



Assistive Technology and Cognitive Impairments : Lab Activity

Thousands of apps are being recommended for students with disabilities. But how do you determine which app is best? It is important to always select the most efficient app to achieve a desired outcome. Understanding the key needs, goals and objectives for the student and the key features of an app/device, enables us to match the student with the most appropriate device or app to achieve a desired goal. **Dr. Therese Willkomm**, created this resource, **Assistive Technology and Cognitive Impairments**, to help guide the process of conducting a cognitive analysis of apps. This resource accompanied the CTD webinar, *Feature Matching of Apps for Students with Disabilities*.



Assistive Technology and Cognitive Impairments: Lab Activity

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Conducting a Cognitive Demand Analysis for a Reminding Device or App

1. Select three different devices or an apps
2. Spend about 20 minutes exploring the devices, apps, and determine how to programming the app or device.
3. **Create a reoccurring reminder to take the trash out at 7 AM every Friday**
4. Conduct an activity analysis related to the **cognitive demands associated with programming** the device or app.
5. Write down each task, starting with turning the device on, reading instructions, finding the app, processing the Information on the screen such as
6. Describe the information processing demands associate with programing the specific reminder,,: Reading, Comprehending the Information, Correctly Interpreting the Information, Synthesizing the Information,
7. Inputting information:, scrolling, swiping, tapping, typing, selecting, sequencing, speaking, auditory prompts. visual prompts, using voice, pictures, video, sounds
8. Conduct an activity analysis related to the **cognitive demands associated with responding to prompt** to take the trash out at 7 AM on Friday
9. How is the prompt received: ie picture, auditory sound, music, voice, vibration, swipe to open, reading text, interpreting text, checking off task has been completed
10. What is required of the person to interact with the device or app once they are prompted ie: swipe to open, reading text, interpreting text, checking off task has been completed; or just listen, see or watch and complete the task without touching the device
11. Determine how you would adapt the device or the app to reduce cognitive demand
12. Determine which of the three apps have the least cognitive demands for programming, Explain Why
13. Determine which of the three apps have the least cognitive demands for completing a task once prompted. Explain why

Cognitive demand analysis for programming the app.

1. Describe the information processing demands associate with programing the specific reminder,:
Reading, Comprehending the Information, Correctly Interpreting the Information, Synthesizing the Information
2. Inputting information:., scrolling, swiping, tapping, typing, selecting, sequencing, speaking, auditory prompts. visual prompts, using voice, pictures, video, sounds

Name of App/Device: _____

	Task Description for inputting the required information for a reoccurring prompts on Fridays at 7:00 am to take the garbage out	Information Processing methods required	Inputting information methods required	How Might you adapt or modify this task
1				
2				
3				
4				
5				
6				
7				
8				
9				

Cognitive Demand Analysis for Responding to the Prompt

1. How is the prompt received: ie picture, video, symbol, auditory sound, music, voice, vibration, text on a screen.
2. What is required of the person to interact with the device or app once they are prompted ie: swipe to open, reading text, interpreting text, checking off task has been completed; or just listen, see or watch and complete the task without touching the device

	Task Description for Responding to the Program Prompt and initiating the task and completing the task of taking the garbage out on at 7 am every Friday	How is the Prompt received and responded to. What senses are used and how is the information processed.	What is required of the person to interact with the device or app once they are prompted	How might you adapted the output information to reduce cognitive demands
1				
2				
3				
4				
5				
6				
7				

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