

Bridget Dalton
University of Colorado-Boulder

ILA Austin 2018
Specialized Literacy Professionals
as Digital Literacy Leaders SIG



Lucas 
Education Research

**Be the Change: Where do you want to
go next?**

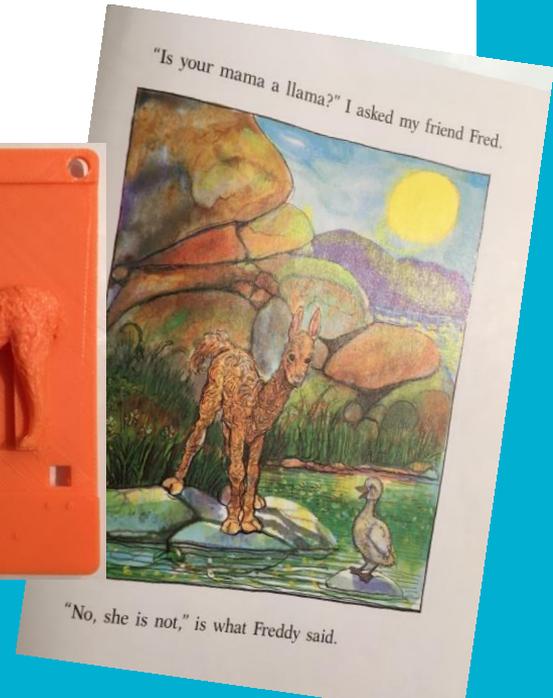
***build a better book**

***compose our world**

***literacy and media lab**

***CU outreach internship project**

Build a Better Book Project



Build a Better Book Project benefits from an interdisciplinary team:

- computer science
- science discovery/
maker spaces
- tactile arts
- literacy education



We benefit from
working in
multiple contexts,
with different
designers and
users

Youth in informal
maker spaces

Librarians

Preservice
teachers

ELA teachers and
students

Engineering and education students
in university outreach project

Obsolete
Skill Set: The
3 Rs —
Literacy and
Letteracy in
the Media
Ages
By Seymour
Papert

The facetious old turn of phrase that identifies schooling with the three Rs -- reading, 'riting, and 'rithmetic -- may express the most obstinate block to change in education. The central role of these "basics" is never discussed; it is considered obvious. Thus the most important consequences of new technologies are not recognized by education policy-makers.

This article appeared in *Wired Magazine* in fall of 1993

BBB Goals

An expanded skill set for “reading and ‘riting”

Convergence of writing, multimodal composing, and making

- Increase blind children’s access to picture books through 3D multimodal design
- Develop multimodal tactile composers/makers who design for equity
- Expand students’ perspectives to view individuals with visual impairments as agentive and accomplished
- Increase interest in STEM professions

Connecting multimodal composition, maker education, and project based learning

Why we care:

- ~Equity
- ~Real world values, practices, & tools

Maker education and project based learning: We learn by doing (Dewey, 1938; Harel & Papert, 1991)

Project-Based learning (Polman, 2000)

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Use of authentic tools and practices common outside of school

Peer collaboration

Authentic audience

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Design and fabrication of products

Public audience

Creative tinkering

Maker space offers tools, materials, expertise in community of makers

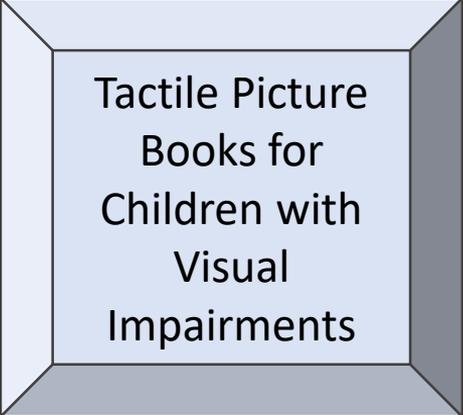
Time, space, membership is fluid, but many offer workshops to develop skills

From writer to multimodal composer-maker: Key concepts hold AND there are new areas of emphasis

