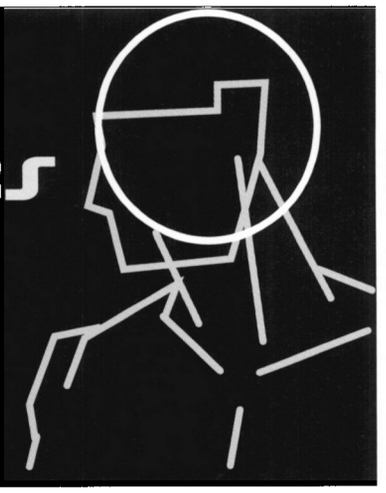
Tapping into Multiple Intelligences to Teach Information Literacy Skills



by Sally Brewer

One of the major questions that classroom teachers wrestle with is what strategy or method to use when teaching their students. This is a question that plagues school library media specialists also. One of the theories that library media specialists are finding to be effective as they teach information literacy skills is Howard Gardner's theory of multiple intelligences. This article will review Gardner's work and the work of other researchers in this area. Examples will be given that illustrate how this theory can be put into practice in a library media center. Recommendations will be provided for using this theory in your library media center. Finally, a list of resources for further reading on this topic will be provided.

Theory of Multiple Intelligences

When Gardner (1983) first described his theory of multiple intelligences, he suggested that "there are at least seven ways that people have of perceiving and understanding the world." Gardner labels each of these ways a distinct "'intelligence'—a set of skills that allow individuals to find answers to the genuine problems they face." Because the theory states that all of the intelligences are needed to function productively in society, teachers need to think of all intelligences as equally important (Brualdi 1996). In his book *Intelligence Reframed: Multiple Intelligences for the 21st Century,* Gardner (1999) expanded his definition of intelligence. Essentially, intelligence is the ability to solve problems or create products that are valuable in one or more cultural settings. He believes that people are not born with all the intelligences they eventually will have. They are able to learn and improve their intelligences throughout their lives. This theory dovetails with our vision of information literate students as lifelong learners. To date, Gardner has identified nine intelligences. These are described in Table 1 (page 20).

Many teachers and researchers have built upon Gardner's work. Most notable are Thomas Armstrong and David Lazear, who have applied the theory of multiple intelligences to the classroom. Armstrong (1994) provides us with a key to using this theory in our teaching in the following statement: "The master code of this leaming style model is simple: for whatever you wish to teach, link your instructional objective to words, numbers or logic, pictures, music, the body, social interaction, and/or personal experience. If you can create activities that combine these intelligences in unique ways, so much the better!" Armstrong also suggests asking yourself the following questions when creating lesson plans:

- Linguistic: How can I use the spoken or written word?
- Logical/Mathematical: How can I bring in numbers, calculations, logic, classifications, or critical thinking?
- Spatial: How can I use visual aids, visualization, color, art, metaphor, or visual organizers?
- Musical: How can I bring in music or environmental sounds, or set key points in a rhythm or melody?
- Bodily/Kinesthetic: How can I involve the whole body or hands-on experiences?
- Interpersonal: How can I engage students in peer or cross-age sharing, cooperative learning, or large-group simulation?
- Intrapersonal: How can I evoke personal feelings or memories, or give students choices?

Lazear's (1999) interest in the theory of multiple intelligences and its application in the classroom came from a number of experiences, including mentoring his two daughters through grade school and junior high. His books, such as *Eight Ways of Teaching: The Artistry of Teaching with Multiple Intelligences,* provide practical advice for using multiple intelligences in the classroom. One of his important contributions to the field is a Multiple Intelligences Toolbox of creative strategies (see Table 2, page 20). These strategies are useful when teaching students how to be information literate.

Integrating Multiple Intelligences into the School Library Media Program

Library media specialists who subscribe to the theory of multiple intelligences provide a student-centered environment. A student-centered program accommodates students' differ-

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Table 1. Description of the Multiple Intelligences

Intelligence	Description	Library Media Center Example
Verbal/Linguistic	Used in the production of words and language, including poetry, novels, and drama.	Students read factual information about a historical period and poetry, drama, and fiction from the same period.
Logical/Mathematical	Helps students be problem solvers. Often described as scientific thinking.	Students search databases to find information about a particular historical period.
Visual/Spatial	Used in creating not only tangible arts, such as paintings and sculpture, but also mental images.	Students use maps to locate towns and cities mentioned. Students create a mental image of life during this period of time.
Bodily/Kinesthetic	Helps students learn by doing. Promoted through hands-on activities.	Students create a diorama to illustrate a setting in a book.
Musical/Rhythmic	Allows students to recognize rhythmic and tonal patterns. Helps them be sensitive to their environment.	Students listen to music from the historical period being studied. Students learn songs from this period.
Intrapersonal	Provides knowledge of feelings, emotions, and thinking processes.	After reading information about the Civil Rights Movement in the 1960s, students write a reflection paper that describes how Martin Luther King, Jr. developed his position on this issue.
Interpersonal	Enables students to work cooperatively.	Students work together in groups to find information about this historical period and then share it.
Naturalist	Promotes students' abilities to classify and categorize.	Students study the plants and trees in the area being studied and then classify and categorize them.
Existential	Enables students to situate themselves within a larger context, whether it is a classroom or their community.	Students reenact a scene from an incident that occurred at the time, such as the Boston Tea Party.

