Accessibility for Children

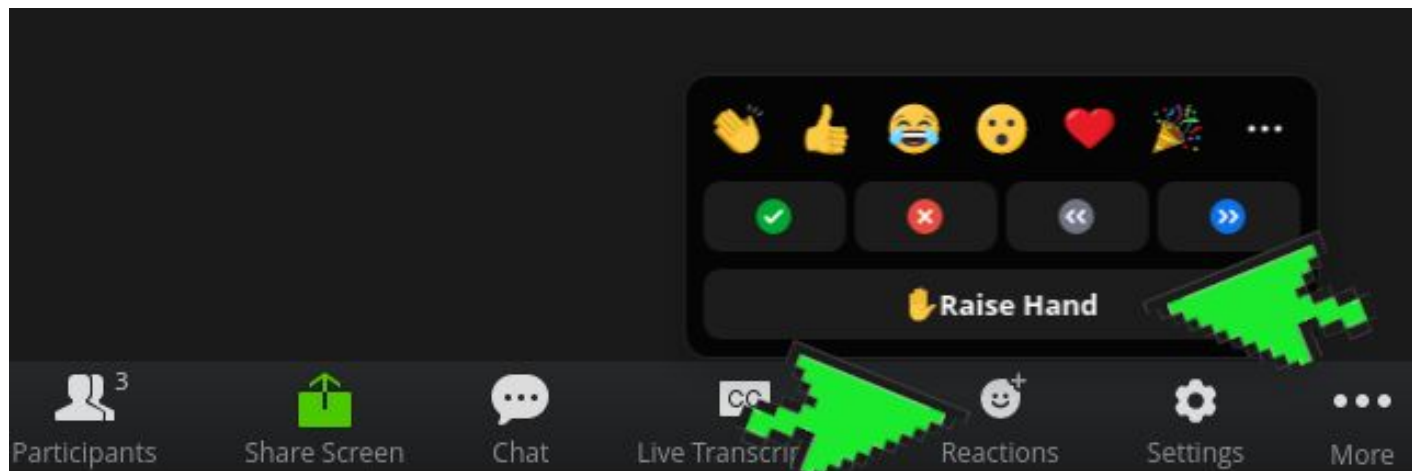## W3C Community Group

Welcome

The Chairs of the Community Group will Present at Today's Breakout Session

- Suzanne Taylor, Founder at Things Entertainment
- Maud Stiernet, Owner at alittleliningcomes.com

Please ask questions or make comments any time

- Raise hand in Zoom
- Or, if you are familiar with IRC:
  - #A11y4ChildrenIntro
  - q+

Why accessibility for children?

- **Different profiles** than adults:
  - rhythms (need instant/fast support or feedback)
  - different exploration skills
  - less predictable
  - evolving competences
- **Research gap** on disabled children as online users
- Children need **age/ level appropriate** accessibility features
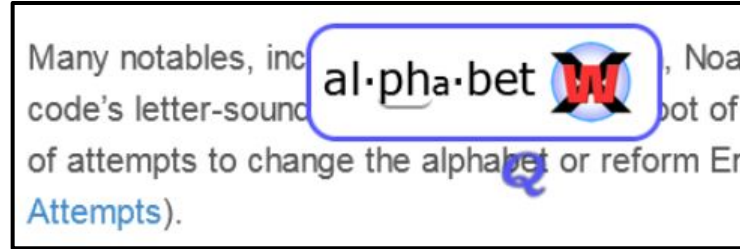
Active Participants

- David Boulton, Learning Stewards (USA)
- Emeline Brulé, University of Sussex (UK)
- Chiara Cielo L, De Agostini (Italy)
- Danielle Guzman-Orth, ETS (USA)
- Kris Anne Kinney, ETS (USA)
- Allison Johnson, Curriculum Associates (USA)
- Melissa Malzkuhn, Motion Light Lab at Gallaudet University (USA)
- AJ Polanco, ETS (USA)
- (Chair) Suzanne Taylor, Things Entertainment (USA)
- (Chair) Maud Stiernet, A Little Lining Comes (Belgium)

