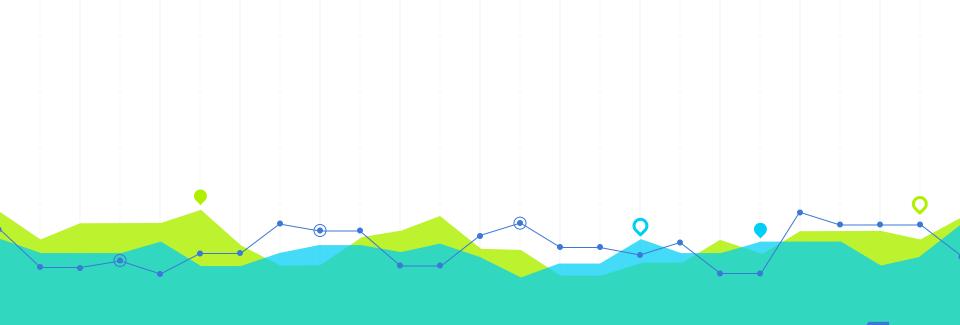# TABLES

Tutor Assisted Browser-based Learning Environment for Students

Manali, Kate, Pankaj and Kunal

AGENDA

- Ideation
- Problem Space
- Conceptualization
- Interactive Prototype
- Usability Testing
- Feedback
- Improvements
- Future Work
- Q&A

Ideation & Brainstorming

Little steps towards our prototype

1

IDEATION AND BRAINSTORMING

Drug Intake Tracking Technology

Collaborative Learning Tools

HCC Portal for Out of Home Advertising

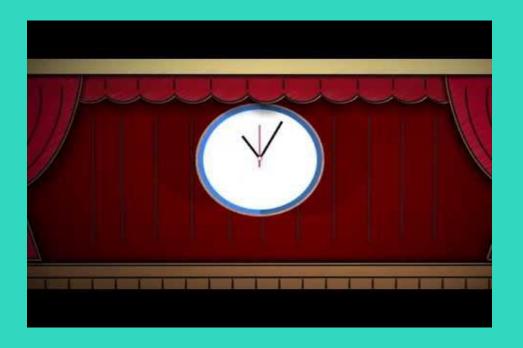**Self Checking Shopping Carts**

Problem Space

Exploring the subject domain

2

Learning Environment MAC Lab

Video demonstrates the collaborative environment with tutor assistance in MAC@IUPUI

PROBLEM SPACE

Space is limited for the ever increasing number of students
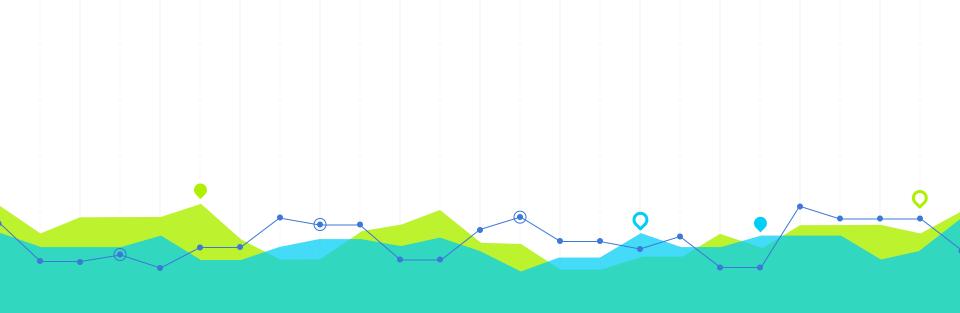
Limited working hours

No archived solutions

Scalability is an issue due to limited resources

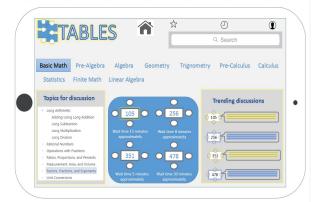**Limited only to IUPUI Students**

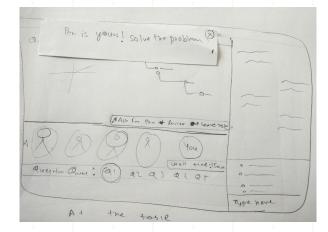# Conceptualization
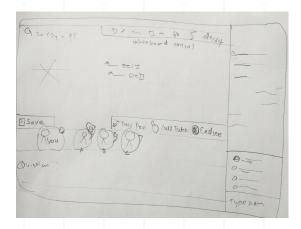
Exploring the subject domain

3

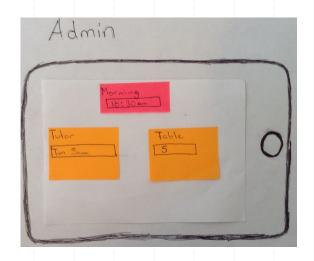# IDEATION SKETCHES

Courses and Table View

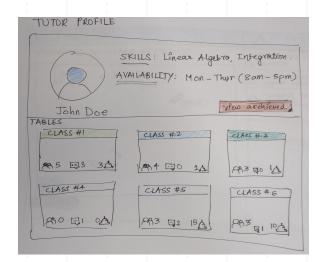Notification when students get the control of pen.

