Developing Metacognition

Objective

To increase your awareness and understanding of your thought processes.

What to Know

Metacognition, a key executive function skill, is the awareness and understanding of your own thought processes, behaviors, and feelings. If you can manage your own thinking and emotions, you can improve learning and performance, see the big picture, self-evaluate, and monitor yourself for successful task completion. This self-awareness can improve time management, goal achievement, planning ability, focus, and more. You can more easily apply what you have learned to the completion of future tasks and solve problems.

Metacognitive thinking, along with self-regulation, helps you choose, monitor, and evaluate how you approach tasks. It helps you measure progress and transfer learning and information to different contexts and tasks, increasing awareness of strengths and challenges.

> For example, imagine Joe is completing an important project for work. If Joe has strong metacognition skills, he will be aware of his progress, acknowledge and cope with distractions, and make different choices to be more efficient with his time. If, upon self-reflection, he notices it is too loud in the coffee shop to work, he will move to a quieter space. He also realizes late evenings are not a good time to work on the project because he is too tired to focus. When his next project is assigned, he will have learned he is more productive during the morning hours and gets better results in a quiet environment.

Metacognitive processes can be applied at any point throughout the execution of tasks. You learn and adjust along the way. You might ask yourself these questions:

1. Before you begin, analyze what is ahead. What is the goal of the task, project, or assignment? Do you have what you need to work on this task? What is the first step? Second step?

2. During the task, pay attention to your progress. How is your plan working? Are you making progress? Do you need to make any adjustments? Where do you need help? Who will you ask for assistance? What do you know about this topic/situation/problem that can help you? Where can you find the information you need?

3. After you finish the task, consider the process as well as your accomplishments. What did you do well? What could you have done differently?

In addition to task completion, metacognitive skills can be applied to social interactions. You can ask yourself open-ended questions to foster self-reflection:

- How am I feeling?
- What's helped me in the past that I could apply to this situation?

- What is the impact of my words, choices, and behaviors on others?
- Where has my attention been drawn to during this conversation?
- What is their non-verbal communication telling me?

Here are some additional tips to develop metacognition.

1. Practice body awareness. Notice your body sensations throughout the process.

2. Keep observations neutral. Remain neutral and avoid using self-evaluation as a path to self-criticism. Instead of asking, "Why am I such a failure?" ask, "How can I do this differently, and what support do I need?"

3. Focus on growth mindset. Reframe self-evaluation from good/bad to working/not working to avoid negativity and boost resilience. Acknowledge problems without giving up or feeling like a failure. Focus on learning, improving efficiency in problem-solving, and identifying the tools and resources you need.

4. Question yourself. Pause throughout a task or project to check your own actions. Ask yourself:

- Is this the best way to carry out this task?
- Did I miss something?
- Did I follow the right procedure?
- How could I do better next time?
- Am I looking at this task the right way?
- How can I do a better job at thinking about what I'm doing?

5. Meditate. Meditation involves clearing your mind, reducing mental chatter, reaching a calm and focused state, and becoming more aware of your inner dialogue.

6. Reflection. Pause to think about a task – reflect, identify ways to improve, try again, return to reflection. Reflective cycles often include the following phases.

- plan the task or project
- attempt the task
- look at how you did the task
- identify what you did well and areas for improvement
- plan the next task, focusing on improving on your weaknesses
- try again…
- reflect again…

Once you become skilled at reflection, you will begin to "reflect in action" while doing tasks so you can adjust as you go.

7. See your strengths and weaknesses. Make a genuine assessment of your strengths and weaknesses by using a SWOT chart:

- Strengths – write down your strengths

- Weaknesses – write down your weaknesses
- Opportunities – identify opportunities to improve your cognitive skills in the future
- Threats – identify potential threats or obstacles that may prevent you from improving

8. Consider your learning style. People learn in different ways, and if you are aware of your learning style, you can utilize your strengths while working on your weaknesses. Common learning styles include:

- Visual – learns best through images, graphics, and graphs; good at identifying patterns and matching complementary colors
- Auditory – learns best through listening rather than watching or reading
- Kinesthetic – learns best through action or movement; learn by doing things rather than reading or listening
- Logical-Mathematical – good at using reasoning to find answers
- Interpersonal – enjoys learning through social interaction; good at group work, have high emotional intelligence, and can compromise to get the job done
- Intrapersonal – enjoys considering ideas in their own heads; happy to learn in silence and isolation and may find working with others to be a distraction

9. Use mnemonic aids. These strategies improve information retention and involve using rhymes, patterns, and associations to remember.

10. Write down your work. Show others how you went about completing a task. If you are an expert on a topic, you may not think about your thinking ("unconscious competence").

