



**USING TECHNOLOGY TO INCREASE SOCIAL
INCLUSION FOR ADULTS WITH
DEVELOPMENTAL DISABILITIES LIVING IN A
SUPPORTED INDEPENDENT LIVING PROGRAM**

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Acknowledgements

Technology and Persons with IDD: What's the big deal?

Persons with Intellectual and Developmental Disabilities are:

- More likely to be socially excluded from their communities
- Less likely to have natural support networks and friends
- More likely to be dependent on others for support
- Social isolation of persons with Intellectual and Developmental Disabilities (IDD) has been linked to **increased costs in social, economic and health domains**

Technology and Persons with IDD: What's the big deal?

- Personal and environmental barriers to social inclusion:
 - Functioning level
 - Adaptive living skills
 - Barrier to transportation
 - Influence of stigma
 - Influence of staff involvement on community participation

Technology and Persons with IDD: What's the big deal?

- There are many benefits to using **technology** to support skill development and to decrease the environmental barriers associated with social exclusion
 - Only 10% of individuals with IDD have access to technology related assistive devices

The Pilot Project - 2016 (Overview)

Community Living Haldimand was interested in finding creative and evidence based practices for introducing technology to persons with IDD



- Established partnership with **Brock University**
- Obtained a **Trillium Seed Grant**
- Participant skill set was determined and they were matched with a specialized app
- Participants with IDD and their staff were given a training session on how to use their new smart phone and pebble watch
- Duration Data was taken for a month and a two focus groups were conducted

Pilot Project - 2016 Results (Duration Data)

Duration of interaction/support with the participants was reduced for:

- Updating and maintaining participants schedule
- For time spent providing participants with reminders related to both work and activities of daily living

Duration of interaction/support with participants was increased for:

- Supporting discussions of monetary value.



(Maich, Rutherford, & Bishop, 2019)

2016 Pilot
Project
Results
(Focus
Group)



Participants (staff and individuals with IDD) recommended:

- More individualized technology and apps
- Increased training for supports to assist with using technology through behavioral skills training
- Providing individuals with direct behavior supports for a longer period of time
- Having a coordinator that is devoted to the project to provide technology related support throughout the day
- Have additional support to collect data



Increasing Community Engagement through Technology Use 2.0

- Obtained a Trillium Grow grant to increase community participation and independence with the support of individualized technologies and apps
- 35 participants from Supported Independent Living
 - 15 participants have completed the project and have successfully reduced the need for staff support related to identified skill to 0%.
 - The remaining 20 have had their target skills identified, tech assessments completed
 - 2 groups with 6 individuals have started in this phase


Increasing Community Engagement through Technology Use 2.0



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Participants were provided with one of the following: an iPad®, iPad mini®, and or an iPhone® (based on strengths, needs and use).

- Technology assessments (developed by Project Coordinator) were used to assist in matching technology to individual needs and strengths.
- Participants are provided with time to see and feel the different options before making a choice about technology

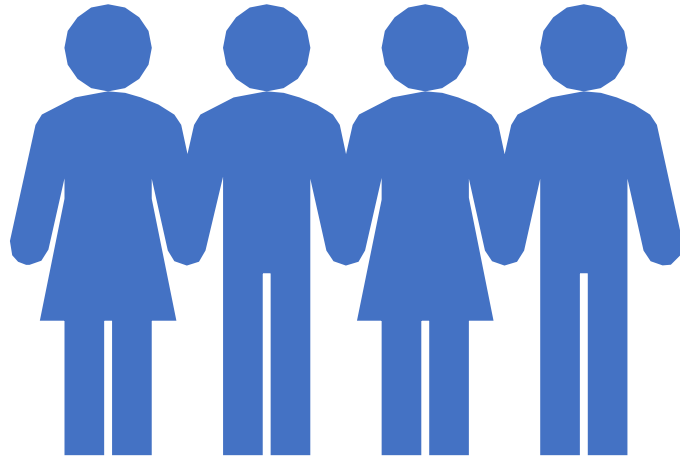


Increasing Community Engagement through Technology Use 2.0

All staff participants supporting individuals with IDD have been trained using a behavioral skills training model, where they are taught principles of Applied Behavior Analysis, such as:

- How to develop a task analysis
- Reinforcement and Matching Law
- How to introduce technology and fade supports using most-least prompting. will be trained to support the introduction and fading of the technology and the apps
- Individuals and staff participants are provided with weekly support from Behavior Consultants

