

Need-finding & experience prototyping

Team Mission Impossible



Our Team



David E. '21



Pau A. '21



Jake W. '21



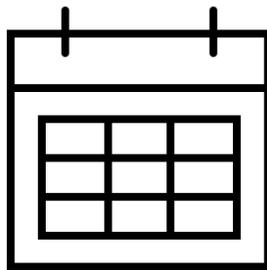
Elena W. '22

We are interested in increasing collaboration and providing organization in asynchronous learning for both students and educators.

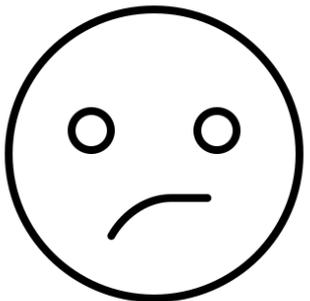
POV + HMW



A freshman at MIT, attending classes virtually.



We were amazed to realize how much he prefers working on his own than scheduling a time with friends.

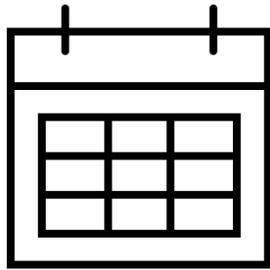


It would be game-changing to make studying less of a solitary activity.



How might we...

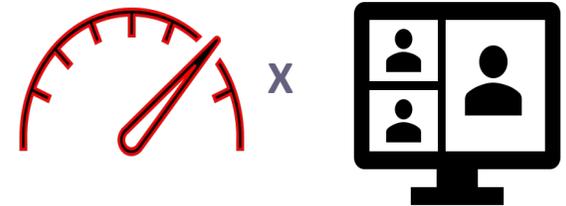
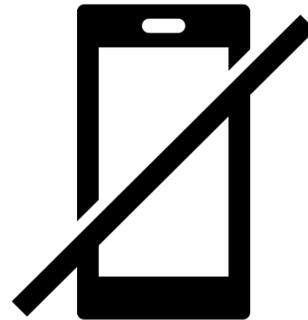
encourage students to prefer studying with friends over studying in solitude?



A college senior who falls behind in asynchronous classes.

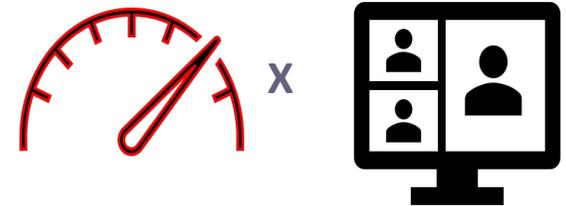
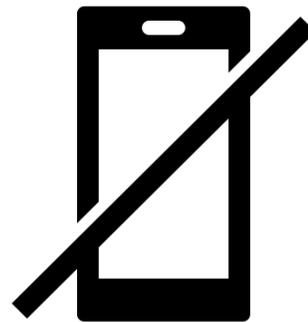
We found that she does not always pay attention while watching lectures and easily distracts herself.

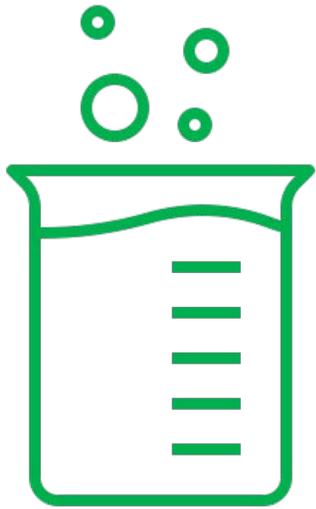
It would be game changing to balance efficiency with presence in the classroom.



How might we...

bring engagement and
accountability to
asynchronous classes?

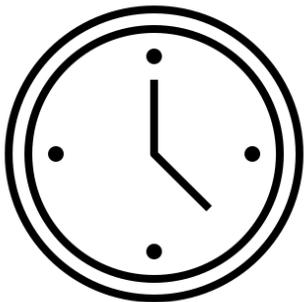




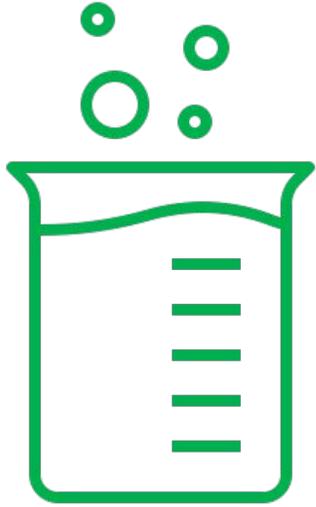
A technically capable yet frustrated high school chemistry teacher.



