

Multiple Minds

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Abstract

Teachers today are faced with complex issues and demanding expectations from local, state, and federal agencies. This places stress on them that can be overwhelming to some. The psychological and educational communities have examined the intelligence of students in ways that can help these teachers satisfy the expectations for students today as they work on improvements for the future. This article looks at how researchers such as Howard Gardner, K. Nunley, and others help educators develop better practices for the students of today.

Multiple Minds

Quality educators are constantly examining the responses from their students for clues to what they have learned, what they are having trouble with, and how they learn best. These educators try to understand how their students learn so they may improve their instruction. They wish for their students to achieve the most possible with the resources that they have. Most importantly, they wish to find solutions to solve the problems of the individual students in their classrooms. Psychological and educational researchers are exploring the same issues to help develop knowledge and techniques that will improve student learning.

Demands of Education Today

Every student is different, and the more the teacher knows about the student, the better able they are to construct a lesson that will allow the student to learn with ease and to retain the information for a long time. However, the teacher is not always successful. When a student is not successful on a regular basis, they may fail a course, a grade, or even to graduate.

In Texas, most students are required to attend school through their eighteenth birthday, and the general expectation is that they will achieve a high school diploma. The Texas Education Code (2003) stated, “Unless specifically exempted by Section 25.086, a child who is at least six years of age, or who is younger than six years of age and has previously been enrolled in first grade, and who has not yet reached the child’s 18th birthday shall attend school.” The Texas Education Code (2003) documents possible ramifications for not meeting attendance and completion expectations as ranging from a school rating of “unacceptable” to the placement of a monitor in the district.

These actions demonstrate the desire for students to navigate the K-12 school years successfully. Therefore, teachers need to find ways to meet the needs of students in mastering the curriculum laid out by the state's education organization for the awarding of a diploma. In Texas, this curriculum consists of K-12 education in math, science, social studies, and language arts in every grade, first through twelfth, plus various electives.

Teachers in the United States have help with this task in the form of special programs designed to improve student success including, but not limited to, Special Education, Section 504, Gifted and Talented, and Advanced Placement (AP). Even with these supports, many teachers feel overwhelmed with their responsibilities (DiBara, 2007). Valli and Buese (2007) point to the dictates of standardized high-stakes testing as the reason for this feeling of being overwhelmed.

Taken together, the testing, attendance requirements, and expectations for a diploma leave the teacher with a strong need to learn the students' strengths and weaknesses so they can bring the student to a level where they can succeed. One way to do this is through assessments of the students' intellectual abilities, specifically the abilities needed to succeed in school. Sattler (2001) puts it this way, "assessment is a way of gaining some understanding of the child in order to make informed decisions" (p. 3). The greater this understanding the more tools available for the teacher.

Intelligence

The definition of intelligence is rather elusive and has changed over the years reflecting the viewpoint of various researchers, educators, psychologists, and other interested parties. However, the understanding of intelligence in the modern era of psychometrics was one based on

predetermined genetic influences that created a mind the behaviorists thought they could do almost anything with if the proper instructional techniques were used (Gardner, 1983/2004a, p. xxxiii).

These genetic influences would provide the constraints for the future development of the mental capacities of the student. Today, there are researchers that dispute this solidity and predetermination of intelligence. Nunley (2003) notes, "IQ, or intelligence is certainly not a stable thing. It is very fluid and can change significantly over the course of your life, particularly during childhood" (p. 129). Others also believe that a solitary intelligence does not exist in humans, and that there must be more involved. As early as the 1960s, researchers were questioning the single intelligence model. Horn and Cattell (1966) argued for the existence of two types of intelligence; fluid, which includes genetically developed factors and factors from injuries to the central nervous system or the sensory systems, and crystallized, which results from education and experience.

Today, the view of crystallized and fluid intelligence has expanded to John B. Carroll's eight Gs model that uses three levels of abilities: narrow, such as reading comprehension, visualization, and reaction time; broad, such as fluid and crystallized intelligences, general memory and processing speed; and general, which is a general factor (Sattler, 2001, pp. 142-143). This theory is in use today for a number of purposes, including identification of specific learning disabilities, through the application of the Woodcock-Johnson® III NU Tests of Cognitive Abilities to student evaluation (Riverside Publishing, 2010).

