Inclusive Design Resources

Resource Entry Macro

A macro has been created to make it possible to enter resources in a standard template; this will make it easier in the future to harvest the resources with code for use in other contexts: Examples of Using the "Fluid Wiki Resources" Macro

Description

This document is a place to find and contribute inclusive design resources you have come across. If you found something interesting, the chances are that someone else will find it interesting too! Why not share it?

The intention of this page is to begin exploring how we gather, compile, and share inclusive design resources in our daily contexts. This will help us discover new and better ways of accomplishing these tasks.

Aside: This document was originally titled: "Community Meeting Notes (Jan 24, 2018) - Pooling and Sharing Inclusive Design Resources"

Tips on How to Use this Wiki Page

- Try to use this page on a daily basis
- Register for an account to begin contributing resources
- Reflect on how you used this resource (either as a contributor or a consumer)
  - What did you like?
  - What did you find frustrating?
  - What features do you wish for? What can make this better?
- Spend some time to help organize the contents of this page.

Share your thoughts and feedback

Your feedback will help us discover new ways of sharing and contributing inclusive design knowledge.

You can:

- Leave a comment on this Wiki page
- Email Jonathan Hung, Alan Harnum, Caren Watkins, or Colin Clark.
- Join the Inclusive Design Community mailing list and post an email there
- Drop a message on the #fluid_design IRC channel

Notes

- Handling inquiries seeking "situated" information (relevant to context)
- Starting simple - gathering stuff onto a wiki page. Our own resources and from partners.
- Questions
  - What questions do our communities have?
  - What kind of resources do we have or recommend?
  - How do we encourage the use of this knowledge resource? (i.e. formality and process)
- Inclusive Design, Co-Design, and Co-Creation Resources
  - https://sojustrepairit.org/resources.html
  - Inclusive Design Guidelines - Research
  - What do we know already and how did we describe them for previous audiences?
  - "a wonderful collaborative mess of stuff"
  - "Draw from the pool"
  - Maybe turn this into a gist so that people can comment and edit?
- Coordinate with OCAD librarians who publish our scholarly work
- Shared links and articles via IRC chats
- Share recorded community meetings via YouTube (and caption first)
- Summaries of books that we find useful
- Cherry pick from this stockpile and pull it into another organization for other projects (someone in the project can do the annotation and curation)
- What things do you draw from this pool for?
  - Links and descriptions or keywords to be able to find it later
  - What sort of workflow each person has to use this for?
  - What project it was for, if it was our own, where we sourced it from if it wasn't ours, tagging/metadata to describe resources in general in order to retrieve them
  - if it applies to specific sectors (which would require specific resources)
- Make an open Zotero group for anyone to join (https://www.zotero.org/groups/2086760/inclusive_design?)
  - Example of pulling resources from the group via the public read API: https://codepen.io/waharnum/pen/LeovaG
- Zotero, are.na, or Mendeley
- Use it day-to-day, reflect on how to use it, how often to use it
- a general approach to organizing resources:
  - three separate, but related concerns:
    - archiving of iDRC research artefacts, which we will work with the OCAD library to help with

Racial bias test from Harvard:
Where to start -- making an accessible website:

https://wiki.fluidproject.org/display/fluid/Making+an+Inclusive+and+Accessible+Website

List of resources for Edify (OER and EMS context)

Learning simulations and interactive content (Learning content)

https://gist.github.com/waharnum/83abbef3f7ec2f850b9add43b62edd8a

CMHR Inclusive Accessibility Guide - design of inclusive spaces for exhibits and galleries

Bodies in Translation Toolkit

**stuff to add content for**

Inclusive Volunteering Guide and tip Sheets (english and french on volunteer.ca)

Outside-In workshops & feature topics / housed on http://outsidein.tigweb.org/

SNOW resources (and possibly workshops--these have a fee)

Our Doors Are Open Guide for Accessible Congregation (will be available soon in English and French on https://opendoors.idrc.ocadu.ca/)

