

Topic: Executive Function Overview

SIPP Competency & Standards: Self-Management (15, 16); Responsible Decision-Making (50)

AET Objectives: Learning and engagement: organization and independent learning; Interests, routines, and processing: problem solving and thinking skills

Vaughn Competencies: A. Scientific reasoning, B. Technical skills, C. Information literacy, D. Critical thinking, E. Quantitative reasoning, G. Written communication, H. Oral communication, I. Ethics and values

CASEL Area: Self-management: impulse control, stress management, self-discipline, self-motivation, goal setting, organizational skills

Learner Goals:

Learners will practice relevant executive functioning skills through an activity/game.

Learners will apply executive functioning skills to three areas of their life.

Learners will begin to identify strengths and growth areas of their own executive functioning skills.

Instructor Goals:

Instructor(s) will provide definitions and real-life examples of executive function skills.

Instructor(s) will facilitate activities/games practicing executive functioning skills.

Instructor(s) will facilitate a reflection about executive functioning skills in each learners' life (3 areas) and identify individual learner's strength and growth areas for executive functioning skills.

Activity:

1. <https://www.youtube.com/watch?v=BkRd-WOx7cM> - what is executive function
2. Define executive function - "the management system of the brain" (understood.org, 2021)
 - a. EF "skills are a set of mental processes that enable us to plan, focus attention, remember instructions, and juggle multiple tasks successfully" (developingchild.harvard.edu)
 - b. Made up of 3 main brain functions:
 - i. *Working memory*: our ability to remember and use individual pieces of information in a short time

- ii. *Mental flexibility (AKA cognitive flexibility)*: helps us keep or change our attention to different things or to apply different rules in different settings
 - iii. *Self-control (AKA inhibitory control)*: allows us to set priorities and resist impulsive actions or responses
- 3. Relate each of these areas to real-life situations/examples
- 4. Introduce other skills involved in EF
 - a. Attention
 - b. Planning
 - c. Verbal reasoning
 - d. Organization
 - e. Problem solving
 - f. Initiating actions
 - g. Monitoring actions
 - h. Metacognition
- 5. Highlight that we are going to spend time this week on the skills involved in executive function and some strategies to support each one, but these skills will all be recurring throughout the year & into your career, family, friends, daily living skills, etc.
 - a. Building core capabilities -
<https://www.youtube.com/watch?v=6NehuwDA45Q&feature=youtu.be>
- 6. Neurodivergence, creativity, and executive functioning (Mel Planet Neurodivergent Admin., 2021).
 - a. When EF is low, it opens your brain up to engage in creative thinking
 - b. Low EF is associated with ADHD, Autism, bipolar, and other neurodivergences
 - c. How will this show up in the innovation hub?

Reflections:

- 1. SEL journal: Identify and reflect on 3 areas of your life that executive functioning skills are used.
- 2. SEL journal: Are there any skills in executive functioning that are difficult for you? Are there any that you find easier than others?

Materials:

- 1. Working memory worksheets
- 2. Brain story worksheet
- 3. Stroop Test link
- 4. SEL journal
- 5. EF presentation
- 6. EF video

Resources:

Executive Function & Self-regulation. (2020). Center on the Developing Child at Harvard University. Retrieved March 11, 2022, from <https://developingchild.harvard.edu/science/key-concepts/executive-function/>

Mel Planet Neurodivergent Admin. (2021). *Creativity functioning skills: Rethinking Executive Dysfunction*. Planet Neurodivergent. Retrieved March 11, 2022, from <https://www.planetneurodivergent.com/creativity-functioning-skills-rethinking-executive-dysfunction/>

Understood Team. (2021). *What is executive function?* Understood. Retrieved March 11, 2022, from <https://www.understood.org/en/learning-thinking-differences/child-learning-disabilities/executive-functioning-issues/what-is-executive-function>

Topic: Attention - building core competencies & strategies

SIPP Competency & Standards: Self-Management (15, 16)

AET Objectives: Learning and engagement: 2. Motivation and engagement, 2.8 Attends to task, activity 2.9 Persists with activity, especially when it becomes difficult 2.10 Shifts attention to another task/activity/request

Vaughn Competencies: A. Scientific reasoning, B. Technical skills, C. Information literacy, D. Critical thinking, E. Quantitative reasoning, G. Written communication, H. Oral communication

CASEL Area: Self-management: self-motivation

Learner Goals:

Learners will practice selective attention and sustained attention tasks.

