

Lessonly

The Online Teachers' Lounge

CS 147 - Education Studio

Low-fi Prototype and Testing

Hannes B. | Eli W. | Lee A. | Mia P.

Introduction:

Value Proposition:

Crowdsourced Lesson Planning and Organization

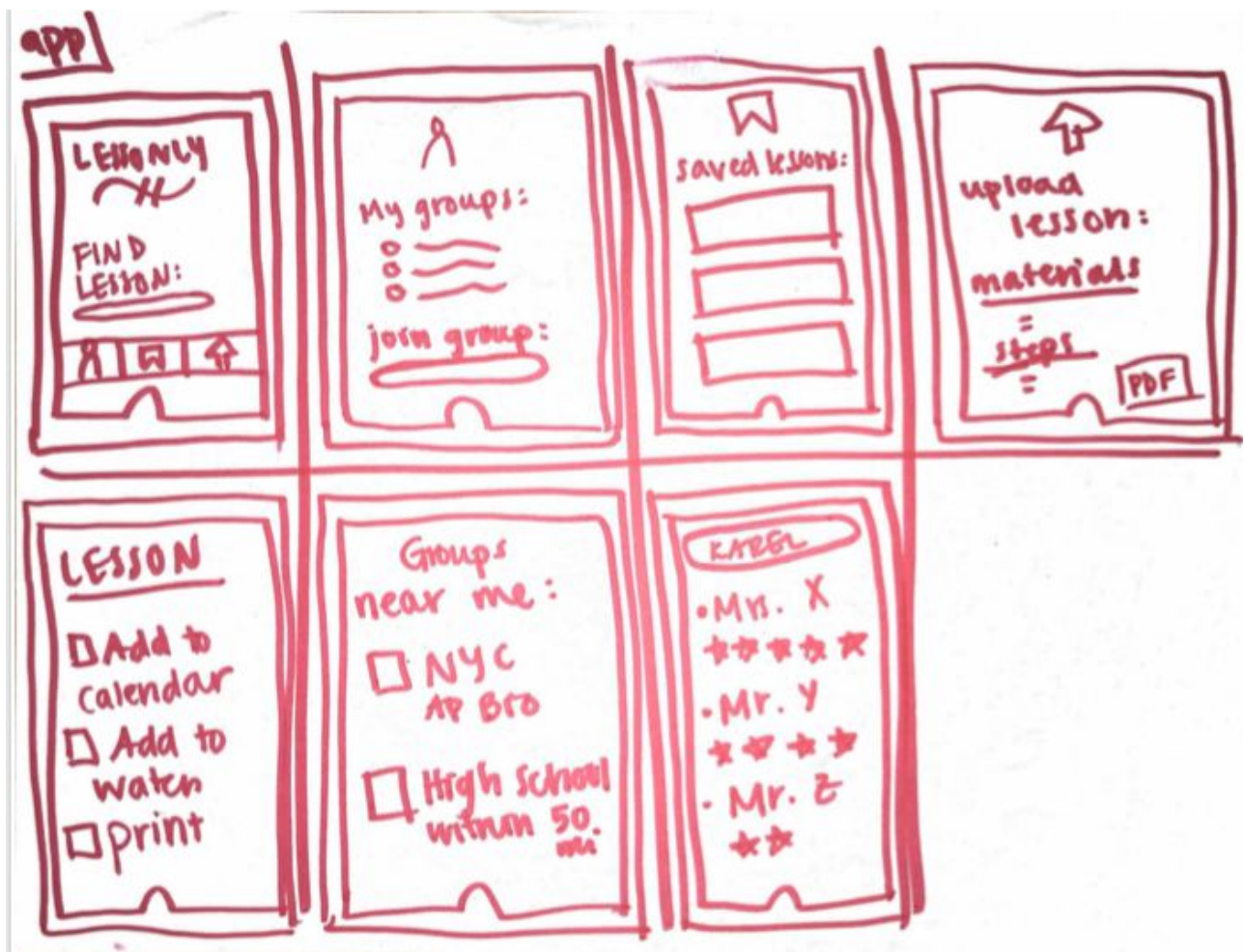
Problem/Solution Overview:

Successful lesson planning can be an arduous and time consuming task which requires resources educators don't always possess. Furthermore, many educators exert immense effort designing creative and effective lesson plans with no way easy way to share them. Lessonly tackles these issues by creating an online community for teachers who want to share, discover, and manage lesson plans. By assisting instructors, and providing them with tools for success, Lessonly aims to have large scale impact on the education sector through positive trickle down effect on their students.

