

A New Way to Teach and Learn



Howard Gardner challenged that prevailing definition of intelligence with one concise description of what it means to be smart: “the ability to find and solve problems and create products of value in one’s own culture.” It’s so simple it’s profound! There is no single measurement for intelligence in this definition. There is no “quotient” that can quantify ability or predict potential. Gardner’s theory attempts to provide for the complex processes of human cognition without setting limits on its potential. If the human mind has an operating system, Gardner’s model is the manual that attempts to explain how it runs.

The metaphor of an operating system has become commonplace with the explosion of information technology over the past several decades. Students today are facing a job market built around an emerging information economy, and the “three Rs” will not sufficiently prepare students for the twenty-first century workplace. While reading, writing, mathematics and citizenship are still core components of American education, the information age demands additional skills in order to remain competitive. Workers need:

- Information Technology Skills – the ability to access information and manipulate it using a variety of digital tools.
- Information Literacy Skills – the ability to evaluate information for validity and reliability through a variety of critical thinking strategies.
- Problem Solving Skills - the ability to generate efficient, effective solutions that meet the needs of the marketplace.
- Collaboration Skills - the ability to interact with colleagues, even in geographically disparate locations, to complete complex tasks.
- Flexibility - the ability to adapt and adjust ideas as new information becomes available.
- Creativity - the ability to present information and ideas in novel, unique ways in the marketplace.

On their own, each of these skills is already valued in the workplace. In combination, however, they create a profile of a worker functioning in a much more abstract environment in which goals and expectations change quickly. The emphasis will be on teamwork and the marketing of ideas rather than concrete products, as we become a world information superpower.

With the information age evolving so rapidly, how do schools adopt a new model of thinking and learning that adequately parallels society's demands? And if we tend to teach in the same ways that we ourselves were taught, how then do we as teachers break away from the standardized, homogeneous approach to schooling that we knew as students? And for those innovators in the classroom who have already recognized the changing needs of society, in what sound theory can they base their evolving instructional practices?

Gardner's multiple intelligences theory does an excellent job of addressing the needs of the information age. In fact, his intelligences nicely correspond to the very skills we have just discussed:

- Information Technology Skills – the kinesthetic intelligence supports these skills as students manipulate tools that help them to successfully work with information.
- Information Literacy Skills – the intrapersonal and naturalist intelligences come into play as students identify and evaluate information for its usefulness.
- Problem Solving Skills – the logical intelligence operates as students offer varied ideas to solve problems.
- Collaboration Skills – the interpersonal and linguistic intelligences function when students interact to complete tasks and create products for the greater good.
- Flexibility – the musical intelligence allows us to detect and follow patterns in information as it becomes available to us.
- Creativity – the visual and existential intelligences allow us to envision ideas, solutions and products that can improve the quality of our lives.

Perhaps there has never been a better time for Gardner's ideas to take hold. They seem to answer so many questions and address so many needs in society. Perhaps this is why educators at so many levels are embracing it so readily.

At the same time, technology can provide us with the tools we need to redefine how and what we teach. As the old saying goes, "If the only tool you have is a hammer, everything around you looks like a nail." There is no longer a one-size-fits-all solution for providing instruction.

This is a time of great growth that can also be a time of great peril; technology advances so quickly it's very easy to be impressed by new advancements, even to the point of letting technology take precedence over instruction. As educators we have a responsibility to make sure that technology is well grounded in sound educational theory and practice; instructional considerations must come first. If technology isn't delivered on a sound instructional foundation it will not fulfill its promise, falling by the wayside like other innovations that have preceded it.

In this regard we come full circle: technology supports the accommodation of multiple intelligences while at the same time multiple intelligences theory offers a strong theoretical foundation for the integration of technology into education.

Each intelligence is a viable, distinct pathway to learning; ways of knowing which stand on their own two feet and yet act in consort with even greater power. They are not talents, gifts, aptitudes or learning styles. Talents, gifts and aptitudes each connote an ability above and beyond the realm of simple human understanding, such as the ability to play a musical instrument well or set new records in athletic competitions. Learning styles are fixed modes of understanding that a learner uses regardless of the instructional context. Intelligences are more than either of these. They are legitimate conduits of cognition that can be flexibly applied across the curriculum in varied contexts by all learners.

Although we each have all the intelligences, they are distributed uniquely in each of us. Because of this, there is a tendency to want to label learners by specific intelligences. Gardner is adamantly opposed to this. He sees his theory as a way to empower learners, not to diagnose deficits and prescribe remediation. Therefore, I avoid discussing “types” of learners and the suggestion that there are surefire types of instruction and technology that accommodate specific learner strengths. Analyzing instruction by intelligences is one thing, but once done we need to rebuild that instruction so that it is once again holistic when it is delivered in the classroom.

Teachers are full of excitement and questions in considering the possibilities of multiple intelligences and technology. It is my hope that the work offered on these pages offers you a theoretical foundation and practical tools to utilize MI and technology in your classroom.



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