Nurturing and Teaching With the Multiple Intelligences

have been awed by the talent that some children demonstrate outside of the classroom. They operate lemonade stands, create fancy needlework, take apart and fix computers and cars, draw cartoons, and do a variety of other creative things. However, many feel frustrated in the typical school. Although they possess many gifts, yet only the child judged to be "gifted" gets to do creative activities in the classroom. So I continually ask myself, "What can I do to nurture that spark of creativity in every child?" Howard Gardner's Multiple Intelligences Theory has helped me find some answers. This article describes in part my journey to tap into the creative resources of every child.

When I use learning strategies that incorporate Gardner's Multiple Intelligences (see sidebar), I've seen my students light up in class. They discover that they are smart in many ways, in spite of being classified otherwise by teachers, report cards, and standardized tests. To help them explore their talents, I ask my students, "How are you smart?" not "How smart are you?" The Multiple Intelligences approach helps them recognize the gifts God has given them, making school less threatening and even fun.

The MI approach also encourages active learning, keep-

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ing pupils in the upper grades as involved as those in kindergarten by giving them opportunities to work in many of their intelligences. As students reach the upper grades, they often fail to have active learning opportunities, as contrasted with kindergarten, where they continually have chances to work in many of their intelligences.

An important part of teaching students via the multiple intelligences is helping them discover who and where they are as individuals. Each school year, I begin with an in-depth discussion of the Multiple Intelligences The-

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ory, after which every student takes a self-evaluation inventory. (See Figure 1.) Using this inventory, they graph their intelligences. My students typically rate themselves in the "genius" areas on the intelligences in which they feel strongest. However, the inventory helps them to see that they possess all of the intelligences, so we can focus on using and strengthening each area during the school year. This process affirms the individuality of each student as unique and valuable in the sight of classmates and God.

To teach successfully using the multiple intelligences, it is important to keep the parents informed about the teacher's approach to the instructional process. For many of them, the multiple intelligences approach to learning is completely new. So on parent night at the beginning of each school year, I carefully explain my teaching techniques and give each parent a handbook that tells how the multiple intelligences are used in my classroom. Parents are asked to set goals with their child in each of the intelligences. The response has been overwhelmingly positive!

In planning curriculum and instruction for my self-contained fifth-grade classroom, I try to include as many intelligences as possible so that every

> child finds the activities stimulating and interesting, and above all, great learning expe

riences. The following scenarios show some ways I use the Multiple Intelligences theory.

Math—Crickets

A recent math class began with reading (linguistic) a picture book (visual/ spatial) entitled The Very Quiet Cricket.1 The end of the book actually contains a recording of a cricket chirping (musical). After reading the book, we discussed cricket chirps in our houses (linguistic and interpersonal), how crickets annoy us (intrapersonal), and how hard it is to find a chirping cricket (bodily/ kinesthetic). We then discussed how temperature changes the rate of chirps. We developed a formula to calculate how cold a house would need to be to rid it of crickets (logical/mathematical). Students thoroughly enjoyed this activity. Each had an opportunity to learn mathematics (and science) through his or her best intelligences.

Bible—Sabbath

After reviewing the events of Creation week (logical/mathematical), I read (linguistic) a picture book (visual/ spatial) titled I'm in Charge of Celebrations.2 First we talked about family Sabbath traditions (interpersonal). I shared my family's Friday night traditions of oil lamps and potato soup by lamplight, followed by singing, playing instruments, playing games, and telling stories. Then the students shared personal experiences (intrapersonal). Lastly, we talked about the Sabbath as a celebration every week and ate (bodily/kinesthetic) a special Sabbath birthday cake complete with candles and "Happy Birthday, Sabbath" written on it (visual/spatial). I lit an oil lamp while we sang a Sabbath birthday song (musical). Several students reacted positively to the lesson, which encompassed many different intelligences.

Social Studies—Immigration

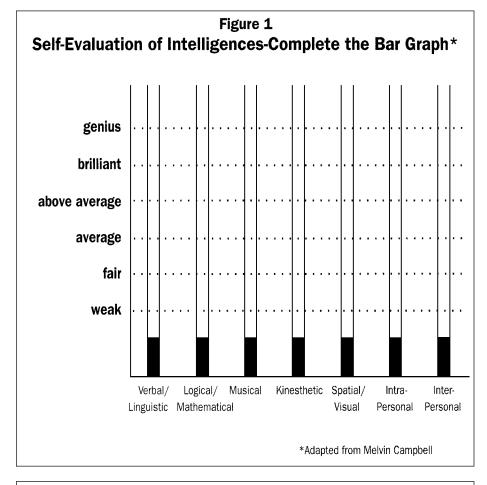
In social studies class, we had a unit on immigration and multiculturalism. Our discussion (linguistic) began with the United States and its melting pot heritage, and concentrated on New Orleans and the cultures that have merged Picture Removed