Concept Sketches

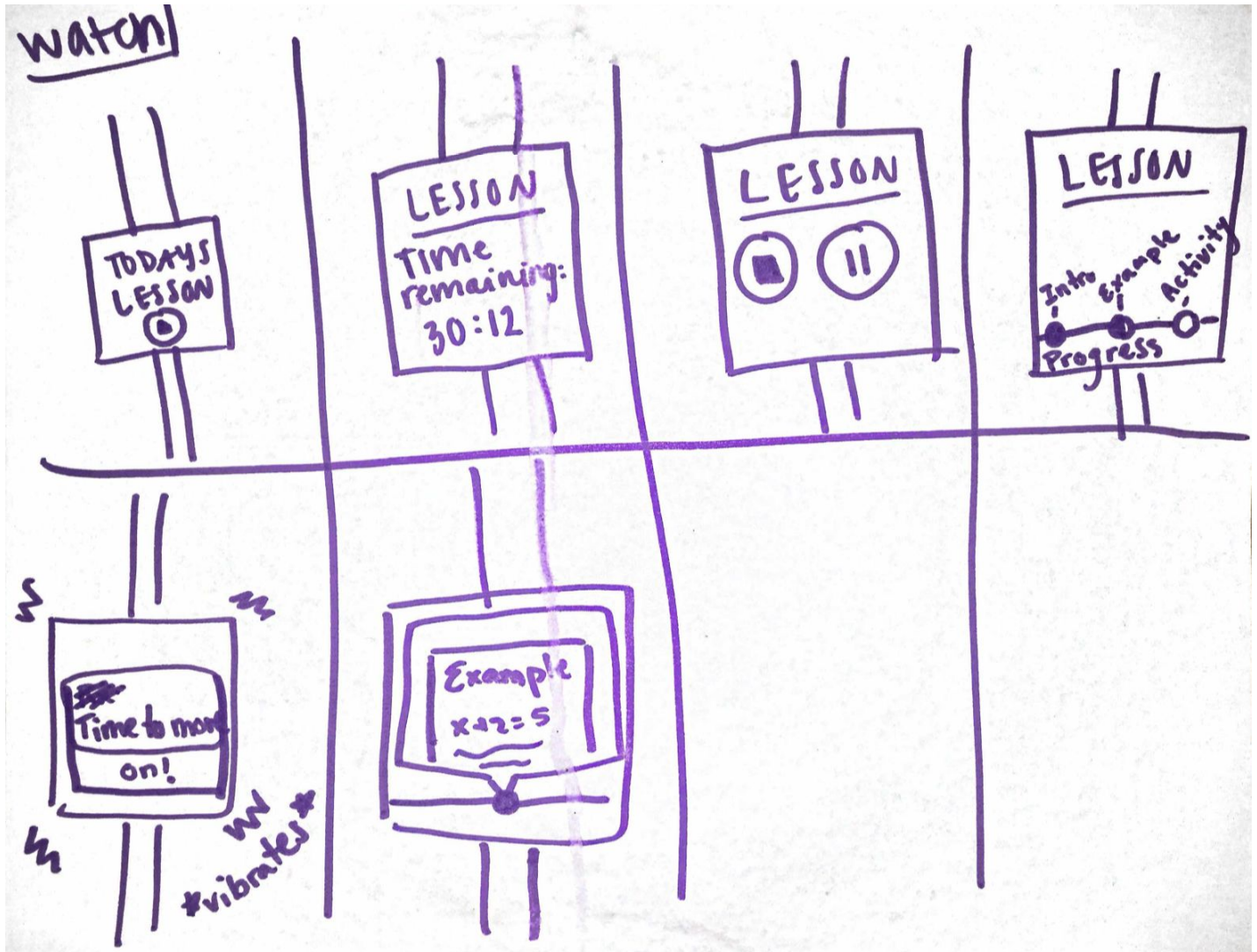
We attempted to explore a large range of design ideas in our initial sketches - both through varying input/outputs and mediums.