Learners will show a basic understanding of how attention relates to learning.

Learners will formulate attention strategies in small groups.

Learners will add attention strategies to their individual “executive functioning strategies masterlist.”

Instructor Goals:

Instructors will facilitate an activity to give learners practice with selective attention and sustaining attention.

Instructors will relate attention to learning and other aspects of life.

Instructors will provide the learners with time to formulate their own attention strategies and will then provide them with attention strategies.

Activity:

1. What is attention? Attention is your ability to focus on something at a given time (understood.org, 2021)
 - a. Orienting: where you choose to focus (this can be conscious or subconscious)
 - i. <https://www.youtube.com/watch?v=vJG698U2Mvo> - classic selective attention test with passing balls and gorilla
 - b. Sustained attention: keeping your attention on something despite boredom, fatigue, etc.
 - i. <https://www.youtube.com/watch?v=1GAy8DAannM>
 - c. Executive control: monitoring your mental processes while paying attention to something, being aware of your own attention processes
2. Attention is used across all different settings, but is especially important when learning new information or completing a task
3. Attention can be affected by many things: interest in material, how much you have slept, your diet, exercise, sensory input (e.g. lights, sounds, etc.)
4. Review a few strategies for increasing attention, but *create an opportunity for small groups to think of strategies and what works for each individual*
5. Some strategies for attention (orienting, sustained, and executive control) (Center on the Developing Child at Harvard University, 2019):
 - a. Create a “Daily Focus List” = 3 top priorities and 3 smaller priorities
 - b. Choose one activity/spot to focus on
 - c. Identify what triggers you to go into “flight, fight, or freeze mode”
 - i. Ex. hunger, too many priorities, lack of organization
 - d. Notice what tasks require more brain effort to stay focused and which tasks you find yourself in a “flow” state
 - e. Give yourself breaks - use a timer if you have time distortion
 - i. Breaks of exercise or a creative project actually make it easier to focus when we come back to the task at hand
 - f. Reduce perfectionism by setting expectations for “good enough” if you notice you hyperfocus on smaller details
 - g. Have an accountability partner
 - h. Understand the expectations for the project - this might mean asking questions
 - i. Set and follow deadlines
 - j. When possible, choose activities that align with your interests
 - k. Pomodoro technique - 25 minute timer, break (5-15 minutes) (Cirillo, F., 2009)
 - i. <https://pomofocus.io/>
 - ii. The time frame can be flexible - find what works for you
 - l. Apps

Reflection:

1. How do you use your ability to focus (attention) to learn new information? Discuss in a small group.

2. In your small group, please discuss the factors that affect attention and create 3 strategies for focusing (orienting) and sustaining attention. Share these strategies with your classmates - you might have one that could help someone else!
3. Fill out your “executive functioning strategies masterlist” for attention strategies - note which strategies may be helpful for you

Materials:

1. Attention tasks videos
2. Executive function strategies masterlist
3. <https://pomofocus.io/> - Pomodoro technique, applications (plantie)

Resources:

Cirillo, F. (2009). The pomodoro technique. San Francisco, Calif: Creative Commons.

