

Team Covalence



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**COURTNEY
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**LOGAN
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**EMMA
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Studio Theme: Creation

Studio Theme: Creation

**Problem Domain:
Making Educational Content**



Making Lessons

Review

Highlighting
Learning

Original POVs: George and Petra

We met George...

We were amazed to realize that students need more visual forms of learning.

It would be game-changing to help guide George toward a more productive form of 'practice'.

We met Petra...

We were amazed to realize that creation of new lesson content fundamentally comes down to tweaking existing material.

It would be game-changing to help teachers combine and re-use quality components and connect around creating new educational content.

Our Interviewees: Studying Education



Carol Giraudo
High School English
Teacher



Petra Dierkes-Thrun
Lecturer in Comparative
Literature

Carol Giraudo

High School English Teacher

“ We do a “Wiki-Project” every year and the **kids love it**. They work together on their Google Docs and then design the page

Pic Collage, Canvas, and Google Docs are great, but **they’re a bit simple** - kind of limiting



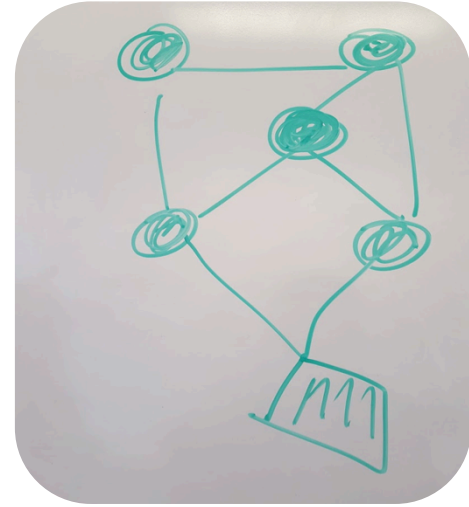
Ms. Giraudo shows us her Microsoft Surface that she uses to start each class with

Petra Dierkes-Thrun

Professor of Comparative Literature

“ Think of [the concepts in a class] as pods...the point of a class is to show **how they are connected**.

When I make my lessons, I take chunks from old ones and number them...**I wish these [lesson plans] were more flexible**. They feel static.



Petra draws out her idea of **how a class should be structured and taught**

Inferences & Conclusions

Students learn and work better in a **collaborative environment**. Having **creative projects** also helps them be more enthusiastic about their work.

Making lesson plans involves a **lot of work** and often involves taking content from **previous plans**. Lesson plans also feel **static**.

Revised POVs

1

We met **George, Tim, and Luke**

We were amazed to realize that **though these students love visual methods of learning, they take cues from their teachers on what sorts of study habits they should develop**

It would be game-changing to help **guide them towards more productive assignments that utilize their love for creation.**



Revised POVs

2

We met **Petra**

We were amazed to realize that **creation of new lesson content comes down to tweaking existing material, often in inflexible forms, such as Word documents.** It would be game-changing to help **teachers combine and re-use quality components in more flexible forms**



Revised POVs

3

We met **Ms. Giraudo**

We were amazed to realize **how important allowing students to collaborate on assignments were to her classroom style**

It would be game-changing to help **give teachers more resources to let their students work together creatively**



George, Tim, Luke HMW

1

How might we help George, Tim, and Luke...

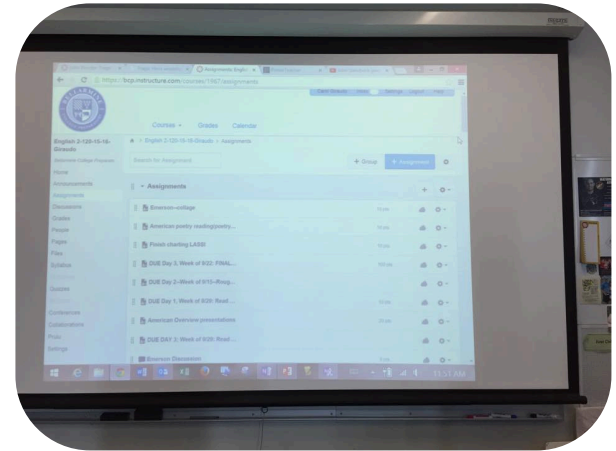
- use their own knowledge and conceptual understandings to teach others?
- give feedback to their teachers on what concepts they understand or have trouble with?
- find new, easy, and exciting ways of interacting with their notes again to solidify their understanding of concepts?



Ms. Giraudo HMW 2

How might we help Ms. Giraudo...