1. Mobile App (Top two)



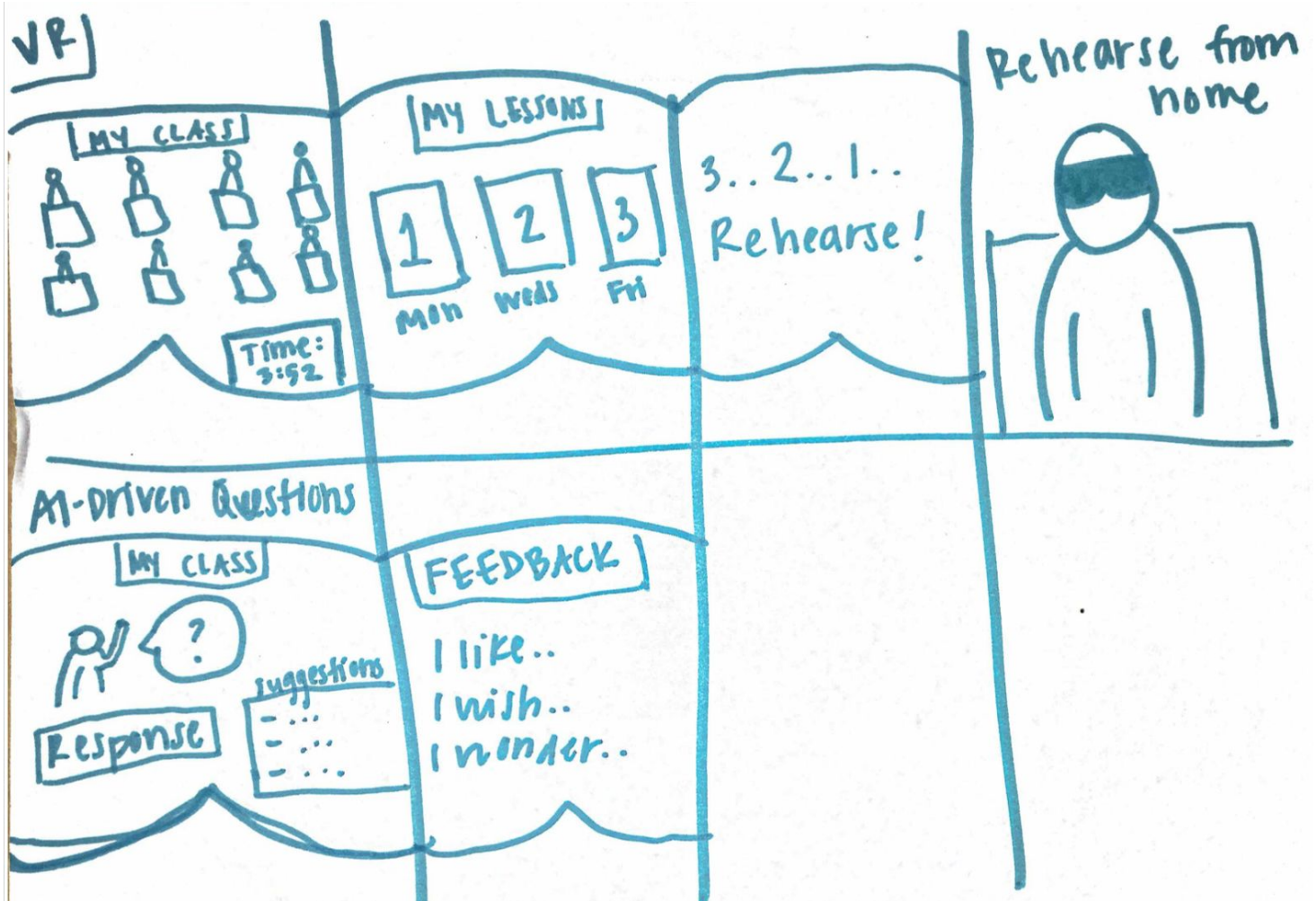
We selected this feature for our top two because we felt it met the most necessary needs we discovered through our needfinding while remaining minimalist and user-friendly in design.

2. Watch App (Top Two)



We chose this to be in our top two because we felt it was our design that most seamlessly fit into the educators lifestyle. The benefit would be great and the user effort or disruption minimal.

3. Virtual Reality



This design would allow teachers to practice teaching their lesson plans to a virtual classroom.

4. Webpage



This design works as a webpage and is more focused on the products interaction with the user's calendar.

5. Mobile App - "Complete Course Planner"

COURSE PLAN

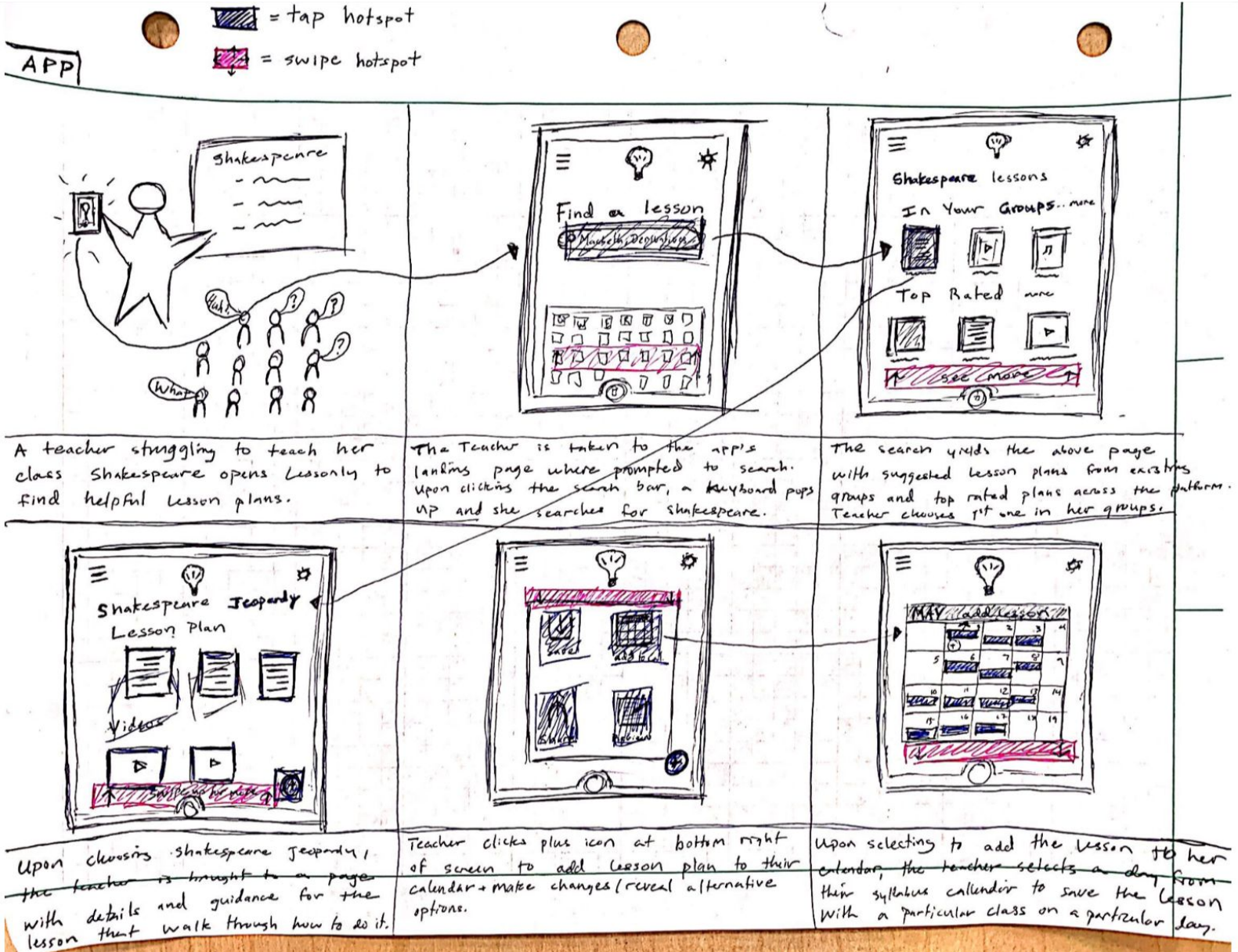
Subject []	YOUR PLAN [] [] [] [] [] [] [] [] [] [] [] []	THIS WEEK MON [1] [2] [3] TUES [1] [2] [3]
level []		
topics []		