Multiple Intelligences

In 1983, Howard Gardner theorized the existence of several separate intelligences that exist in people (Gardner, 2004a). The idea of multiple intelligences was not new; however, Garner (2004a), using psychology and neurobiology, described specific criteria for the existence of separate intelligences including potential isolation by brain damage, evidence of savants in that area, core operations, and more. These criteria led to seven intelligences - Linguistic, Logical-mathematical, Spatial, Musical, Bodily-kinesthetic, Interpersonal, and Intrapersonal - that he carried into his work with educating children (Gardner, 1995/2004b).

This approach has a number of positive attributes for teaching. As Gardner (2004a) notes, “seven kinds of intelligence would allow several ways to teach, rather than one” (p. xxxiii). Does this information end up helping the teacher? Research from Douglas, Burton, and Reese-Durham (2008) produced results indicating improvements to learning when students in math were instructed using Multiple Intelligence (MI) methods. Other researchers found gains in additional areas, including for learning disabled students in reading. Abdulkader, Gundogdu, and Eissa (2009) stated, “students with learning disabilities may have special abilities that do not emerge in the traditional educational system. By using Gardner's intelligences in the classroom, students will be able to display their strengths and interests” (p. 688).

Designing and sustaining effective MI classrooms may be more related to the overall atmosphere and management of the schools and teachers in which they are located (Cheng & Mok, 2008). The MI classroom is not a traditional direct teach room. The classroom will try to invoke all of the intelligences as often as possible making for a dynamic and complex environment. Cheng and Mok (2008) found that the effective MI schools had staff involved in

decision making and believing in the school mission; however, these schools also configured their curriculum and resources to create learner-centered classrooms based on students' needs.

Emotional Intelligence

Gardner's work greatly increased the number of people considering the idea of more than one intelligence, including Daniel Goleman. Goleman (1995/2006) moved MI in a different direction when he noted, "there is one dimension of personal intelligence that is broadly pointed to, but little explored, in Gardner's elaborations: the role of emotions" (p. 40).

Emotional Intelligence (EI) is described by Mayer, DiPaolo, and Salovey (1990) as, "the accurate appraisal and expression of emotions in oneself and others and the regulation of emotion in a way that enhances living" (p. 772). This expanded view on intelligence opened the conversation on how best to teach students and to operate in business.

Education programs designed to train students to improve their EI scores and ability, referred to as EQ, were developed. One design, social emotional learning (SEL), currently in schools, already has had its effectiveness reviewed. The research led Goleman to state, in Lantieri (2008), "the data shows impressive improvements among the SEL students in their behavior in and out of the classroom ... their grades improved, and their scores on academic achievement tests were a hefty fourteen percentile points higher than similar students who were not given such social and emotional learning programs" (p. 3). EI brings the opportunity for solidifying the gains in academic learning with gains in emotional understanding and control.

Momeni (2009), found that the level of a manager's EI is directly related to their credibility as perceived by their staff; thus, making possible a better and more productive citizen while completing the complex requirements of the educational system.

Conclusion

The demands of education today stress some teachers in ways not experienced in the past. High-stakes testing, attendance issues, and pressure to graduate students can leave teachers feeling overwhelmed, yet the advances in psychology and instructional methods have kept pace. There are resources and successful programs today that can provide teachers with the tools needed to achieve the goals set by local, state, and federal agencies. Using practices built on MI theory and EI theory, teachers can revitalize their classrooms and allow students the opportunity to engage in learning in a meaningful way.

The work does not end here. MI and EI research continues and Gardner (2008) in his latest book on the human mind notes, “I concern myself here with the kinds of minds that people will need if they – if we – are to thrive in the world during the eras to come” (p. 1). This continual examination of what works to develop the intellect brings together many people, and this provides the scholarly educator with insights from multiple minds that they can use to solve the problems of the individual students in their classrooms.

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