

## CSESA Framework for Selecting Technology

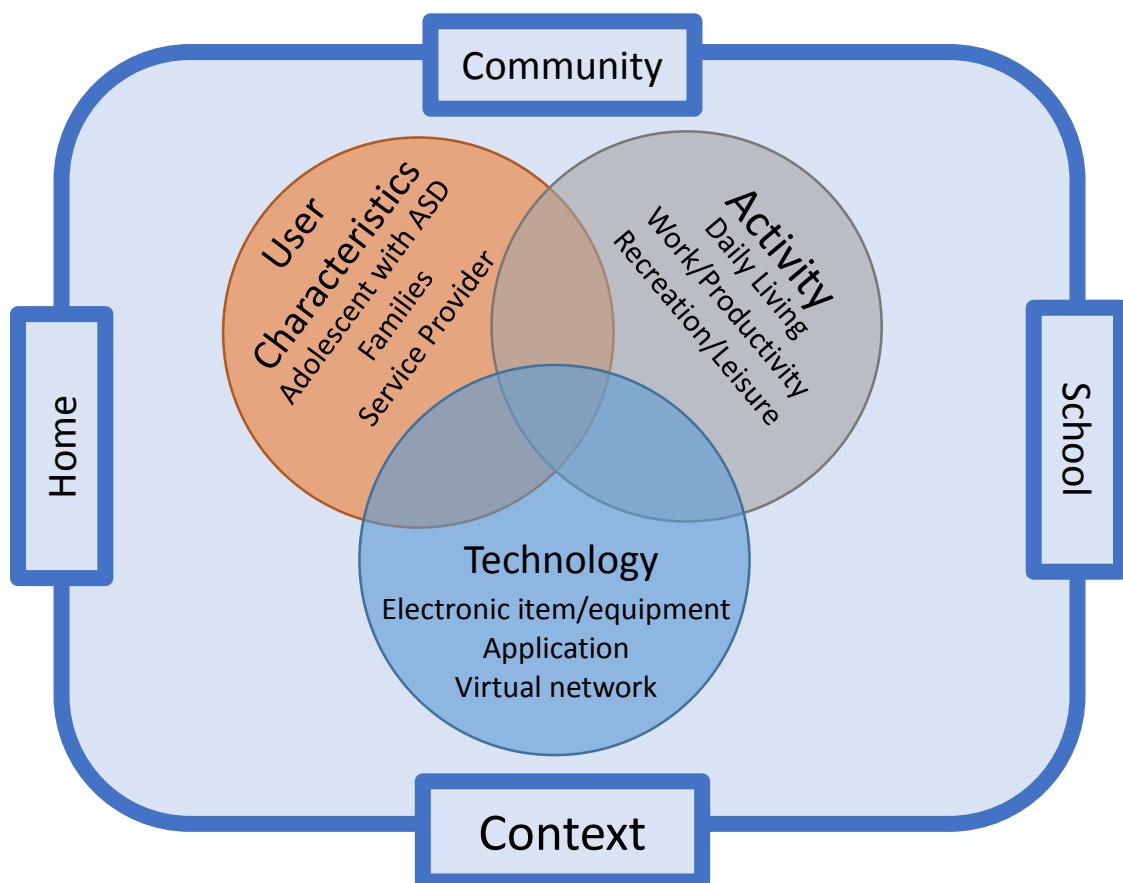
CSESA Technology Group\*

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The CSESA framework uses the domains of **human** (individual, family, service provider), **activity** (daily living, work, leisure), and **technology** (electronic item, equipment, application, virtual network) situated within the context of school, home, community to organize thinking about technology use for individuals with ASD.

Where these three domains overlap is the ideal user-activity-technology match.

Whether you are a designer of technology, a researcher of technology, a caregiver of an adolescent with ASD or a practitioner who supports students with ASD, we would encourage you to keep this model in mind while thinking about technology use by and for individuals with ASD.



A little background

This model was developed by the CSESA Technology Group that met in 2013 to develop a framework for selecting and evaluating technology interventions and instruction for use with adolescents with ASD.

First the workgroup needed a common definition for technology. After sifting through a variety of resources the group settled on a definition that draws from the US federal definition of assistive technology (PL 108-364, [http://www.gpo.gov/fdsys/pkg/PLAW-108publ364.html](http://www.gpo.gov/fdsys/pkg/PLAW-108publ364/html/PLAW-108publ364.htm)), and, incorporated the Canadian Association for Occupational Therapy (2012) definition as well. Technology definition:

*Any electronic item/equipment, application, or virtual network that is used to intentionally increase, maintain, and/or improve daily living, work/productivity, and recreation/leisure capabilities of adolescents with autism spectrum disorders.*

Next, the group wanted a framework for thinking about the different variables affecting the use of technology for adolescents with ASD.

We settled on a model based on Persuasion Theory from the field of human-computer interactions (Fogg et al., 2002). Persuasion Theory focuses on:

- factors within the individual (such as their capabilities, interests, and attitudes),
- the purpose of its use (such as for communication, social interaction, organization, etc.) and,
- the specific context within which it will be used (at school, home, work, etc.).

This theory has two underlying concepts: credibility, and expertise. The technology needs to do what it is supposed to do, at the right time, and deliver the desired outcome. For example, if a reminder alarm is set in a smart phone to remind a student to turn in homework at the beginning of class and the act occurs at the right time and the student is successful, the tool is demonstrating expertise and deemed credible.

Finally, the group wanted a visual model of the technology selection process and came up with what you see above. This design was inspired by the Human Activity Assistive Technology Model (HAAT) developed by Cook and Hussey (2009).

Canadian Association for Occupational Therapy. (2012). *CAOT position statement on assistive technology and occupational therapy*. Ottawa, Ontario, Canada: Author. Retrieved from <https://www.caot.ca/default.asp?pageid=4184>

Cook, A. M., & Hussey, S. M. (2008). *Assistive technology principles and practice* (3rd ed.). St. Louis, MO: Mosby.

Fogg, B. J., Lee, E., & Marshall, J. (2002). Interactive technology and persuasion. In J. Dillard & M. Pfau (Eds.), *The persuasion handbook: Developments in theory and practices*. Thousand Oaks, CA: Sage. Retrieved from [http://knowledge.sagepub.com/view/hdbk\\_persuasion/n34.xml](http://knowledge.sagepub.com/view/hdbk_persuasion/n34.xml)

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