

# Multiple Intelligences: Teaching for the Future

BY DENISE MICHAELIS

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**N**ot long ago, I visited the first-grade classroom of an Adventist school as an “inclusion consultant.” Eight of the 23 students in the class were judged to have some type of learning disability—three of them had been diagnosed by the public schools and already had Individualized Educational Programs (IEPs) prepared. The teacher had been trained to use the concept of multiple intelligences (MI) to operate an “inclusive” classroom, where *all* students receive an education that is special, including those with disabilities.

The teacher used the language-arts period to begin full implementation of MI. She set up seven stations in the room and created a chart for the children to use in determining where they were to go for part of every day. Usually, the children would move from one station to the next during the class period. It wasn't long before she created data-keeping devices for the students to use in evaluating their progress. The teacher used this data to assess the learning process of every student at each station. The teacher set up daily, weekly, and monthly goals for the students, and then created the curriculum that would teach that goal in all seven intelligences. For further information about this classroom from the teacher's perspective, see the sidebar on page 25.

This classroom celebrated diversity and capitalized on the unique strengths of each child. As I observed, it became clear that the students were motivated for their own reasons and that learning is an individual experience. It occurred to me that I was observing a classroom of the future.

## **Classrooms of the Future**

We will enter the 21st century in a few short years. Are we preparing the next generation for the radically changing world they will inherit? In 1950, 73 percent

of U.S. employees worked in production or manufacturing. Now, the number is less than 15 percent.<sup>1</sup> It doesn't take long for skills and knowledge to become outdated in a fast-changing world of technological advances and rapidly expanding information.

The U.S. Department of Labor estimates that by the year 2000 at least 44 percent of all workers will be in data services—gathering, processing, retrieving, or analyzing information. “Already an estimated two-thirds of U.S. employees work in the services sector, and ‘knowledge’ is becoming our most important ‘product.’”<sup>2</sup> Does your classroom prepare students for these challenges? What might a futuristic classroom look like?

- The first-grade classroom is filled with excited chatter. The teacher just introduced Multiple Intelligences to her diverse class of 23 students, who are joyfully sharing their “smarts” with one another.

- As you enter the room, a student approaches you and says, “Maybe you could join our group. We need someone with logical/mathematical intelligence to help with this project.” These academically and culturally diverse junior academy students are creating multiple-intelligence cooperative-learning groups to work on a project.

- A senior academy student who has been identified as “learning disabled” is delighted to demonstrate her visual/spatial intelligence by drawing a pictorial essay about a piece of literature she studied, which had been recorded for her on cassette tape. The English teacher describes the pictorial essay as “Completed in perfect detail.”

In the classroom of the future, teachers and students work together to create an atmosphere of acceptance that celebrates different cultures, genders, intelligences, languages, gifts and talents, interests, and means of self-expression. Students and teachers understand that within and across every culture there are many individual variations and that differing opportunities, values, and motivations produce a variety of ability patterns.<sup>3</sup> In the school of the future, educational administrators and class-

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nents of these educational settings is the implementation of the concept of multiple intelligences.

### **The Theory of Multiple Intelligences**

Howard Gardner's theory of multiple intelligences offers educators a comprehensive framework within which they can build a curriculum to meet the needs of all students. “From my perspective,” states Gardner, “the essence of the theory is to respect the many differences among people, the *multiple variations in the ways that they learn*, the several modes by which they can be assessed, and the almost infinite number of ways in which they can leave a mark on the world.”<sup>4</sup>

To Gardner, intelligence involves the

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*As part of a multiple-intelligences activity, students from Martha Ban's class at Warren Elementary School in Warren, Massachusetts, make gingerbread houses.*

room teachers do more than just accommodate such differences; they honor and value *all* students. The concept of multiple intelligences is clearly defined and implemented as the first step toward developing and celebrating a full-inclusion classroom.

