

Planning and Attention

What Parents and Teachers Can Do

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BILLY ENTERS THE CLASSROOM

with his usual flair and high level of energy. He yells “I’m here!” only to be told by his teacher that he needs to put his belongings away and be seated without disrupting the class. Billy begins to unload his backpack, and then sees his friend reading a new comic book across the room. As his teacher begins to take attendance, she notices that Billy’s backpack is on the floor with crumpled papers spilling out. Billy is out of his seat reading the comic book with his friend. Once the teacher reminds Billy again that he is not following the morning routine he quickly tries to organize his belongings and get to his seat. But a few minutes later, Billy talks out of turn in the middle of the teacher’s morning announcements to inform the class that he has a new puppy.



Problems in AD/HD:

"Strength" corresponds to the strong end of the ability spectrum and "weakness" corresponds to the weak end of the ability spectrum. Individuals can fall at any point between the two. Individuals may be toward the strong end on some abilities and toward the weak end on others.

Even though Billy is enthusiastic about being part of the classroom, he has a difficult time controlling his energy and planning his actions. Why does Billy act this way? Billy has attention-deficit/hyperactivity disorder (AD/HD). Despite how much Billy wants to follow classroom rules, it is difficult for him to do so. But beyond the diagnosis of AD/HD and the description that Billy is impulsive, inattentive and hyperactive, what specific intellectual process does he struggle with leading to this pattern of behavior?

It has been well documented that intellectual processes impact children's achievement, but do they play as powerful a role in shaping children's behavior and adjustment for conditions such as AD/HD? Could Billy's behavior be symptomatic of intellectual strengths and weaknesses? Would an understanding of those strengths and weaknesses help to change Billy's behavior?

To understand the cognitive components of Billy's behavior, it is best to move from a traditional approach of intelligence based upon the concept of general intelligence to a multi-dimensional theory. One such theory is rooted in Alexander Luria's research about how the brain works. Luria hypothesizes that there are four basic intellectual psychological processes—called Planning, Simultaneous, Attention, and Successive—to redefine intelligence and its measurement. These four cognitive processes contribute in a significant way to learning and behavior. This article will focus on two of these processes—Planning and Attention. Readers interested in developing a better understanding of all four processes may wish to read *Helping Children Learn* (Brookes, 2003).

Billy wants to please his teacher. Despite his desire to do well in school he has difficulty turning assignments in on time and completing daily tasks efficiently—even throwing away his trash at lunch. He turns in work late because he struggles to understand what to do when starting assignments. When supervised, Billy can remain on task and do well. However, as soon as his teacher leaves him to work on his own again he becomes confused and typically gets off task. At home, Billy's parents are equally challenged. They struggle to have him finish homework or chores. Though he is eager to please, he is the one of their three children least likely to finish his school and house work, even with constant reminders. His room is a mess, his possessions scattered, and his follow-through often limited—even on tasks he enjoys.

Continuum of Behaviors Associated with Attention Processing

Strength

Can multitask without losing focus on overall objective

Notices minor details about the environment and people

Concentrates well on both easy and hard tasks

Able to focus on one thing at a time

Picks up on changes easily

Works efficiently for long periods of time

Weakness

Unable to resist distractions in the environment

Does not pay attention to details, such as minor facts in the story

Daydreams often

Has a short attention span, even during favorite activities

Seems to forget, when in fact he or she did not notice

Spends a lot of time working but does not get things done

Continuum of Behaviors Associated with Planning Processing

Strength

Able to create an efficient strategy to successfully complete projects

Understands when a chosen method is not working

Knows what to say at the right time to help someone

Looks at ideas with a fresh perspective, and is open to change

Benefits from feedback

Able to control behaviors ranging from thoughts to actions

Weakness

Cannot prioritize what needs to be done in order to achieve a goal

Uses the same method repeatedly, regardless of the outcome

Unable to interpret the behavior of others

Inflexible and resistant to change

Does not know how to handle criticism

Poor impulse control

Children who make good plans find many ways of doing things and are effective at devising strategies. Children who cannot plan well struggle with how to do things. They are often disorganized in their use of strategies and may continue using a similar strategy even when it is ineffective.