Increasing Community Engagement through Technology Use 2.0



Multiple-Probe across Participants

- Participants are introduced to technology ONE at a time
- Participant in the intervention phase is provided with weekly support from a Behavior Consultant
- Once a decrease is seen in the amount of direct support provided to skill set, support for technology use is faded
- The support then moves to next individual in the group
- Multiple probe data is taken throughout for all participants



Increasing Community Engagement through Technology Use 2.0

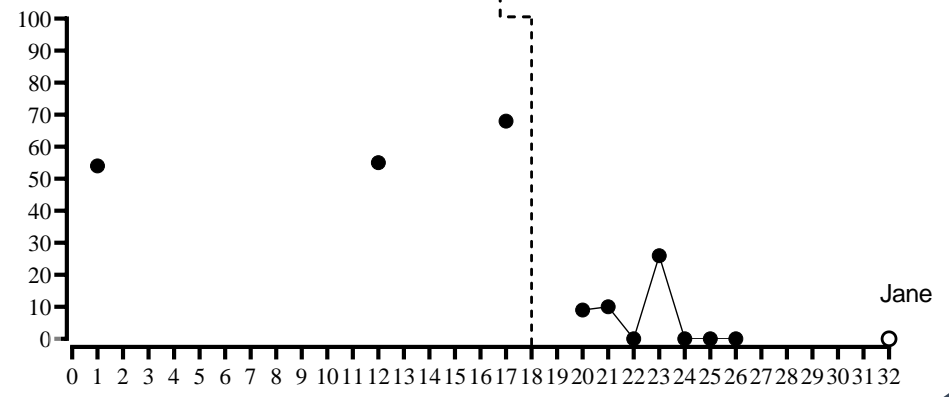
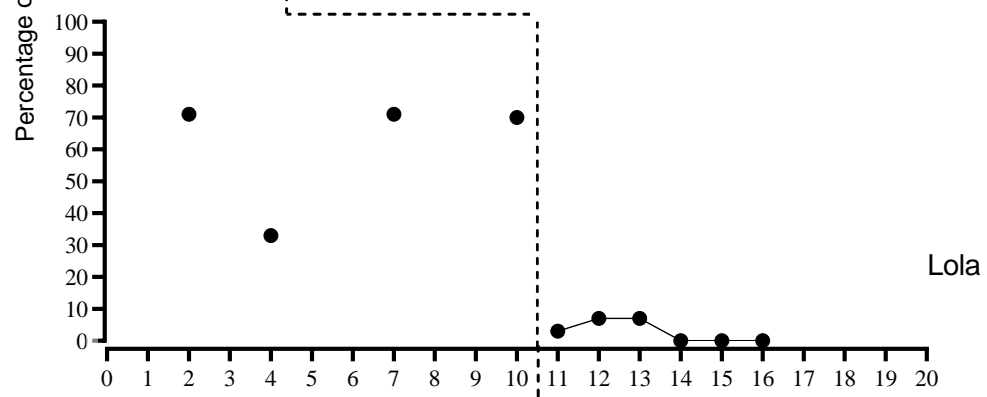
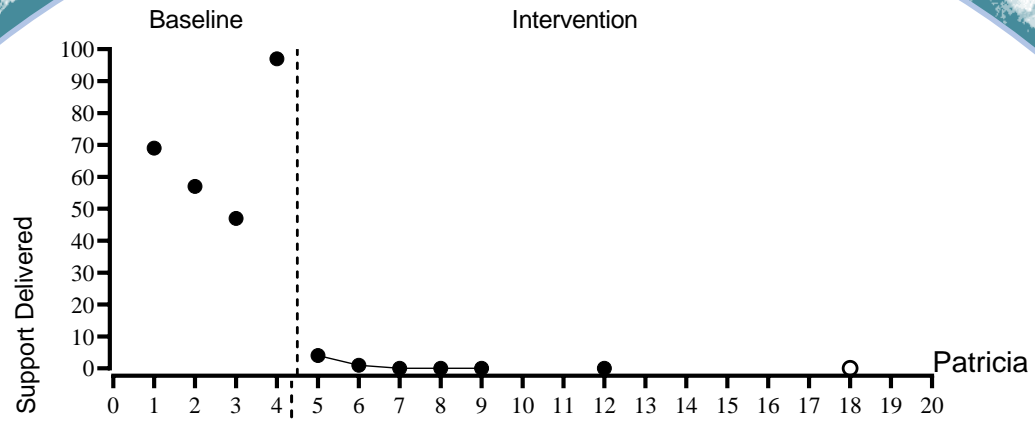
Multiple-Probe Baseline across Participant