How to build executive function skills for adults. Center on the Developing Child at Harvard University. (2019). Retrieved March 11, 2022, from <https://developingchild.harvard.edu/innovation-application/key-concepts/adult-capabilities/>

Lasky, S., (2022). *12 ways to maintain focus all day long.* ADDitude. Retrieved March 11, 2022, from <https://www.additudemag.com/slideshows/why-cant-i-focus-adhd-strategies/>

Understood Team. (2021). *What is executive function?* Understood. Retrieved March 11, 2022, from <https://www.understood.org/en/learning-thinking-differences/child-learning-disabilities/executive-functioning-issues/what-is-executive-function>

Topic: Working Memory - building core competencies

SIPP Competency & Standards: Self-Management (15, 16)

AET Objectives: Learning and engagement: 5. evaluating own learning; Interests, routines, and processing: 4. Problem solving and thinking skills

Vaughn Competencies: A. Scientific reasoning, B. Technical skills, C. Information literacy, D. Critical thinking, E. Quantitative reasoning, G. Written communication, H. Oral communication

CASEL Area: Self-management: organizational skills

Learner Goals:

Learners will practice working memory games to gain an understanding of what working memory is.

Learners will show a basic understanding of working memory and how it relates to learning.

Learners will formulate working memory strategies in small groups.

Learners will add working memory strategies to their individual “executive functioning strategies masterlist.”

Instructor Goals:

Instructors will facilitate an activity to give learners practice with working memory.

Instructors will relate working memory to learning and other aspects of life.

Instructors will provide the learners with time to formulate their own working memory strategies and will then provide them with working memory strategies.

Activity:

1. What is working memory? It is the ability to hold onto new information & process it so we can use it in some way; holding onto information we perceive and using it to complete a task (Rosen, P., 2021)
 - a. About 10-15 seconds long
2. Relate working memory to learning new information
 - a. Use working memory when taking notes
 - b. Use our working memory when completing a mental math problem
3. Working memory is closely related to attention: one must be paying attention to listen & hold the information in your head
4. Review some strategies for working memory, but give learners the opportunity to brainstorm their own strategies
5. Strategies for working memory:
 - a. In class, you can ask the professor to record the lectures or for permission for you to record
 - b. Guided notes
 - c. Chunking (ex. Instead of remembering a full phone number, you can group the numbers together into smaller groups
 - d. Checklists
 - e. Practice visualization of new information

Reflection:

1. In your small group, please discuss and brainstorm some strategies that might help you with working memory.
2. Fill out your “executive functioning strategies masterlist” for working memory strategies - note which strategies may be helpful for you

Materials:

1. Executive function strategies masterlist

Works Cited:

Rosen, P. (2021). *What is working memory?* Understood. Retrieved March 11, 2022, from <https://www.understood.org/articles/en/working-memory-what-it-is-and-how-it-works>

Topic: Verbal Reasoning - building core competencies

SIPP Competency & Standards: Self-Management (15, 16)

AET Objectives: Learning and engagement: 5. evaluating own learning; Interests, routines, and processing: 4. Problem solving and thinking skills

Vaughn Competencies: A. Scientific reasoning, B. Technical skills, C. Information literacy, D. Critical thinking, E. Quantitative reasoning, G. Written communication, H. Oral communication

CASEL Area: Self-awareness, Self-management, Responsible decision-making

Learner Goals:

Learners will show evidence of basic understanding of verbal reasoning and its components.

Learners will relate verbal reasoning to learning and using it in the workplace/professional life.

Learners will brainstorm verbal reasoning strategies and add strategies to executive function masterlist.

Learners will practice a hands-on verbal reasoning reflection activity.

Instructor Goals:

Instructors will provide a definition of verbal reasoning and its components.

Instructors will relate verbal reasoning to learning and using it in the workplace/professional life.

Instructors will facilitate a brainstorm of verbal reasoning strategies and provide learners with strategies post-brainstorm.

Instructors will facilitate a hands-on verbal reasoning reflection activity.

Activity:

1. What is verbal reasoning? Verbal reasoning, in simple terms, is thinking (understanding & reasoning) in words (Psychometric Test, 2019)

2. Relate verbal reasoning to learning new information and other aspects of professional life.
3. Components of verbal reasoning:
 - a. Comprehending information that is heard or read
 - b. Discriminating between relevant and irrelevant information
 - c. Analyzing what was heard or read
 - d. Constructing meaning beyond what is heard or read
4. Strategies for verbal reasoning:
 - a. Read the text slowly
 - b. Underline important information
 - c. Read the questions before reading the text
 - d. Read questions carefully
 - e. Take your time
 - f. If verbal reasoning is difficult, take a moment to use some coping strategies to relax

