Floe Brainstorming 2015

The following are notes gathered from meetings that occurred in November 2015. The purpose of the meeting was to summarize what has been done and to brainstorm where Floe could go next.

What is Floe?

- Sponsored by Hewlett Foundation
- Umbrella connected to accessible and inclusive education
- Chart authoring tool
- Personalizes how we learn to address barriers to learning
- ILDH - sharing the results of research with an open audience
- best practices, guides, approaches
- point of integration for all of the work in the other projects that we do applying them specifically to education
- learner autonomy
- multi-dimensional environments - audio, video
- putting our work into a concrete context
- Putting our personalization technologies into the open education world
- Sonification
- Space to do experiments and try new approaches
- Addresses barriers such as the level of the content, access to content, finding content.
- Full cycle which includes creation and production
- Tackles the gnarliest of things
- Self assessment
- Metadata
- Working with students, teachers, authors
- Provide information for search engines
- Learner driven tools for personalization
- Engagement with content creators, enabling them to create better content
- Lumen; PhET
- Teaching
- Video Player
- UIO

Areas of Interest

Student Dashboard

"Co-design a personal learning dashboard that enables learners to investigate and track their own learning progress and discover their personal learning requirements or how they learn best. Dashboard available on FLOE site with 3 components with 1 test implementation."

What have we already done in this space:

- https://wiki.fluidproject.org/display/fluid/%28Floe%29+Preference+Exploration+and+Self-Assessment

Next steps on these designs:

- developing the wireframes further
- thinking through some of the flow of what it would look like and how it would work
- Where would a student find this? We probably want to embed this into existing tools.

Are there existing things we can build on?

- DEEP digital notebook from Self-knowledge breakouts: https://docs.google.com/document/d/1G31DGNqgaV7uQqsnNhbDU3HFFJEQvXpFyKJb0WqM/edit
- Metadata authoring had the seeds of user feedback in it.
- Gooru’s platform has a dashboard showing progress.

Are there new interesting spaces to explore related to this task?

- how to challenge the student, broaden their thinking
- is there a way to integrate the information about yourself and your learning with the actual activities of learning?
- danger of data being unmotivating

Teacher Dashboard

"Co-design a teacher dashboard that aggregates learner dashboard content and helps plan inclusive delivery. Teachers able to track student progress and match learner needs with appropriate OER – through co-design. Teacher dashboard available on FLOE site."

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What have we already done in this space

- LDOA - but it had the issues of hierarchy discussed below
- Indirectly, the work we’ve done on GPII privacy infrastructure is useful here in terms of giving learners an ability to express what they share and who they share it with when it comes to personal learning data.
- This should be an outgrowth of the learner self assessment

Are there existing things we can build on?

- Gooru and Lumen both have this type of thing.

Are there new interesting spaces to explore related to this task?

- Address privacy and evaluation concerns
- Issues around hierarchy between teacher and student. It shouldn’t be a teacher assigning to the student but rather a two way communication between teacher and student.
- A conversation mechanism for the teacher to talk to the student about their own learning goals.
- A mechanism for connecting learners with matching/convergent/contrasting learning styles together, to share OER with one another.

Going forward with this work, we’ll use the learner self-assessment model as the basis for designs that help to connect students up with their teachers in a more conversational, non-hierarchical manner. And equally important, allowing students themselves to connect and share with other students who may have common learning needs/goals/progress states, etc. Notably, we will ensure that our entire approach to assessment is “self”, meaning learners themselves decide what gets assessed, how it gets assessed, and who this information is shared with.

Enabling Rich Learning Experiences

"Develop innovative approaches to address currently unsolved accessibility challenges associated with richer learning experiences and new forms of OER, including simulations, games, tests and geospatial data. 3 exemplary SIMS showing representative approaches, 2 open components for games, component to support map accessibility"

What have we already done in this space?

- PhET Sims
- Lumen - design for choose your own path for learning content - relates to the conversations between teachers and students
- Discovery Cats
- Sonification, tactile

Are there existing things we can build on?

- empty

Are there new interesting spaces to explore related to this task?

- Tactile!
- Demonstrations that are very simple.
- Music education? Music literacy, ear training
- Take the patterns that are emerging from the PhET work to create exemplars. These can be linked to the work we need to do for P4A.
- Geospatial - Infusion wrapper for Leaflet - http://leafletjs.com/

Multimodal Expression of Information

Add a multimodal palette for expressing information (including sonification) to FLOE authoring supports. A prototype of a charts and graphs sonification authoring tool.

What have we already done in this space?

- chart authoring tool without sonification exists.
- sketching and prototyping of the sonification is being done
- should be able to build out a simple example quite easily

Are there existing things we can build on?

