In Praise of Memorization: 10 Proven Brain Benefits Posted on Monday July 23, 2012 by Staff Writers

Memory learning catches a lot of flack these days. Informed educators are often quick to write off rote memorization as an unnecessary and even harmful exercise, instead preferring to teach creativity and problem solving. While we agree that creative, analytical lessons are a great way to learn, it's worth pointing out that memorization can still play an important role in learning, no matter your age. Read on to find 10 great benefits of memorization in school and beyond.

1. Memorization trains your brain to remember:



Although memorizing lines of poetry may not feel particularly essential, it's an important task for training your brain to remember things. This type of memorization task exercises your brain, giving it strength to retain more information. Memorizing passages or poetry over time (rather than cramming) is a very effective way to make your brain more receptive to remembering.

2. Memorization challenges your brain:



Just like when you work out at a gym, consistent and challenging exercise is the key to staying brain fit. Challenges like memorization are a very useful way to work out your brain for better mental health.

3. Rote learning improves neural plasticity:



Irish researchers found that through extended exercises in rote learning, learners can actually recall more information overall. Rote learning benefits the hippocampal foundation, a key structure in the brain for episodic and spatial memory in humans. In their group of participants aged 55-70, these researches noted that repeated activation of memory structures promotes neuronal plasticity in the aging brain.

4. Nursery rhymes teach rhythmic patterns:



Repeating the same nursery rhymes over and over again to young children offers memorization by repetition, a very important memory tool for kids. As parents recite familiar rhymes, children learn rhythmic patterns, teaching them balance and symmetry.

5. Memorization offers a mental gymnastics exercise:



Those who obsess over sports statistics should be encouraged: neurobiologists believe that "mental gymnastics", like remembering facts from sports history, can make your brain more quick and agile. Although researchers have yet to find a direct link, they do believe that there's a plausible connection between sports score obsessions and a more flexible mind. Plus, as UCLA neuroscientist Arthur Toga points out, an exercise like reading sports scores "gets a lot more circuits involved" than, say, watching sports on TV.

6. Knowing frees up brain power:



Students who "just know" equations, functions, definitions, and other memorized facts can save brain power; brain power that can be used for other things. If foundational concepts and information are grasped, students can move on to bigger and better things, rather than spending time looking up words or doing simple math in a calculator.

7. Memory exercises help students practice focus:



As an adult, it may be hard to remember what you ate for dinner last night, but you just might remember the Gettysburg Address you had to recite in grade school. Why is that? The answer is focus. As students spend time memorizing passages, tables, anything at all, they learn to find focus. Educators have found that students who were required to memorize from an early age often go on to have more capacity to focus on educational tasks as high school and college students.

8. Memory skills are essential to learning new concepts:



Weber State University student researcher Paula Fiet has delved into a working memory research project, discovering that underdeveloped short-term memory may be to blame for some students' problems with mastering concepts in math and reading. Fiet explains, "you need working memory to learn," or to hold enough information in your mind to comprehend what you're learning. Fiet's research has shown that "children with poor working memories don't get enough information in their minds at one time to make sense of what is coming in."

Students who complete exercises aimed at building short-term memory have seen improvement in their working memory and capacity to learn.

9. Working memory is important for creativity:



Just as a strong working memory is good for learning, working memory is important for creativity as well. Dutch researchers have found that semiprofessional cellists were able to perform more creatively with a higher working memory capacity. But under cognitive load, participants performed worse on a creative insight task. Students who learn to focus and develop their working memory through memorization tasks can free their mind to become more creative.

10. Memory training can stave off cognitive decline:



Memory-forming can become a healthy lifelong habit. Researchers from the National Institute on Health and Aging have found that adults who went through short bursts of memory training were better able to maintain higher cognitive functioning and everyday skills, even five years after going through the training. Practicing memorization allowed the elderly adults to delay typical cognitive decline by seven to 14 years. Students who start practicing memory training now can stay sharp in years to come.