1. mismatch as design solvable
2. one-size-fits-one
3. design decisions — as exclusion
WHAT IS INCLUSIVE DESIGN
3 PRINCIPLES OF INCLUSIVE DESIGN

1. recognize diversity and uniqueness
2. use an inclusive process and tools
3. have a broader beneficial impact
3 PRINCIPLES OF INCLUSIVE DESIGN

1. recognize diversity and uniqueness
   • Let individuals be unique
2. use an inclusive process and tools
   • Nothing about us without us
3. have a broader beneficial impact
   • look at the big picture
1. mismatch as design solvable
2. one-size-fits-one
3. design decisions — as exclusion
DISABILITY
MISMATCH
ALL EXPERIENCE MISMATCH

DISABILITY IS MISMATCH

MISMATCH IS SOLVABLE

DESIGN CAN SOLVE MISMATCH
1. mismatch as design solvable
2. one-size-fits-one
3. design decisions — as exclusion
Are you typical?
THE PROBLEM WITH ONE-SIZE-FITS-ALL

• exclude learners that do not fit the categories (doubly-marginalized)

• treat learners with disabilities as a homogeneous group

• ignore the multiplicity of needs and skills that affect learning

• ghettoize education for students with disabilities - less sustainable, more costly
THE MAGIC AT THE MARGINS

• the edge case and the edge scenario
• innovation
• benefits the majority
• supports the spectrum
• resiliency
every learner learns differently
digital resources and delivery mechanisms can be easily reconfigured
we all learn better if the education environment and content matches our individual needs
disability is relative
we can deliver “one-size-fits-one” learning
• Pace, Path, Content, Delivery Method
• Presentation modality - visual, sonification…
• Pedagogical approach: individual, group, didactic…
• Motivation – external, internal, positive, negative
• Form of Feedback – formative and summative
• Social support – peer, instructor, other
• Degree of structure
ONE SIZE FITS ONE

- User interfaces that can adapt to the needs, preferences, tastes of learners—feel at home
- Content that fits—delivered in a form that learners can understand and use
Personalize
• Sometimes, accessibility involves just a small change... (e.g. describing an image, adding some captions)

• OER is an unprecedented source of potential inclusion—it’s remixable, adaptable, reusable, transformable
WHY PERSONALIZED INTERFACES?

http://www-03.ibm.com
http://www.thejournal.ie
http://inhabitat.com/
http://dc.about.com/od
http://insideupmc.blogspot.ca
ONE-SIZE-FITS-ONE

• Flexible
• Accessible
• Meet users where they are
1. mismatch as design solvable
2. one-size-fits-one
3. design decisions — as exclusion
BRILLIANT DECISION?

- Mode
- Context
- Affordances
DESIGN IDEAS: BRILLIANT OR EXCLUSIONARY?

• With this brilliant design idea who just got excluded?
• Is there a way I can bridge the gap I just created? A way I can solve for the mismatch or avoid it?
Student Agency and Self-Knowledge

- Learning to learn
- Metacognition
- Transitions
- Toward lifelong learning
Navel Gazing and Meta-cognition

- Learners as investigative scientists in their own learning
- Data in accessible and tangible forms
Scraped Knees & Learning Through

• VR as risk-free simulation lab
• Opportunity for trial and error
• Opportunity to reflect on failure
1. mismatch as design solvable
2. one-size-fits-one
3. design decisions — as exclusion
INCLUSIVE DESIGN

ENCOURAGES

• Adaptation
• Personalization
• “User-continued” design
5 minutes
• Find and discuss an example of a digital mismatch between a learner and an interface or content
LET’S DO THIS NOW

• think about a problem you want to solve
• think about the edge case — create a persona
• think about a use case — your persona in action
  MISMATCH
• solve for them ONE-SIZE-FITS-ONE
• ITERATE — watch for Design BRILLIANCE THAT
  EXCLUDES
GOAL

To co-design inclusive digital tools for diverse learners — tools that help accomplish learning goals

• Meet learners where they are
• Allow users to be unique; make learning materials that adapt to those uniquenesses
HOW CAN I DO THIS?