**Testing Tools:**

- **Heads**nings Map Firefox plugin
- HTML Validation (Nu HTML Checker) + WCAG only parsing bookmark [WCAG 2.0 parsing error bookmarklet](https://gist.github.com/waharnum/83abbef3f7ec2f850b9add43b62edd8a)
- Colour contrast evaluators [TPG Contrast Analyser](https://github.com/waharnum/83abbef3f7ec2f850b9add43b62edd8a)
- Zoom Text Chrome extension and Zoom Page Firefox Add-On.
- Accessibility evaluators [AChecker, WebAIM WAVE, FAE](https://github.com/pa11y/pa11y)
  - W3C list of evaluation tools
- [Firebug](https://github.com/dequelabs/axe-core) plugin for Firefox
- [Developer Toolbox](https://github.com/dequelabs/axe-core) plugin for Firefox
- [WAVE Toolbox](https://github.com/dequelabs/axe-core) extension for Chrome
- Screen reader (e.g. [NVDA](https://github.com/dequelabs/axe-core), [JAWS](https://github.com/dequelabs/axe-core), for Windows;
  - VoiceOver for Mac OS, [iOS](https://github.com/dequelabs/axe-core)
- [Readability Score](https://github.com/dequelabs/axe-core)

**Automating Accessibility Testing:**

**Automated Testing Libraries**

These libraries can be integrated with a continuous integration test suite to perform some automated checks.

- **aXe**
  - [https://github.com/dequelabs/axe-core](https://github.com/dequelabs/axe-core)
  - aXe is also now built into Firefox's developer tools.
- Tags: Accessibility, Automated Testing

- **Pa11y**
  - [https://github.com/pa11y/pa11y](https://github.com/pa11y/pa11y)
- Tags: Accessibility, Automated Testing
Browser Automation Tools

Automation tools to script browser actions can also support automating some aspects of accessibility testing.

Selenium
http://www.seleniumhq.org/
Tags: Automated Testing, Browser Automation

PhantomJS
http://phantomjs.org/
Tags: Automated Testing, Browser Automation

Examining the Accessibility API:

Inspector (Windows) and Accessibility Inspector (OS X) are system tools for graphically examining the Accessibility API; the Firefox DOM Inspector is also useful for this.

Accerciser for Linux.

Communities of Practice

Web Accessibility Initiative, WebAIM and the web-a11y Slack group are open groups for discussing web accessibility topics.

#a11yTO Meetup Group

Meetings and Conferences

DEEP, OCADU, Toronto
https://deep.idrc.ocadu.ca/
Tags: conference

CSUN
https://www.csun.edu/cod/conference
Tags: conference

Creative Commons Global Summit
https://summit.creativecommons.org/
Tags: conference

Some Useful Articles and Essays and Books

"Writing CSS With Accessibility In Mind" by Manuel Matuzovic

"Making An Inclusive and Accessible Website" (IDRC resource)

"Accessibility APIs: A Key To Web Accessibility" by Léonie Watson & Chaals McCathie Nevile

Todd Rose The End of Average

Donella Meadows Thinking in Systems

The Youth Effect - Organizing inclusively with young people

Nothing About Us Without Us - James I. Charlton

The Spirit Level - Kate Pickett and Richard G. Wilkinson

A Web for Everyone - Sarah Horton & Whitney Quesenbery

Becoming Human - Jean Vanier
Useful Tools

- Static site generator: Hugo, Cupper
- CSS frameworks: Foundation, Bootstrap 4, CAST Figuration
- Can I Use?
- Amara captioning
- AblePlayer (open source accessible web video player)

Ace by DAISY
http://www.prweb.com/releases/2018/01/prweb15141305.htm
Ace by DAISY, equips the publishing industry with a tool which can test their ebooks against internationally recognized standards for accessibility. Designed to assist content providers at any stage in their workflow.
Tags: Free, EPUB Accessibility Checking Tool