- Multiliteracies (New London Group, 1996)
- Multimodality (Kress & Van Leeuwen, 2001)
- Design (Kress, 2003; Dalton et al, 2014; Smith, 2016)
- Tool affordances (Gilje, 2011; Ranker, 2008)
- Recursivity (Bruce, 2008; Fullweiler & Middleton, 2012)
- Identity/ies (Alvermann, 2011; Smith, 2016)
- Embodied literacies (Leander & Bolt, 2013; Ehret & Hollett, 2014)
- Literacies socially and historically constructed and positioned within specific social contexts (Gee, 1996; Street, Pahl & Roswell, 2009)

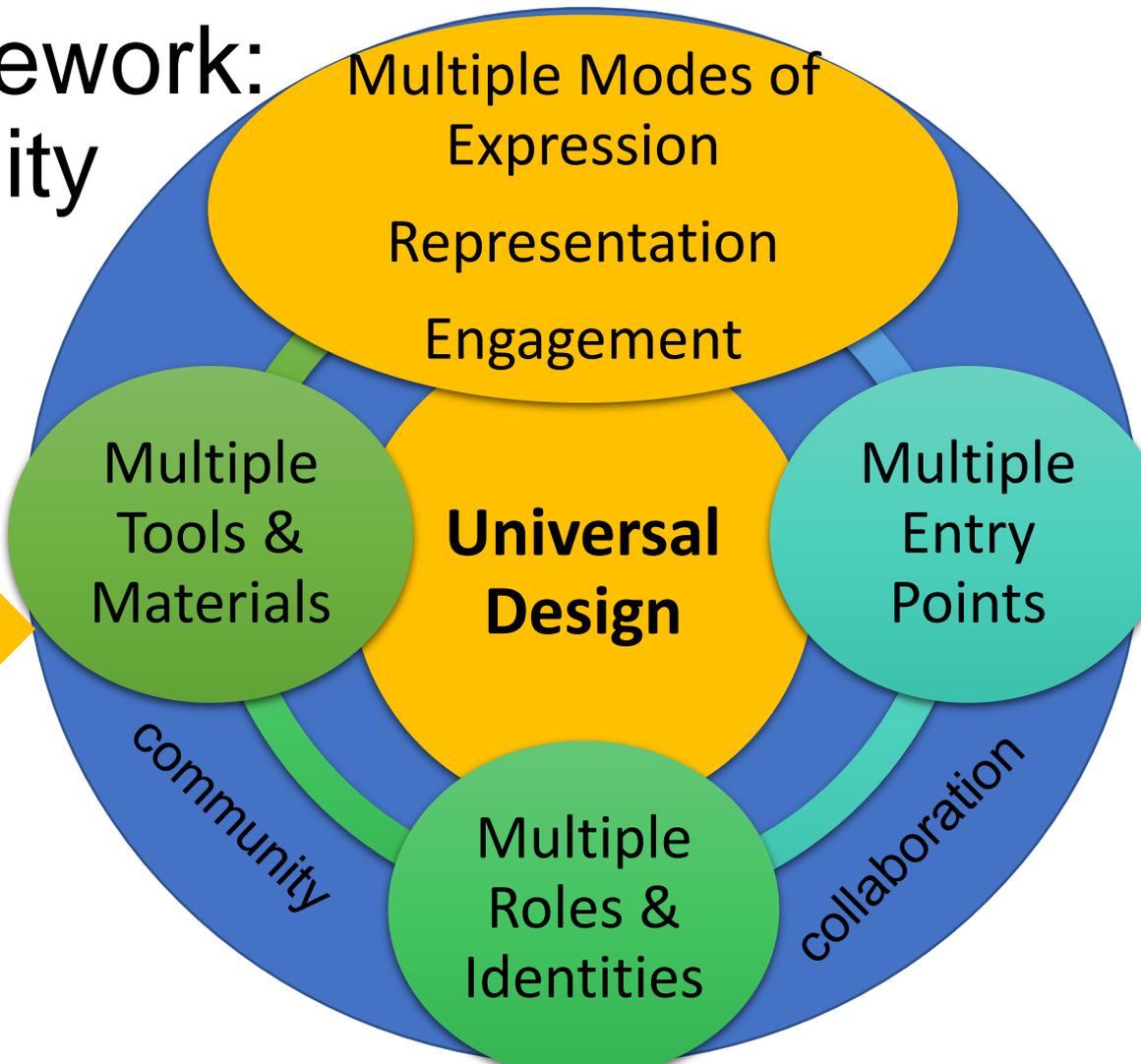
Instructional framework: Designing for equity

