Memory

With Karen Kruger
May 21, 2013
Karen Kruger, M.S. is the new Director of Education at Hidden Sparks. Previously, she served as Hidden Sparks’ Internal Coach Program (ICP) School based mentor, a regional facilitator and the lead trainer for No Child Left Behind funded workshops. She also mentored middle school teachers and administrator for the NYC Department of Education. Prior to this, Ms Kruger served as a field facilitator and course instructor for ‘Schools Attuned’, teaching courses offered by “All Kinds of Minds”, developing curricula for workshops, and mentoring and supervising teachers in grades K-12. A former adjunct professor at Bank Street College of Education where she received her Master’s degree, Ms. Kruger has taught in elementary and middle schools from Kindergarten through 8th grade.
In this webinar, we will consider the different kinds of memory and how it is possible to have both strengths and weaknesses in this pathway of learning. We will also discuss memory strategies to help our children at home and learn about ways we can support our own memory struggles.
Session Goals:

• Develop an awareness of the three kinds of memory and what it looks like when students struggle in these areas.

• Consider strategies to support weaknesses in memory for our children and for ourselves.
“At no time in life are we required to store and retrieve as much diverse information and skills as we are during our school years.”

- Dr. Mel Levine
3 Types of Memory:

• Short term memory
• Active working memory
• Long term memory
Some Memory considerations

- Memory and attention work very closely together. In order to remember something, you must attend to it. Memory “champions” describe the process as intense focusing, combined with some unusual visualization techniques.

- Memory and anxiety go together. If you are anxious about doing a task that involves memory, anxiety can prevent you from going forward.
Let’s see what your short term memory is like...

• Please put down your pencils/pens.

• I’m going to show you a list of words and I want you to memorize them without writing/typing them.

• After a certain amount of time, I will take the words away and then you can write down all the ones you remember.

• Ready?
• Persistence
• Recoding
• Abbreviated
• Essential
• Libel
• Frock
• Cantilever
Now, write down all you can remember…

When you are finished, I’ll show you the list of words and you count how many you remembered.
• Raise your hand if you got all 7
• Raise your hand if you got 6
• Raise your hand if you got 5
• Raise your hand if you got 4 or fewer…
How did you remember?

If you got all 7 correct, what did you do to remember the words?

Please type in the chat box.
If you recalled 4 or fewer words, what would have helped you remember more? Please type your ideas in the chat box.
Short term memory is...

- Briefly (only for a few seconds) registering new information that is to be used,
- stored, or forgotten.

- What information will get “in”?

- Very quick decision – is this important?
  Is this relevant? What should I store or discard?
Home demands on short term memory:

• Following directions – at home and/or at school

• Paraphrasing the parent’s/teacher’s directions

• Name/word retrieval

• Copying from a rough draft (a thank you note)

• What else?
What it may look like if a student struggles with short term memory

The student…

• only takes down part of the homework assignment
• needs instructions repeated more often
• keeps looking back at the board when asked to copy something
• always looks around to see what his peers are doing
• may look overwhelmed when given assignments and tries to imitate others
• may miss important details in concepts, test questions, directions
Strategies to help children who struggle with short term memory

• For young children – keep directions simple and slowly build up to two-step directions.

• Ask your children to paraphrase what they just heard.

• Make intentional mistakes and reward your child for catching them.

• Repetition and subvocalizing

• Ask your child what will help them to remember – they may have a unique strategy that will work for them.
Strategies for parents...

- If you go into a room and forget why you are there, what can you do?
How do you remember?

• Retrace your steps and the memory will probably pop back in your mind.
• Location can be an important memory trigger.
• Sometimes our senses (taste, touch, hearing, smelling, seeing) will also trigger memories. When we hear a song from our past, we can be transported to another time or when we smell someone baking something, we may be recall a memory that involved that very scent.
• What else helps you remember? How do you remember people’s names?
Let’s see what your active working memory is like...

- I’m going to give you a mental math problem to solve in your head. Please put down your pens/pencils and don’t use your keyboard either.

- Are you ready?
How did you do?