Table 2. Multiple Intelligences Toolbox

Logical/ Mathematical	Verbal/ Linguistic	Visual/ Spatial	Musical/ Rhythmic	Interpersonal	Naturalist	Bodily/ Kinesthetic	Intrapersonal
Abstract Symbols/ Formulas	Creative Writing	Active Imagination	Environmental Sounds	Collaborative Skills Teaching	Archetypal Pattern Recognition	Body Language/ Physical Gestures	Altered States of Consciousness Practices
Outlining	Formal Speaking	Color/Texture Schemes	Instrumental Sounds	Cooperative Learning Strategies	Caring for Plants/ Animals	Body Sculpture/ Tableaus	Emotional Processing
Graphic Organizers	Humor/Jokes	Drawing	Music Composition	Empathy Practices	Conservation Practices	Dramatic Enactment	Focusing/ Concentration Skills
Calculation	Impromptu Speaking	Guided Imagery/ Visualizing	Music Performance	Giving Feedback	Environment Feedback	Folk/Creative Dance	Higher Order Reasoning
Deciphering Codes	Journal/Diary Keeping	Mind Mapping	Percussion Vibrations	Group Projects	Hands-on Labs	Gymnastic Routines	Independent Studies/Projects
Forcing Relationships	Poetry	Montage/Collage	Rapping	Intuiting Others' Feelings	Nature Observation	Human Graph	Know Thyself Procedures
Pattern Games	Reading	Painting	Rhythmic Patterns	Jigsaw	Natural World Simulations	Inventing	Metacognition Techniques
Number Sequences	Storytelling/Story Creation	Patterns/Designs	Singing/Humming	Person-to-Person Communication	Species Classification (organic/ inorganic)	Physical Exercise/ Martial Arts	Mindfulness Practices
Problem Solving	Verbal Debate	Pretending/ Fantasy	Tonal Patterns	Receiving Feedback	Sensory Stimulation Exercises	Role Playing/ Mime	Silent Reflection Methods
Syllogisms	Vocabulary	Sculpting	Vocal Sounds/ Tones	Sensing Others' Motives		Sports Games	Thinking Strategies

ent learning styles. The collection contains information in a variety of media. The library media specialist practices flexible scheduling. Thus, the students are able to come to the library media center as necessary and not just on a scheduled basis. When possible, library resources are available not only throughout the school via a network, but also via the Internet so that students may access them 24/7. In order to expand the resources of the library media center, connections are made with different agencies within the community, thus expanding the walls of the library media center. Their library media program does not offer information skills instruction in isolation, but rather as a part of collaborative units with other teachers.

Integrating Multiple Intelligences into the Teaching of Information Literacy Standards

Using multiple intelligences theory to teach information literacy skills is a natural strategy. The strategies defined in Lazear's Multiple Intelligences Toolbox work well with an information literacy curriculum like Eisenberg and Berkowitz's (2004) The Big6, as the lesson plan below illustrates. Both the theory and the curriculum model are student-centered and propose that students be involved actively in their learning. The following example of a research project about communities demonstrates how multiple intelligences strategies can be used in a collaborative unit.

Title: Why do people want to move to my community (town, state)?

Goal: Students will produce either a brochure or *PowerPoint* presentation that describes their community and the reasons people would want to move there.

Objectives: By the end of the research project, students will be able to:

- List five to seven positive aspects of their community (climate, amenities, available activities, etc.).
- Describe their community (geographic information and demographic information).
- List major historical events.
- List notable people who have lived in the community.

Teachers involved in unit: Social studies, language arts, art, and library media specialist

Information Literacy Skill: Students will use Boolean and keyword search strategies to locate information about their community and create a brochure or multimedia presentation with that information.

Student Activities:

Task definition. Students brainstorm topics (Logical/Mathematical intelligence) that they need to explore and places they might find information. They might use *Kidspiration* to record and organize their ideas.

Information seeking strategies. Students, working in groups (Interpersonal intelligence), identify what sources are available and which ones would be the best.

Location and access. Students access each source and find the information needed within each source (Verbal/Linguistic intelligence).

Use of information. At this point, students need to decide how they can use each source and what information in each source is most useful (Intrapersonal intelligence).

Synthesis. Students decide how they are going to organize the information and present the results (Verbal/Linguistic and Visual/Spatial intelligences).

Evaluation. Students and teachers evaluate not only the final products but also the effectiveness of the process (Intrapersonal intelligence).

Conclusion

Using multiple intelligences theory to teach information literacy standards is a natural combination. Information skills help students become lifelong learners. By using multiple intelligence strategies, students have a positive educational experience and transfer what they have learned to problems they might encounter in life.

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