Authentic Audience



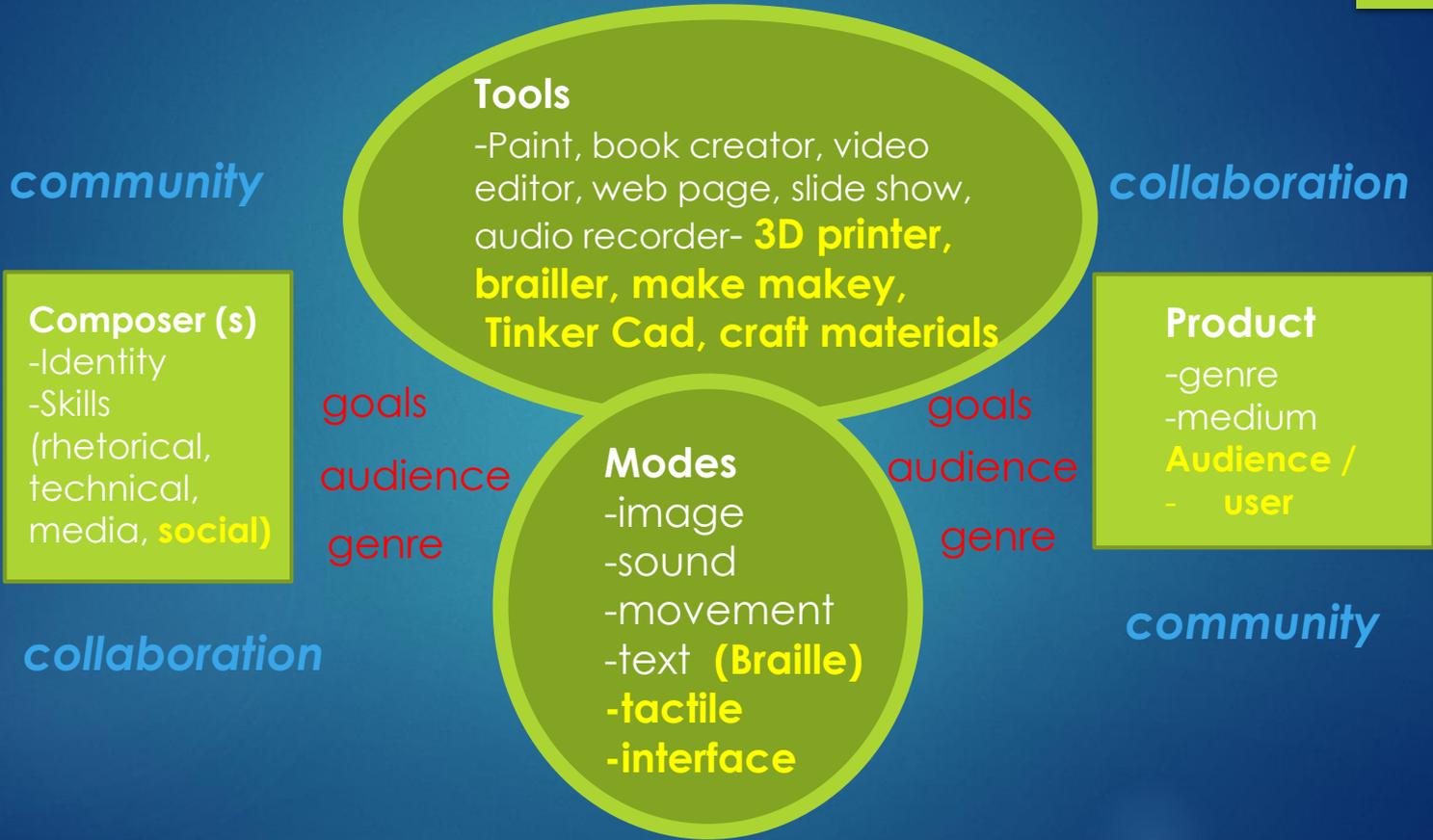
Tactile Picture Books for Children with Visual Impairments

