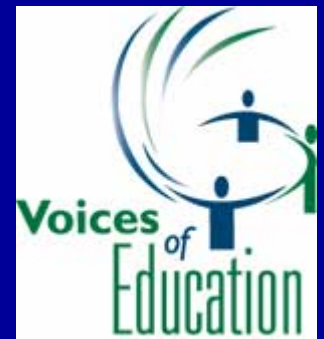


Multiple Intelligences and Instructional Technology



Walter McKenzie
Salem Public Schools

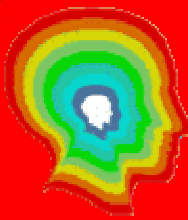
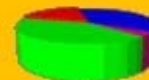


ASCD 2005



The Current State of Affairs

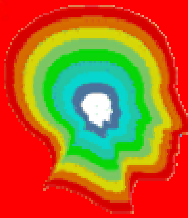
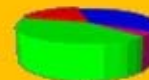
- Much technology has been sold to schools
- Many promises were made
- There is little evidence that integration of technology into instruction has made a measurable difference in achievement





The Current State of Affairs

- Technology needs to pay off for schools, or schools will no longer be able to justify investing in new technologies.
- The shift must occur in *how* we implement technology for instruction



Dear Walter,

I am very glad I found your web page. I am fifty-six years old and retired. Could you help me with three observations I have?

- One, I think ALL the time but noise like T.V. and radio distract me.
- Two, I can look at anything and see it in three dimensions.
- And three, I always am looking on things that relate in forms and genealogies.

I want to believe I have some smarts. I am a dreamer, a visionary, a futurist, yet cannot use those talents to their fullest ability. Do you think I am different than the "normal" crowd and why. Your answer is very important to me. Even if your answer is negative it cannot hurt my feelings.....

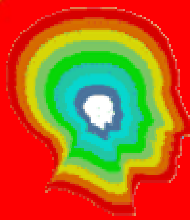
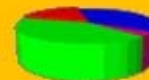
-Paul





Students like Paul never fit the
“one-size-fits-all” ideal of the
last century.

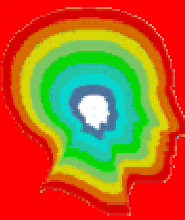
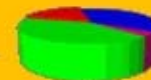
Their orientation to learning
required tools
that were not available.





M.I. would have had no relevance in the Agricultural Age

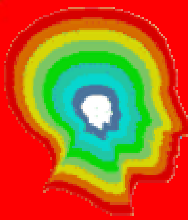
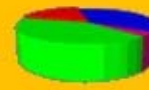
- A nation of farmers
- Most people were not educated and never strayed far from their place of birth
- Learning a skill was the standard





M.I. would have questioned the assumptions of the Industrial Age

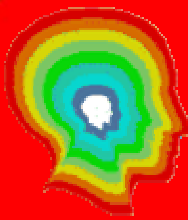
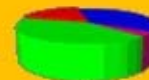
- The assembly line became the metaphor for this era
- One size fits all
- Education was the means to provide a standardized citizenry





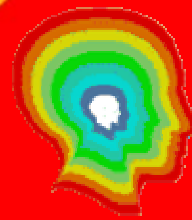
M.I. is the perfect learning paradigm for the Information Age

- Our eyes have been opened by brain research
- Technology is transforming how society functions
- There is no longer one “right” way to succeed



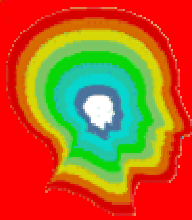
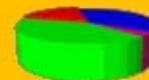


Survey Says™





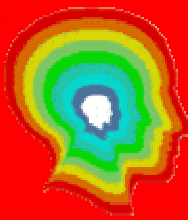
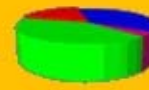
A new age demands
a new paradigm!





This New Paradigm.....

- Has to address students as they function in today's society, even while preparing them for even more changes in their future
- A new definition of what it means to learn, achieve and be productive

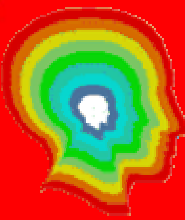




This New Paradigm.....

"The ability to solve problems and create products that are of value in one's own culture."

-Howard Gardner

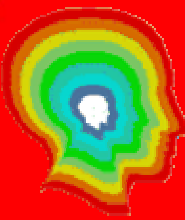
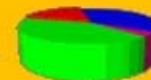




I think.....

therefore.....

I am!

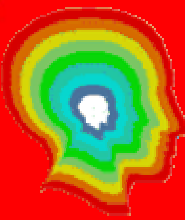
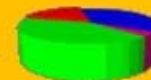


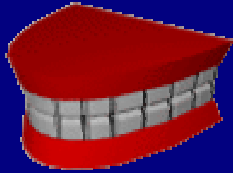


I think.....

therefore.....