MAKE YOUR PLAN suggestions [] ★★★★★ [] ★★★★★	TOP PLAN ★★★★★ [Intro] [Activity] [Discussion]	STUDENT PERFORMANCE [1] A [2] B [3] A-
---	---	--

This is another mobile app where Lessonly plays a larger role in consolidating all of the lesson plans uploaded to the app into a single course reader per subject by taking the highest reviewed plans for each topic.

Top Two Sketches Continued

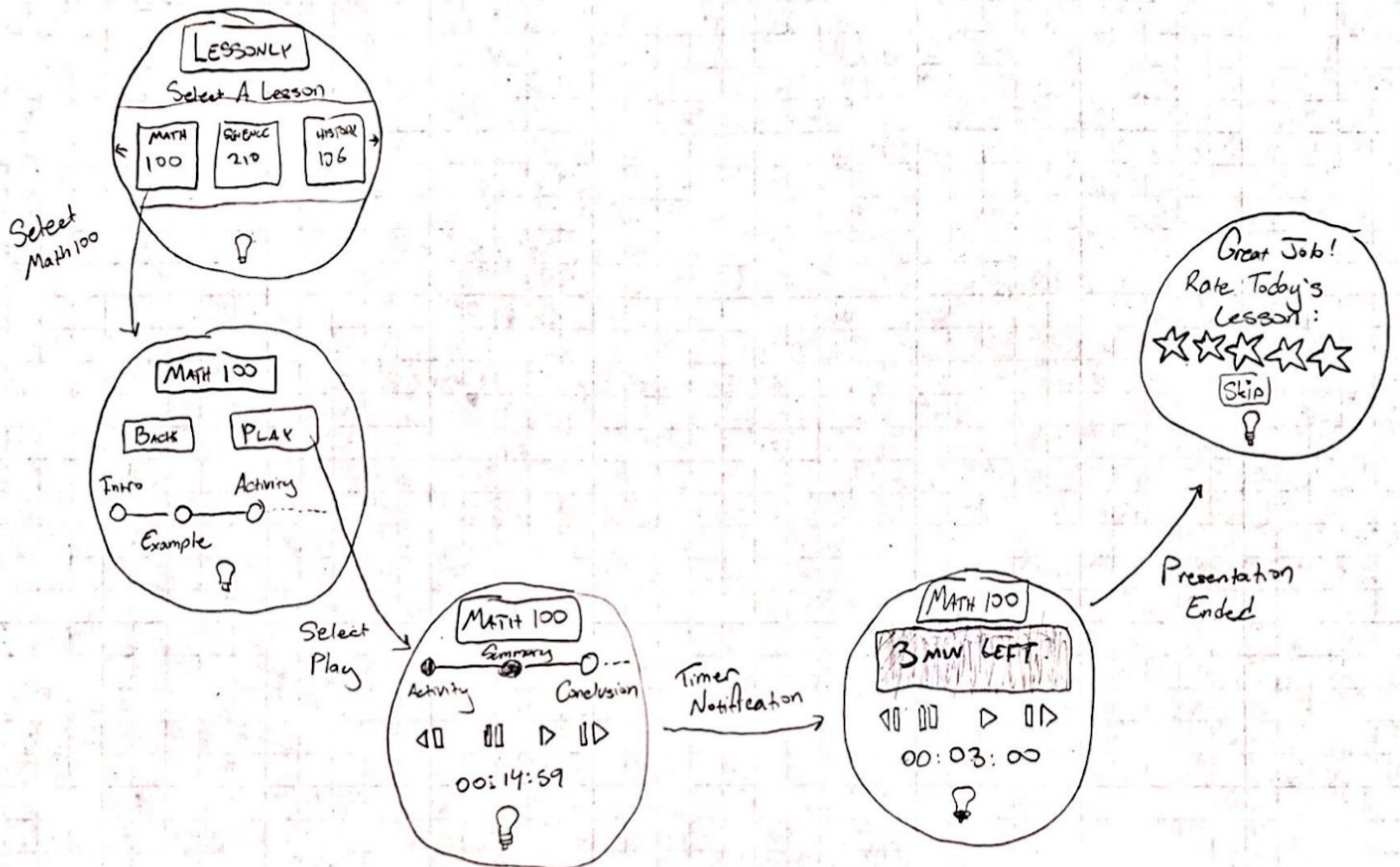
1.Mobile App



Focused example of the lesson finding process a user would go through when searching for a specific lesson through one of the social educator groups they are a part of and add that lesson to their calendar.