Web Specifications and Related Best-Practices

- HTML Specification
- CSS Specification
- WAI-ARIA 1.1
  - Core Accessibility API Mappings 1.1 (technical)
  - Name and description computation (technical)
  - SVG Accessibility API Mappings (technical)
- WAI-ARIA Authoring Practices 1.1
- WAI-ARIA Graphics module
  - WAI-ARIA roles for graphics
- Web Content Accessibility Guidelines (WCAG) 2.0
- Web Content Accessibility Guidelines (WCAG) Overview
- Diagram Center
- W3C Web Publication
- BBC News Accessibility
- BC Open Textbook Web Accessibility Toolkit

Inclusive Design Guides

- https://www.ontario.ca/page/inclusive-design-toolkit
- Accessible Digital Office Documents https://adod.idrc.ocadu.ca/
- Field Guides to Ensuring Voter Intent - Centre for Civic Design

Content Authoring and Publishing

- Inclusive Publishing - a11y Checker for EPUB
  - Based on Daisy Ace open source checker - visit github

Canadian Centre for Diversity and Inclusion
http://ccdi.ca/products/workplace-solutions/reports-toolkits/

Examples of Inclusive Design

The Electronic Curbcut – Centre for an Accessible Society http://www.accessiblesociety.org/topics/technology/eleccurbcut.htm

Ontario ODS' Method Cards - https://www.dropbox.com/sh/ku5kt35fyi7a2fe/AABWuyblfmmn7gHu_WwAvC7G2va?dl=0

UK Government Digital Service - https://gds.blog.gov.uk/about/

18F Method Cards - https://methods.18f.gov

Videos + Audio

Fluid Project YouTube Channel (Fluid Project)
https://www.youtube.com/user/FluidProject
Official YouTube channel for the Fluid Project

IDRC-relevant Videos – collected videos of IDRC and Jutta
Introduction video to UIO on YouTube

Jutta’s CBC Interview on Spark – AIs Problem with Disability and Diversity

Michael Graves on design and accessibility:

Game Accessibility
- GDC archive

Resources shared on IRC, email, social media

Articles
https://newsroom.uber.com/canada/ocad/ – IDRC and Uber

Zine
http://ripplemap.io/zine.pdf
Tags: Digital Privacy, Content Warning, Consentful Technology

Make me think!
https://blog.prototypr.io/make-me-think-90b46aa50513
Tags: UX, Interaction Design, Design Thinking, Internet of Things

Turning Complete User
http://www.contemporary-home-computing.org/turing-complete-user/
Tags: UX, Interaction design, Interface Design, Invisible Computing

Designing for the Arab User—Basic Arabic UX for Business (Anna Rubkiewicz)
https://medium.freecodecamp.org/designing-for-the-arab-user-basic-arabic-ux-for-business-6ff23d4c7c60
Focused on Arabic, but a lot of relevant material generally for RTL UX, design and implementation
Tags: UX, Multilingual, Internationalization

Books

Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor
https://points.datasociety.net/beyond-the-rhetoric-of-algorithmic-solutionism-8e09cadada53
Tags: Algorithms, Inequality, Technology, Ethnography, Data Analysis, Social Services

Adoption and Impact of OER in the Global South
This volume examines aspects of educator and student adoption of OER and engagement in open educational practices (OEP) in secondary and tertiary education as well as teacher professional development in 21 countries in South America, Sub-Saharan Africa, and South and Southeast Asia.
Tags: OER, education advocacy, policy, practice and research in developing countries

Awesome Falsehood
https://github.com/kdeldycke/awesome-falsehood
A curated list of awesome falsehoods programmers believe in" and it collects links to articles on "falsehoods"
Tags: falsehoods, programming, identity, date, time, email, network, geography, phone number

Websites

FLOE Resources
Learning to Learn

My Life Long Learning Lab (MyL3)
https://wiki.fluidproject.org/display/fluid/%28Floe%29+Preference+Exploration+and+Self-Assessment
MyL3 enables learners to keep track of their progress, and personalize their learning goals and learning experience through self-reflection.

MyL3 Evolution of tools
https://docs.google.com/document/d/1oIqIgJ3H7R_sj7ybrUYq-QZj0Zs-kU3wjUa_rNnHVZM/edit

MyL3 Current Designs
https://files.inclusivedesign.ca/s/Irsq4w24gFgEGqF#pdfviewer

Learning Differences & Digital Equity in the Classroom (2018)
Read about digital equity in the classroom for students with learning differences, as well as the role of technology in the provision of equitable education for the full diversity of students.