- think about the edge cases early and solve for them — MISMATCH
- can you let the user decide — ONE-SIZE-FITS-ONE
- think about design decisions as excluding rather than solving — BRILLIANT? EXCLUSIONARY?
FLOE PROJECT

- http://floeproject.org
- Inclusive Learning Design Handbook
- open components addressing the gnarly challenges
- learning personalization
- leveraging OER for one-size-fits-one learning
SHOW & TELL

http://build.fluidproject.org/infusion/demos/prefsFramework/
(learner options demo)

Inclusive Design Cards

1. mismatch as design solvable
2. one-size-fits-one
3. design decisions — as exclusion
THANK YOU

Email: jmitchell@ocadu.ca
Twitter: @jesshmitchell
PHOTOS

Multi-coloured stacked cups: https://www.flickr.com/photos/doug88888/2987668742/in/photolist-5y1zQ3-9iioxp-4hGtdR-e86mXv-7S3xLA-oGJ71U-2GKVgd-qpo7RQ-LqBMB-LB3EG-5SZRvN-LBbgF-9GAD7c-6tYNTm-4Ev2TX-4QiDbk-8Vd1QI-qnpzqR-6ZKrmP-rsfoP-teU2X-9q5WPk-9q8YjY-7BF8ob-LBbgP-7EQk6t-dx7TCA-e8bXp5

Stethoscope: http://cbsnews1.cbsistatic.com/hub/i/r/2014/01/24/d6bd0d38-cb4a-4411-bd1d-7a5dcc4e319d/thumbnail/620x350/fa75501812b1d1d699dd40da9648001a/stethoscope.jpg


Square peg, round hole: http://wp.production.patheos.com/blogs/adrianwarnock/files/2015/08/3546059144_1b33dfdc0e_o.jpg

Walrus and octopus: Justina Kochansky/articulatematter.com

Scraped Knees: https://www.flickr.com/photos/theloushe/4630743266/in/photolist-84cLD9-6aJifh-2kUyK-fjxgAu-yA7Bw-hjQKc3-kpzP6x-qKICM-yA7Br-499dY-4i8wVP-885zy-aqQPCn-nKQJIQ-f5bAkX-8d7G1D-crYbzb-dSMUY-yPjmnr-p3TSoX-8eeJKO-p3T4aa-4stR9T-Mnt19-7JnWR-nUuCpS-9Jp8bw-aw8eAc-rBUPe-m7KPlot-8ewzdwm-9hkGYk-8qVgNs-2qDgNC-bLYGYG-qLFees2-fhLbKF-GqexGw-qLFeYP-d6pSe-e6Zmjg-9EFqFx-6bKiWZ-e7yMAH-dT5y9B-nmgvY-f4STJ6-cfPShs-p27npC-a1k6wD

Blue Men: https://www.flickr.com/photos/yuan2003/1796355617/in/photolist-3JJMWz-8Puj2q-81kpst-8U38eb-8PpkQI-8PIkBvS-8X6U3J-8X6U3S-4S4YJg-8foVgY-5gSnxx-78JlmqH-93jnYo-dWK7bho-9ad9Pe-7FH6bY-91WSP7-6Lx8wA-vGtnnoXuEK-9S97Rz-pA03W-77ykw8-dqGDrZ-3xk1Vx-oVqYPB-5fh8e9-c4zeF9-91WZKo-hoI6Lj-4vJn56-b8LYiv-hoI7BN-8n3Gq8-dnkdfMw-7ecxT1-7ZyvDNZ-F8f6Q-5q7bnW-75uieg-4ad4Ad2-67pKfl-5DQz53-9dryrJ6-ac5iB6-dCoXdQ-365ApV-9aglWCC-dn63tB-hoK9PF/