The future is here! The scenarios just described as schools of the future are descriptions of classrooms that exist today. In public and parochial schools alike, active-learning environments show us how teaching and learning should happen. One of the primary compo-

use of skills that enable people to solve existing problems, to create effective products, and to find or create new ideas. These problems and the products must be relevant in a particular cultural context. Gardner has identified seven intelligences found in most people: linguistic, logical/mathematical, spatial, musical, bodily-kinesthetic, interpersonal, and intrapersonal.<sup>5</sup> Theoretically, each of us begins life with innate brain properties that place us at some point along each intellectual scale. Those who score higher initially on a given scale

will find it much easier to succeed using that intelligence than those who score lower. Thomas Armstrong<sup>6</sup> in his book *Multiple Intelligences in the Classroom*, lists four key points about the theory of multiple intelligences:

- **Each person possesses all seven intelligences.** Most people fall somewhere between two poles, the first being extremely gifted in all areas and the second being profoundly developmentally delayed, lacking all but the most rudimentary aspects of the intelligences. Most of us are highly developed in some intelligences, modestly developed in others, and relatively underdeveloped in the rest.

- **Most people can develop each intelligence to an adequate level of competency** if given the appropriate encouragement, enrichment, and instruction.

- **Intelligences usually interact in complex ways.** For example, to cook a meal, a person must read the recipe (linguistic), possibly double the recipe (logical/mathematical), develop a menu that satisfies all members of a family (interpersonal), and placate one's own appetite (intrapersonal).

- **Many ways to be intelligent exist within each category.** There is no standard set of attributes that a person must possess to be considered intelligent in a specific area. Consequently, someone may not be able to read, yet be highly linguistic because he or she can tell a terrific story or has a large oral vocabulary. An individual may be awkward on the playing field, yet have superior bodily-kinesthetic intelligence when weaving a rug or creating an inlaid chess table.

Many people are able to develop all their intelligences to a relatively competent level. The degree to which intelligences develop depends on three main factors:

- **Biological endowment**, including

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## *Teachers must adapt their teaching methods to meet the diverse challenges of tomorrow's students.*

hereditary or genetic factors and injuries to the brain before, during, and after birth.

- **Personal life history**, including experiences with parents, teachers, peers, friends, and others who either awaken intelligences or keep them from developing.

- **Cultural and historical background**, including the time and place in which one is born and reared and cultural or historical development in different domains. Gardner uses the term *domain* to differentiate a craft or discipline from the specific intelligence. For example, a musician (domain) will exhibit a high level of musical intelligence, but must

also have developed other intelligences to be successful, i.e., as a conductor, a concert pianist, or composer.<sup>7</sup>

### **Applying the Theory of Multiple Intelligences**

An amazing amount of educational material has been published on multiple intelligences in the past several years. Teacher study groups are being organized to discuss the topic. The Association for Supervision and Curriculum Development spawned an e-mail study group on the Internet to give educators an opportunity to share their ideas and experiences.<sup>8</sup>

Within the Adventist education system, virtually every NAD union conference is providing training and support materials on multiple intelligences. In 1995, for example, the *Atlantic Union Teacher Bulletin* is using multiple intelligences as a year-long theme for reading. Each issue offers recommendations for using multiple intelligences to teach language arts at all grade levels. Each month features a multiple-intelligences lesson plan, activities, and strategies. For instance, in October the primary-level student goal was to identify the main idea of a sentence, paragraph, or story. A copy of a sample lesson plan<sup>9</sup> is shown on page 23. In November, the upper-level student goal was to develop reference skills. A copy of a sample lesson plan is shown on page 24.

## Reading Camp as an MI Experience

In August 1995, Atlantic Union College's Reading Center conducted a Reading Camp based on MI theory. It focused on helping children connect vowel sounds with sensory activities, thereby enabling them to learn more quickly and effectively. Such activities also help reinforce the idea that reading is fun and can be a social as well as an individual activity. Julia, who would be entering second grade in the fall, attended the camp. This is her report:

*The first day we talked about how we can be smart. We can be smart in seven different ways: Picture Smart, Logic Smart, Word Smart, People Smart, Self Smart, Music Smart, and Body Smart.*

*The room was divided into seven places or stations. My favorite place was the Picture Smart place because we made lots of pictures, painted, and did crafts there. One day we made pretzels in the shapes of letters. My next favorite place was the Body Smart place because we went bowling for words and fishing for fish with words on them.*

*At the Logic Smart place we worked on a big puzzle. At the People Smart place we did things with a friend. At the Music Smart place we listened to music on headphones while we read.*

*My least favorite place was the Self Smart place where we did things by ourselves.*

*I really liked Reading Camp.<sup>10</sup>*

## Conclusion

Classrooms of the future are here:

- In schools where the learning environment provides all students with easy access to tools that engage each of the seven intelligences.
- In schools where the curriculum provides opportunities for each student to explore and develop all seven intelligences.
- In schools where the faculty use the seven intelli-

*Teachers in non-graded or multi-age classrooms can take advantage of the fact that diverse learning populations provide the perfect setting in which to use multiple-intelligence techniques.*

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gences as tools of instruction.