Students working in Collaboration

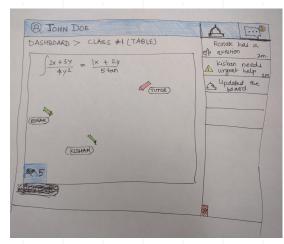# IDEATION SKETCHES

Admin Page for Scheduling

Tutor Dashboard

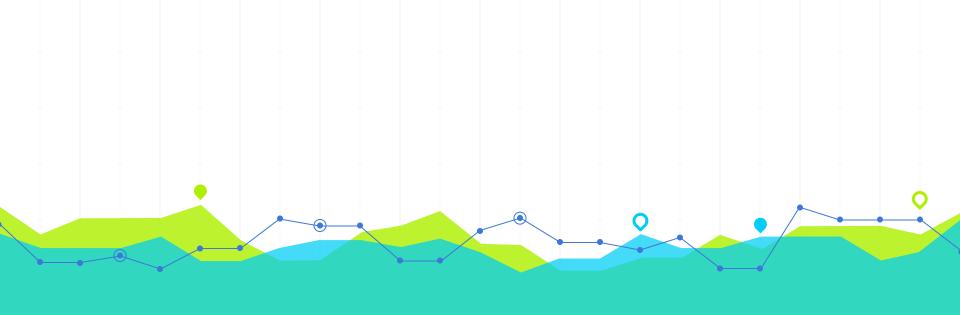Whiteboard View for the Tutor

TABLES

TABLES will provide collaborative learning environment while providing the experience of in-situ environment.

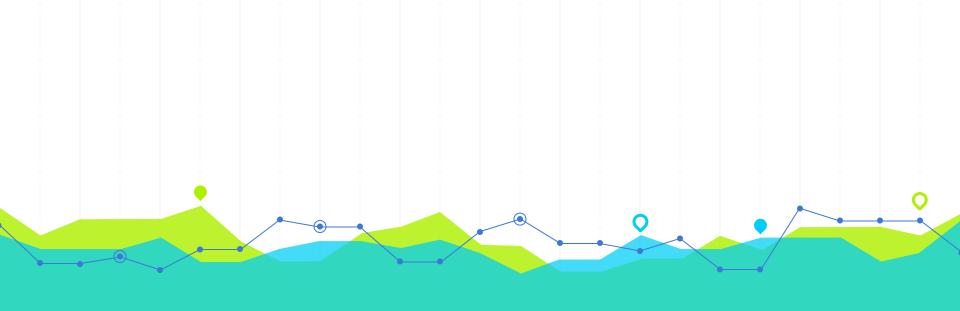# Interactive Prototype

Testing a concept

4

Launch

Usability Testing

Evaluating the prototype

5

DEMOGRAPHICS

GENDER

FIVE MALES

FOUR FEMALES

PROFESSION

Three Undergraduate

Five Graduate

One Tutor

AGE GROUP

23-30

Methods and Techniques - Usability Testing

Cognitive Walkthrough

Initiated process though set of tasks and cognitive walkthrough
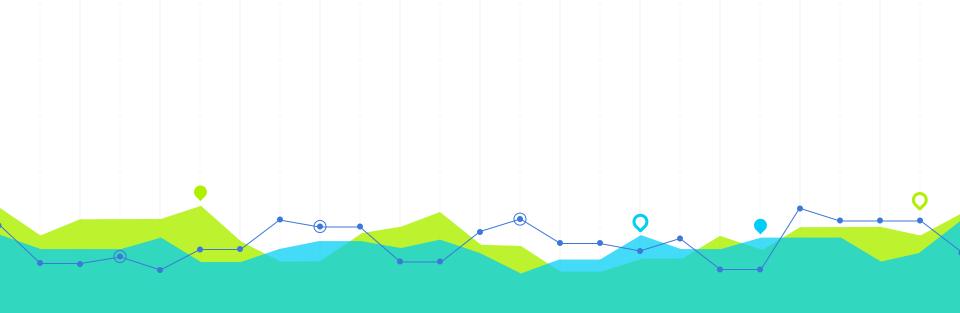
Heuristic Evaluation

Iterated initial prototype after first expert review

Think aloud

It helped us identify some of the key insights

Wizard of Oz

In some places we had to fake the interaction.