Inclusive Learning Experiences
https://handbook.floeproject.org/CreatingInclusiveLearningExperiences.html
Learn about building positive and constructive environments for self-learning and self-reflection with learners who have diverse learning needs and preferences.

The Value of Imperfection: the Wabi-Sabi Principle in Aesthetics and Learning (2010)
http://openresearch.ocadu.ca/id/eprint/1202/1/Treviranus_Value_2010.pdf
This paper explores the importance of imperfection, mistakes, problems, disagreement, and the incomplete for engaged learning, and relinquishing notions of perfection, acknowledging that learners learn differently and we need diverse learners.

Multimodal Presentation, Content Adaptation, and Personal Preferences

User Interface Options Video (2017)
https://www.youtube.com/watch?v=63DqNgxtsR4
Learn about the Fluid Project's User Interface Options (UIO) component, how it enables people to personalise web content to meet their unique needs, and how to integrate it into a site.

UIO Chrome Browser Extension
https://chrome.google.com/webstore/detail/ului-options-plus-ui-o%2B/okendailhmikjfnmopafecbpaek

Multimodal Design Patterns for Inclusion & Accessibility
http://www.alanharnum.ca/post/2017-06-01-multimodal-design-for-inclusion/
A presentation from the 2017 University of Guelph Accessibility Conference discussing multimodality as a tool for building inclusive experiences and shifting perceptions.

Nexus Science Lab Video (2017)
https://youtu.be/NNwc0VYRhUU
See how sensors commonly found in a science lab can be connected to accessible, sonified graphs using the Nexus, a system that connects disparate technologies, enabling new and inclusive interactions that can be used to visualize and sonify data as it is gathered.

Nexus API
https://wiki.gpii.net/w/Nexus_API

Nexus Inclusive Music Creation Video (2016)
https://youtu.be/7R_pz2Fz4qE
See a demonstration of the Nexus being used to inclusively create music using various inputs including a head tracker.

Sonification
https://wiki.fluidproject.org/display/fluid/%28Floe%29+Sonification
Try the inclusive chart authoring toolthat automatically sonifies data using the sonification framework that provides a set of tools to help web developers more easily create sound-based representations of interactive data.

Sonification Demo
https://build.fluidproject.org/chartAuthoring/demos/

Harmonious Authorship from Different Representations (2015)
http://www.ppig.org/library/paper/harmonious-authorship-different-representations
“We describe the Infusion system, which is a library, language system or integration domain implemented in JavaScript, as well as a mentality and model for thinking about the ex-pression of end-user applications. We promise that this system will bring together the worlds of different kinds of users engaged in different tasks at different times, and allow them shared authorial access to the same artefacts which are presented to each in a notation appropriate for them.”

Creating a Global Public Inclusive Infrastructure (2011)
The Global Public Inclusive Infrastructure ensures that everyone who faces accessibility barriers due to disability, literacy or aging, regardless of economic resources, can access and use the Internet and all its information, communities, and services for education, employment, daily living, civic participation, health and safety.
First Discovery
https://build.fluidproject.org/first-discovery/demos/
This tool walks the people through a step by step process of discovering, declaring and storing digital preferences.

Discovery Cats
https://wiki.fluidproject.org/display/fluid/Discovery+Cats++First+Discovery
See some playful designs for setting user preferences and check out the student project that turned this into a game.

Social Justice, Activism, and Digital Equity

Digital Inclusion (2017)
http://pub.rehabmagazine.ca/publication/?i=462308&ver=html5&p=10
Read about digital inclusion in ‘The bad news, the good news and what to do about it’

Design Justice Network
http://designjustice network.org/
“Design justice rethinks design processes, centers people who are normally marginalized by design, and uses collaborative, creative practices to address the deepest challenges our communities face.”

Leveraging the Web as a Platform for Economic Inclusion (2014)
This paper describes an international initiative that leverages the internet to address the economic exclusion of people with disabilities and maps out how this may help to address the broader issues of our current markets, education, employment, and financial systems.