Public Product



Composing-Making Workshop

(adapted from Digital Writers Workshop, Dalton & Smith, 2014)





2018 STEM FOR ALL VIDEO SHOWCASE

Transforming the Educational Landscape, May 14-21

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BUILD
A BETTER BOOK

BuildaBetterBook.org

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STACEY FORSYTH

University of Colorado Boulder



Facilitators'
Choice

Designing Tactile Picture Books:
Critical Making in Libraries to Broaden
Part...

NSF Awards: 1615247

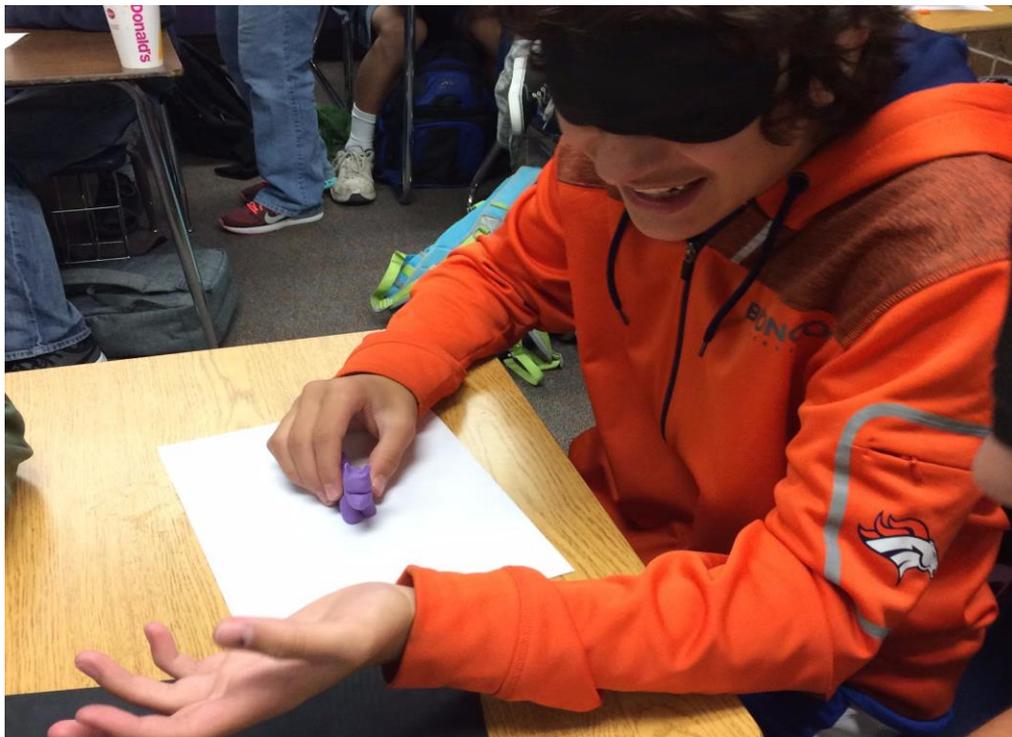
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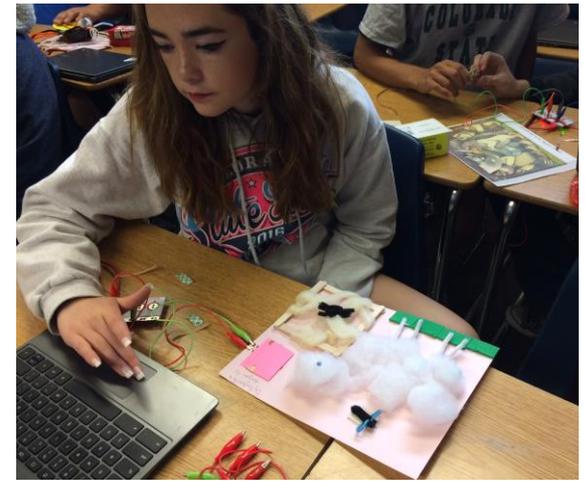
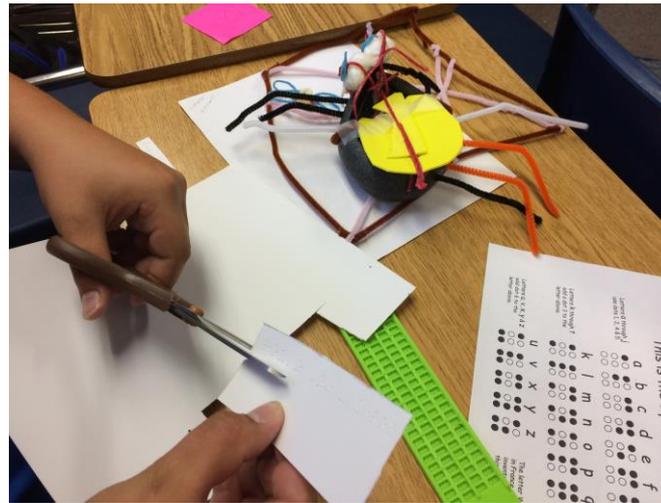
<http://stemforall2018.videohall.com/presentations/1301>

