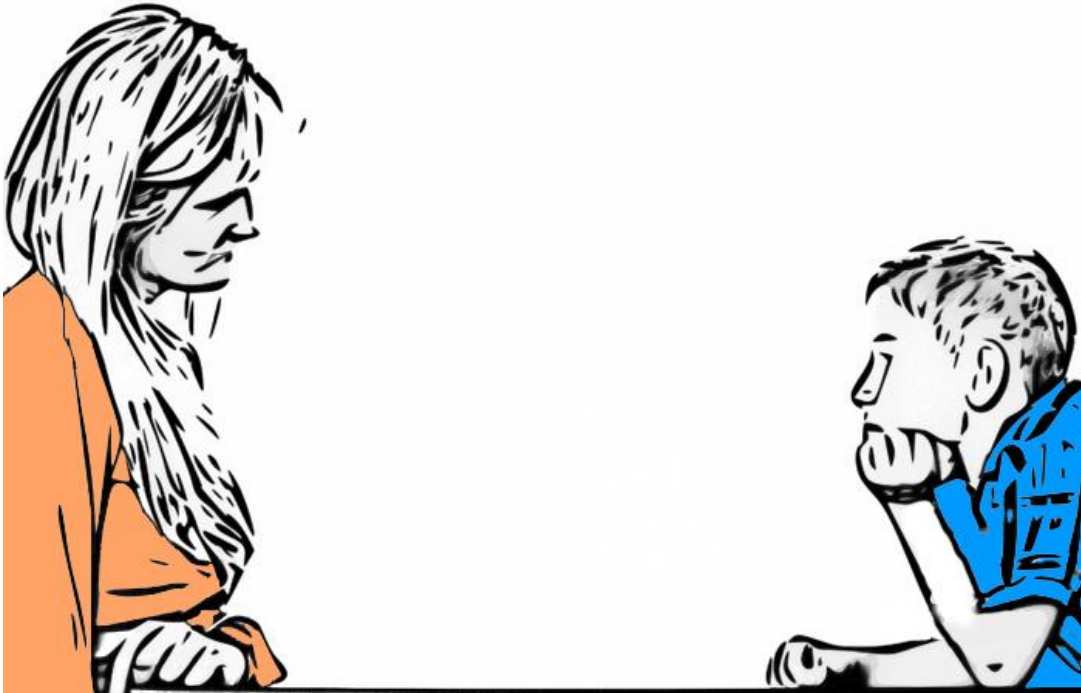


# Metacognition

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*Is your child not using problem-solving strategies?*

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Is your child:

- Getting lost on homework assignments?
- Failing to ask for help?
- Expecting that you do the homework for him?
- Unable to tell you how she will complete a project?
- Responding “I don’t know?” when asked, ‘How will you do this?’
- Getting frustrated and giving up easily?

## **LET’S TALK ABOUT IT**

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Some children struggle to organize their thoughts. They often fail to make a plan of how to solve a problem or to complete a project. When asked, ‘how should we do this,’ your child does not know. Alternately, she may storm off in anger if you ask her, ‘why did you

do it this way?’ Children with these challenges have trouble thinking through how to do things.

Children who are adept at using strategies can tell you how they will solve a problem or complete an assignment. Children with poor skills in this area are easily overwhelmed. They do not know where to begin and what steps they will take to complete tasks. The school day is often filled with frustration and failure. Teachers may comment that your child is ‘unmotivated,’ ‘doesn’t do his work’ or ‘never finishes anything.’

## CLINICAL DESCRIPTION

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Children with problems in this area do not use strategies effectively, make a plan of attack for completing an assignment or think through the steps to solve a problem. Psychologists call this skill *metacognition*.

Put simply, metacognition is *thinking about your thinking*. Metacognition is the understanding and use of problem-solving strategies.

What is happening here is that your child may have poor executive functioning in the area of metacognition. The executive functions are like the central executive of the brain, the part that does the thinking, planning, judging, and organizing.

Children with challenges in metacognition often have trouble keeping track of how they are doing on a task. This skill is often clinically referred to as ‘*self-monitoring*.’ Monitoring is the ability to recognize when you are on track in your efforts. Sequencing skills are also required for metacognition, as children have to know how to put steps and priorities in order. Children with good sequencing and metacognition can say, “First, I will choose my topic, then I will decide what to research, and then I can start writing my research paper.”

A final problem may be with *working memory*. Working memory is the ability to hold information in your mind while performing a mental operation on it. When using strategies, your child will have to be able to remember the second and third steps while performing the first step.

## WHAT TO DO IF YOUR CHILD DOESN'T USE STRATEGIES

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If you suspect your child may have trouble with metacognition, a school psychologist or clinical psychologist can conduct a test of executive functions, such as the BRIEF or the Tower of London-II (see list below). These tests can provide information about your child’s higher order problem-solving skills, including metacognition.

If your child indeed has poor metacognition, it will be important for him or her to learn to use strategies. Children who struggle to plan and organize the sequence of steps needed to solve a problem tend to require explicit teaching in strategy use.