Current Activity: Defining "Accessibility for Children"

- Differing International Definitions of Disability
- Differing ages/standards for diagnoses
- Acquired (learned) Learning Disabilities
- Acquired (learned) Mental Health Concerns
- Low Resource Environments
- Learning Contexts vs. Information Contexts
- Intersectionality

Current Activity: Learning About Members' Work

- David Boulton presented on *Interactive Orthography* on September 30th (https://bit.ly/3oYzSsw)
- Melissa Malzkuhn will present on *Bilingual Resources for Literacy Development* October 28th

One large green fruit hung from a branch above the girl's head. **Perfect**, she thought. And she **climbed up**, and up, and up.

Scope

- Web and Software
- Problems and solutions from AI
- Problems and solutions from XR
- Assessments
- Learning Contexts
- Entertainment Contexts

Goals for 2021 and 2022

- Document user needs for children with disabilities
- Document kinds of learning needs unique to children learning online
- Conduct literature review to see where enough research is already available to support accommodating these user needs
- Identify open research questions and advocate for further research where needed
- Document additional information to help inform implementation efforts

Example User Need:
Access to information without sound and without literacy

- Captions don't help if you can't read them
- Research Status: Need is clear, but research is needed for the techniques.
  - Can AI or adaptive tutorials help determine when this is needed and should be provided?
- Possible Techniques:
  - ASL
  - other sign languages
  - visual cues
  - language-free UI

Example User Need:
Access to information with limited ability to read captions

- Captions are not enough when you don't have time to read them and watch the video or animation as well
- Research Status: Need is clear, but research is needed related to when to provide or prioritize different accommodations
  - Determine the user need/preference at which captions become a. Helpful and b. Reliable
    - How adaptive interfaces can help students select these accommodations
    - If only one accommodation can be provided, how to determine which to provide
  - Can orthogonal hand spelling (emphasize shape of letter) prepare users to read the captions?
  - If captions are part of a test to measure comprehension and fluency, how might pausing or slowing down the experience impact these measurements?
  - Can there be images or other reading aids within the captions?
- Techniques:
  - Slow down or Pause experience to be able to read the captions
  - Reduce the amount of caption text (careful default scripting, edited scripting, visual cues to supplement captions, game design to limit the amount of narration presented at a given time)
    - Training to use innovative captions

Example User Need Category:
Right to be accurately assessed

- Construct Relevance in Assessments:
  - Timing adjustable vs. High frequency words
  - Read aloud vs. Interpreting a graph or equation
  - Reading comprehension vs. Listening comprehension
- Instruction
  - Opportunity to work with formats that will appear on assessments (fair scoring)
  - Opportunity to be given appropriate instruction based on accurate assessment (fair educational opportunities)

Example User Need Category:
Proficiency Prioritizing

- Executive Functioning
  - Cognitive load
  - Memory (e.g., working memory)
  - Flexible Thinking
  - Following directions or instructions
- Research Status:
  - Often develops with age
  - Implications for platform and task designs, accessibility tools, accommodation implementation

Intended Impact

- **In General**
  - WCAG 3.x
    - Thanks to Jeanne Spellman and Janina Sajka for helping with this
  - Implementation Efforts
    - Products of participating organizations and others
- **Other Specific-Topic Initiatives such as**
  - [(pdf) UNICEF Policy guidance on AI for children DRAFT 1.0 | SEPTEMBER 2020](#)

Invite to Participate

- First meeting was September 2, 2021
- We meet for one hour every other week on Thursday
  - 13:30 UTC (GMT)
  - 9:30 am Eastern Time (United States)
  - 3:30 pm Central European Time
- You can also participate asynchronously
- You can join at the [Community Group Home Page](#)
- [Next meeting is October 28th](#)

We're Happy to Help

- We are hoping to help Children's Accessibility Needs to be incorporated into other initiatives and documents.
- Let us know how we can help!
- Contact the Chairs:
  - Suzanne.Taylor@ThingsEntertainment.net
  - Maud.Stiernet@ALittleLiningComes.com