Developing perspective taking, empathy, appreciation of **diversity**, and tactile design skills for children with visual impairments



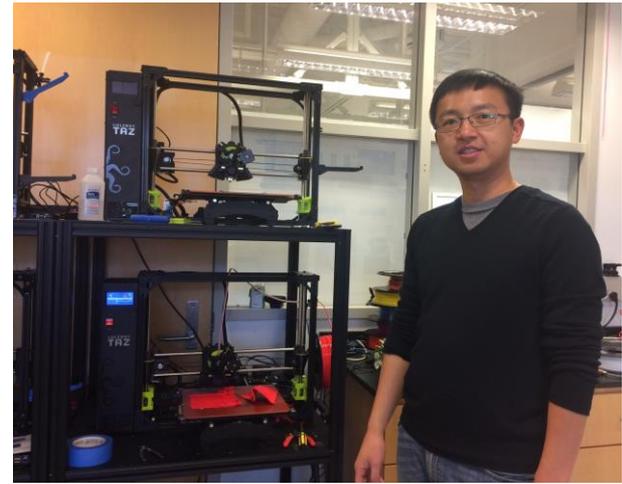
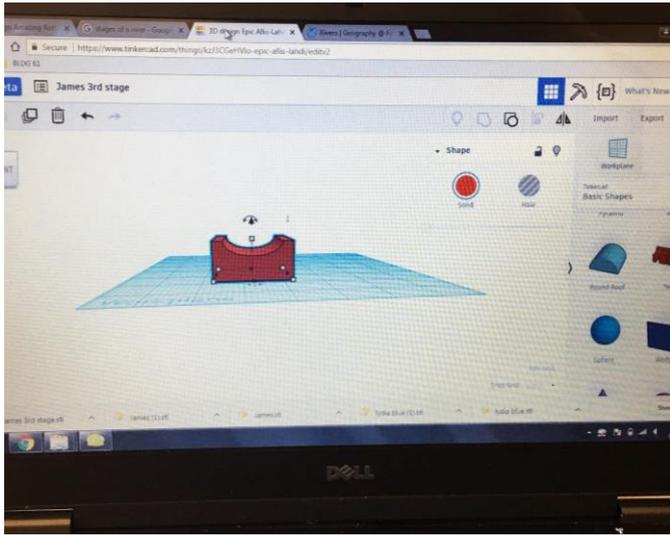
Tactile immersion





Tactile making
experience with craft
materials:
*The Very Busy
Spider* by Eric Carle





Tactile making experience with Tinkercad, 3D printer, Braille app, Makey Makey, and Scratch



Key findings from study of 9th grade ELA students (Dalton et al, 2018; Walsh, 2017)