there. Since jazz originated in the U.S.A., we played some jazz music (musical). I read (linguistic) a picture book (spatial/visual) to the students called *How My Parents Learned to Eat*,³ then we made gumbo and ate it with chopsticks (kinesthetic). The students followed step-by-step directions that included both words and pictures (logical/mathematical) to manage this task. Then they wrote entries in their journals (linguistic and intrapersonal) about their experiences. For homework, they wrote directions for eating with a fork (logical/mathematical), using both

words and pictures (visual/spatial), patterned after their chopsticks lesson. Again, this activity included most of the multiple intelligences.

Social Studies—Revolutionary War

The Revolutionary War unit included the reading of a picture book called Yankee Doodle.⁴ The students sang the original version of "Yankee Doodle" and discussed the history behind the song. We then separated into groups to complete the following activities: Each group picked a major event from the Revolutionary War, wrote a summary,



Multiple Intelligences*

Verbal/linguistic-word smart

The capacity to use words effectively—writing, speaking, persuading, remembering information, and explaining.

Logical/mathematical—logic smart

The ability to use numbers effectively-reasoning, recognizing and solving problems, using logical patterns to categorize, infer, make generalizations, and test hypotheses.

Musical—music smart

The capacity to perceive, express, transform, or discern musical forms.

Kinesthetic—body smart

Expertise in using one's body to express ideas and feelings, often goaloriented, as in the fine motor ability of a sculptor or the flexibility and grace of a dancer.

Spatial/visual—picture smart

The capacity to perceive the visual world accurately, to transform and recreate visual perceptions.

Intrapersonal—self-smart

The capacity for self-knowledge—to detect and discern among one's own feelings—and the ability to use that knowledge for personal understanding.

Interpersonal—people smart

The ability to notice and make distinctions among other individuals, being attuned to their moods, temperaments, and intentions.

*Taken in part from Thomas Armstrong, Multiple Intelligences in the Classroom (Alexandria, Va.: Association for Supervision and Curriculum Development, 1994).

then illustrated and prepared an entry for a class book. Each group also wrote a verse to "Yankee Doodle" about their event, and practiced so they could sing it to the class. We then came back together, presented our "Yankee Doodle" verses, and put our class book in chronological order. Again, all the intelligences were used to teach this unit.

Science—Molecules and Matter

At the beginning of each school year, my fifth-grade science class studies Building Blocks of Matter. Students begin with an engaging project called Drops on a Penny. After hypothesizing the number of drops that will fit, each student places as many drops on the penny as possible.

I introduce the scientific method with an experiment. To learn the concepts of direct and indirect evidence, which students will be using all year, we discuss and handle fossils, fingerprints, and footprints. By going through each step of the scientific method, students gain an understanding of one way to process science. They evaluate their work and that of their peers. This forms the structure for the entire year.

Journaling in Science

During each science experiment, the students have an opportunity to write in journals. We use a given format that asks what they want to find out, their best guess, the steps they took, what they learned, how they felt, and how it relates to their lives. They then draw and color a pictorial explanation of their experiment, and give it a title. This gives them a summary of their activities. After they assess the journal with their peers, I give it a grade.

The Academically Challenged Student

The academically challenged student has many opportunities to excel in his or her strong intelligences using the MI approach. Typically, such pupils are not recognized for their gifts and therefore have been made to feel that their school work is unacceptable. Learning through the multiple intelligences gives them the self-confidence they need and helps them to strengthen their weaker intelligences. Students get excited about

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The author's fifth-grade students, with their parents, gather around her for rest time during an overnight orienteering trip in the San Bernardino Mountains in Southern California. This experience allowed each student to learn map and computer skills using all their intelligences.

learning when they use all their intelligences, especially their strongest ones.

Conclusion

In summary, I have found a way to make education meaningful for both my students and myself. I still have many challenges in meeting all the needs of my students, but each day is an exciting adventure.

Traditional methods of learning can be mixed with new educational approaches and the merger can be wonderfully successful. I would recommend that every teacher try MI instructional strategies. Your teaching will be revitalized, and your students will love to come to school.

A special thanks to my colleagues at Loma Linda Elementary School, Susan Whitley, Judy Reinschmidt, and David Banta, for ideas and encouragement.

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Theory. Ms. Burton has made presentations about the use of multiple intelligences in the classroom at both local and national meetings of the National Science Teachers Association. Recently she authored an article "Learning in Their Own Style" (Science and Children, April 1994), which described the teaching of science using the Multiple Intelligences.

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