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

1.0 Purpose

▸ Today's standards and guidelines on information and communication technology (ICT) for people with intellectual and developmental disabilities (IDD) are not good enough.

▸ When standards and guidelines are not good enough it can lead to barriers.

- Barriers prevent a person with a disability from participating in society because of their disability (Humber College, n.d.).

▸ Barriers stop people with IDD from using ICT.

▸ We completed a literature review and worked with people with IDD to start talking about this problem.

2.0 Literature Review

2.1 Background

▸ The literature review focused on the barriers and challenges that people with IDD face when using ICT.

▸ This review included articles written ("published") from 2007 to 2022.

2.2 Results

▶ There were 7 barriers that people with IDD face when using ICT:

(1) Reliance on text-based content. For example: the need to read text to get information.

(2) Complicated security features. For example: the need to get a code and then enter the code, to open an application, often called a "two (2)- factor authenticator".

(3) Difficulties of information. For example: not simple words.

(4) Unfamiliar technology. For example: changing hardware or software.

(5) The need to use their hands to use hardware. For example: using a pencil stylus.

(6) Not a lot of training and support.

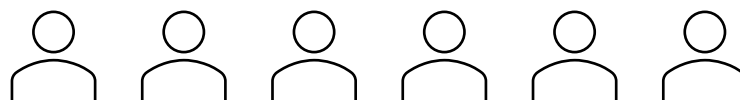(7) Task Difficulties. For example: keyboards with different functions.

3.0 Consultations (Meeting with People with IDD)

3.1   Background

▶ 8 people took part; they are called "advisors".

▸ 6 advisors have mild IDD.

▸ The 2 advisors who do not have IDD support 2 of the advisors with IDD.

▸ 5 advisors with IDD are from Ontario and 1 is from Newfoundland.

▸ The advisors with IDD ages ranged from 12-64 years.

▸ Sometimes we met with advisors alone, sometimes we met in groups.

▸ Meetings were semi-structured interviews and were about ICT tasks.

- Semi structured interviews mean some questions are written down before meeting the participant but as the researchers talk to the participant, they may ask more questions that they did not have written down.
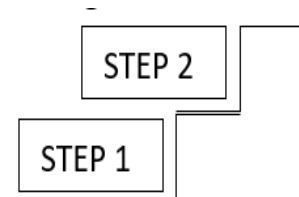
3.2 Main Results

The advisors said that they often faced barriers when using ICT. For example:

▸ Websites often have too much text and that made it hard for advisors to understand the information.
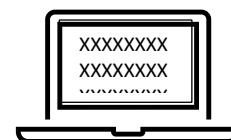
▸ Some tasks have too many steps and that made it hard for advisors to complete the steps.

STEP 2

STEP 1

- For example: multiple steps when on a laptop/iPad.

▸ Website layouts were often too hard to navigate.

- For example, multiple tabs or drop-down menus were hard to use.

| OPENED TAB | NEW TAB | NEW TAB | NEW TAB | NEW TAB | | ▭ | ⬚ | ✖ |

▸ The need to enter words to complete forms or to do searches was hard because many advisors had trouble with spelling.

Spellin|
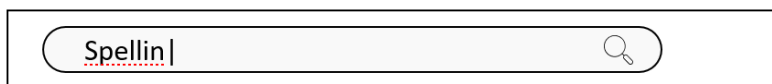
▸ When software updated and there were changes, often advisors had difficulty with the new version of software.
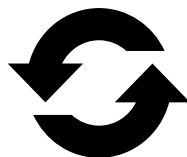
▸ Many advisors used accessibility aids (for example: screen readers or voice-controlled devices) to help understand or navigate websites or online activities.

- But accessibility aids were not always helpful.

4.0 Decision Tree and Recommendations

▸ The information from the literature review and talking to advisors were used to create solutions (called "recommendations") and a decision tree.

▸ Recommendations:

1. Think about the needs of people with IDD in the present Web Content Accessibility Guidelines (WCAG).

2. Create guidelines on the development and updating of hardware and software technology (none currently exists).

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

▸ For more information on the recommendations and to see the

decision tree please visit [place holder for link – material to be posted

soon].

REFERENCE

Humber College. (n.d.). *Fact sheet: Understanding barriers to accessibility*. Retrieved from
https://hrs.humber.ca/assets/files/human_rights/AODA/HRDAODAUnderstanding Barriers.pdf

Inclusion Europe. (n.d.). *Easy-to-read explanations*. Retrieved from
https://www.inclusion-europe.eu/easy-to-read-term/#Accessible