Storytelling Tool
https://stories.floeproject.org/
See the in progress development of the learning reflections site that will be used to gather stories about learning to learn.

Social Justice Repair Kit
https://sojustrepairit.org/
Explore the Social Justice Repair Kit project that is working on engaging diverse youth with learning differences in social justice initiatives.

Bodies in Translation (BiT)
https://bodiesintranslation.wordpress.com/
This project aims to create collaborative partnerships between artists, arts organizations, activists, scholars, and educators. It cultivates activist art produced by disabled, d/Deaf, fat, Mad, and E/elder people with the goal of expanding understandings of vitality and advancing social justice.

Inclusive Design Practice

Inclusive Learning Design Handbook
https://handbook.floeproject.org/
The Floe Inclusive Learning Design Handbook is a free Open Educational Resource (OER) designed to assist teachers, content creators, web developers, and others in creating adaptable and personalizeable educational resources that can meet the needs of learners with a diversity of learning styles.

Realizing the Potential of Inclusive Education (2018)
Learn about Inclusive Design and its applications to education.

If You Want the Best Design, Ask Strangers to Help (2018)
https://medium.com/ontariodigital/if-you-want-the-best-design-ask-strangers-to-help-e37bdb73567
This article provides inspiration for the future of design in the Ontario government.

The Inclusive Design Guide
https://guide.inclusivedesign.ca/
This ever-evolving guide can be applied to digital design as well as to the design of services, the built environment and physical products. It can be applied to processes like workshops, meetings, conferences, and our daily interactions with one another.

Inclusive Education Podcast (2016)
http://quantization.ca/podcast/episode-one-inclusive-education/
The first episode of the Quantization podcast which talks about visible and invisible barriers that exist in our lives focusses on inclusive education.

Co-Design
https://wiki.fluidproject.org/display/fluid/Inclusive+Design%2C+Co-Design%2C+and+Co-Creation+Resources
The practice of co-design allows users to become active participants in the design process by facilitating their direct input into the creation of solutions that meet their needs, rather than limiting users to the role of research subjects or consultants.

Co-Design in the Inclusive Design Guide
https://guide.inclusivedesign.ca/practices/PracticeCoDesign.html
Inclusive Design Mapping Tool
https://wiki.fluidproject.org/pages/viewpage.action?pageId=80674818
This tool aims to help design and development teams to map out their product and user needs and identify the existing gaps. Users are encouraged to adapt this tool based on their project needs and goals.

Inclusive E-learning (2006)
https://pdfs.semanticscholar.org/f9bc/a101763769a22d0f0733bc3388bc2fa3df30c.pdf#page=494
An early vision for inclusive e-learning that continues to be relevant today.

Microsoft Inclusive Toolkit
https://www.microsoft.com/en-us/design/inclusive
This toolkit is a comprehensive resource for any inclusive session to practice new skills, develop new concepts, or create a prototype. This toolkit is made to be retrofitted to a design team's goals.

Design Council's Principles of Inclusive Design
This document is the government advisor on building inclusive architecture, urban design and public space.

Privacy, Power, Autonomy

How Artificial Intelligence Creates Discrimination in #HR & #Recruiting Podcast (2017)
A podcast looking at the inclusiveness of machine learning technology and exploring the implications for people with disabilities.

AI's Problem with Disability and Diversity Podcast (2017)
The Spark radio show explores issues with artificial intelligence.

Beyond the Rhetoric of Algorithmic Solutionism (2018)
https://points.datasociety.net/beyond-the-rhetoric-of-algorithmic-solutionism-8e0f09cdada53
A short review of the book “Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor”

Platform Cooperativism
https://platform.coop/
Platform cooperativism aims to build a fairer future of work. Rooted in social justice and democratic ownership, co-op members, technologists, unionists, and freelancers create a concrete near-future alternative to the extractive sharing economy.