Students

- Expanded composing-making identities, connected to roles on teams
- Developed awareness of importance of accessible, inclusive design
- Shifted perspective toward view of individuals with visual impairment as agentive and accomplished
- Built tactile design skills, with special consideration of needs of individuals with visual impairments (salient objects and features, texture, spatial arrangement)
- Developed programming and making skills in Tinker Cad, Scratch, Makey makey

Teachers developed expertise and identity: ELA-PBL teachers who design for equity

BBB = STEM + Literacy

- Expanding multimodal composition to medium of tactile picture books –
- Connecting composition and making
- Interdisciplinary
- Teachers and students are designing for equity

Compose Our World:

*How do we compose our world?
How is our world composed for us?*



COMPOSE OUR WORLD

WHY:

Expand notions of "text"

ROLE:

Remix Artist

PRODUCT:

Design a multimodal text + produce an essay



WHAT HAPPENED HERE

WHY:

Tell human interest stories

ROLE:

Investigative Journalist

PRODUCT:

Produce personal vignette, narrated photo stories, and a film festival



UNEARTHING HUMANITY

WHY:

Critique the human experience

ROLE:

Museum Exhibit Designer

PRODUCT:

Write argumentative essays, produce an interactive museum exhibit, facilitate a seminar



CHANGING THE CONVERSATION

WHY:

Influence an audience through research

ROLE:

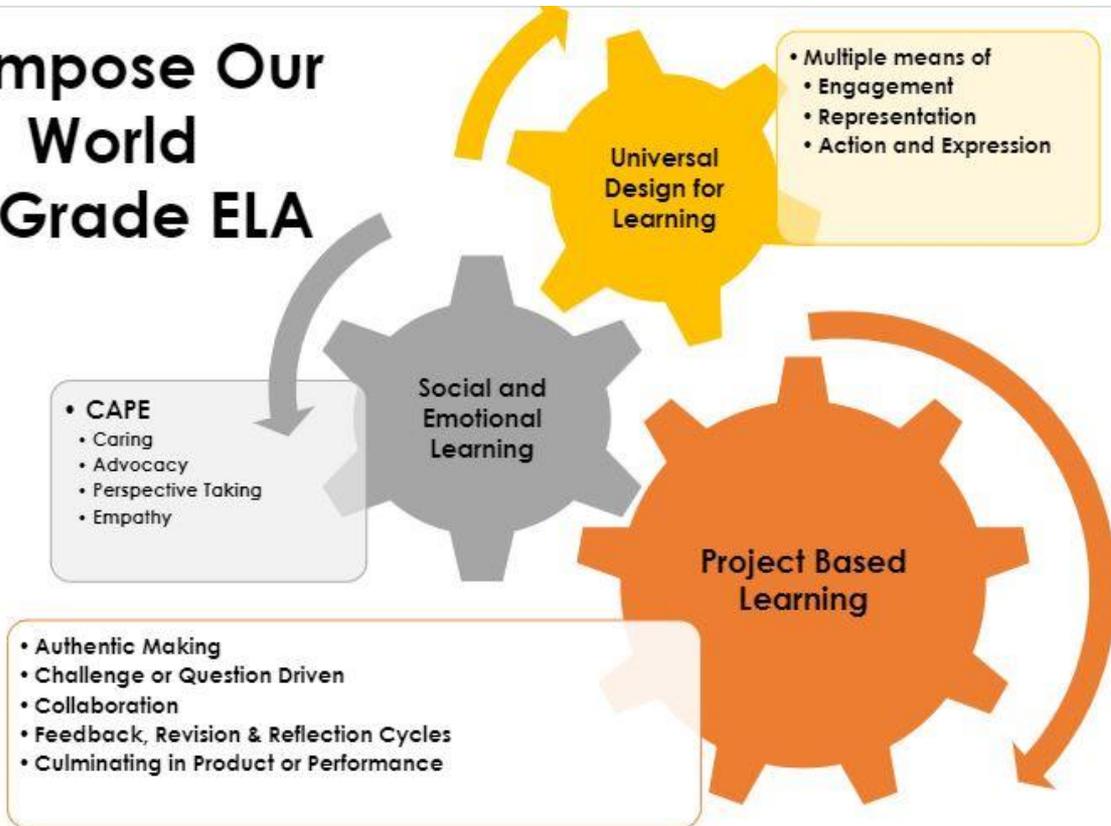
Campaign Manager

PRODUCT:

