Westminster
TECHNOLOGIES

Assistive Technology for Executive Function

Memory, Initiation, Control, Self-monitoring, Planning, Organization, & More

Heather R Koren, ATP
Director of Assistive Technology
Westminster Technologies

1

Presenter

- RESNA Certified ATP

- M.S. in Rehabilitation Science and Technology

- Taught undergraduate and graduate level assistive technology courses at East Carolina University

- Developed an online graduate certificate program in AT for East Carolina University

- Director of Assistive Technology at Westminster Technologies

Westminster
TECHNOLOGIES

Westminstertech.com

2

Objectives

- Discuss Executive Functioning

- Explore Apps to help with Executive Functioning

- Discover Wearable Technology

Westminster
TECHNOLOGIES

Westminstertech.com

3

Executive Function

What is it?

Westminster
TECHNOLOGIES

Westminstertech.com

4

What is Executive Function?

- Three main areas:
  - Working Memory
  - Flexible Thinking
  - Self-Control (Inhibition)

- Group of mental skills
  - Working memory
  - Planning
  - Organizing
  - Self-Control
  - Attention & Focus
  - Prioritizing
  - Initiating
  - Emotion Regulation

Westminster TECHNOLOGIES

Westminstertech.com

5

Development

- Development of executive functioning develops
  - Childhood
  - Mid-20's

- Causes
  - Brain development
  - Heredity
  - Environment
  - ADHD
  - Learning Disabilities
  - Slow Processing Speed

Westminster TECHNOLOGIES

Westminstertech.com

6

What does it look like?

- Trouble with task initiation
- Inability to complete tasks
- Can't prioritize tasks
- Forget what they just learned or read
- Can't sequence steps or follow directions
- Trouble switching between tasks

- Fixate on tasks or things
- Overly emotional
- Can't organize thoughts
- Trouble organizing materials
- Difficulty managing time
- Anxiety over routines or rules are changed

Westminster TECHNOLOGIES

Westminstertech.com

7

Everyday Challenges

- Sorting & organizing mail, files, important papers
- Staying calm when something unexpected happens
- Keeping up with deadlines, chores, and everyday tasks
- Paying bills, sticking to a budget
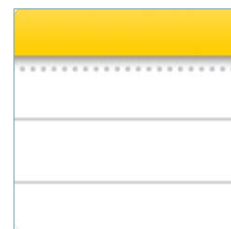- Starting new activities/projects

Westminster TECHNOLOGIES

Westminstertech.com

8

Apps

There's an app for that!

Westminster
TECHNOLOGIES

Westminstertech.com

9

Working Memory

- Notability
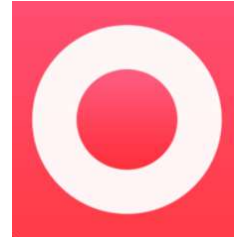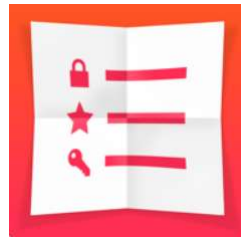- AudioNote
- OneNote
- GoodNotes
- iOS Notes

Westminster
TECHNOLOGIES

Westminstertech.com

10

Working Memory 2

- Picture Scheduler
- Say&Go
- Just Press Record
- Cheatsheet Notes

Westminster
TECHNOLOGIES

Westminstertech.com

11

Flexible Thinking

- 30/30
- Choiceworks
- VisTimer
- Time Timer

Westminster
TECHNOLOGIES
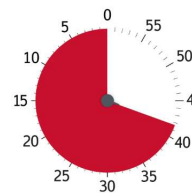
Westminstertech.com

12

Task Initiation

- First Then Visual Schedule (FTVS)
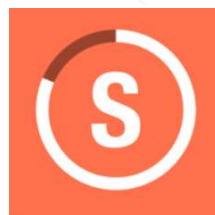- iPrompts
- Plan It, Do It, Check It Off

Westminster
TECHNOLOGIES
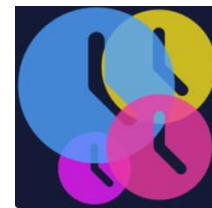
Westminstertech.com

13

Task Initiation 2

- Due – Reminders & Timers
- MultiTimer
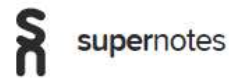- Streaks
- Timewinder

04:27

Westminster
TECHNOLOGIES
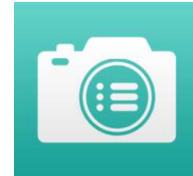
Westminstertech.com