- quickly and easily be able to create (and iterate on) new, interesting high-quality educational materials?
- facilitate group work in more creative and visual manners?
- encourage free creation and creativity through her assignments?

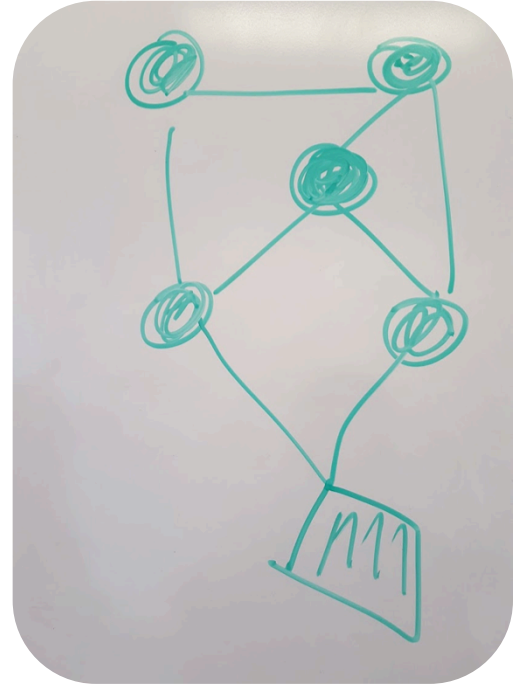


Petra HMW

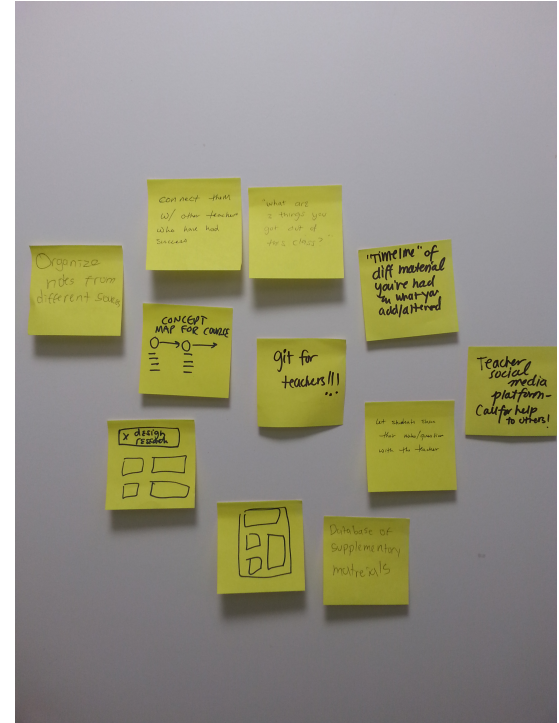
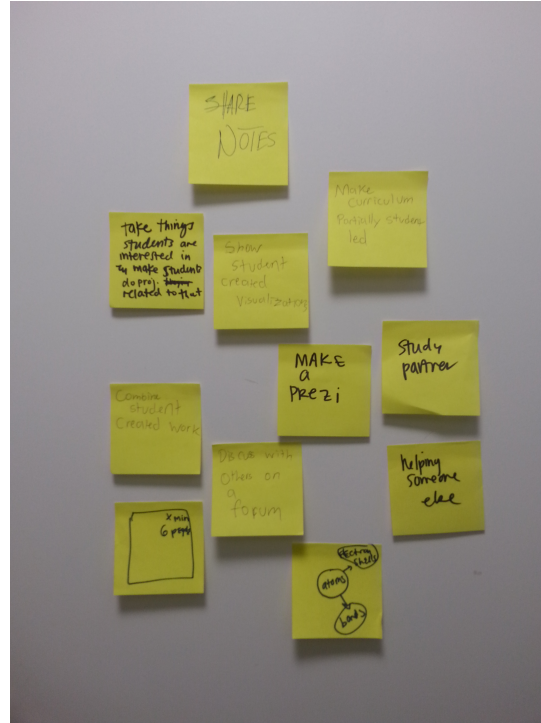
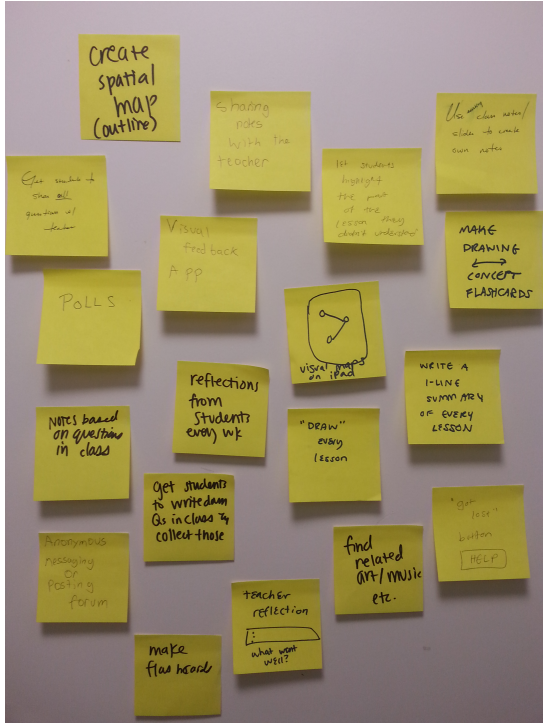
3