Reflection:

1. How does verbal reasoning relate to learning new information? How are verbal reasoning skills used in the innovation hub? Please discuss in small groups.
2. Practice this verbal reasoning activity <https://www.youtube.com/watch?v=BGn8XgprHDg>
3. In your small group, please discuss and brainstorm some strategies that might help you with verbal reasoning.
4. Fill out your “executive functioning strategies masterlist” for verbal reasoning strategies - note which strategies may be helpful for you

Materials:

1. Verbal reasoning activity practice - <https://www.youtube.com/watch?v=BGn8XgprHDg>
2. Executive function strategies masterlist

Resources:

Psychometric Test, (2019). *Verbal reasoning*. Psychometric Tests. Retrieved March 11, 2022, from <https://www.psychometrictest.org.uk/verbal-reasoning/>

Topic: Mental (cognitive) flexibility- building core competencies

SIPP Competency & Standards: Self-Awareness (5), Self-Management (15, 16); Responsible Decision-Making (42)

AET Objectives: Learning and engagement: 5. evaluating own learning; Interests, routines, and processing: 4. Problem solving and thinking skills

Vaughn Competencies: A. Scientific reasoning, B. Technical skills, C. Information literacy, D. Critical thinking, E. Quantitative reasoning, F. Diverse perspectives, G. Written communication, H. Oral communication, I. Ethics and values

CASEL Area: Self-awareness, social awareness: perspective-taking, empathy, respect for others, appreciating diversity, Responsible decision-making: Identifying problems, analyzing situations, solving problems, evaluating, reflecting

Learner Goals:

Learners will understand a basic definition of cognitive flexibility and the actions it relates to.

Learners will brainstorm how cognitive flexibility is related to learning new information and using it in the workplace.

Learners will try at least one hands-on cognitive flexibility activity in small groups.

Learners will brainstorm their own cognitive flexibility strategies before the instructor shares strategies.

Learners will add cognitive flexibility strategies to the “executive function masterlist.”

Instructor Goals:

Instructors will provide learners with cognitive flexibility definition and the actions it relates to using real-life and concrete examples.

Instructors will provide learners with the opportunity to brainstorm about how cognitive flexibility is related to learning new information and using it in the workplace.

Instructors will facilitate at least one hands-on cognitive flexibility activity in small groups.

Instructors will provide learners with the opportunity to brainstorm their own cognitive flexibility strategies before the instructor shares strategies.

Activity:

1. Define cognitive flexibility - the ability to shift thinking between two (or more) concepts, or to think about multiple concepts simultaneously (Willis, J., 2016).
 - a. Also helps us apply different rules in different settings
 - b. Relates to evaluating strategies and finding novel solutions
 - c. Sometimes requires us to act against our biases and against what we have learned so far

- d. <https://www.youtube.com/watch?v=c3v0dK0NMsA> - optical illusions, switching perspectives
2. Let's brainstorm about how cognitive flexibility relates to learning and performance in the workplace
3. Try at least one of the reflection cognitive flexibility activities before brainstorming strategies for cognitive flexibility
4. Provide learners with the opportunity to brainstorm their own strategies for cognitive flexibility
5. Strategies for cognitive flexibility (Perina, K., 2019)
 - a. Being open-minded to other opinions and points of views
 - b. Willing to make mistakes and try again
 - c. Trying multiple ways to solve a problem
 - d. Opportunities for brainstorming and inquiry
 - e. Do something you do every single day in a new way
 - f. Try new challenges
 - g. Expose yourself to new people with different interests than yourself
6. Add strategies to "executive function masterlist"

Reflections:

1. How does cognitive flexibility relate to learning new information? How would it be useful in the workplace?
2. How does cognitive flexibility appear in engineer design?
3. "This is not" activity: pass around a familiar object and have students describe what it is not and give an alternate purpose for the object
4. Provide learners with a problem and ask them to generate 3 different solutions - <https://www.youtube.com/watch?v=cHHEhevWZYE>
5. Try retelling a story from a different point of view
6. Please add strategies to "executive function masterlist"