- In schools where students work together in multi-age and multi-ability groupings.

Schools of the future narrow their curricular scope to enable students to achieve in-depth knowledge of core disciplinary concepts and provide unstructured alternatives that allow students to explore their interests. Schools of the future foster general knowledge, creativity, and student/teacher collaboration for evaluation and assessment. And parents and teachers are collaborative educational partners.<sup>11</sup>

In his book *A Celebration of Neurons: An Educator's Guide to the Human Brain*, Robert Sylwester writes:

*One important educational issue to emerge out of Gardner's theory is whether schools should focus on increasing students' strengths (the intelligences in which they are already strong), or on shoring up their weaknesses. Ideally, the schools should do both, being especially diligent to shore up any serious weakness that would handicap the student in life, and also to encourage those who have exceptional abilities.<sup>12</sup>*

Teachers must adapt their teaching methods to meet the diverse challenges of tomorrow's students today.

Teachers in non-graded or multi-age classrooms can take advantage of the fact that diverse learning populations provide the perfect setting in which to use multiple-intelligence techniques.

Teachers must see students as diversely intelligent. Rather than comparing children to one fixed standard like IQ, they should evaluate each one realistically, as individuals. By setting up a curriculum that taps into seven—instead of just one or two—intelligences, teachers can provide every student with the opportunity to reach his or her full potential. Giving students freedom to move into their

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Beth Anderson, teacher at Atlantic Union College's Reading Center, watches as students play "The Vowel Forest" game.

discomfort zones, expand their options, and enjoy the process provides a more realistic way of teaching and learning.

It is up to us to engage students' full intellectual potential, to create a classroom of the future today. To do so requires training and the support of the church school community. But for inspiration, we need to look only as far as our students' eyes to see that that future is here—now! ✍

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#### NOTES AND REFERENCES

1. Price Pritchett, *The Employee Handbook of New Work Habits for a Radically Changing World* (Dallas: Pritchett & Associates, Inc., 1994), n.p.

## R E A D I N G L I S T

**M**aterials are being produced and published so fast that it would be impossible to give an up-to-date listing in this article, but the following basic reading list will serve as a foundation for learning about multiple intelligences and how they can be applied in the classroom:

**Armstrong, Thomas, *In Their Own Way: Discovering and Encouraging Your Child's Personal Learning Style*. New York: Tarcher/Putnam, 1987.**

This is an excellent introduction for parents to MI theory and application.

\_\_\_\_\_. ***Multiple Intelligences in the Classroom*. Alexandria, Va.: Association for Supervision and Curriculum Development, 1994.**

This is perhaps the best single source of information on MI for teachers.

**Gardner, Howard, *Frames of Mind: The Theory of Multiple Intelligences*. New York: BasicBooks, 1983.**

The technical description of the MI theory.

\_\_\_\_\_. ***Multiple Intelligences: The Theory in Practice*. New York: Basic-Books, 1993.**

An introduction to the theory and application of MI.

\_\_\_\_\_. ***The Unschooled Mind*. New York: BasicBooks, 1991.**

Practical information about use of MI in teaching.

**Lazear, David, *Multiple Intelligence Approaches to Assessment: Solving the Assessment Conundrum*. Tucson, Ariz.: Zephyr Press, 1994.**

An excellent resource for teachers and psychologists.

\_\_\_\_\_. ***Seven Pathways of Learning: Teaching Students and Parents About Multiple Intelligences*. Tucson, Ariz.: Zephyr Press, 1994.**

Methods for teaching parents and students about MI.

\_\_\_\_\_. ***Seven Ways of Knowing: Teaching for Multiple Intelligences, Second Edition*. Palatine, Ill.: Skylight Publishing, 1991.**

An excellent handbook of teaching techniques.