Pros	Cons
<ul style="list-style-type: none">• Includes many features• Can integrate well with other mobile apps (calendar)• Social/community aspect• Customizable• Large range of data available with ease• Works both for organizing personal plans as well as exploring those of other educators	<ul style="list-style-type: none">• Teachers may be more comfortable with web rather than mobile app• Amount of features could be overwhelming• Requires roaming/data• Lesson scanning or uploading of files could be frustrating

2. Watch



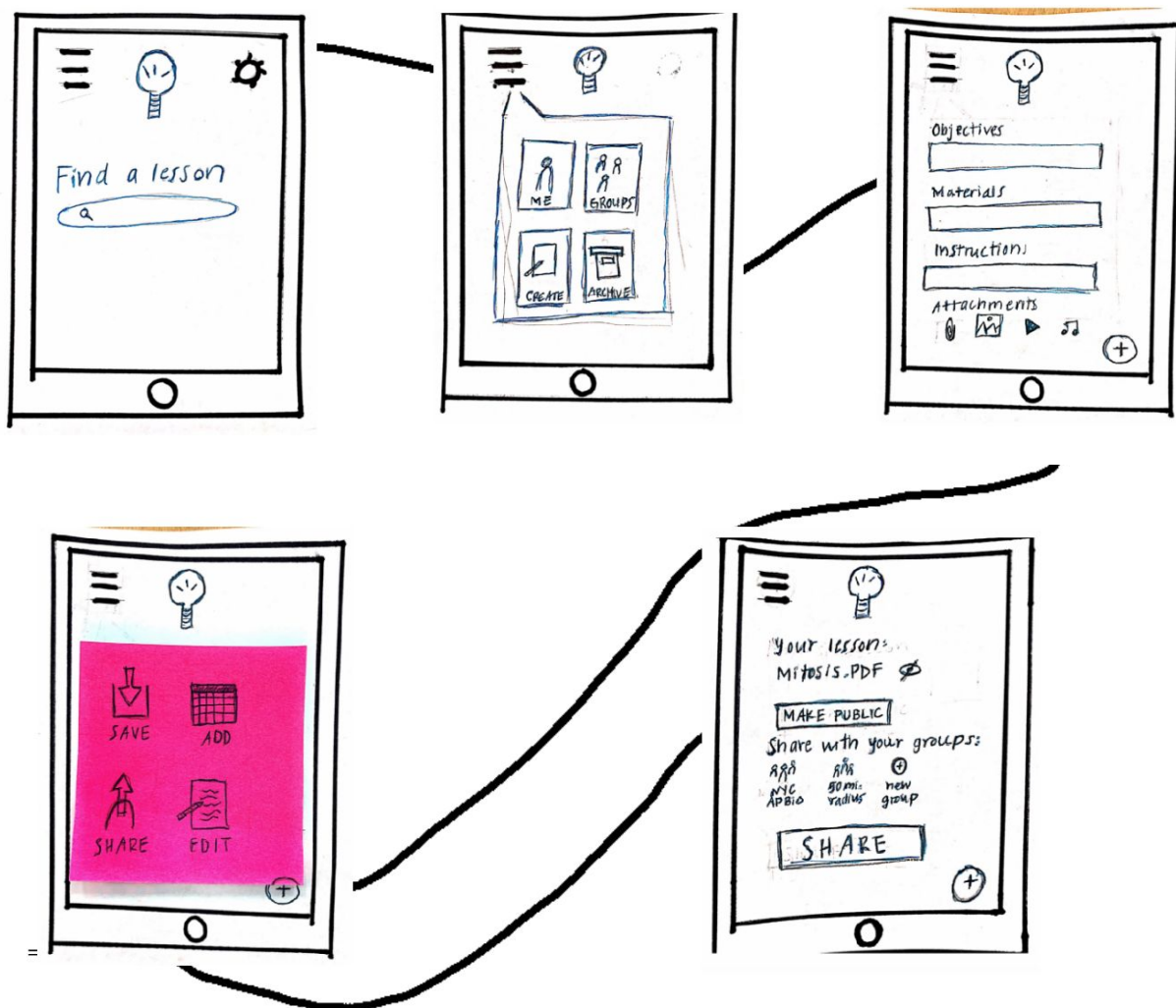
An educator selects the lesson they want to teach and the sketch then follows through in detail their interactions with the watch as they teach.