- Were you able to get through the entire problem?
- Where did you stop? What happened?
Active Working Memory (AWM)

- AWM involves mentally suspending information while using or manipulating it.
- The amount of time you have to “hold onto the information” can be seconds, minutes, or hours.
- For the mental math problem, you had to hold in place various parts of the answer long enough to complete the task.
Home/school demands on AWM

- Any kind of writing (you have to remember how to spell, form the letters, grammar rules and what you are writing about).
- Math problems (if I triple this recipe, how many \( \frac{3}{4} \) teaspoons of vanilla will I need?)
- Keeping a concept in your mind, while looking for new information.
What it may look like when a child struggles with AWM

• They can’t summarize what they heard.
• They have trouble remembering what they read in the first chapter when reading the second.
• They may seem to forget the question when searching for the answer.
• They can’t hold on to the grammar, spelling, ideas, syntax and handwriting all at the same time.
• They may lose their place in the middle of a math problem.
• They may prefer printing instead of cursive writing.
• They may seem to know more than their test indicates.
Strategies to help children with AWM challenges

- “Chunking” – reduce the task that is supposed to be completed in one session into a few different tasks and stages
- Acronyms can help students who understand math concepts but can’t remember the order of operations: **DMSB** (Divide, Multiply, Subtract, Bring down). They can also help with recalling what has to be done when you check over your writing: **COPS** (Capitalize, Organization, Punctuation, Spelling)
- Visualization/making mental pictures can help with association (This reminds me of...)
Long term memory

- Long term memory has endless capacity and the greatest duration. We consolidate what we need in long term memory.
- Long term memory is holding information for hours, days, years.
- It is the permanent storage of knowledge, skills, and experiences.
- Long term memory is like a filing cabinet: it’s where we put in the information, identifying it and being able to retrieve it when needed.
- There are 2 parts to long term memory: consolidation (storing information) and access (retrieving information)
There are different ways that we store information into long term memory:

- Paired association – linking and storing two relevant pieces of information (names and faces, sounds and written symbols, history facts and dates, states and capitals etc.)
- Procedural – remembering steps and processes of how to do things (long division, riding a bicycle, tying a shoelace, reducing a fraction).
- Categories – classifying information into meaningful groups (types of literature, animals, music,)
- Rule, Pattern, and schema – recognizing patterns and systems (seeing spelling regularities and irregularities, knowing where to find items in a grocery store, knowing where elevators might be in a building).
Access is the recovery of stored knowledge and skills. Teachers generally expect students to access information very rapidly. Some students can store information into their long term memory, but have trouble retrieving it.

Anxiety can affect the retrieval of information from long term memory. Some children get anxious when they are “put on the spot” to answer a question.

What do you do when you have trouble recalling someone’s name or the title/author of a book or the name of that great restaurant?
Home and school demands on long term memory

- Trying to locate items: Where did you put your homework? Where did you put your shoes? Where did you put your keys/glasses?
- Trying to remember important events: When did the war begin? What was the conclusion of the book? When will the final exam happen and will it be open-book? When is my brother’s anniversary?
- Trying to recall procedures: How do I do long division? How do I write a persuasive essay? How do I reprogram my VCR? How do I get to my cousin’s house?
Strategies to help support long term memory struggles for children and adults

- Use more wait time: both to allow children (and yourself) to absorb information and file it effectively. And to allow your child and yourself to access the information. Often, we are rushing so much, we don’t allow enough time for people to think and respond.
- Ask your child (and yourself) “How will you (I) remember this?” and consider strategies that the child suggests. Perhaps those strategies will work for you as well.
- Use checklists to support active working memory demands.
- Encourage self monitoring strategies such as stopping after each paragraph to test for comprehension. Or use FACT for self monitoring: Focus attention, Ask yourself questions, Connect ideas, Try to picture important ideas.
- What else can you do?
Some final thoughts...

- Some students (and adults) are very efficient with storing information and their memory storage is like a neatly organized closet. These students (and adults) can access the ideas very rapidly.
- Some very bright students have good thinking skills but can’t remember simple things. Others, have learned the information, but can’t retrieve it quickly enough to answer fast paced questions. They may feel stupid, defective and humiliated, even when they are very bright and have higher level skills and ideas.
- In order to learn, you need the right balance between understanding and remembering.
- Ask your children (and yourselves) to tell you how they will remember what they are learning.
Resources

- A Mind at a Time by Dr. Mel Levine
- The Source for Learning and Memory Strategies by Regina Richards
- Learn: Playful Strategies for All Students by Regina Richards
- HSWOW Memory webinars 2008 by Claire Wurtzel
  www.hiddensparks.org (Archives of HSWOW)
- Moonwalking with Einstein by Joshua Foer
- Care ADvantage; Spring 2013, “Training His Brain and Yours!”
Upcoming Hidden Sparks Without Walls Sessions

Please visit our website in the Fall to register for upcoming sessions.

In the meantime you can listen to archived sessions on our website:

http://www.hiddensparks.org/professional-development-programs/hidden-sparks-without-walls/parents-registrations/

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Contact Hidden Sparks:
www.hiddensparks.org
margaret@hiddensparks.org
(212) 767-7707