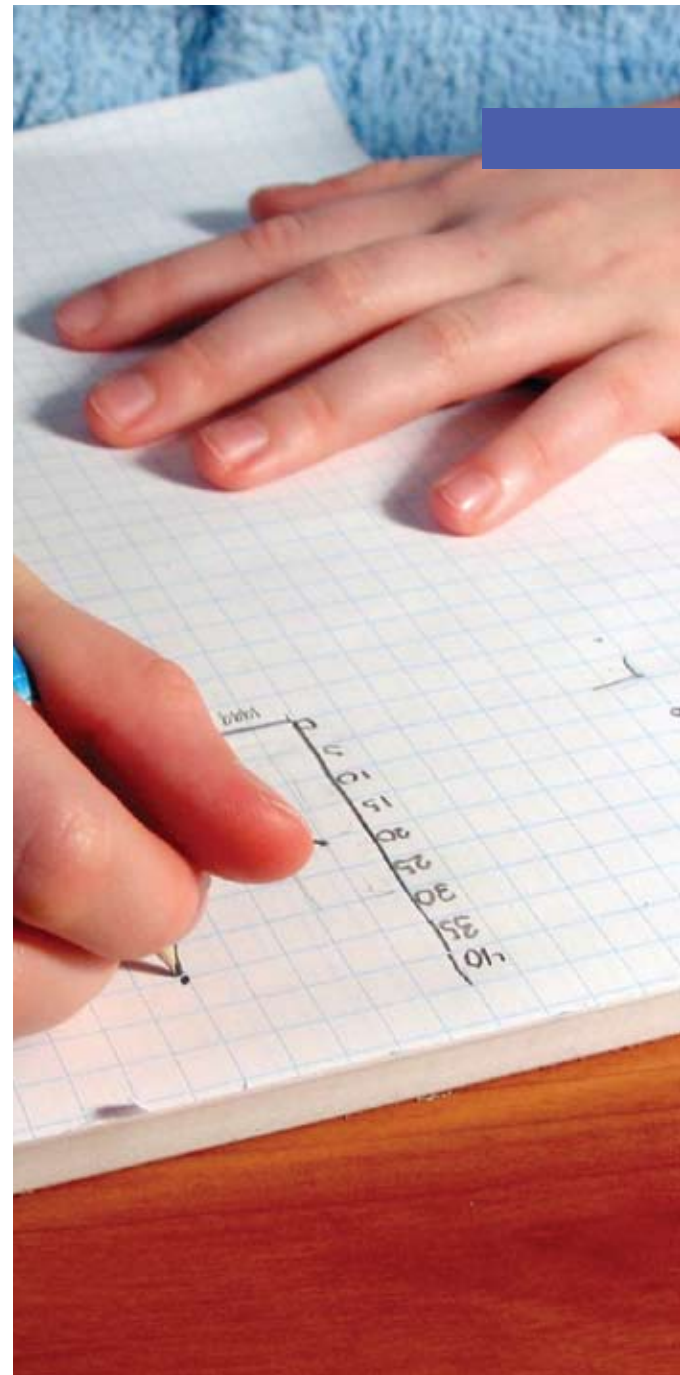
Attention processes

Attention is a way of thinking that allows a child to focus on one thing and ignore others (see the sidebar titled “Behaviors Associated with Attention Processing” on page 23). Resisting distractions in the environment is an important part of attention. In the classroom this process allows a child to selectively focus on things heard or seen, and to resist being distracted by less relevant sights and sounds. Children with strong attention processing can concentrate well and resist distractions. Those with weak attention have trouble focusing on what is important, working on the same task for very long, concentrating on one topic and seeing all of the details. Problems with attention processes are routinely reported for youth with AD/HD.

Even when Billy is engaged in his favorite activity, he can’t stay focused on one thing. He loves art, but he rarely finishes any of his art projects because he does not stay focused. Once, when the class was working on a long-term art project, Billy mistook a classmate’s artwork for his own—even though there were distinct differences in the details, including the other child’s name. These features often go unnoticed by Billy.

Little League baseball is one of Billy’s favorite activities. Yet the only time he actually appears focused is when

he is hitting the ball. If he is on the field he is most likely doing a science experiment—checking the sky, looking at the ground, or talking to someone off the field. Another teammate once told him that he did not want him on the team. Billy’s feelings were hurt.



Planning processes

Planning is a way of thinking that a child uses to evaluate a task, select or develop a way of doing something (a strategy), monitor progress and develop new strategies when necessary (See the sidebar titled “Behaviors Associated with Planning Processing” on page 23). This process provides control of thought as well as the use of other processes, knowledge and skills. When a child is faced with a task that demands that he or she figure out a way to do something, planning is involved. Sometimes the way children are taught can involve planning as well.

Children who make good plans find many ways of doing things and are effective at devising strategies. Children who cannot plan well struggle with how to do things. They are often disorganized in their use of strategies and may continue using a similar strategy even when it is ineffective. Planning deficits have been repeatedly found in children with AD/HD. These deficits often discriminate children with AD/HD from other learning and psychological problems. One researcher who compared regular instruction to planning facilitation for two groups of students with AD/HD found that those who

PLANNING FACILITATION FOR MATH CALCULATION

Adapted from Helping Children Learn: Intervention Handouts for Use in School and at Home, by Jack A. Naglieri, Ph.D., and Eric B. Pickering, Ph.D., (Brookes, 2003), pages 109-110.

Math calculation involves recalling basic math facts, following procedures, working carefully, and checking one's work. Math calculation requires a careful, “planful” approach to follow all the necessary steps.

Planning facilitation helps students develop useful strategies to carefully complete math problems through discussion and shared discovery. It encourages students to think about how they solve problems, rather than just think about whether their answer is correct. This helps them develop careful ways of doing math. Children who score low in planning are likely to improve the most from planning facilitation.