Pros	Cons
<ul style="list-style-type: none"> Includes many features Simple interface Simple tasks User Friendly Relatively seamless integration into the daily tasks of an educator Could be used offline 	<ul style="list-style-type: none"> Functions like a feature, dependent on phone app Less versatile/less functionality Hard to view lessons on small screen Lesson assistant rather than Lesson Planner

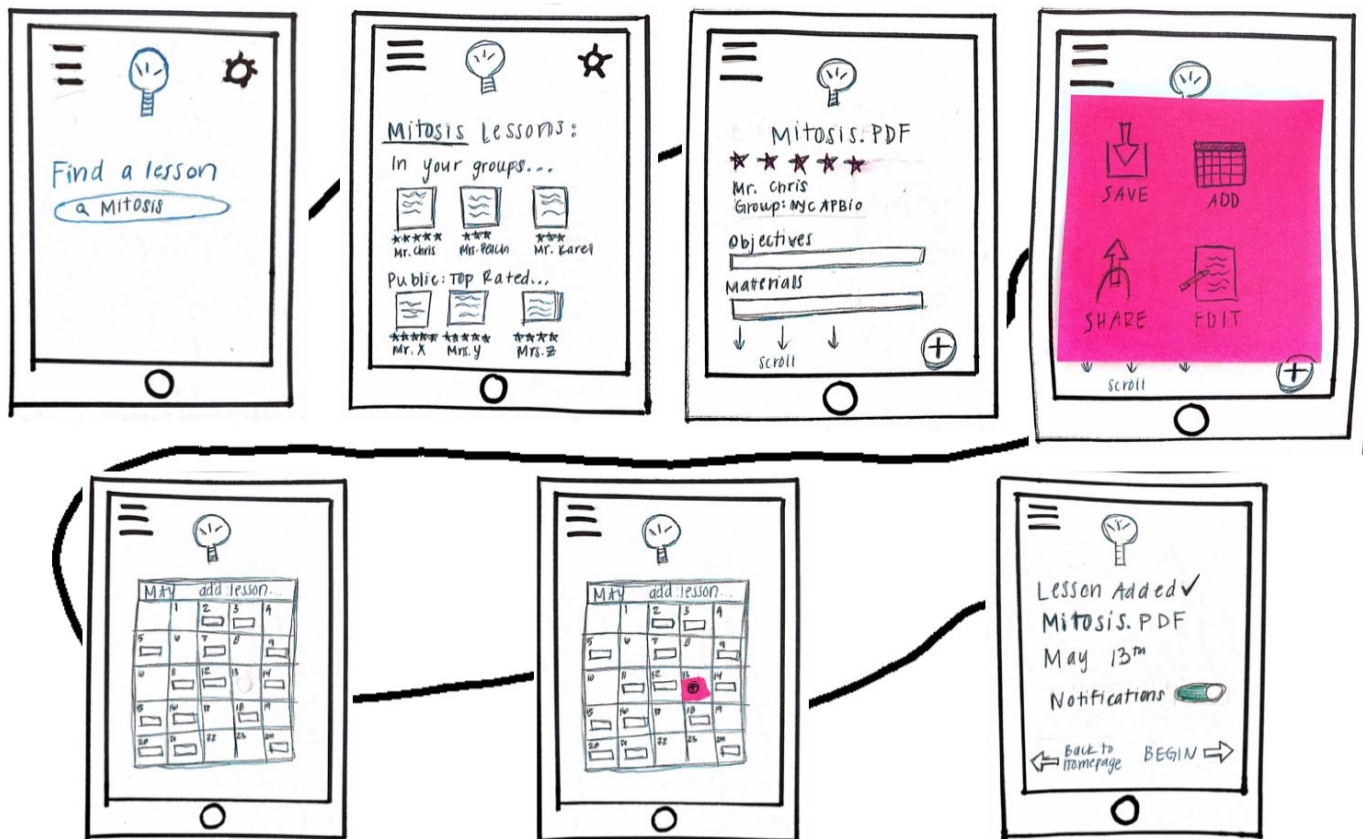
Selected Interface Design/Task Storyboards

We chose to continue with our first mobile app interface. We made this decision because we felt it provided much greater functionality than the watch which has very limited screen space. If we were to expand this app, we feel we could add the watch feature as an extension of the mobile app.