We were amazed to hear that he spent around 16 hours to record an hour-long lab.

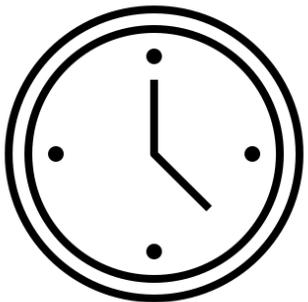


It would be game-changing if we could give this teacher hours back every week.



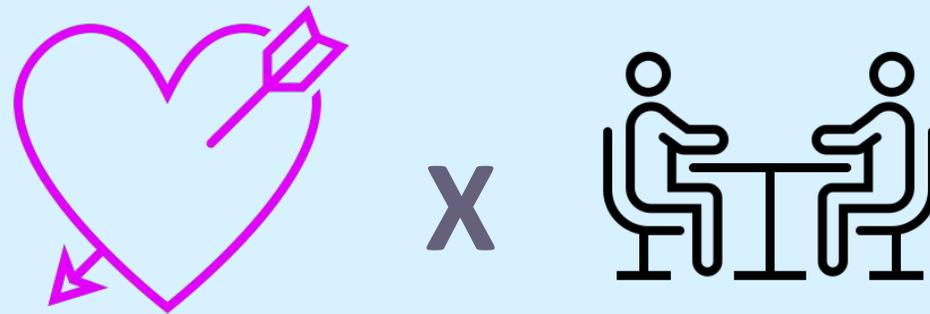
How might we...

consolidate resources in order to streamline lab and lesson creation?

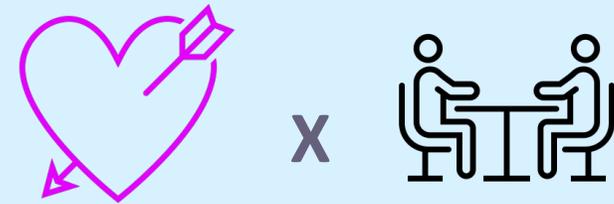


Experience Prototypes

Prototype no. 1



~~Marriage~~ *study* pact

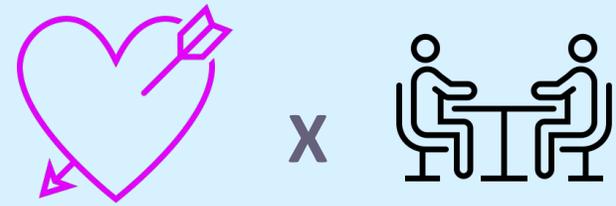


Sent out a form for study partner-matching, asking for a variety of pertinent details.

Used Google Forms, shared in mailing lists (e.g. WiCS), and followed-up via email.

Recorded the number of responses and number of pairs who made plans to meet.

~~Marriage~~ *study* pact



18 responses in 1 day



Matched manually



Quick responses to the form



Small sample size; single population (WiCS); algorithmic matching

Prototype no. 2



X



Lecture party: **Communal watching of recorded lectures**



We scheduled **one pair** and **one individual** to watch the same recorded lecture and complete its accompanying tasks.

The group used Zoom and screen-shared the lecture.

Recorded data such as the number of pauses and the duration/attempts of each lecture quiz.

Lecture party: Communal watching of recorded lectures

01 > Modules > Week 4: Boolean Logic, CMOS Transistors and Logic Gates > 21. Boolean Values Using Switches

21. Boolean Values Using Switches

E40M Lecture 21
Boolean Values Using Switches
Reader 4.2-4.3

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M. Horowitz E40M Lecture 21 1

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Lecture party: Communal watching of recorded lectures