11. Think aloud. Thinking aloud makes you really think because you must talk through what your brain is doing. You become more conscious of your cognitive processes as well as help others identify areas where you might be going off-track.

12. Use a graphic organizer. Graphic organizers include mind maps, flow charts, and spider diagrams. They help you consciously improve your thinking processes through:

- organizing your thoughts
- creating connections between things you know
- thinking more deeply
- visualizing processes and procedures

13. Use regulation checklists. This can be task-based or generalized. A task-based regulation checklist, created before a task begins, includes:

- thought processes required to succeed in the task.
- observable outcomes of higher order thinking associated with the task.
- checkpoints during the task where you can pause to reflect on your thinking.

A general regulation checklist includes strategies that that include:

- reminders to pause and reflect-in-practice at regular intervals.

- prompts to remind you to think about what strategies you are using and whether they are appropriate.
- self-questioning prompts to remind you to question your choices.
- charts and questionnaires to help you focus.

14. Use active reading strategies. These strategies ensure you are concentrating while you read to comprehend the information. Examples of active reading strategies include:

- underlining important pieces of information to highlight their importance in your mind.
- placing a ruler under the sentence you are reading to help you focus.
- scanning for the main ideas.
- asking yourself questions to check comprehension.
- summarizing what you just read in one or two sentences to check for comprehension.

15. Use active listening strategies. Active listening strategies help you listen attentively. Focus on:

- turning your body to directly face the speaker.
- making eye contact.
- asking questions.
- nodding when appropriate.
- repeating what was said to you.

16. Plan. Think about how you will complete a task or project. During your planning phase:

- decide what strategies you will use when your task or activity begins.
- consider a range of different thinking skills you might use when approaching a task.
- remind yourself not to make the same mistakes you made last time.
- prepare tools that will help you keep your thinking on track, such as a graphic organizer.

For adults with ADHD, metacognition is an essential skill that can help them manage symptoms and improve their ability to focus, plan, manage time, regulate emotions, and prioritize.

This worksheet is designed to help you develop your metacognitive skills.

What to Do

The first step in developing metacognitive skills is to understand how your ADHD symptoms affect you. Answer the following questions.

What are your most significant or bothersome ADHD symptoms?

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How do your symptoms affect your ability to focus?

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How do your symptoms affect your ability to plan and prioritize tasks?

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How do your symptoms affect your ability to manage your time?

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How do your symptoms affect your ability to regulate your emotions?

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How do your symptoms affect your ability to remember important information?

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The next step is to identify your thinking patterns. This involves becoming aware of the way you think and the habits and strategies you use to manage your symptoms. Answer the following questions.

What strategies do you currently use to manage your ADHD symptoms?

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What are your most common thinking patterns? (e.g., negative self-talk, catastrophizing)

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How do your thinking patterns affect your ability to focus?

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How do your thinking patterns affect your ability to plan and prioritize?

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How do your thinking patterns affect your ability to manage your time?

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How do your thinking patterns affect your ability to regulate your emotions?

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How do your thinking patterns affect your ability to remember important information?

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The final step is to develop skills that will help you manage your symptoms more effectively. Answer the following questions.

What new strategies can you use to manage your symptoms more effectively? Be specific.

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What new thinking patterns can you develop that will help you focus on tasks, plan and prioritize effectively, manage your time more efficiently, regulate your emotions, and remember important information?

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How can you monitor your progress and evaluate the effectiveness of your new strategies and thinking patterns?

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How can you use the feedback from your progress monitoring to adjust and refine your approach?

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How can you develop a growth mindset that will help you stay motivated and persevere through challenges?

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Finally, apply your metacognitive skills to real-life situations. Answer the following questions.

What situations trigger your ADHD symptoms?

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How can you use your metacognitive skills to manage your symptoms in these situations?

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What steps can you take to prepare for challenging situations?

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How can you use your metacognitive skills to reflect on your performance and make improvements?

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What can you do to celebrate your successes and stay motivated to continue developing your metacognitive skills?

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For the next two weeks, practice developing your metacognitive skills. Refer to the above suggestions and tips for ideas. Write down the date, describe the situation (task, project, or problem), and note any challenges or obstacles you face. Describe the metacognition skill or tool you used to cope.

Date	Situation	Challenges	How you coped

Reflections on This Exercise

What are the top three things you can do to continue developing your metacognitive skills?

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Did anything surprise you about this activity? If so, describe.

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How helpful was this exercise? _____
(1 = not very helpful, 5 = moderately helpful, 10 = extremely helpful)

What did you learn from this exercise?

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