14

Self-Monitoring

- Built-in Apps:
  - Reminders
  - Calendars
  - Alarms
- Screen Time
- Alarmed
- PhotoMind
- Supernotes

supernotes

Westminster
TECHNOLOGIES

Westminstertech.com

15

Plan & Prioritize

- Ayoa HD
- Launcher
- inClass
- Todoist

inClass

Westminster
TECHNOLOGIES

Westminstertech.com
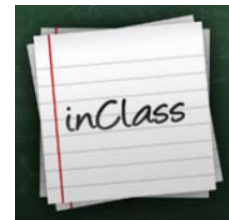
16

Organization

- BugMe! Stickies
- Due
- Google Keep
- MindNode
- Popplet

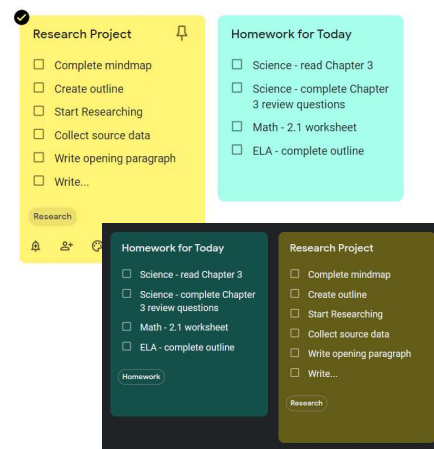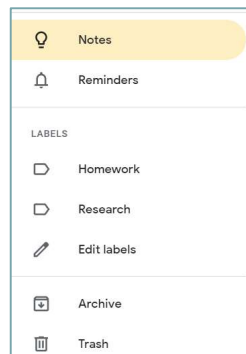Westminster
TECHNOLOGIES

Westminstertech.com

17

Google Keep

- Notetaking Tool
- Available on the web, or mobile devices through an app
- Tools include:
  - Text
  - Lists
  - Images
  - Audio

Notes

Reminders

LABELS

Homework

Research

Edit labels

Archive

Trash

Research Project 📌
- ☐ Complete mindmap
- ☐ Create outline
- ☐ Start Researching
- ☐ Collect source data
- ☐ Write opening paragraph
- ☐ Write...

Research

Homework for Today
- ☐ Science - read Chapter 3
- ☐ Science - complete Chapter 3 review questions
- ☐ Math - 2.1 worksheet
- ☐ ELA - complete outline

Homework for Today
- ☐ Science - read Chapter 3
- ☐ Science - complete Chapter 3 review questions
- ☐ Math - 2.1 worksheet
- ☐ ELA - complete outline

Homework

Research Project
- ☐ Complete mindmap
- ☐ Create outline
- ☐ Start Researching
- ☐ Collect source data
- ☐ Write opening paragraph
- ☐ Write...

Research

Westminster
TECHNOLOGIES

Westminstertech.com

18

Emotional Control

- RealLifeChange
- Calm
- Relax Melodies
- At Ease

Westminstertech.com

19

Wearable Technology

Take it wherever you go

Westminstertech.com

20

Wearables

- Wearables
  - Manage
    - Schedules
    - Notifications
    - Information
  - Fitness Devices
  - Smartwatches
  - Focus Aids
  - Blind/Low-Vision watches
  - Tracking Tech

Westminster TECHNOLOGIES

Westminstertech.com

21

Fitness Bands

- Fitbit
- Garmin

Westminster TECHNOLOGIES

Westminstertech.com

22

Notifiers

- Ditto
  - Custom Vibration
  - Calls, Texts, Apps, Alarms, Email
  - Set up Favorites
  - Silent Alarms
- Martian
  - Analog smartwatch
  - Alerts & Notifications
    - Caller ID
    - Texts
    - Social Networking
    - Calendar
  - Voice Commands
  - Custom Vibration

Westminster TECHNOLOGIES

Westminstertech.com

23

Focus

- ReVibe
  - Vibration Reminders
  - Step Counting
  - Watch
- Time Timer Watch
  - Custom Timers
  - Analog or Digital Displays
  - Custom Alarms

Westminster TECHNOLOGIES

Westminstertech.com

24

Tactile

- Dot
  - Braille Watch
    - Time
    - Date
    - Alarm Clock
    - Timer
    - Stopwatch
  - Manage Calls
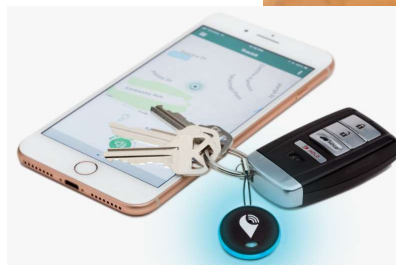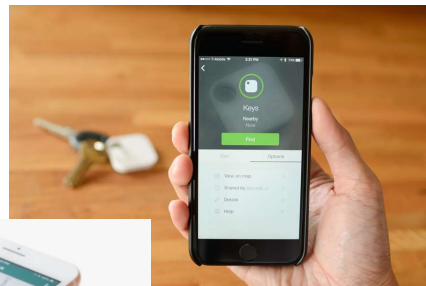 - Text Messages
  - Organization
  - Social Networking