Materials:

1. Cognitive flexibility concrete examples - <https://www.youtube.com/watch?v=c3v0dK0NMsA>
2. Cognitive flexibility strategies
3. Executive function masterlist

Works Cited:

Perina, K. (2019). *3 ways to improve your cognitive flexibility*. Psychology Today. Retrieved March 11, 2022, from <https://www.psychologytoday.com/us/blog/wild-connections/201912/3-ways-improve-your-cognitive-flexibility>

Willis, J. (2016). *Building students' cognitive flexibility*. Edutopia. Retrieved March 11, 2022, from <https://www.edutopia.org/blog/building-students-cognitive-flexibility-judy-willis>

Topic: Self (Inhibitory) Control - building core competencies

SIPP Competency & Standards: Self-Management (10, 11, 12, 15, 16); Responsible Decision-Making (50)

AET Objectives: Emotion understanding and self-awareness: 2. Managing emotions and behavior

Vaughn Competencies: D. Critical thinking, F. Diverse perspectives, H. Oral communication, I. Ethics and values

CASEL Area: Self-management: impulse control, stress management, self-discipline

Learner Goals:

Learners will show a basic understanding of the definition of and components to inhibitory control.

Learners will brainstorm how inhibitory control is used in school/work and in everyday life.

Learners will brainstorm strategies to improve inhibitory control.

Learners will practice a mindfulness activity.

Learners will add inhibitory control strategies to their executive function masterlist.

Instructor Goals:

Instructors will provide learners with inhibitory control definition and the actions it relates to using real-life and concrete examples.

Instructors will provide learners with the opportunity to brainstorm about how inhibitory control is related to school/work and in everyday life.

Instructors will facilitate a brainstorming session for learners to identify strategies to improve inhibitory control.

Instructors will facilitate a mindfulness activity.

Activity:

1. Self-control (inhibitory control): a person's ability to stop their impulses, pause, and choose another action that may be more appropriate (Lyons, K.E. and Zelazo, P.D., 2011)
 - a. Requires a level of awareness about responses and emotions
 - b. Example: your phone buzzes with a notification while you are working. The ability to ignore your initial impulse to answer the phone and choose to focus on work is inhibitory control
2. Brainstorm how we use inhibitory control at SIPP and in our everyday lives
3. Strategies for improving self-control:
 - a. Improve overall self-regulation
 - b. Balancing sleep, diet, and exercise help our brains be able to override these initial impulses
 - c. Practice mindfulness - <https://www.youtube.com/watch?v=w6T02g5hnT4>
 - d. Begin to identify when you feel impulsive. When this happens, stop and notice it
 - e. Practice slowing down
 - f. When impulses do happen, reflect on it but be forgiving and learn from it
 - g. Practice practice practice connecting our emotions to our behaviors
 - h. Increase distress tolerance - GRIT & growth mindset
 - i. Grounding techniques (5-4-3-2-1)

Reflections:

1. In small groups, brainstorm 3 ways we use inhibitory control (either at SIPP or in everyday life)
2. In small groups, brainstorm strategies for improving or helping inhibitory control
3. Try a mindfulness activity
 - a. Let thoughts and observations come and go
 - b. Be free of judgment of thoughts

Materials:

1. Mindfulness exercise
2. Executive function masterlist

Works Cited:

Lyons, K.E. and Zelazo, P.D. (2011). Monitoring, metacognition, and executive function: Elucidating the role of self-reflection in the development of self-regulation. *Advances in Child Development and Behavior*, (40), 379-412

Franco, C., Amutio, A., López-González, L., Oriol, X., & Martínez-Taboada, C. (2016). Effect of a Mindfulness Training Program on the Impulsivity and Aggression Levels of Adolescents with Behavioral Problems in the Classroom. *Frontiers in psychology*, 7, 1385.
<https://doi.org/10.3389/fpsyg.2016.01385>

Phillips, L. (2019). *Taming impulses*. Counseling Today. Retrieved March 11, 2022, from <https://ct.counseling.org/2019/08/taming-impulses/>