Quantization Podcast Episode on Platform Cooperativism
http://quantization.ca/podcast/episode-five-platform-cooperativism/
Fluid Project's Involvement in Platform Cooperativism
https://wiki.fluidproject.org/display/fluid/Platform+Cooperativism

Platform Co-ops Explained
https://wiki.fluidproject.org/pages/viewpage.action?pageId=144474470
An infographic/brochure illustrating the concepts of platform cooperativism.

Education Technology and the New Behaviorism (2017)
Ed-tech writer Audrey Watters summarizes and critiques recent trends in AI, algorithms and other technological developments in education.

Notes from the 2017 DEEP Conference
https://docs.google.com/document/d/1UYGW8MzbqXwg7OoABd94b9_BrqsX1QyOYnv4evOwbys/edit?usp=sharing

Inclusive Technology for Learning

Interactive Simulations for Science and Math
https://phet.colorado.edu/en/accessibility/prototypes
Play with PHET's fun, free, interactive, research-based science and mathematics simulations.

John Travoltage Simulation
The John Travoltage sim supports keyboard-only access, audio description and sonification.

SNOW - Access to education using technology
https://snow.idrc.ocadu.ca/
Get information and training geared to educators, parents and students with disabilities on technologies for learning both in and out of the classroom.

“Visual programming systems are widely used to introduce children and other learners to programming, but they cannot be used by blind people. Inspired by the ideas of blind computer scientist T.V.Raman, the Noodle system provides nonvisual access to a dataflow programming system, a popular model for visual programming systems.”

Georgia Tech Sonification Lab
http://sonify.psych.gatech.edu/

“The Sonification Lab focuses on the development and evaluation of auditory and multimodal interfaces, and the cognitive, psychophysical and practical aspects of auditory displays, paying particular attention to sonification.”

A Nonvisual Interface for a Blocks Language (2016)

“We are building a nonvisual interface to a blocks language. We present a pseudospatial interface for the language, similar to that of Noodle, and compare it with other approaches to accessibility for blocks languages.”

Pressbooks
https://pressbooks.com/

Pressbooks easy-to-use book writing software enables people to create books in all the formats needed for publishing.


This paper describes the AccessForAll accessibility strategy for delivering accessible computer based resources to individual learners based on their specified needs and preferences in the circumstances in which they are operating. Many of the resources presented here are based on this original work.

Finding Open Educational Resources

Connexions
https://cnx.org/

Discover learning materials in an Open Space. View and share free educational material in small modules that can be organized as courses, books, reports or other academic assignments.

EngageNY
https://www.engageny.org/

Current materials and resources related to the implementation of the New York State P-12 Common Core Learning Standards (CCLS), Teacher and Leader Effectiveness (TLE), and Data-Driven Instruction (DDI). EngageNY is dedicated to providing educators across New York State with real-time, professional learning tools and resources to support educators in reaching the State’s vision for a college and career ready education for all students.

Gooru
http://www.gooru.org/

Gooru is an educational technology non-profit that is dedicated to improving learning outcomes for all students by making education equally accessible and empowering. Gooru is creating technology that enables educators and researchers to “open-source” effective practices and content to improve learning outcomes for all.

K-12
http://www.k12.com/

K12 is a leading online learning provider serving K–12 online schools. The K12 program is offered through tuition-free online public schools* and online private schools.

Multimedia Educational Resource for Learning and Online Teaching (MERLOT)
https://www.merlot.org/merlot/index.htm

MERLOT is a curated collection of free and open online teaching, learning, and faculty development services contributed and used by an international education community.

OER Commons
https://www.oercommons.org/

OER Commons is a public digital library of open educational resources. Explore, create, and collaborate with educators around the world to improve curriculum.

OER Pub
https://oerpub.org/

OERPub is creating innovative open-source tools for authoring, adapting, remixing and publishing open education resources and then delivering them to the web, mobile, tablet and print.

Open Education Consortium
http://www.oecconsortium.org/

A global network of educational institutions, individuals and organizations that support an approach to education based on openness, including collaboration, innovation and collective development and use of open educational materials. The Open Education Consortium is a non-profit, social benefit organization registered in the United States and operating worldwide.

The Orange Grove
https://florida.theorangegrove.org/og/home.do

Florida’s open educational resource repository.