One way to teach strategy use is to model strategies as a parent when you are solving problems. This technique is often referred to as a 'think aloud.' For example, "Okay, I want to bake a cake. First, I will get my recipe out. Then, I will pull out all the ingredients, measuring tools, and mixing bowl. Next, I will pre-heat the oven..." In this way, the child is seeing a problem-solving approach.

Another appropriate intervention is to talk to the teacher about providing your child with visual checklists and graphic organizers. Often, children can begin to develop their sequential processing skills through this type of 'scaffolding'.

Finally, if your child's skills are very low in terms of sequential processing, a consultation with the school may help. A 504 plan or IEP may be necessary. Both the 504 and the IEP can provide accommodations such as 'extra prompting and process time' and 'provide visual checklists and graphic organizers.'

## SIMILAR SYMPTOMS

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*If your child is struggling with a similar problem, not directly addressed in this section, see the list below for links to information about other related symptom areas.*

- [Verbal comprehension](#): challenges with understanding information and knowing about one's own learning processes relates to metacognition
- [Auditory processing](#): challenges processing what is heard will have an impact on the ability to plan and organize and implement strategies for learning
- [Working memory](#): challenges with making a plan and 'thinking about thinking' is associated with issues in working memory
- [Planning](#): challenges with planning and organizing lead to major issues with metacognition
- [Intelligence](#): challenges thinking and reasoning can impact metacognition

## POTENTIAL DISABILITIES

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*Children who have significant problems in this area **may** have any of the following potential disabilities. \*Note, this information does **not** serve as a diagnosis in any way. See the 'Where to Go for Help' section for professionals who can diagnose or provide a referral.*

- [Developmental Coordination Disorder](#): challenges with fine motor skills, likely including poor handwriting, may cause a child to write very slowly; which could be associated with inefficient use of metacognitive strategies
- [Autism Spectrum Disorder](#): deficits in social communication and restricted interests or behaviors. Often, problems with problem-solving, planning, and metacognition are present

- [Dyslexia or Specific Learning Disability in Reading \(Educationally Identified Disabilities\)](#): challenges with reading that have an underlying sequencing problem could be related to poor metacognition
- [Dysgraphia or Specific Learning Disability in Writing \(Educationally Identified Disabilities\)](#): challenges with writing can stem from a sequencing problem that could be related to poor metacognition
- [Dyscalculia or Specific Learning Disability in Math \(Educationally Identified Disabilities\)](#): challenges with mathematics may relate to a sequencing problem that could be related to poor metacognition
- [Depression](#): often, depressed individuals have a slower processing speed, which can impact sequencing and overall cognitive functioning; also, depression lowers motivation, which can impact metacognitive processing
- [Intellectual Disability](#): individuals with low IQ and adaptive skills may have trouble sequencing information and metacognition
- [ADHD](#): children with ADHD often struggle with many executive functions, including attention, and metacognition

## WHERE TO GO FOR HELP

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*If your child is struggling with this symptom to the point that it is getting in the way of his learning, relationships, or happiness, the following professionals could help; they may offer diagnosis, treatment, or both.*

- [CLEAR Child Psychology](#): to obtain a *customized profile* of concerns for your child or to *consult 'live'* with a psychologist
- [Psychologist or Neuropsychologist](#): to consider symptoms in mental health context
- [School Psychologist](#): to test IQ and consider for 504 or IEP
- [Occupational Therapist](#): to assess for visual spatial problems with sequencing



*These professionals may recommend the following tests for this symptom:*

- [KABC-II](#): test that allows examiners to understand a child's thinking and reasoning skills as well as areas of processing
- [WISC-V](#): another test of cognition; thinking and reasoning skills
- [WIAT-III](#): academic test for assessment of learning strengths and weaknesses; a way to confirm learning strengths or identify challenges
- [Beery VMI sequence](#): test of visual motor integration; visual perception; motor coordination; identify learning style and strengths/weaknesses
- [TOVA-II](#): continuous performance test of sustained attention
- [CTMT](#): test of visual planning and speed of processing visual information

## LEARN MORE

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[1] Dawson, Peg & Guare, Richard (2009). *Smart but scattered: The revolutionary “executive skills” approach to helping kids reach their potential.*

Amazon: <http://www.amazon.com/Smart-but-Scattered-Revolutionary-Executive/dp/1593854455/>

[2] Reid, Robert, & Leinemann, Torri Ortiz & Haganan, Jessica L. (2006). *Strategy instruction for students with learning disabilities, second edition.*

Amazon: <https://www.amazon.com/Instruction-Disabilities-Special-Needs-Lienemann-Paperback/dp/B010WI4TBA/>

[3] Siegel, Daniel J. & Bryson, Tina Payne (2012). *The whole brain child: 12 revolutionary strategies to nurture your child’s developing mind.*

Amazon: <https://www.amazon.com/Whole-Brain-Child-Revolutionary-Strategies-Developing/dp/0553386697/>

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Description: ...Mother and son sit at table and argue and discuss solve problem

Image ID# 169125875 (Big Stock)

By: Voy

How to teach your child problem solving skills

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