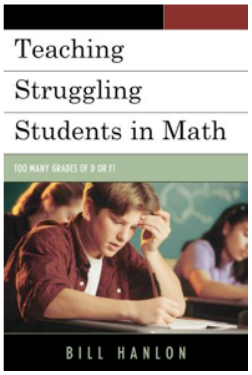
Hanlonmath Newsletter

A newsletter for math teachers and administrators
who work with struggling students

What works is work, working hard and working smart



Student Suggestions to Increase Achievement

With the new semester beginning, it might be worthwhile to review and reinforce strategies that result in increased student achievement. First and foremost, make no mistake, there are no shortcuts - *what works is work!*

Second, while many outside consultants make a lot of money selling repackaged programs and ideas that promise to increase student achievement, it all boils down to work. Whether teachers are using the latest technology or teaching math with a stick in the dirt – students have to study and practice.

One of the most effective ways to study is still through self-quizzing. Very much like was done in first grade when preparing for a spelling test. The students are expected to go home and study with a focus on learning how to spell their words, they say them multiple times, they often write them three to five times, then they ask a parent or guardian to quiz them on those words. The words they hesitate on or still don't know, they go back and study and write again, and then quizzed again.

As students progress through school, more is expected of them as they mature. But working hard and self-quizzing are still the foundation on which student achievement is built.

Here are some other suggestions students might want to incorporate so they can learn more effectively and efficiently.

Student Suggestions

1. To understand math, you must acquire the language - vocabulary and notation. If you are experiencing difficulty with a concept, go back to the definition. Knowing and understanding the definition will often help in explaining the "why" behind the mathematics.

2. Take good notes in class. Notes should include definitions, conceptual/pattern development, connections, and guided practice examples done in class.

3. At home, recopy notes taken in class, highlighting key ideas. Rework example problems from the notes on a separate sheet of paper, then check your answers with the problems completed in the notebook.

4. As you do homework exercises that were taught using a procedure or formula, write the procedure or formula as you do each problem to embed it in short-term memory.

5. After completing the homework assignment, review the concepts, procedures, definitions and formulas. Spend time understanding and memorizing information. Memorization helps in absorbing and retaining factual information over time upon which understanding and critical thought is based. Knowing and using mathematical vocabulary and notation is key to understanding mathematics.

6. Self-quizzing is a very effective way to study. Make flash cards for key vocabulary words, formulas and procedures. Hesitation or not knowing an answer suggests more time needs to be spent memorizing.

7. Always come to class if at all possible! There is no way to fully makeup for missed instruction – development and nuances.

8. Do not waste time in class – pay attention! Most learning will occur during class time.

9. Prepare for tests! Test questions are often made up from homework, class notes, and review materials. Complete the unit chapter review, practice test or study guide provided in the book or by the teacher.

10. Form a study group to discuss items that would be tested. Individuals who help others learn, often gain a better understanding themselves. Caveat – Any member who does not prepare for the group study should be excluded from the group.

11. Use outside sources, like the internet, for additional information or problems.

12. There is no excuse for not knowing a definition, procedure or formula for a test. If you know how to do a problem, get it right!!!

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He was the coordinator of Clark County School District's Math/Science Institute and was also responsible for K-12 math audits. He served as vice president of the Nevada State Board of Education, Regional Director of the National Association of State Boards of Education (NASBE) and as a member of the National Council for Accreditation of Teacher Education (NCATE) States Partnership Board. He also hosted a television series, "Algebra, *you can do it!"* on PBS Las Vegas.