Created a set of tasks for cognitive walkthroughs

Reiterated hi-fidelity screens based on evaluations

Asked users to think aloud to gain better understanding

Followed Wizard of oz as prototype was not complete

USABILITY

Feedback

What users said

6

Feedback: Paper Prototype

- Making the chat feature clearer

- A noticeable archive button

- Better description of courses

- Ease in joining group chat

- Pen control feature well explained and developed

- It was not clear to them if the equation displayed could be clicked on

- Badges and endorsement for the tutor to gain recognition

FEEDBACK: Hi-Fidelity Prototype

- ʻPassing the pen' was confusing
- Dashboard was redundant at the same time it was unclear
- ʻWhat's the table number' - Most of the users suggested to use topic name as an indicator

Our SUS Score
70.5

Avg. SUS Score
68

0

100

THINGS USERS SAID..

" *I am excited to see the live action*

" Nice, clean and easy to use interface
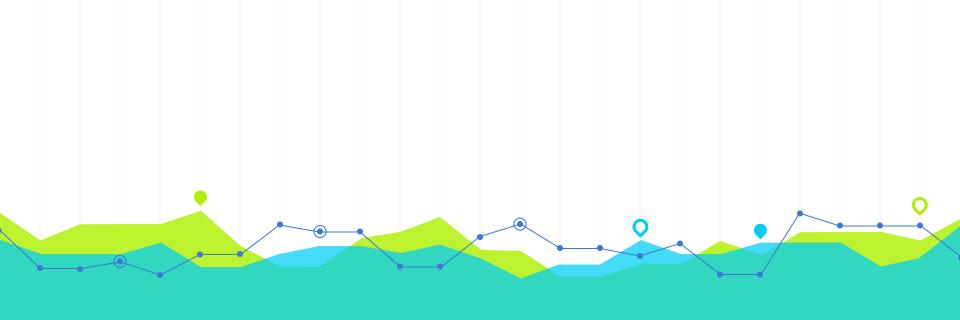
" *This is so much better, I can sit at home and get my problems solved*
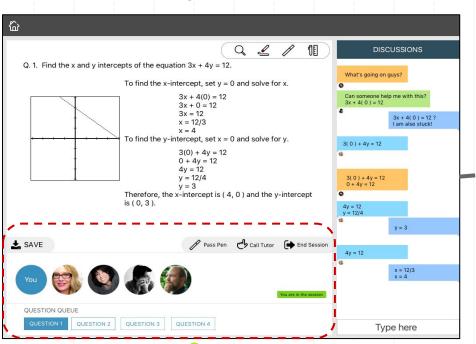
Improvements
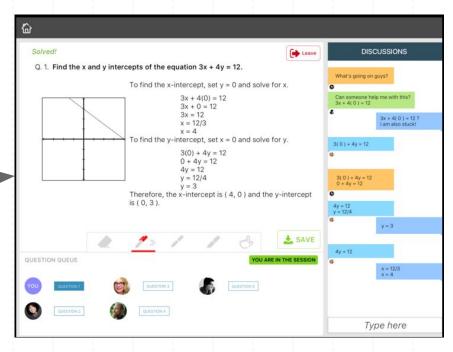
Incorporating the feedbacks

7

IMPROVEMENTS

BEFORE

AFTER

IMPROVEMENTS

BEFORE

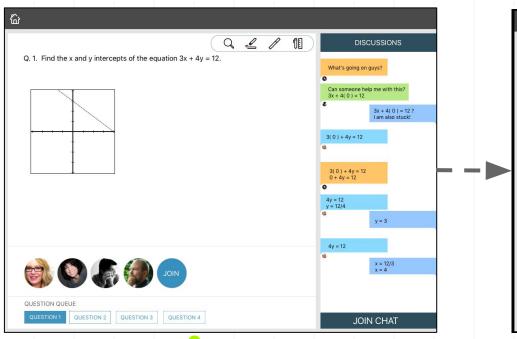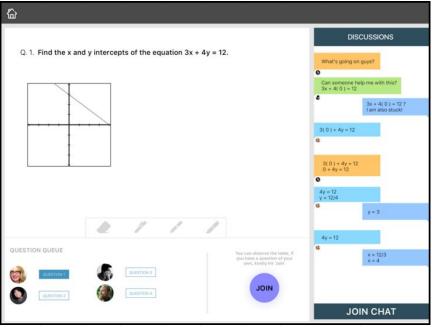**AFTER**

Future Work

A way forward

8

FUTURE WORK

- Incorporate the feedbacks
- Conduct more usability testing sessions
- Design interfaces for tutor and admin profiles
- Develop a complete prototype with all functionalities
- Study and improve whiteboard interaction designs

It's all about understanding collaborative online moderated learning.

THANKS!

Any questions?