Topic: Metacognition - noticing our thoughts - building core competencies

SIPP Competency & Standards: Self-Awareness (1); Self-Management (10, 14, 15, 16); Responsible Decision-Making (43, 46, 50)

AET Objectives: Interests, routines, and processing: 4. Problem solving and thinking skills

Vaughn Competencies: A. Scientific reasoning, B. Technical skills, C. Information literacy, D. Critical thinking, E. Quantitative reasoning, F. Diverse perspectives, G. Written communication, H. Oral communication, I. Ethics and values

CASEL Area: Self-awareness: accurate self perception, Responsible decision-making: identifying problems, analyzing situations, solving problems, evaluating, reflecting, Self-management: goal setting, Relationship skills: communication, social engagement, relationship building, team building

Learner Goals:

Learners will show evidence of a basic understanding of metacognition and how it relates to self-regulation, self-awareness, and learning.

Learners will practice readiness to learn/work - check ins.

Learners will reflect on previously established goals and learning progress.

Instructor Goals:

Instructors will provide a definition of metacognition and relate it to self-regulation, self-awareness, and learning using real-life and concrete examples.

Instructors will facilitate readiness to learn/work check-in reflection activity.

Instructors will provide learners with time to reflect on their goals and learning progress.

Activity:

1. Metacognition: awareness of one's thinking; thinking about thinking (Chick, N., 2013; Global Metacognition, 2019)
2. Relate metacognition to self-regulation, self-awareness, and learning

- a. If you are able to identify your thoughts and critically think about them, you are better able to find self-regulation strategies that work for you
- b. Able to actively monitor your learning

Reflections:

1. Reflect on all the learning we have been doing so far - work on a personal learning checklist
2. Practice monitoring our readiness to learn - mood, emotion, tiredness, etc. check-ins
3. Reflect on our goals - are they still relevant? Do they need adjustments?
4. Add metacognition strategies to the executive function masterlist.

Materials:

1. Readiness to learn/work check-ins
2. Learner's individual goals
3. Executive function masterlist

Works Cited:

Chick, N. (2013). Metacognition. Vanderbilt University Center for Teaching. Retrieved March 11, 2022 from <https://cft.vanderbilt.edu/guides-sub-pages/metacognition/>.

Global Metacognition, (2019). *Metacognition Activities & Strategies: The ultimate guide*. Metacognition. Retrieved March 11, 2022, from <https://www.globalmetacognition.com/post/metacognition-activities-strategies-the-ultimate-guide>

Topic: Planning and Organization - building core competencies

SIPP Competency & Standards: Self-Management (13, 14, 15, 16); Responsible Decision-Making (45, 50)

Learner Goals:

Learners will show a basic understanding of planning and organization in relation to professional and personal life.

Learners will brainstorm and discuss planning and organization strategies.

Learners will practice one planning and one organization strategy.

Learners will add planning and organization strategies to their executive function masterlist.

Instructor Goals:

Instructors will provide a definition of and examples of planning and organization as it relates to personal and professional life.

Instructors will provide learners with time to discuss planning and organization strategies and provide learners with strategies post-discussion.

Instructors will facilitate a reflection activity involving planning short-term and long-term tasks with components listed.

Activity:

1. Define planning & organization: when working towards any goal (short-term or long-term), an organized plan needs to be developed
 - a. Breaking down tasks required to complete goal
 - b. Map the tasks over time - how long will it take?
 - c. What materials are needed?
 - d. After each task is completed, review and assess if on timeline
2. Organization: each goal needs an organization system (e.g. calendar, to-do lists, filing system, etc.)
 - a. Important to find which organization system works for each individual student
 - b. Each student choose one organization system
3. Relate planning and organization to professional and personal life
4. Brainstorm planning and organization strategies
5. Discuss planning and organization strategies:
 - a. Define the goal
 - b. Break the tasks into smaller tasks
 - c. Assign deadlines/timeline
 - d. Plan the materials for each task
 - e. Assess how long each task might take
 - f. Review this plan daily/consistently
 - g. Organization - choose something that will work for you
 - i. Add your events into this system
 - ii. Consider if you will need notification
 - iii. Option to organize hourly, daily, weekly, monthly, etc.
 - iv. Excel daily plan (divide day into blocks of time and assign this time to a task)
 - h. Research helpful phone/laptop applications
6. Add planning and organization strategies to executive functioning masterlist

