Executive Summary:
Usability of Digital Information and Technology with People with Intellectual and Developmental Disabilities (IDD)

Purpose

While there are examples of information and communication technology (ICT) that try to address accessibility needs for people with intellectual and developmental disabilities (IDD) (e.g., 2019 Accessible Canada Act), current standards and guidelines are inadequate to guide developers of ICT. As a result, barriers prevent this population from accessing and participating freely in what is increasingly becoming the "digital world." We completed a literature review and consulted with people with IDD to begin addressing this problem.

Literature Review

Background

The literature review focused on the barriers and challenges that individuals with IDD face when using ICT. This review included articles published from 2007 to 2022 that focused on individuals with IDD.

Results

There were seven barriers faced by people with IDD when interacting with ICT and digital information:

(1) Reliance on text-based content (e.g., the need to read text to get information or input text to interact with ICT).

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(2) Complex security features (e.g., the need to receive and enter codes to gain access to application, two factor authentication).

(3) Complexity of information (e.g., the use of jargon and other unusual words).

(4) Unfamiliar technology (e.g., changing hardware or upgrading software).

(5) Need for manual dexterity required to operate hardware (e.g., use of stylus).

(6) Lack of training and support.

(7) Task complexity (e.g., keyboards with multiple functions).

Consultations

Background

A total of eight people acted as advisors to this project. Six of the advisors have mild IDD and two do not. The two who do not have IDD supported two of the advisors with IDD. Five of the advisors with IDD were from Ontario and one was from Newfoundland. The advisors with IDD ages ranged from 12-64 years. Several meetings were held with each advisor with and without IDD. Sometimes we met with advisors individually sometimes we met in groups. Meetings consisted of semi-structured interviews and ICT related tasks.

Main Results

- The advisors said that they often faced barriers when using ICT. For example
  - Websites often contained too much text that they could not understand.
  - Some tasks like banking involved too many steps that they could not complete.
  - Website layouts were often too complicated for them to navigate. For example, multiple tabs or drop-down menus were difficult to use.

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- The need to enter words to complete forms or do searches was a challenge because many of the advisors had trouble with spelling.

- When software updated and there were changes, often advisors had difficulty adjusting to the new version of the software.

▸ Many advisors depended on accessibility aids to assist in understanding or navigating websites or online activities. However, it was evident that accessibility aids were not always effective.

Decision Tree/ Recommendations

The information from the literature review and consultations were used to develop recommendations and to create a decision tree to specifically address the needs of people with IDD. The recommendations address the following three areas of need:

1. Specifically considering the needs of people with IDD in current WCAG guidelines need

2. Establishing guidelines on development and updating of hardware and software technology (none currently exist)

3. Promoting and supporting research using User Experience (UX) and co-design approaches to address gaps in accessibility solutions when it comes to barriers people with IDD face in accessing ICT and digital information.

For more information on the recommendations and to see the decision tree please visit: [place holder for link – material to be posted soon].

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