The following is an example of how parents and teachers might provide planning facilitation.

STEP 1: Provide math worksheet for student to complete in 10 minutes.

STEP 2: Discuss how child completed the worksheet and how he/she will go about completing problems in the future. Ask questions that encourage the child to consider whether his/her strategies worked. Planning is facilitated by verbalizing ideas and explaining why some strategies work better than others.

Examples of probing questions include:

- › How did you do the page?
- › What do you notice about how this page was completed?
- › Why did you do it that way? What did you expect to happen?
- › How are you going to complete the page next time so you get more correct answers?

› What seemed to work well for you before, and what will you do next time?

› What are some reasons why people make mistakes on problems like these?

› You say these are hard. Can you think of any ways to make them easier?

› There are many problems here, but not all are completed. Can you figure out a way to do more?

› Do you think you will do anything differently next time?

It is important not to say things like, “Watch me. This is how to do it.” “That’s right. Good, now you’re getting it!” “You made a mistake. Fix it now,” or “Remember to use your favorite strategy.”

STEP 3: Give child another math worksheet to complete in 10 minutes.

SELF-MONITORING FOR PLANNING AND ATTENTION PROBLEMS



Adapted from Helping Children Learn: Intervention Handouts for Use in School and at Home, by Jack A. Naglieri, Ph.D., and Eric B. Pickering, Ph.D., (Brookes, 2003), pages 49-50.

The self-monitoring strategy is helpful for children who need to learn to be more productive in class or while doing homework. Children who are inattentive or who score low in planning processing benefit from such strategies. Self-monitoring academic performance increases the amount of on-task behavior by students who are typically off-task. It helps them focus on what they need to be doing and whether they are doing it. Self-monitoring helps children monitor their **productivity** (how *much* they have completed in a given time) and their **accuracy** (how *correct* they are in a given time).

While following the steps below, parents (or teachers) should model the technique, provide feedback, allow the child to independently record his/her performance, encourage the child to examine his/her performance over time, praise accurate self-reporting, and be patient. Success may not come immediately.

Modify the strategy according to the child's age and ability. The strategy may be modified so that the child is randomly signaled several times during a session to record if he/she is on-task or not (after explicit and positive descriptions of what on-task behavior is).

STEPS OF THE SELF-MONITORING STRATEGY

1. Describe to the child the meaning of academic accuracy and academic productivity.
2. Provide a record sheet (see "My Work Log" chart) on which the child can record the number of items completed with the total number of items given (productivity) and the number of items correct with the total number of items given (accuracy) in the appropriate columns.
3. Explain that self-monitoring is important for on-task behavior and successful learning and demonstrate how to calculate and record the percentages for accuracy and productivity at the end of the session (10- to 30-minute period).
4. Provide a session in which the child works on a task with a specific number of items (spelling list, math problems, question sheets related to a story).
5. At the end of the session, have the child record and calculate progress.
6. Have child keep daily logs, and encourage him/her to compare percentages of previous sessions to recent sessions. The child may graph his/her own progress. (Reinforcements or rewards are optional.)

MY WORK LOG

Date	Number Finished	Total Number	Percentage	Number Correct	Total Number	Percentage



received planning strategy instruction methods consistently outperformed the regular instruction group on classroom math worksheets.

What signs might give insight into a student's planning ability? Look to see how well the student can control his behavior. Students with good planning processing are well-controlled and appear organized and efficient, but those who have planning problems are not. They seem unable to solve problems using any kind of foresight or strategy, and appear rigid and inflexible. Importantly, they don't evaluate the success of their actions or often insist on solving the same problem the same way, even when it doesn't work. Students who are good in planning processing come up with many solutions to one problem, choose wisely about which one to use and change their strategy when the first strategy proves ineffective.

What can parents and teachers do?

Teaching children with AD/HD to be more strategic when they do things is definitely something that every parent should and can easily do. For example, if a parent wants to help a child with AD/HD with academic skills such as math, they might use one of the handouts from *Helping Children Learn*. One dealing with learning math is shown in the sidebar on page 25. This handout illustrates how children can be taught to be more deliberate about how they do what they do.

Remember that telling children what to do is different from teaching children to realize the importance of using a strategy. Children often forget what we tell them to do, but they remember the strategies they figured out for solving problems. Parents should gently ask questions like, "How did you solve that problem?" "Are there other ways of solving the problem?" "What will you do next time?" "Are there other ways of doing this more efficiently?" If the child doesn't have any ideas, then parents can give a solution saying, "One way to do this is to _____. Tell me another way." The goal is to help the child understand the importance of solving problems by thinking through the possible solutions.

It may also be helpful to teach children with AD/HD to monitor their own behavior so that they use strategies more often (see sidebar on page 26). Teaching children about strategies, but helping them learn to develop their own strategies, has proven to be a very successful method for children with learning disabilities and AD/HD. **A**

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MORE INFO: For a list of references and helpful resources, visit www.chadd.org/attention/references.