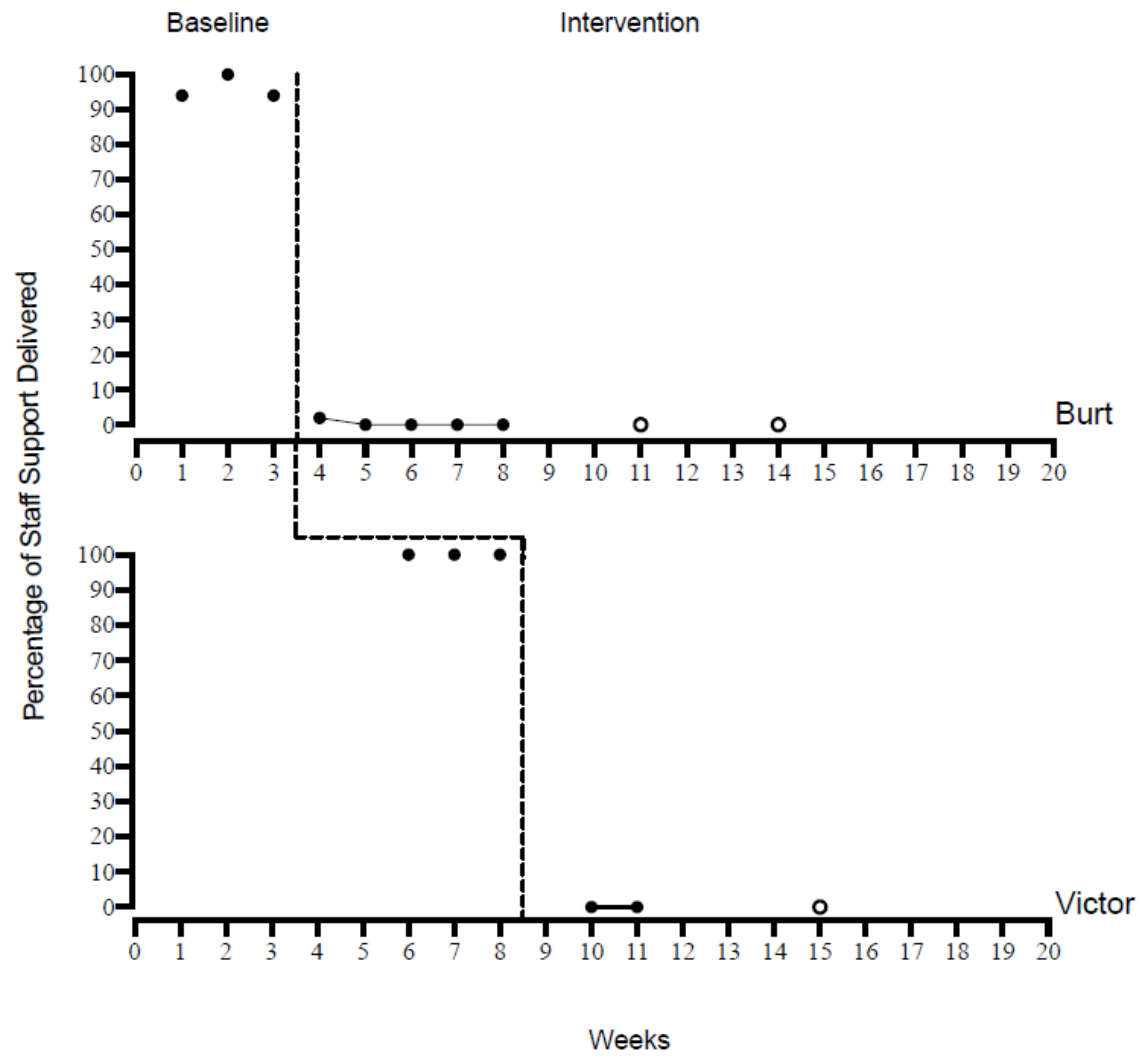
- Allows us to provide more support to one individual at a time
- The first individual becomes the control for the next participant and so on
- This helps to illustrate that the changes in staff support are due to the introduction of technology and not to other possible changes in the participant's environment

Results

- Participants require between 30% and 100% direct support for the target skill prior to the introduction of technology
- Within 5 weeks of the technology being introduced, participants required 0% direct support for the target skill















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