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Article Name: The effects of multiple intelligence teaching strategy on the academic achievement of eighth grade math students

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Type of research: Applied quantitative study

Synopsis of research: Pedagogy experts have identified multiple intelligences (MI) and direct instruction (DI) as two teaching methods that improve learning performance. A literature review of both methods in this article explains that MI focuses on teaching students based on individual abilities and information processing tendencies, while DI relies on highly interactive, teacher-directed learning. Authors of this study set out to answer the following question: Would using MI method produce higher test scores than the DI method when applied to teaching eighth grade mathematics?

Fifty-seven students from two eighth-grade math classes at one North Carolina public school served as the sample for this study. They were broken into two groups: an experimental group of 28 and a control group of 29, both of which were almost evenly split in terms of gender. Both groups were also ethnically diverse, comprised of a mix of students who were Anglo, African American, Hispanic, and American Indian.

The study began with a pre-test of both groups to gauge mastery of state-mandated standards for eighth-grade mathematics. Then for a semester, the instructor provided both groups with the same material, textbook, objectives, and assignments. The only difference was the teaching method. With the DI group, the instructor focused on drill and practice, teacher-directed lecture,

note taking, and practice problems related to the common text. With the MI group, the instructor engaged students in activities related to the material, including creation of a board game and rhymes to help remember math concepts and illustrate understanding, class presentations, and student feedback on what they wanted to learn. During the study, assessment for both groups took the form of collected observational data, student answers to surveys, and student-generated journal entries. At the conclusion of the semester, the instructor administered a post-test to both groups to gauge material mastery and learning success.

The analyzed results of the pre-test and post-test scores of both groups revealed that at the end of the semester, students taught using MI methods had significantly higher mean scores than those taught using DI. Besides improved academic performance, analysts also noted behavior improvement in the MI group. As such, the study's authors concluded that MI is a better method for teaching eighth grade math. They recommend using MI method because its focus on innovative lessons that address the diverse learning needs should produce higher test scores and enhance student well being.

Key points for educators and why they are important: This research is significant for at least two reasons. First of all, high-stakes standardized testing is reality in America's schools. Teachers must identify and use the most effective instructional strategies and methods to raise students' test scores because their jobs and the schools' funding rely on good results. If research has identified MI as a more successful method for teaching eighth-grade math, teachers should consider experimenting with it in their classrooms.

Secondly, I believe a teacher's ultimate goal is to help each student be the best he or she can be. As such, a teacher must recognize individual student strengths, weaknesses, learning tendencies, and proclivities. Automated teaching methods that do not take into account the needs

of individual students seem like a throwback to earlier generations, when diversity was squashed in an attempt to achieve a homogenized norm. I believe teachers must recognize, celebrate, and preserve humanity's diversity to allow each individual to contribute meaningfully to society. MI, which is built upon the recognition of individuality, could help an instructor successfully meet the needs of diverse learners and reach the ultimate goal of student self-actualization.

Personal applications: Considering my interest in teaching financial literacy, I found this article inspiring. I hypothesize that financial literacy is best taught using real-life examples and finding ways to help each individual apply lessons to their own financial life. I believe the key is transferring the knowledge to young adults shortly before they are faced with such major financial decisions as choosing a first credit card or buying a first car. This research suggests that using MI methods could be effective in teaching this subject matter.

While much of eighth grade math curriculum revolves around the more complex and abstract concepts of algebra, probability, measurement and data analysis, it seems critical that practical money management should also be included in the curriculum for young teens. Eighth grade students are at the very beginning of their active money management years. With limited cash on hand, plenty of temptation to spend rather than save, and part-time jobs looming in the near distance, this age is the perfect time to instill basic financial literacy skills, including the mathematical mechanics of how to spend and save money as well as practice in how to make smart financial decisions that don't lead to negative long-term consequences.

My theory is that practical application of financial literacy could help future consumers prevent some degree of the financial ruin our society has watched unfold in the last two years. Using MI methods that allow individuals to connect with the material based on their own talents and in innovative ways such as games could be the key to making the instruction take hold.

Since I am not a teacher in a traditional classroom, I do not face the challenge of assessment based on standardized tests, which allows me a high degree of flexibility in determining how I teach financial literacy through the educational publishing channels I manage. However, I lack face-to-face contact, which puts me at a deep disadvantage on gauging learning success. I hope that as I gain greater exposure to teaching methods and educational philosophy I will be able to blend that knowledge with emerging technology opportunities and my media expertise to deliver instruction in new and exciting ways that prove to be as successful as classroom methods.