Task 1: Keep a record of effective lesson plan and make it accessible



Task 2: Search for specific lesson plan by topic

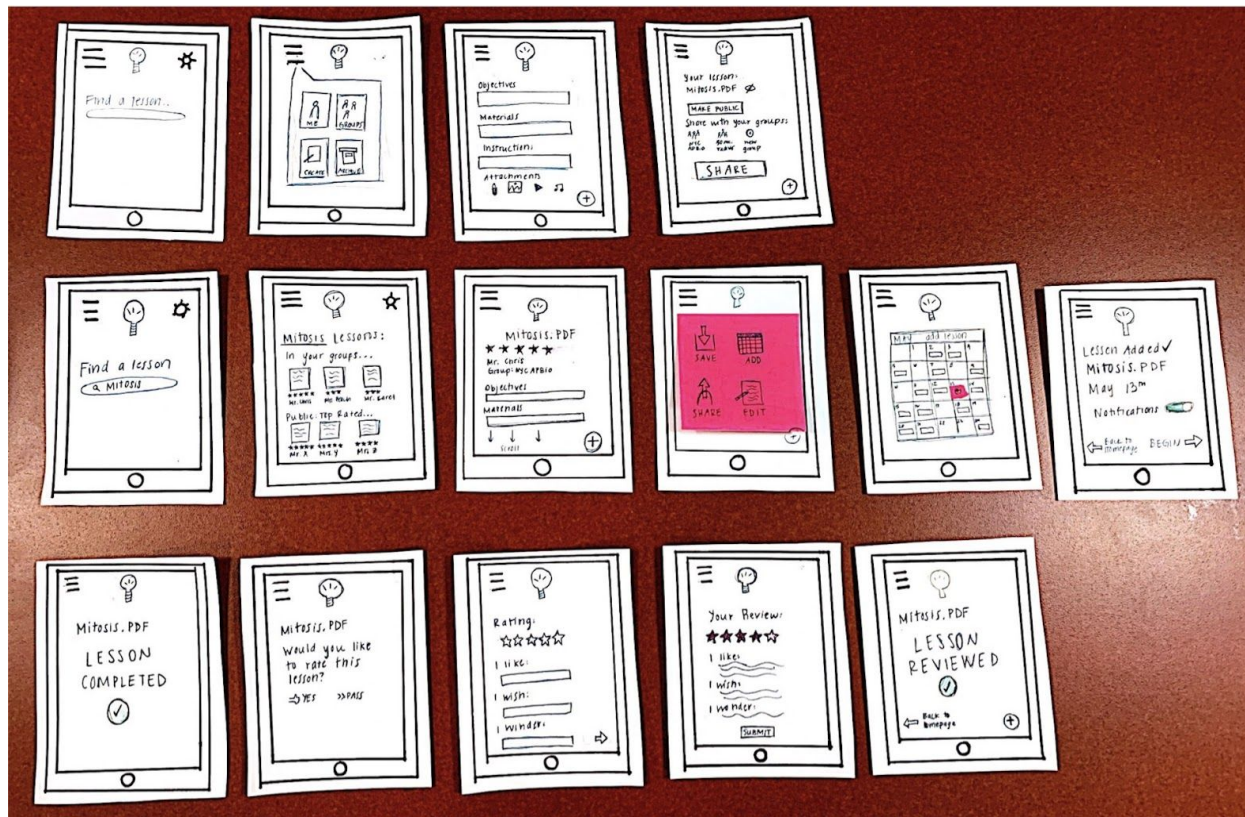





Task 3: Leave reviews/take suggestions on lesson plan

















Low Fidelity Prototype

Our low fidelity prototype was made out phone-shaped outlines illustrating our different screens, icons, and buttons.



Screen/Interface Element	Icon	Functionality
Selection Bar		The app pulls up a menu of selections regarding your profile.
Profile image		The user's profile will be accessed.
My groups		The user's groups will be accessed.

Create		The user will be able to create a lesson plan on the app.
Archive		The user will see their saved lesson plans from past lessons and for future lessons.
Lesson creation screen		The user will fill in the blanks of the lesson objectives, materials, instructions, and attachments.
Share lesson button		When the user hits the share button, their lesson will be shared within their chosen demographic.
Settings		When this icon is tapped, the teacher is taken to the settings where they can modify their profile.
Search bar		The user can search lesson topics or find groups using this bar.
Lesson options screen		The user will see a number of options for their desired lesson plan after searching for a topic.
“Add” circle		When the user hits this button, options will come up for them to save, add, share, or edit the lesson plan.
Save button		When the user hits this button, the lesson will be archived.
Add to calendar button		The user can add the lesson to a future date on their calendar.
Share found lesson button		This allows the user to share a lesson plan they found, as long as it is public.
Edit button		This allows the user to edit a lesson.
Calendar screen		The calendar screen shows the user their upcoming lesson plans.
Rating screen		In the rating screen, the user can evaluate a lesson.

Method

Participants:

We attempted to find a wide breadth of educators.

- Section Leader: From our needfinding we had discovered that Stanford section leaders are already used to teaching as part of a larger community and to discussing lesson plans. As such, we were curious to see how a section leader would react to the thought of transferring this community online and, possibly, expanding it.
- High School Teacher: We asked one of our former interviewees to put us in contact with another educator from her high school. We asked her not to reveal information about our project in advance to preserve the authenticity of the testing.
- Elementary School Tutor: We were put in contact through with a local tutor. We were curious how an educator for younger ages, who covers a multitude of subjects, would react to our app.

Environment:

- We went to Stanford's LAIR around the time of shift changes and found a section leader willing to help us. We then went and sat with them in a quieter area.
- Outside MA High School. We were very thankful to the teacher for taking the time to speak to us so we tried to find a time and place that was the most convenient for her.
- We invited the Elementary School Tutor to Philz and got him a coffee to thank him for his time.

Tasks:

- Creates new lesson.
- Searches and saves lesson.
- Review a lesson.

