

Memory & Learning

Written by, Kelly Steinke

READ Learning Educational Services, LLC

The other day I was at the grocery store. I knew I needed something at the deli, but couldn't remember what it was. I forgot my grocery list at home and my husband wasn't answering his phone, so I stood there trying to remember what I needed to buy. As I stood, I noticed there were several kinds of Swiss cheese in the deli case - some with more holes some with less. And Swiss cheese reminded me of memory. This is kind of funny in itself because the whole reason I noticed the Swiss cheese was because of my inability to remember what was on my grocery list. What a coincidence! Just like Swiss cheese has holes in it, many students have holes in their ability to remember information. This can be true for new information that has just been learned and old information that has been rehearsed for years. This inability to retain information is frustrating to both the student and the teacher working with the student. Without memory learning can't occur.

Working memory has been found to be a more powerful indicator than intelligence quotient (IQ) when it comes to learning. Poor working memory can affect reading comprehension, math, standardized test scores, the ability to move information into long-term memory, and just about everything else that is taught to a child. When memory systems are weak, students pay attention but can't hold onto information long enough for it to stick and move into long term memory. This results in unexpected holes. It's often surprising to find out that information students have been practicing for years have not been memorized accurately.

If you are trying to determine if your child has trouble with long-term memory, ask them to perform the following tasks in writing. Remember to take into consideration developmental readiness. A 5 year old should not be expected to complete these tasks to the same degree as a 12 year old. Watch closely as they complete these tasks independently. Don't allow the use of visual aids, give assistance, or offer reminders. Children who have trouble with long-term memory will have many errors when they perform these tasks. This is all information that has been repeated time and time again, year after year throughout the course of a child's education; yet it is information that usually has holes if memory is an issue.

- ✓ Write the alphabet in order using lower case then upper case
- ✓ Write their first, middle and last name
- ✓ Write their phone number and address - including city, state, zip
- ✓ Write the days of the week and months of the year in order

- ✓ Spell high frequency sight words
- ✓ Complete rote math facts quickly and accurately – multiplication, addition, subtraction
- ✓ Write the dates of common holidays – ie Christmas is on December 25th
- ✓ Write their birthday – Month, date, year

If you think your child has difficulty with short term or working memory, you may see some of the following difficulties.

- ✓ Student forgets what they were going to say.
- ✓ Student mixes up material – combines two words or sentences to make completely new words or sentences.
- ✓ Student forgets how to finish an activity after having the steps explained to him/her.
- ✓ Forgets to complete assignments.
- ✓ Forgets what they were doing when they are doing it. (especially multi-step processes)
- ✓ Doesn't remember what a person just said moments before
- ✓ Misplaces things frequently.
- ✓ Doesn't finish activities.
- ✓ Studies for tests/quizzes but can't recall necessary information during test time.

Children with learning disabilities and/or ADD/ADHD often have holes or weaknesses in their memory. When this occurs, memory will need to be supported with consistent review, repetition, multisensory activities, and the use of memory strategies. Use the following memory strategies to help students retain information and achieve more success.

1. Use multisensory activities – visual, auditory, and kinesthetic.
2. Review previous learning at the beginning of your lessons.
3. Attach new learning to preexisting background knowledge or build background knowledge.
4. Use mnemonics.
5. Use graphic organizers.
6. Develop associations - Use visuals as memory triggers to support retention.
7. Repetition and consistency of instruction.
8. Ask students to teach you what they have learned. The ability to teach a concept is the highest level of learning.
9. Practice retrieving information through the use of practice tests/quizzes and study guides.
10. Take written (as opposed to typed) notes while reading and listening.



11. Patience and encouragement – only a certain amount of information can be learned at a time. Don't present too much information at once.
12. Break information into smaller, more manageable parts.
13. Exercise regularly. Exercise reduces stress and anxiety, which in turn promotes retention of information.
14. Get a good night's sleep. Learned information is stored and organized in the brain during sleep.

Weakness in memory has nothing to do with intelligence, but everything to do with brain wiring. Some days there will seem to be fewer holes in memory, while other days there seems to be more holes in memory. Part of this has to do with how the brain processes, organizes and retrieves information. But other variables can play into memory, too. Anxiety, emotional/physical health, and the presence of learning disabilities will also affect memory.

About Kelly

Kelly Steinke, M.A. Ed., NBCT is the founder of READ Learning Educational Services, LLC. Kelly taught special education, primarily to students with learning disabilities, for over 15 years in the Midwest, East Coast, and Pacific Northwest. During this time she became a National Board Certified Teacher (NBCT) in Exceptional Needs, earned a Master of Arts Degree in Education (Administration and Leadership), and founded her company, READ Learning Educational Services, LLC. For the past six years, Kelly has served the community as a dyslexia specialist. Kelly is also the creator of Silver Moon Spelling Rules™ instructional materials.

Web: www.readlearningservices.com

Phone: 262-226-9284

Email: Ksteinke@readlearningservices.com