How might we help Petra...

- recognize what her students are interested in, and guide/improve the curriculum toward engaging them?
- help students create these connections and roadmaps on their own time?
- organize her overflowing amount of content in ways that will allow her to make more connections?



Generating Solutions



Github for Teachers

1

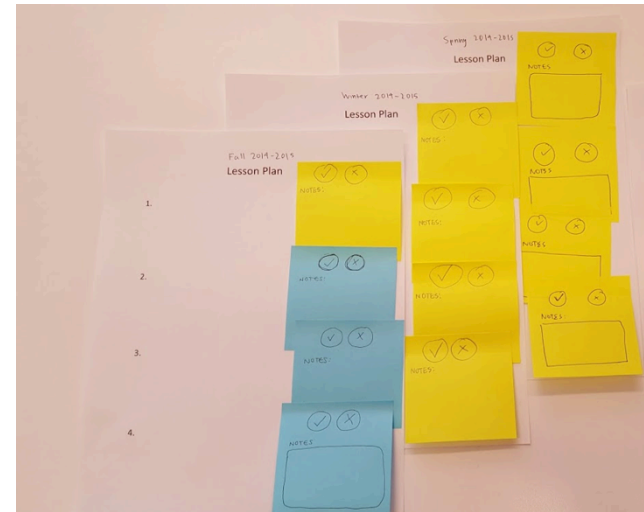
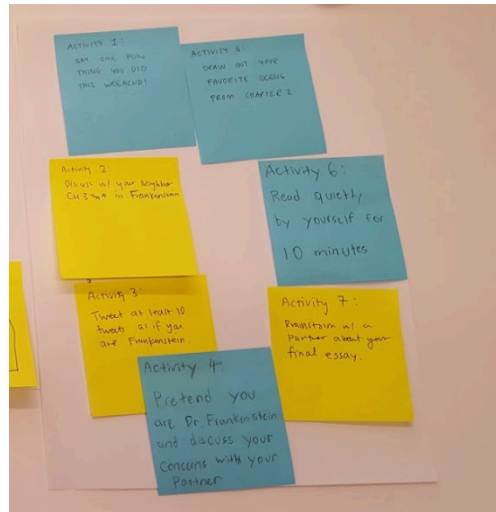
Experience Prototype



Scene: first class of a new course

Roles: students/teacher in her class

Artifacts: “lesson plans” with activities/comments (on sticky notes)



Github for Teachers

1

Experience Prototype

👍 : Lesson plans felt more dynamic – easy to update

👎 : Not enough time to take notes while teaching

! : Classes broken down as “pods” of knowledge that teachers then connect

📖 : A ton of detail and time goes into planning each lesson

Github for Teachers

1

Experience Prototype

Assumptions:

Teachers would like a way to more quickly make flexible lesson plans that they can go back to



Github for Teachers

1

Experience Prototype

Assumptions:

Teachers would like a way to more quickly make flexible lesson plans that they can go back to



Teachers would like to be able to take quick notes on their lesson plans in class