\_\_\_\_\_. ***Seven Ways of Teaching*. Palatine, Ill.: Skylight Publishing, 1991.**

A wonderful manual for teachers. Provides practical strategies for turning a classroom into an MI laboratory.

7. Ibid., p. 21.

8. For more information, contact the Multiple Intelligences Network, New Dimensions of Learning, 729 West Waveland, Suite G, Chicago, IL 60613; (800) 726-8605; (312) 525-6650.

9. Lesson plans were developed by Martha Ban and Denise Michaelis, and printed in the *Atlantic Union Conference Teacher Bulletin*. Used by permission of the Atlantic Union Conference Office of Education, South Lancaster, Massachusetts.

10. Julia Rittenhouse, "AUC Reading Center Teaches Seven Ways to Be Smart,"

*Panther Prints* (Greater Boston Academy, Stoneham, Mass.) 8:1 (August 21, 1995), p. 7. Used by permission.

11. From Handout No. 3 accompanying a facilitators' guide that accompanies a series of videos called *The Multiple Intelligences Series*, developed by Linda Campbell, et al., for the Association for Supervision and Curriculum Development, Alexandria, Va., 1995.

12. Robert Sylwester, *A Celebration of Neurons: An Educator's Guide to the Human Brain* (Alexandria, Va.: Association for Supervision and Curriculum Development, 1995), p. 116.

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*A student creates a pizza, using visual, spatial, verbal, linguistic, and intrapersonal intelligences.*

2. Ibid.

3. C. June Maker, Aleene B. Nielson, and Judith A. Rogers, "Giftedness, Diversity, and Problem-Solving: Multiple Intelligences and Diversity in Educational Settings," *Teaching Exceptional Children* (Fall 1994), pp. 4-19.

4. Thomas Armstrong, *Multiple Intelligences in the Classroom* (Alexandria, Va.: Association for Supervision and Curriculum Development, 1994), pp. vii, viii.

5. Howard Gardner, *Frames of Mind: The Theory of Multiple Intelligences* (New York: BasicBooks, 1991); \_\_\_\_\_, *The Unschooled Mind: How Children Think and How Schools Should Teach* (New York: BasicBooks, 1991), p. 12.

6. Armstrong, pp. 11, 12.

## MULTIPLE INTELLIGENCES IN MY CLASSROOM

BY CHRIS BRUSO

**A**s a first-grade teacher in a small Adventist school in Massachusetts, I found multiple intelligences (MI) to be an answer to prayer. There are no support services for the children in our school, and therefore the classroom teacher must be able to meet the needs of all the children. It can be a very frustrating and lonely task. MI has made this first grade a much less frustrating place for both the children and their teacher.

As a teacher with more than 20 years of experience, I found that the children were more productive and learned more through MI. The classroom was set up with seven stations and contained activities pertaining to each of the intelligences. The children were given the opportunity to choose the station. This gave them a feeling of control and allowed them to have work on a skill in more than one intelligence. The carryover was surprising! The children would actually talk about what they learned with comments such as, "I know how to spell this because I learned it when I was word-fishing in 'body smart.'"

All children learned at their own rates and never felt that they couldn't do something successful every day. They cooperated and helped one another with their activities. Those children who might have had to be placed in special-needs classes because of their different learning styles found success every day in more than one area.

Those children who had not been successful in more traditional classroom

settings began to have a real turn-around in their attitudes as they enjoyed daily success. Some of them asked to stay in from recess to continue with their activities. These were the children who had previously not completed their work.

Behavior became less of a problem, since the children did not have to sit in their seats all day. There was much more movement and constructive noise as the children's natural energy levels were utilized and not stifled as in the traditional setting. The children were less tired and much happier, which I believe makes for an environment more conducive to learning.

The teacher's role in this type of classroom setting is to be more of a facilitator than a dispenser of knowledge. The children are responsible for their own learning. Of course, the teacher sets the conditions and prepares the materials that the children will be working with during the course of the day. He or she then becomes a guide during the learning time by questioning, encouraging, and directing the activities.

In the MI classroom the *child* is taught, rather than the curriculum or the grade or even the developmental age. The child makes many of the decisions and learns in a natural way, rather than the rigid artificial methods of the traditional classroom. ☺

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