Using Technology in Assessment and Building Executive Function

Tavia Freedman, B.A. Psychology, B.Ed. (June 2017)
University of Saskatchewan
- Gronlid, Saskatchewan
- **Population:** approximately 60
Student Teaching

- Valley Manor Elementary School in Martensville, Saskatchewan
Teaching

- Macklin School in Macklin, Saskatchewan
- Living Sky School Division
- High School Sciences and Middle Years Health
Outline

● Executive Functioning Skills:
  ○ What are they?
  ○ Why are they important?
● Strengthening through classroom application
● Technology in assessments
● FreshGrade
● Podcasts in the classroom
What Are Executive Functioning Skills?

Executive functions are a set of mental processes that are necessary for the cognitive control of behaviour. They enable us to plan, focus attention, remember instructions and multi task successfully.
Executive Functions Skill Set

- Planning
- Organization
- Working Memory
- Flexibility
- Self-Regulation
- Prioritizing
- Sustained Attention
- Time Management
- Task Initiation
- Emotional Control
- Impulse Control
Why Is This Skill Set Important?

- Crucial for learning and development
- Promote healthy decisions across a lifetime
- Help children become aware of their actions, behaviours and feelings and their impact they have on themselves and others
- Decrease stress and anxiety; and
- Build decision making skills
Targeting This Skill Set

- Using a simple questionnaire that surveys students about their abilities in executive function
  - Examples:
    - My desk and locker are always tidy, and organized.
    - I am usually okay when plans change and if things do not go as planned.
Results - Turn and Talk

- How do you see these results reflected in your own teaching and learning?
- How do you see these results reflected in your day-to-day life outside of school?
- What are the benefits in early intervention for students in the growth of executive function?
Targeting This Skill Set

What do you do with the results?

- We need to analyze the results that our students yield. It is important to observe which skills are the students self perceived weaknesses and to target these.
- Plan lessons and units around these results.
  - Planning - have students strengthen planning skills by making plans for successfully creating and completing a project
  - Organizing - have students create informational videos on how to organize something relevant to their age group (binders, lockers, bedrooms, how to get ready for school, etc.)
Discussion

How effective is implementing executive function in the classroom?

Is this something that should be implemented regularly? Daily? Weekly? What do you think?

Any obstacles that could prevent you from doing so?
Sample

CC6.8 - Experiment with a variety of text forms and techniques.

D. Create **expository, informational, and procedural** texts, multi-step directions, and a problem/solution presentation as follows:
   ○ follow an organizational pattern

CC6.1 - Create various visual, multimedia, oral, and written texts that explore identity, social responsibility, and efficacy.

● Create a variety of visual, oral, written, and multimedia (including digital) texts including personal narratives, responses or reactions to reports, articles, instructions, explanations, letters, illustrations, diagrams, leaflets, stories, poems, storyboards, cartoons, skits, or short video scripts.
Sample
Activity

At your table groups, I would like you to choose one executive functioning skill and create a lesson and/or assessment that would promote the development of this skill.

Using your assigned executive functioning skill:

● What activity would you have students complete to build this skill?
● Create an independent activity for students and an assessment for this activity
● Share with your tablemates
● Share with the room (as a group)
Technology

Technology can help to improve executive function:

- Assistive technology
- Incorporating technology into classroom activities and assessments

There are various options, but some to incorporate are:

- iMovie
- Sway
- Prezi
- PowerPoint
- Green Screen
- Minecraft
- WattPad
- Poll Everywhere
- Padlet
- Glogster
- Edmodo
- FreshGrade
- Code.org
- Epic!
- Book Creator
- Story Jumper
- Subject Specific Educational Applications
Turn and Talk

- What are some challenges you face in incorporating technology in activities and instruction?
We Need to Remember...

● Technology is going to continue to advance and surpass our current knowledge
● Kids are growing up in a rapidly growing technological era
● Kids will figure anything out if they are engaged in what they are doing
● Technology is engaging for kids!
● Just because we do not know how to use something does not mean we cannot learn - promote lifelong learning!
● If we cannot figure it out...the kids will master it four times as fast
Samples
Coding

- Coding is a fantastic way for children to use technology and to learn about Computer Sciences
- Teaches and reinforces many basic and fundamental skills from the curriculum
- SO MUCH FUN!

www.code.org

https://code.org/educate/curriculum/elementary-school

https://studio.code.org/

Any questions or comments?
FreshGrade

- An application that promotes parent engagement and inclusion in students learning
- Creates ease in communication of classroom activities, assignments, and grades
- Allows teachers and students to share their successes with their families
- Engaging way for students to create digital portfolios
FreshGrade can be used for:

- Recording and communicating grades
- Formative assessment
- Sending assignments home to parents by uploading photos
- Uploading videos and photos of hands on activities
- Students to refer to work when studying
- Assessment - reactions, comments, feedback and grading
- Students creating digital portfolios
Podcasts in the Classroom

- One way to increase student engagement is by using podcasts in lessons and units.
- Podcasts provide deep understanding of a variety of different topics that can be incorporated with curricular outcomes and indicators.
- Podcasts also promote oral tradition and storytelling.
- Kids make their own connections to content and are able to share their thoughts, not just what you have told them.
- Podcasts also provide great examples for authentic assessments and activities for example you can find fun debates in different podcasts to model for students how a debate works before doing one in the classroom.