Design + analyze surveys, plan original research, share with public audience

Compose our World Design Criteria

Compose Our World 9th Grade ELA



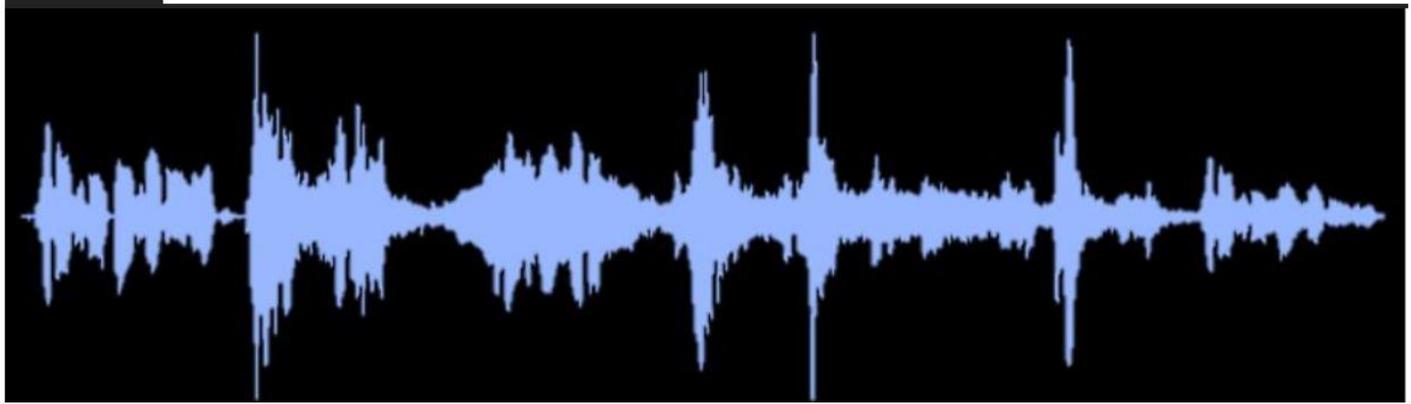
The Literacy and Media Lab

University of Colorado – Boulder, School of Education | Lafayette Elementary School

Home

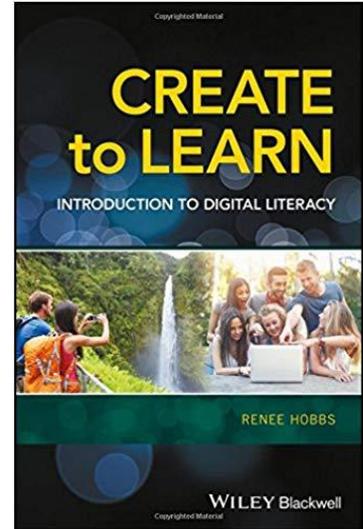
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About



Goals

- Develop passionate and skillful digital literacies teachers who design for equity
- Develop school based partnership based on mutual goals and needs
 - Direct contribution through service to children and development of teacher and school capacity



HOW? Embed children's digital literacies workshop within onsite graduate course on digital literacies and new media

Literacy and Media Lab Workshop

- LAM team – 10 graduate students in literacy master's course; teacher liaison; instructor
- Teachers engage as learners-makers first
- Teachers collaborate to lead design and enactment of a children's digital literacies workshop session (colleagues join in as coaches; instructor leads first few workshops)
- Teachers critically read, reflect, and co-design throughout
- Teachers share work on [LAM Blog \(teachers as leaders\)](#)

Emergent findings

- It's a powerful model – learning and engagement success
 - for teachers and kids; for schools of education and partner K-12 schools
- Exploratorium and long term projects have a role to play
- It takes resources – people, materials, space

Questions:

- How to sustain?
- What is the Impact on transfer to teachers' classrooms?