Reflections:

1. Pick one organization system for events (e.g. online calendar, phone calendar, agenda/planner, reminders, etc.) for planning - this may be something you already use or something you need more support with. Reflect on if this system will be effective for both personal and professional life

2. Practice planning & organization: choose a short-term and long-term goal/task relevant to the current topics in orientation or your personal life
 - a. Fill out the short-term task worksheet
 - b. Fill out the long-term task worksheet
 - c. Discuss in a small group - how did you break down your tasks?

Materials:

1. Short-term & long-term task worksheet (goal, materials, task (complete/not completed))
2. Organization system example
3. EF Masterlist

Works Cited:

Standard interventions for executive function - D181. (n.d.). Retrieved March 11, 2022, from https://www.d181.org/uploaded/Parents/Family_Education_Events/STANDARD_INTERVENTIONS_FOR_EXECUTIVE_FUNCTION.pdf

Najdowski, A. C. (2017). *Flexible and focused : Teaching executive function skills to individuals with autism and attention disorders*. ProQuest Ebook Central
<https://ebookcentral-proquest-com.tc.idm.oclc.org>

Ylvisaker, M., Szekeres, S. F., & Feeney, T. J. (1998). Cognitive rehabilitation: Executive functions. In M. Ylvisaker (Ed.), *Traumatic brain injury rehabilitation: Children and adolescents* (pp. 221–269). Butterworth-Heinemann.

Topic: Initiating Actions and Monitoring Actions - building core competencies

SIPP Competency & Standards: Self-Awareness (1); Self-Management (13, 14, 15, 16); Responsible Decision-Making (45)

Learner Goals:

Learners will show a basic understanding of initiating actions and monitoring actions in relation to professional and personal life.

Learners will brainstorm and discuss initiating actions and monitoring actions strategies.

Learners will practice one initiating actions and monitoring actions strategy.

Learners will add initiating actions and monitoring actions strategies to their executive function masterlist.

Instructor Goals:

Instructors will provide a definition of and examples of initiating actions and monitoring actions as it relates to personal and professional life.

Instructors will provide learners with time to discuss initiating actions and monitoring actions strategies and provide learners with strategies post-discussion.

Instructors will facilitate reflection activities involving initiating actions and monitoring actions strategies.

Activity:

1. Define initiating actions and monitoring actions:
 - a. Initiating actions (getting started): after a plan is made and the tasks are broken down, the next step is to get started on the task at hand
 - b. Monitoring actions (keeping track): keeping track of the actions you complete within a task and actions you still need to complete
2. Relate these using real-life concrete examples to professional and personal life
3. Brainstorm some strategies for initiating actions and monitoring actions
4. Discuss strategies:
 - a. Behavior momentum (Zuluaga, C. A., & Normand, M. P., 2008): beginning an easier task and slowly building up to the more involved task
 - i. E.g. start reading at your desk, open your laptop, read emails, open documents, and then begin the more difficult task
 - b. Set yourself up for success: create a designated space for the task you are completing
 - i. E.g. working = desk; break = couch
 - ii. Minimize distractions
 - iii. Prepare yourself and your space for jumping back in after a break
 - c. Monitoring actions
 - i. Keep a checklist of tasks and check them off when you are done
 - ii. "To Done" list - at the end of the week (or any period of time) make a list of all of the things you have accomplished, doing this you will begin to focus on the positives and celebrate the small accomplishments
 - d. Set up a motivation system - after each task complete or period of work, give yourself something that you enjoy
 - e. Use a timer - see "Attention" strategies
 - f. Keep tasks manageable - if you notice they are overwhelming, continue to break them down even more

Reflections:

1. Discuss in your small group some strategies you already use to get yourself started on a task. Reflect on if others use strategies that may be helpful for yourself.
2. Reflect on a possible motivation system for yourself.

