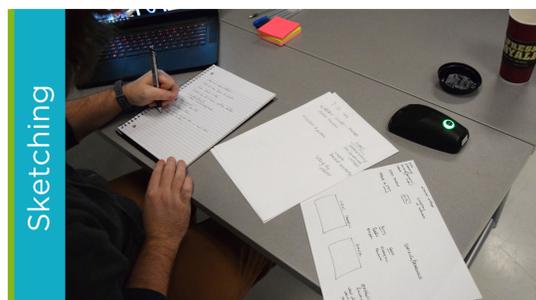
- How do educational researchers present ideas to designers?
- How do designers respond and build on the presented ideas?
- What are some successful and ineffective strategies used to communicate ideas by both groups?

Methods

- 17 participants: Undergraduate students, graduate students, post docs, and faculty
- Recruited through flyers in design and education buildings on campus
- Attended an hour long workshop to brainstorm educational research ideas with designers in small groups

Three stages of possible work:

- Groups discussed preliminary work for tools or environments based on an initial idea for a study.
- In progress work discussed designing the experience, physical space and/or user experience design for a more fully formed research project.
- Groups discussed completed work for ideas to synthesize and dilute information into consumable artifacts.



Sketching

Education and designer participants took notes and sketched during the workshop.



Design Examples

The designer uses her phone to show an example of an app and explains how the researcher's work may benefit from some of these functions.



Usability

The education participant asked a question about text size on their website; the designer recommended usability standards W3C to determine the appropriate text size.



Work In Progress Coding

Discussion Elements – Primary coding scheme

Question Elaboration Explanation Suggestions Clarification

Non-Verbal Actions – Secondary coding scheme

Sketching Taking Notes Moving Artifacts Active Listening Gesturing

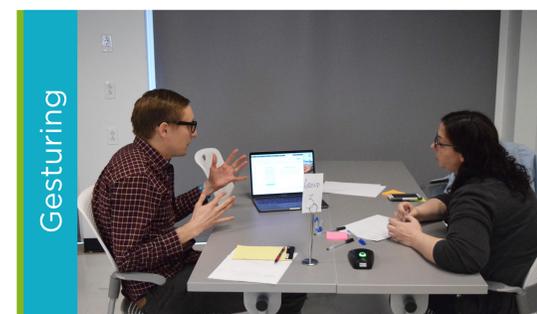
Topic of Discussion – Tertiary coding scheme

Introduction	Project Status	Design Brainstorm
Project Explanation	Specific needs	Key Features
Project Content Examples	Future Goals	Aesthetics
Design Examples	Working Model	Functionality
Critique	Design Research	User Error
User-Testing	Hiring a Designer	Usability
User Group	Citing Sources	ADA/Accessibility
User Goals	Identified Limitation	Agency



Moving Artifacts

In this group, participants used sticky notes to mock-up the design. This gave them the flexibility to move around components as they discussed the design and made changes throughout brainstorming.



Gesturing

Many researchers used gesture to emphasize their research explanations. These gestures can help designers to understand the connections between concepts as well as appropriate interactions with digital interfaces.

Conclusion

Future goals regarding improving research methods:

- Integrating design into the education research process (interdisciplinary teams)
- Creating a framework for collaboration
- Developing new research methods that combine design expertise and education methods
- Creating higher functioning prototypes used in study – lead to future product