- empty
Are there new interesting spaces to explore related to this task?

- treating sonification, text, labels, visual display as ‘layers’ that could be enabled and disabled
- evolving the early authoring demo that ties together several of the things we’ve done in Floe.
- minimal scaffolding for web authoring and publishing

**Mobile UIO**

> Address mobile learning by making Learner Options responsive. An exemplar of Learner Options for mobile integrated into the Inclusive Learning Design Handbook; update WordPress plugin for mobile

What have we already done in this space?

- Joanna created wire frames a long time ago. We want another round of design of these wireframes before we pick them up to develop.
- designs at bottom of this page: https://wiki.fluidproject.org/display/fluid/%28Floe%29+UI+Options+Design+High+Fidelity%2C+C.1

Are there existing things we can build on?

- Empty

Are there new interesting spaces to explore related to this task?

- Empty

**Open Badges and Engaging Youth**

> Address gaps in OER variants (and engage youth facing barriers to employment) through Outside-In by developing Open Badges relevant to OER gaps. 3 Open Badges available with training and evaluation criteria

What have we already done in this space?

- Joanna created some early designs around matching people experience and badges.
- https://www.dropbox.com/s/yts1zr3wibshbql/trainingandmarketplace.pdf?dl=0

Are there existing things we can build on?

- This is related to P4A, Outside In.

Are there new interesting spaces to explore related to this task?

- How do badges relate to quality? References? Ratings?
- Distill some of these challenges and the work done on Outside In in the ILDH.

Things that we would like to do

Continue to:

- develop the Inclusive Learning Design Handbook. Add sonification and authoring content into ILD

Are there other specific things we could easily do or that we’d really like to do?

- Summarized version of ILD to help people get started. “Quick and Dirty” for design. Simple content a11y guide. On ramp to the ILD.
- Continue to assist in integrating FLOE functionality into OER projects and education efforts using OER, DRPI, LPSS, EdReady, CK12, OpenStax, Lumen
  - https://lpss.me/about
  - http://www.online-educa.com/OEB_Newsportal/stephen-downes-learning-support-systems/
- Integrate with Gooru, Don Tapscott, PhET
- Conduct workshops and dissemination activities including an OER Accessibility Sprint, an Inclusive Design Workshop at OpenEd 2015, Webinars, papers and presentations at relevant conferences. Conduct 2 workshops and 1 sprint, including an Inclusive Design Workshop at OpenEd 2015
- P4A sprint in Copenhagen; hackathon organized by Edgar and Steve from Metatecture and Vera.
- CSUN; February Hewlett meetings.
- Provide policy guidance by developing a white paper on small and thick data to support inclusive education
- This is Jutta’s contribution.
Are there new areas we would like to explore that we can relate to open education?

- **Expand the Video Player**: get it up to working, build out the features, integrate with authoring and sonification.
- **Bring everything together, bring the metadata tool back onto the table. First discovery and exploration - spaces that are more playful and gamelike. Geared to younger folks.**
- **Learner as creator**: Provide a means by which learning material can be created, delivered, and modified using the same environment—providing learners with the ability to “open up” and change/modify/experiment with the learning material they’re using, sharing their own personal versions of a resource with the friends, classmates, teacher, etc. This connects with self-assessment, in terms of shifting the dynamic away from “learner as consumer” and towards a more constructivist, self-structured learning philosophy.
- **Inclusive learning in IT**: geared to people who want to be programmers.
- **Open accessible educational computing environments**: Possibly in the area of computer science but also in terms of computer as simulator or experimental sandbox. Ties in with PhET. Instead of just being a consumer of simulations you can also create and/or modify.
- **Create an exemplar that is a SIM** that demonstrates the techniques we have use as well as integrating the Floe tools. Possibly we could consider using the chart authoring tool for this.
- **Expand the sonification work**: Work on other types of graphs, math formulas, symbols. Look for collaboration with other people such as Vibrotactile. See if we can work with other modalities.
- **Update the Video Player wordpress plugin** and polish it. Work on little booklets, stickers, cards and other ways of advocating for our ideas and getting the word out.
- **Simplified version of learner options**: In context simplified widgets that can easily be used to modify the experience.
- **Personal metadata**: Collaboration with people who gather personalized data (such as heart rate) and provide secure ways of storing and sharing this data. Allowing people to monitor their bodies. This relates to self assessment.
- **Working in the maker-space**: - interfacing between the digital and physical world. How to build this, how to interact. Novel physical interactive things.
- **Evaluating**, looking as customizations as a window to innovating. Look at ways in which users customize things themselves for inspiration for next generation.