MULTIPLE INTELLIGENCES AND TECHNOLOGY

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As an educator, how can I most effectively incorporate MI Theory and Technology into the curriculum to create an optimal learning experience?
Ways of Knowing

1. Verbal/Linguistic
2. Logical/Mathematical
3. Visual/Spatial
4. Intrapersonal
5. Bodily/Kinesthetic
6. Interpersonal
7. Musical/Rhythmic
8. Naturalistic
9. Existential
Question:

Do students learn better with technology because it taps many of their intelligences?
Technology Enhances the Multiple Intelligences

At least one-third of our students are Visual learners.

Computers offer students a multi-sensory smorgasbord.
Verbal / Linguistic Intelligence

- Word processing programs (Word)
- Typing tutors (Mavis Beacon)
- Desktop publishing (MicroSoft Publisher)
- Electronic libraries (World Library)
- Word games (Missing Links)
- Story Writing Programs (Imagination Express; The Amazing Writing Machine; Storybook Weaver)

Free Natural Reader
Logical / Mathematical Intelligence

- **Math skills tutorials** (Math Blaster; Treasure Math Storm; Math Rock!; Cosmic Geometry; Astro Algebra)
- **Computer programming tutors** (LOGO)
- **Logic games** (King’s Quest)
- **Strategy games** (Strategy Series)
- **Science programs** (Science Tool Kits; DK Multimedia; Gizmos & Gadgets)
- **Critical thinking programs** (H.O.T.S.- Higher Order Thinking Skills; Visual Venture)

http://www.funbrain.com/math/index.html
Bodily/Kinesthetic Intelligence

- Hands-on construction kits that interface with computers (LEGO Dacta)
- Motion-simulation games (Flight Simulator)
- Virtual-reality system software (Dactyl Nightmare)
- Eye-Hand coordination games (Shufflepuck Café)
- Tools that plug into computers (Science Tool Kit)
- Typing Tools (Alpha Smart; Dream Writers)
Musical/Rhythmic Intelligence

- **Music literature tutors** (Exploratorium)
- **Singing software** (Transforms voice input into synthesizer sounds)
- **Tone recognition and melody enhancers** (Arnold; SimTunes)
- **Musical instrument digital interfaces** (Midi)
- **Musical Problem Solving** (Making Music; Music Ace; Dr.Brain)
Interpersonal Intelligence

- **Electronic bulletin boards** (Kidsnet)
- **Simulation games** (Sim City)
- **E-mail programs** (Outlook, Eudora)

SKYPE
Visual/Spatial Intelligence

- **Animation programs** (Art/Film Director; KidPix)
- **Clip-Art programs** (Print Shop)
- **Draw & Paint programs** (Print Artist)
- **Electronic chess games** (Chessmaster)
- **Spatial problem solving games** (Dr.Brain; Thinking Things)
- **Electronic puzzle kits** (Living Jigsaws)
- **Geometry programs** (Sensei’s Geometry; TesselMania, Tetris)
- **Digital Imagery/Graphics Programs** (Adobe, Photo Editor)
- **Drawing Tools:** (CrossPad; Apple Newton)

Inspiration
Intrapersonal Intelligence

- **Personal choice software** (Decisions, Decisions)
- **Career counseling software** (The Perfect Career)
- **Any self-paced program** (Foreign Languages; Personal finances)

http://www.uiowa.edu/~acadtech/phonetics/english/frameset.html - Google Search

Geography quiz
Naturalist Intelligence

- Scientific plug-ins
- Nature sound files
- Classification of Flora/Fauna software
- Animal sounds identification programs
- Earth Science programs (DK Science)
- Life Science programs (The Learn About Collection - Stars; Animals; Insects; Human body; Plants, etc.)
Existential Intelligence

• Software that would encourage an individual to think deeply about one’s own purpose; about life’s mysteries; or about what is true or real?

• Meditation CD’s
Effective Learning Through M.I. Means “Triple Coding” Content

Anytime three or more intelligences are used to introduce new material to students, the greater their chances of long term retention.
The Integration of M.I. & Technology: The Positive Effects:

• Students find topics more interesting when information is presented in a variety of ways.

• Students feel more comfortable and motivated when they know that their learning styles will be addressed.

• Students believe their learning has more meaning when the way in which they learn and present new information is acknowledged.

• Students are more challenged, engaged, and independent.
M.I. & Technology: Positive Effects, cont.

- Students have more control over what and how they learn (self pacing).

- Students gain a greater sense of responsibility for their work.