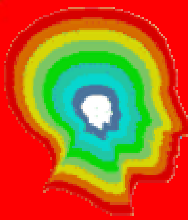
MI!







So why doesn't
one definition of intelligence
or
one technology
address all the needs
of the Information Age?

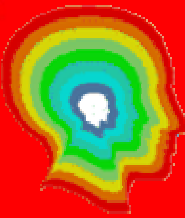




Because if the only tool you have
is a hammer.....

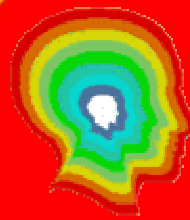


.....everything around you
looks like a nail.





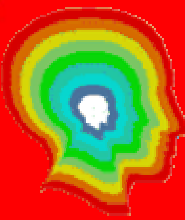
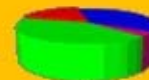
Tools vs Resources





But.....

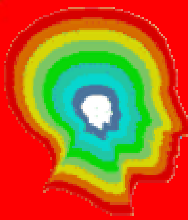
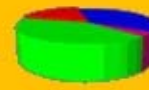
.....is technology just another
tool for instruction?





Other Popular Tools

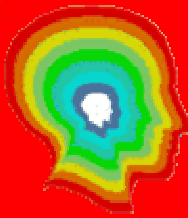
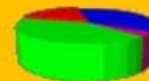
- Textbook
- Chalkboard
- Overhead projector
- Tape recorder/player
- TV/VCR





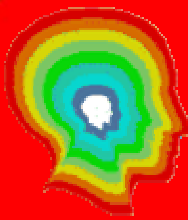
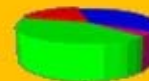
How is Digital Technology different?

- Addresses all facets of human cognition
- Accommodates multiple forms of communication
- Breaks down boundaries of time and space
- Can *transform* the classroom



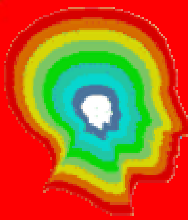


In our hands,
technology is not just
another classroom tool;
it connects all the intelligences
and becomes a
path to authentic learning.





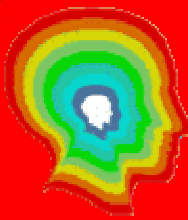
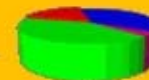
5 Steps for Integrating MI and Technology in the Classroom





1. Map the process!

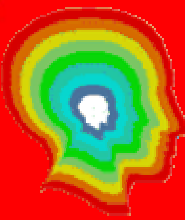
Pre-Software	Experience	Post-Software
<p>Read chapter 5 of <u>Sign of the Beaver</u></p>	<p>Have students work in cooperative groups to create Inspiration maps of predictions for the remainder of the book</p>	<p>Refer to maps in reading the rest of <u>Sign of the Beaver</u></p>





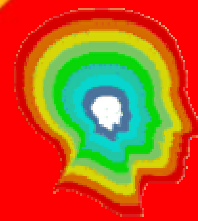
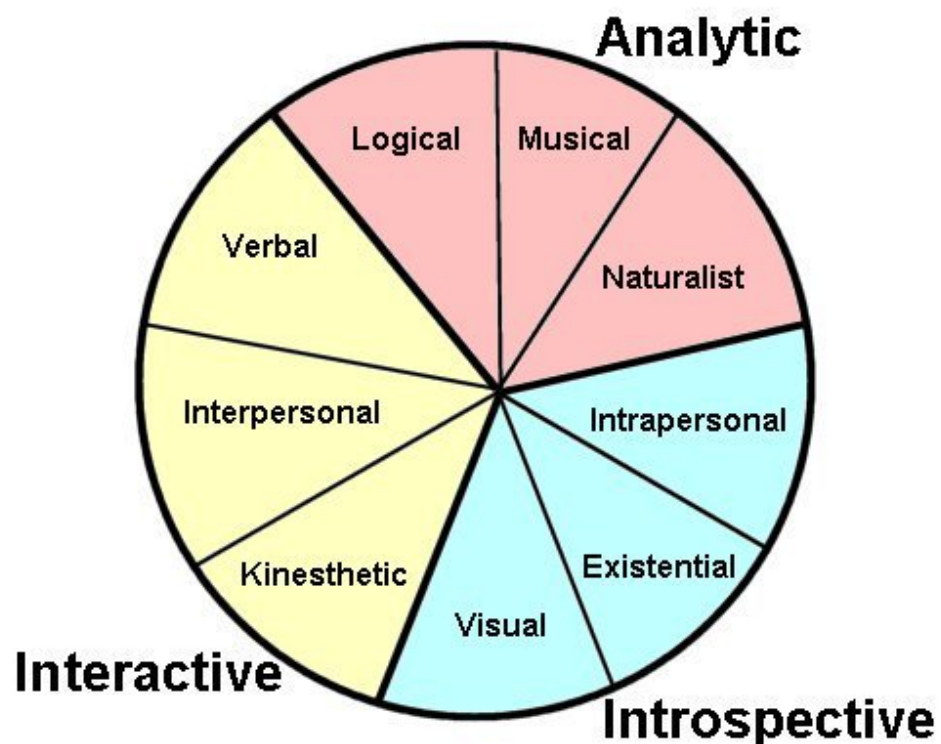
True or False?