Procedure:

- Introduction of ourselves, our class, our idea, and a task.
- Task performance
- Feedback / Q&A

Test Measures:

Used four point scale to keep track of

- Time spent completing tasks
- Mistakes made (as opposed to our expected flow)
- Confidence in task performance (vs. looking to us for guidance)

Team Member Roles:

- 2 Greeters/Facilitators
- 1 Computer
- 1 Observer/Notetaker

Results

- They generally seemed excited about engaging in the activity and eager to use the app, but they needed a fair amount of gesturing to understand the next steps at any given point.
- Once an icon was clicked it was easy to understand the next page, but each user struggled to understand the icons without text labeling them.
- All participants asked about the groups and seemed to receive this concept well.
- One tester was concerned about the privacy settings and asked about the “public” lessons, so this is a good feature to keep on the app.
- One participant seemed to have mixed feelings about rating lessons.
- If the rating lesson feature was explained to be analogous to a recipe site (leaving reviews and suggestions) it was more easily understood.
- Calendar feature took some explaining, so we should reconsider how to format this within our app.

From our results, we realized there were a few key components we wanted to keep and adjust.

Aspects to keep:	Aspects to adjust:
Public and private lesson sharing options	Icon clarity
Star ratings of lessons	Calendar feature
Clear “share” buttons	Profile setup flow
Lesson only icon at the top	Tutorial setup options
Teacher groups	“Add” button compared to “Menu” button

Discussion

Overall, the participants seemed to enjoy using the Lessonly application and generally understood the tasks we wanted them to do. They seemed to think the features were smart, useful, and relatively intuitive. Even so, there seemed to be some areas which could have helped with improving the overall flow, timeliness, and confidence of our users in completing the tasks.

One large issue we realized in our design was our use of iconography and assumption of its inherent meaning. Over and over we realized that these needed labels. In order to maintain the clean look, perhaps in our final product this could be a scroll-over label. Additionally, it seems some of our initial setup tasks might feel slightly convoluted to users - especially for someone who doesn't view themselves as "tech-savy". A helper or tutorial could prove useful at these critical moments.

Furthermore, varying inputs about group, public/privacy settings, and reviews were interesting regarding the community aspect of the app and have led us to think critically about whether this is something educators would embrace. Users seemed to understand the functionality and usage of groups through our interface and tasks. There seemed to be some questions regarding this which leads us to believe that while some teachers may be excited by the prospect, others may take time to become comfortable with the concept. Furthermore, educators might feel very differently leaving reviews on a lesson plan made by a member of a small group versus a member of the larger Lessonly community. While the overall feedback was that of excitement and positivity, we might need to help users adjust to this feature by suggesting many potential groups, providing some "view without membership" groups for beginners, and offering highly customizable privacy settings.

As a whole, however, the feedback was positive and teacher's seemed to think the tool could be extremely useful. We definitely learned a lot from the exercise and hearing fresh perspectives proved highly valuable.

Appendix

Word Count:

1486

Raw Data:

Task 1 - Create a lesson

Incident	Severity Rating	Participant
Confused at which icon to click	2	3
“What is ‘me’??”	1	3
“Oh I know I want to create”	0	2
Confused about what objectives were	2	1
Was unsure about how to submit the lesson plan	3	1
Understood “add” menu	0	3
Didn’t input name, they were confused why it was labeled “Mitosis”	1	2
Public setting was unclear	2	3
They liked the privacy setting	0	2
Read group descriptions carefully, seemed to understand	0	1
Share button easily understood	0	2

Task 3 - Find a lesson

Incident	Severity Rating	Participant
“Is there a keyboard to type?”	2	1
Pause after typing, unsure how to submit search	3	3

Asked what “my groups” were, lingered over groups	1	2
Liked the star ratings	0	2
Wanted to know how to see more categories	1	1
Teachers know each other through full names → Shouldn’t use Mr/Mrs	1	2
Confused about transition from lesson page to selection, had to explain	3	3
They liked the star ratings	0	3
“Are these my lesson options?” after add button	2	2
We had to gesture them to add to calendar to go along with task	2	1
“What are the boxes on the calendar?”	1	1

Task 2 - Review lesson

Incident	Severity Rating	Participant
Tried to press check button, but it’s not a button	1	1
Thought they could click on file	1	2
Pressed menu button - not clear that page would dissolve	2	3
Tried to click on file	1	2
Didn’t want to rate lesson	2	3
“Oh I like the icons!”	0	1
Unclear how to fill the stars	1	1
Confused about I wonder box	2	1
Liked review format, easy to submit with arrow icon	0	2

"Is this what I was supposed to write?" - format lacking clarity	2	3
Liked being able to see their full report summarized	0	2
Asked what they should do next at closing page	1	2
Didn't know what homepage was	2	1

Icons cited:

1. lines by Alfredo @ IconsAlfredo.com from the Noun Project
2. person by Caitlin George from the Noun Project
3. people by Adnen Kadri from the Noun Project
4. paper with a pencil by Alena from the Noun Project
5. file box by Stanislav Levin from the Noun Project
6. bullet list by Ralf Schmitzer from the Noun Project
7. Settings by Faris Ma'ruf from the Noun Project
8. search bar by FayraLovers from the Noun Project
9. grid by Yo! Baba from the Noun Project
10. plus sign by Oksana Latysheva from the Noun Project
11. Save by Mahesh Keshvala from the Noun Project
12. add calendar by logan from the Noun Project
13. Share by Billy Sweetman from the Noun Project
14. pencil and paper by Milko from the Noun Project
15. Calendar by Markus from the Noun Project
16. stars by Alina Oleynik from the Noun Project