- Students remain on task for longer periods of time.
Positive Effects, cont.

- Students produce higher quality work, that reflects the increased depth and breadth of their knowledge and talents.

- Students become better at critical thinking, organizing & evaluating information, and presenting their new knowledge in creative ways.
ESOL lesson plan

• Phase 1: Share the goals of the lesson with the learners. Tell them that after the lesson, they will be able to recognize the names of common rooms and other words related to houses. Furthermore, they will be able to use most of the vocabulary items productively or, more precisely, to be able to describe houses and name the various rooms that houses may hold, to ask questions about houses, and to argue in favor of their own as well as against other people's opinions.

• Next, invite them to suggest real-life situations in which they may have to discuss or describe houses in a foreign language.
Phase 2: Read out the text entitled "Our House" to the learners. Ask them to listen carefully and to pay special attention to the various types of rooms mentioned in the text. You could also invite one of the learners to do the reading.

“Our House”

I live in a big yellow house near the main road. Our house has eight windows and two balconies that overlook a big garden. On the ground floor there are a kitchen, a hall, a living-room with many paintings on the walls, a dining-room where we have all our meals, a bathroom, a toilet, a computer room with lots of books in a giant bookcase that fills the whole wall, and a garage. In front of the house there are a garden, a swimming-pool, and a large, green fountain with fish.

On the first floor there are three bedrooms, a bathroom, and a small toilet. On the second floor there is an attic which has all kinds of old furniture. Behind the house there is a vegetable garden. We have a large basement too, with a cozy sitting-room and an open fireplace.
Phase 3: Divide the learners into pairs and ask them to list the different rooms mentioned in the text and to provide answers to the following questions:

- How many floors were mentioned in the text?
- Which rooms were on which floors?
- Was there something in the house or the garden that you do not normally find in an ordinary house or its garden?
• **Phase 4:** Ask the learners to make individual lists of all the rooms they wish they had in their dream house. Also, ask them to specify whether their dream house is new or old, a single-family house or in a block of flats, located in a city or in the countryside, etc.

Play the song "Our House" (performed by Crosby, Stills and Nash) at a low volume in the background while the learners are working.
Phase 5: Divide the learners into groups of three and give each group a copy of the house plan shown below. Ask each group to agree among them as to which rooms there are in the house plan, and at the same time try to include as many elements as possible from every group member's individual dream house.
• **Phase 6:** When the learners are finished, invite them to walk around in the classroom, discussing and comparing house plans. Ask them to make notes of the types of houses included in everybody else's individual house plans while walking around, and also of the rooms found in the house plans agreed upon within the groups.

• **Phase 7:** Divide the learners into new groups of three and ask each group:
  • to decide among them which rooms were the most popular ones, and
  • to categories the existing house types into whatever number and kind of categories that they find appropriate

• **Phase 8:** Play the background song "Our House" one more time (at a higher volume) and ask the learners to concentrate specifically on the **lyrics**. Next, ask them to decide what the text is all about and then share their thoughts with the learners sitting next to them.
Phase 9: As the final phase of the lesson, ask your learners to work with a computer program entitled VANBASCO.

The program is downloadable free of charge from the internet: http://www.vanbasco.com.

The program opens on your desktop and also permits a midi search to perform a karaoke. The lyrics will appear on the screen, and students can sing the lyrics following the software.
Lesson Plan

Catering for the various intelligence types

POSSIBLE ANSWERS:

- verbal-linguistic learners: all phases
- mathematical-logical learners: phases 3, 5 & 7
- visual-spatial learners: phases 5, 6 & 9
- bodily-kinesthetic learners: phase 6
- musical-rhythmic learners: phases 4 & 8
- interpersonal learners: phases 5, 6, 7, 8 & 9
- intrapersonal learners: phases 4, 8 & 9
- naturalist learners: phase 7
- existentialist learners: phases 1 & 8
Conclusion:

- Technology is a way to allow the utilization of various intelligences.

- Technology can provide students with the proper medium through which they may demonstrate and present their mastery of the subject through technology based project learning.

- With so many media available in today's classrooms, the utilization of technology as a means to demonstrate mastery of content becomes not only convenient but also effective as a teaching/learning tool.

- The learners become teachers in their presentations and teachers become true advisers and mentors to student learning.

- It is far more important for teachers to recognize the fact that learners are in fact different and therefore may need different types of classroom activities and techniques in order to learn.
"Tolerance, freedom, equality, humor, ... infrastructure, health and education - yes, with all its flaws, ..."

"The Politics of Equality:" by Hubert H. Humphrey

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