Westminstertech.com

25

Object Finder

- Tile
  - Sticker
  - Slim
  - Pro
  - Mate
- TrackR
  - Pixel
  - Coin-sized
  - LED lights
  - Ringer

Westminstertech.com

26

Smartwatch - Apple

- Apple Watch
  - Alarms
  - Reminders
  - Fantastical
  - Due
  - Just Press Record
  - OneNote
  - Clear (To Do Lists)
  - Breathe

Westminster TECHNOLOGIES

Westminstertech.com

27

Smartwatch - Android

- Android Wear
  - Todoist
  - Google Keep
  - Wear Audio Recorder

Westminster TECHNOLOGIES

Westminstertech.com

28

Smartwatch - Samsung

- Samsung Galaxy Watch
- Connects with favorite apps
  - Alarms
  - Reminders
  - Voice Memos
  - Tasks

Westminster TECHNOLOGIES

Westminstertech.com

29

ATforEd.com   Diana Petschauer   Stacy Driscoll   LifeLongAT.com   Exec Function App Matrix   2016

Feature Matching Executive Functioning Apps

Device	*Output Features*	*Output reminders*
❏ iPad	❏ Visual	❏ Type
❏ iPhone	❏ Text	❏ Frequency
❏ Android Tablet	❏ Images	❏ Duration
❏ Android Phone	❏ Video	*Executive Function Deficit Area*
❏ Windows Tablet	❏ Icons	❏ Impulse Control
❏ Windows Phone	❏ Colors	❏ Shift / Flexible Thinking
	❏ Auditory	❏ Emotional Control
Input Method	❏ Sounds	❏ Task Initiation
❏ Typing Text	❏ Alarms	❏ Planning and Prioritizing
❏ Voice	❏ Music	❏ Organization
❏ Pictures	❏ Voice	❏ Self Monitoring
❏ Video	❏ Tactile	❏ Working Memory
❏ Drop Down Menus	❏ Vibration	
❏ Icons		
	Preferred Features	
	❏ Nag	
	❏ Snooze	
	❏ Sync between devices	
	❏ Notification Type	
	❏ Banner	
	❏ Alert	
	❏ Push Notifications to others	

Westminster TECHNOLOGIES

Westminstertech.com

30

Questions

Westminstertech.com

31

Resources – App Finders

https://www.augsburg.edu/class/groves/assistive-technology/everyone/

https://www.understood.org/en/tools/tech-finder

https://search.bridgingapps.org/dashboard

Westminstertech.com

32

Resources

Petschauer, Diana, and Stacy Driscoll. "Executive Functioning App Matrix_AbleNet _2016." *Google Docs*, Google, 2016, http://bit.ly/ATexecfunc.

Team, The Understood. "What Is Executive Function?" *Executive Functioning*, Understood, 17 Apr. 2020, www.understood.org/en/learning-thinking-differences/child-learning-disabilities/executive-functioning-issues/what-is-executive-function?_ul=1%2A17991v4%2Adomain_userid%2AYW1wLU1ZWHdFd mJZVW44SlhuVURFWFlReEE.

Westminster TECHNOLOGIES

Westminstertech.com

33

Resources 2

Perez, Luis, and Stacy Driscoll. "Wearable EF." *Google Docs*, Google, 2017, http://bit.ly/EFwatch.

"CTD Quick Takes: Executive Function Apps." *Center on Technology and Disability (CTD)*, 18 Oct. 2018, www.ctdinstitute.org/library/2018-10-17/ctd-quick-takes-executive-function-apps.

Perez, Luis. "Wearables as Supports for Executive Functioning and Independence." *Center on Technology and Disability (CTD)*, 16 Feb. 2018, www.ctdinstitute.org/library/2018-02-09/wearables-supports-executive-functioning-and-independence.

Westminster TECHNOLOGIES

Westminstertech.com

34

Any Questions after Webinar

Heather R Koren, ATP 844-881-2088 hkoren@westminstertech.com www.westminstertech.com	AT of Ohio 800-784-3425 atohio@osu.edu darling.12@osu.edu atohio.engineering.osu.edu

Westminster TECHNOLOGIES

Westminstertech.com

35