You should try and teach to all the intelligences in a lesson?





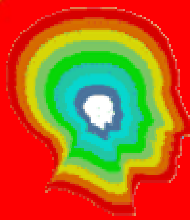
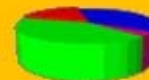
2. Use the Domains!





3. Follow the process!

Learner ► Objective ► Intelligences ► Technology





MI Awareness

MI Survey Scoring Report

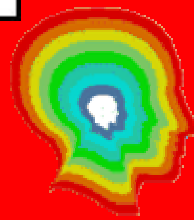
To graph your results, simply highlight the range B6:C22 and click on the Chart Wizard Button.



Verbal	6
Logical	5
Visual	4
Musical	2
Kinesthetic	7
Interpersonal	7
Intrapersonal	7
Naturalist	4
Existentialist	5

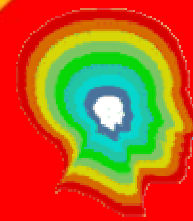
	% out of 30 items	proportion out of 100%
Analytic:	37%	23%
Interactive:	67%	43%
Introspective:	53%	34%
		out of
		100%

Strongest Domain: 67%





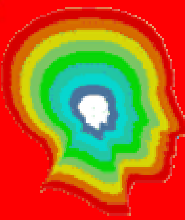
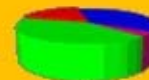
MI Awareness





True or False?

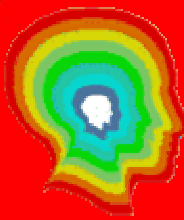
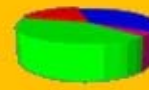
You can tell what intelligence(s) a lesson stimulates based on what students are asked to do.





4. Check for Consistency!

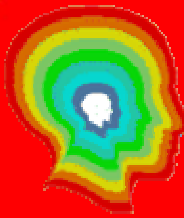
<u>Objective</u>	<u>Procedure</u>	<u>Product</u>
Create maps on graph paper with a legend of symbols for doorways, windows, counters, closets and furniture.	Brainstorm map elements and then have students work in pairs to create original classroom maps.	Classroom maps which are evaluated for neatness and accuracy.
<u>Intelligences</u>		
visual and naturalist	visual and naturalist	logical
<u>Bloom</u>		
synthesis	synthesis	comprehension





Existing Instruction

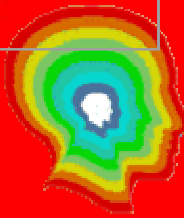
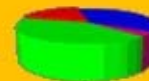
POMAT	V	M	V	K	R	IE	I	N	E	Notes
<u>Procedure</u>		✓	✓	✓		✓		✓		Organizing, building, measuring, problem solving, working in groups
<u>Objective</u>		✓		✓						Problem solving and building
<u>Materials</u>		✓	✓	✓						Hand tools, rulers, balsa wood, nails, screws, safety goggles, information books, paper, pencil





Developing Units

Goals(s):	Intelligence:	Technology:	Standard:
Materials:			Intelligence:
Daily Tasks:			Intelligence:
Assessment:			Intelligence:





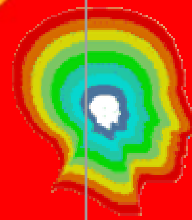
5. Assess Authentically!

Degrees

Criteria

Exemplars

	Unsatisfactory 1	Satisfactory 2	Excellent 3	Total
Project includes all required elements	2 or more elements missing	1 element missing	All elements included	2
Project is a working application of taught skills and/or concepts	Is not a working model <u>or</u> does not address taught skills/concepts	Is a working model <u>and</u> addresses some taught skills/concepts	Is a working model <u>and</u> addresses taught skills/concepts	2
Takes concepts and applies them at higher levels of thinking	Only operates at Knowledge and Comprehension	Operates at least an Application and Analysis	Operates at Synthesis and Evaluation	3
Use of technology is critical in demonstrating learning	Technology is disjoint from project content	Technology is incidental to project content	Technology is a vital component in demonstrating understanding	3





Keep the dialogue going!

walter@surfaquarium.com