x



Zoom screen-sharing



Quiz attempts

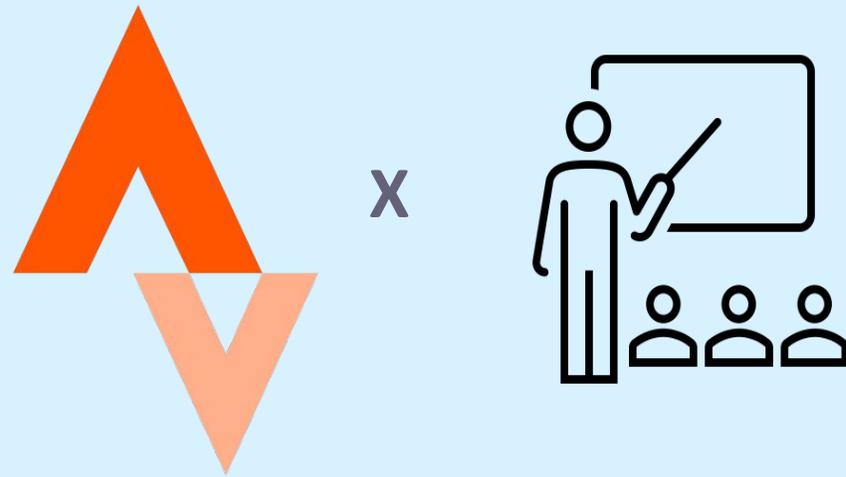


Group paused fewer times than the individual

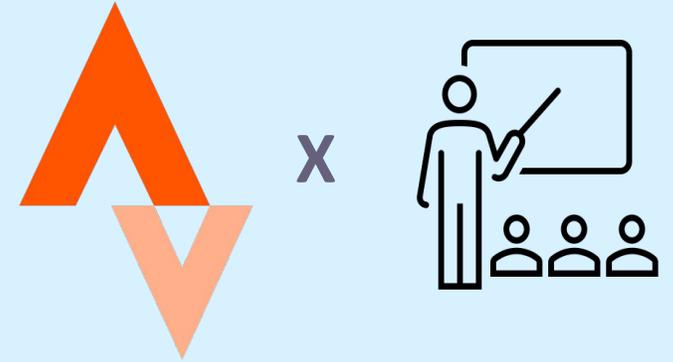


Small sample size; whole point of async courses is flexibility while watching

Prototype no. 3



“Strava” for educators



Posted a question on several Reddit threads specifically aimed at teachers, asking for advice on teaching materials for various science labs.

Monitored metrics such as **responses**, **upvotes**, and **direct messages** to see the general interest among a free-formed community of teachers.

“Strava” for educators

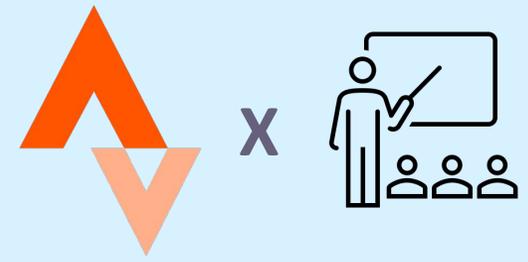
The screenshot shows the top of the r/Teachers subreddit. At the top left is the subreddit logo and name "Teachers" with a "JOIN" button. Below this are navigation links for "Posts", "WIKI", "USER FLAIR", and "JOIN CHATROOM". A filter bar shows "Hot" selected, with options for "New" and "Top". The main content area features three posts:

- A pinned post by u/AutoModerator titled "Teacher's Lounge: Share/Rant/Discussion Fridays - September 18, 2020" with 182 comments.
- A post by u/AutoModerator titled "Ask a Teacher! - October 05, 2020" with 14 comments.
- A post by u/SigKapEA752 titled "After 5 long years.... SUCCESS!" with 348 comments. The post text reads: "I FINALLY GOT MY OWN CLASSROOM! NO MORE FLOATING FOR ME!! MY NAME IS ON THE DOOR AND EVERYTHING! For all you floaters out there, keep rolling on. Your day will come!"

On the right side, there is an "About Community" section with a description: "All things education and teaching! Share your experiences, stories, insights, and inspirations! Notes: We welcome new accounts, but posts from accounts with low ages or karma levels will be automatically removed by the filter. These posts will be manually approved as soon as possible. If you have a question for the mod team, please contact us via modmail. Direct messages to mods about community business will be ignored." It also shows "188k Members" and "1.6k Online". Below that is a "Created Dec 23, 2008" date and a "Related Communities" section.

The screenshot shows a post in the r/ScienceTeachers subreddit. The post is titled "Chemistry Labs in the Online Learning Environment" and is categorized under "General Lab Supplies & Resources". It was posted by u/jtwagner8 1 day ago and has 13 upvotes. The post text asks: "How is it that everybody has been transitioning to online learning in lab based classes? Does anybody have resources for chemistry labs, more specifically tied to **chemical bonds** and **solutions**?" At the bottom, there are 10 comments, and the post is marked as "100% Upvoted".

“Strava” for educators



Access to Reddit communities;
18+ upvotes and 14 comments



Not huge numbers of interaction
relative to size of subreddit



One teacher offered to share
lesson plans



Number of members in subreddit
is not indicative of active users;
we would need to migrate
teachers/users to new platform