Atom Model

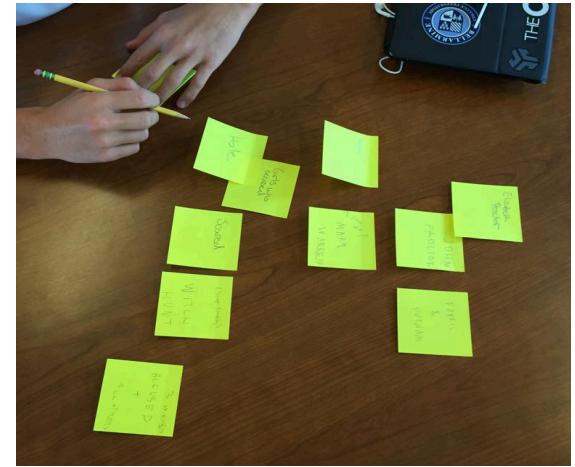
2

Experience Prototype

Scene: creating map for The Crucible

Roles: students in an English class

Artifacts: Post-It notes that represent ideas and a table to map on



Atom Model

2

Experience Prototype

- 👍 : Students were very enthusiastic and felt like it gave them a broader understanding
- 👎 : Lack of customization and aesthetics
- ! : Proposed the idea of making it online
- 📖 : Students enjoy working with each other – they talked about every step in constructing the map

Atom Model

2

Experience Prototype

Assumptions:

Students enjoy working in a collaborative environment.



Atom Model

2

Experience Prototype

Assumptions:

Students enjoy working in a collaborative environment.



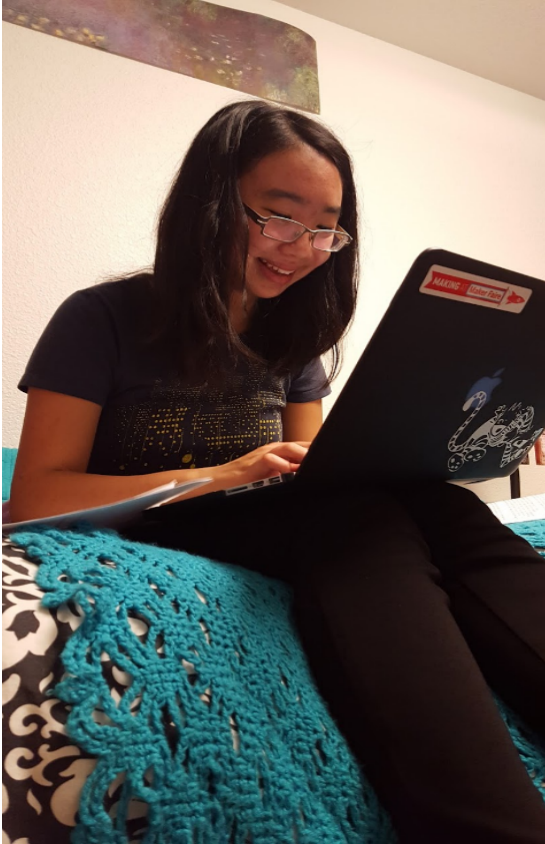
Putting your knowledge into a spatial context helps with understanding



Short Educational Videos

3

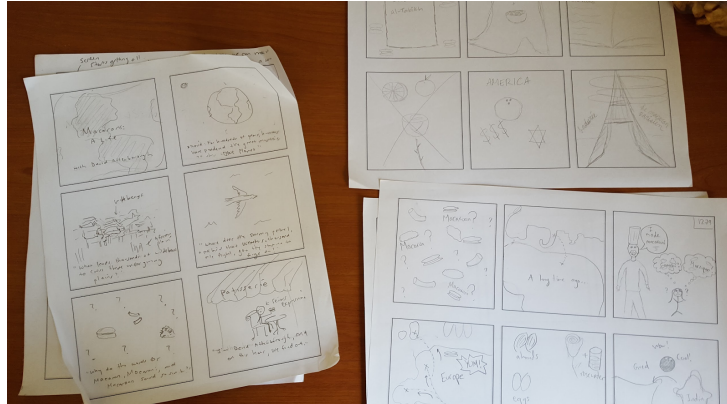
Experience Prototype



Scene: making a storyboard for something they just learned

Roles: students/teacher in a class

Artifacts: article to read and paper to storyboard on



- 👍 : Students said they had to think deeply about the material – fun as well!
- 👎 : Challenging and time intensive for some
- ! : Everyone had different ideas
- 📖 : Students are very different in what they enjoy doing, can do well, and how they approach their work

Short Educational Videos

3

Experience Prototype

Assumptions:

Making videos can be a fun way to synthesize your learning



Assumptions:

Making videos can be a fun way to synthesize your learning



We can make an app that makes creating videos simple enough for most people to do



In summary...

We learned a lot about the creation process for students and teachers through *observation*

Many of our conversations revolved around two main ideas:

- Making learning engaging and collaborative
- Connecting different ideas in a map

Of our three prototypes, we are looking to pursue the **Atom Model** prototype