3. Practice a “behavior momentum” series of actions (action 1 = easiest, action 2 = medium, action 3 = hardest)
4. Practice writing a “to done” list for the last few days. First, define the period of time and the setting (e.g. “week 4 orientation, Innovation Hub). Then write however many tasks you completed during that time and place. This strategy can help you monitor the tasks you have completed, as well as gain insight on what you have left to reach the deadline/goal.
5. Add the task initiation and monitoring tasks strategies discussed in your small group and in the large group with instructors to your executive function masterlist.

Materials:

1. To done list prompt/worksheet
2. Motivation system prompt/worksheet
3. Behavior momentum task sequence
4. EF masterlist

Works Cited:

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Zuluaga, C. A., & Normand, M. P. (2008). An evaluation of the high-probability instruction sequence with and without programmed reinforcement for compliance with high-probability instructions. *Journal of applied behavior analysis*, 41(3), 453–457.
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Topic: Problem Solving - building core competencies

SIPP Competency & Standards: Responsible Decision-Making (42, 46, 48); Self-Management (13, 14, 15, 16)

Learner Goals:

Learners will show a basic understanding of the definition of and process of problem solving.

Learners will relate problem solving skills to the engineering design process.

Learners will brainstorm and discuss problem solving strategies in their personal and professional lives.

Learners will practice at least one hands on problem solving activity.

Learners will add the problem solving strategies to their executive function masterlist.

Instructor Goals:

Instructors will share a definition and process of problem solving.

Instructors will relate problem solving skills to the engineering design process.

Instructors will provide learners with time to brainstorm and discuss problem solving strategies in their personal and professional lives.

Instructors will facilitate at least one problem solving activity.

Activity:

1. Define problem solving - the process of finding solutions to difficult or complex issues (Mirriam-Webster, n.d.)
 - a. Break down definition: the process = the steps, finding solutions = iterating, brainstorming, prototyping, to difficult or complex issues = defining the problem(s)
2. Relate problem solving to the Engineering Design Process
3. Steps to problem solving (ASQ.org, n.d.):
 - a. Define the problem
 - b. Brainstorm ideas
 - c. Select solutions
 - d. Test solutions
4. Provide problem solving activity or relate problem solving steps to work currently in other content areas
5. Discuss problem solving strategies (Jozwiak, J., 2004; Raviv, D., 2004):
 - a. Defining the problem:
 - i. It is important to define the problem, but this step should not take up too much time
 - b. Generate new ideas:
 - i. Practice creativity and curiosity
 - ii. Involve members of the group
 - iii. Provide ample time to generate ideas together
 - c. Evaluate and select solutions
 - i. Prototype solutions
 - ii. Cost-benefit
 - iii. pros/cons
 - iv. Incorporate all relevant factors
 - d. Implement and evaluate
 - i. Test the idea in real time
 - ii. Observe what works and what does not work

- iii. Record observations & data
- e. Repeat any of the steps as necessary until an solution is found - the exact process and order of repeated steps may look different for every problem
6. Add problem solving strategies to executive function masterlist

Reflections:

1. In your small groups, identify some problems you faced in the last few days and discuss how you solved the problems or are working on solving the problem.
2. Reflect on the projects we have been working on some far - provide examples for each step in the problem solving process.
3. https://web.stanford.edu/group/ree/archives/archive07/usa/notes/2004-897_Final.pdf - complete one activity from the stanford problem solving activities

Materials:

1. https://web.stanford.edu/group/ree/archives/archive07/usa/notes/2004-897_Final.pdf - problem solving activities
2. SEL journal
3. Problem currently or previously in related orientation content

Works Cited:

Jozwiak, J. (2004). Teaching problem solving skills to adults. *MPAEA Journal of Adult Education*, 33(1).

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Raviv, D. (2004). *Hands-on activities for innovative Problem Solving*. Stanford University. Retrieved March 11, 2022, from https://web.stanford.edu/group/ree/archives/archive07/usa/notes/2004-897_Final.pdf

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