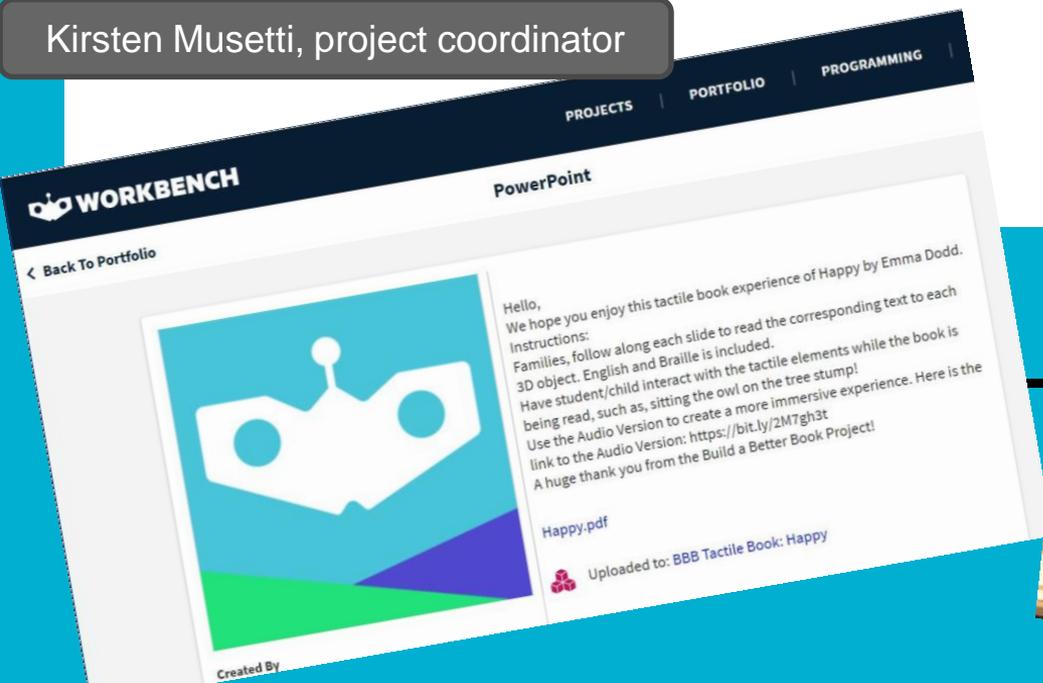
What do we value? (stop motion animation team)

- Nicole: “As an educator I value investing time into researching and trying new tools and technology in the classroom. Our workshop model provided a low-stress space to try many of the projects I had always envisioned for my class. I’ve learned that there is great value in taking risks as a teacher, try new things, and design creative projects because it is engaging for students and easy for us as teachers to share our passion for learning. ”

- Casey: “I value allowing students to demonstrate their knowledge in a variety of ways, because not all students enjoy simply writing what they know. While it was nerve-wracking to ask students to complete a project that I had only completed once myself, I learned that they were so incredibly engaged with the process. Not only were they on-task the whole time, they also had a finished product they were proud to show off!”

Engineering and pre-service teachers' BBB Internship

Kirsten Musetti, project coordinator



Engineering and preservice teachers' value the experience and each other

- I feel like having experience from education students especially in something we don't have a lot of experience in as engineering students, so that was sort of good to mix both worlds of um in their expertise in making children's books and in the arts, and ours in technology and stuff and how we can combine them to make a unique story" EG2 11:00
- "they (children with BVI) should still be allowed to explore all of these different options and I feel like with projects like this we are finally developing things that allow them to explore the things they deserve to explore...yea it just makes me think of all of these kids that coming into college I didn't really consider and **that hurts my heart so much** because all of these things could be introduced at such a young age " SH3 9:55

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Be a Change Maker - Where do you want to go next?

- Composing as making
- Literacy + STEM
- Partnerships
- Embedding children's workshops within teacher education and PD
- Professional community & teachers as leaders

Thank you

- Bridget.Dalton@Colorado.edu

- To learn more about the Build a Better Book Project:

- <https://www.colorado.edu/project/bbb/>

- To learn more about teachers' work at the Literacy and Media Center:

- <https://wordpress.com/view/theliteracyandmediacenter.wordpress.com>