

Chart 1. Instructional Technologies



Instructional Technology	Description	Application
Syllabus		
Course Documents		
Announcements		
Discussion Board		
PowerPoint		
Web Links		
Dropbox		
Journal		
Gradebook		
Email		
Homepage		

Chart 2. Seven Principles of Good Practice in Higher Education

Good Practices	Implementation
Student-Instructor Interaction	Encourage contact between students and faculty through syllabus, encouraging email, threaded discussion, faculty information, photos.
Peer Interaction	Develop reciprocity and cooperation among students through group projects, peer review, email, threaded discussion, student information, photos.
Active Learning	Utilize active learning techniques such as project-based learning, real-life situations, collaboration, journaling,
Prompt Feedback	Give prompt feedback through email, threaded discussions, returning work,
Time on Task	Emphasis time on task through syllabus, threaded discussions, external links, FAQ,
High Expectations	Communicate high expectations through posting exemplary work, rubrics,
Learning Styles	Respect diverse talents and ways of learning by incorporating linguistic, visual, audio, musical, kinesthetic, logical, social, reflective, and natural components.

Chart 3. Course Management Systems Observation Tool

Course Management Systems Observation Tool	
LEAST IDEAL	MOST IDEAL
Inactive Learning Abstract theory. Rote recall. Independent.	Active Learning Real World problems. Inquire and Analyze. Produce. Collaborate.
Isolated Learning Individual. Little or no feedback. Traditional assessment.	Social Learning One-to-one-one-to-many. JIT Feedback. Authentic assessment.
Content Context No choices about what to learn. Abstract examples. Recall with limited application.	Learner Context Choices about what to learn. Models and Schemas. Real World data. Higher order evaluation. Prerequisite skills and knowledge.
Unengaged Learner No choices about how to learn. Text and lecture.	Engaged Learner Choices about how to learn. Explicit goals and objectives. Multimodal information sources.
No Learner Ownership No learner products. No learner goal-setting or reflection about learning. Teacher documents learning.	Learner Ownership Goal-setting. Learning records. Timelines-deadlines. Choices about format of end-product cuts. Documented reflection. Learner-identified problems, processes, & solutions.
Arbitrary Technology Learning in class. Minimal connections among assignments. No public functions. Click and guess.	Technology-supported Anytime/anywhere. Archives. Multimodal options. Public-private functions. More than interface interactivity.
Obscure Design Symbols unclear. Navigation doesn't relate to content or processes. Few user prompts. Few criteria for completion. Not ADA compliant.	Intuitive Design Navigation for site-content-processes. Learner supports. Symbolic icons. User prompts. Multimodal content options. Learning environment metaphor. Criteria for performance-completion. ADA
Isolated Activities No sharing of learner work. Independent work. Knowledge and comprehension.	Engaged Activities Public assignments-products. Collaboration-Cooperation. Application-synthesis-evaluation.
Didactic Teaching Practices Instructor directed and centered. Learners receive and respond.	Facilitative Teaching Practices Objective-driven. Learner responsiveness-accommodation. Learner-involved. Purposeful. Knowledge negotiation-acquisition.

(McGee, 2003)

Chart 4. Learner-Centered Principles of Teaching

NLII Descriptors: Observation Tool for Learner-centered Principles	
Characteristic	Descriptor
Active	<p>Learners address real world problems. Cases require higher order thinking. Learners debate, research, inquiry, solve problems. Discussions are learner focused. Learners generate products. Peers critique each other.</p>
Social	<p>Learners engage in mentoring and collaborative learning. Automated responses to learner queries. Instructor participates in discussions and chats. Instructor feedback is more than a grade. Instructor and learner have one-on one interactions.</p>
Learner Context	<p>Learner makes choices about course context. Models, examples, or schemas are provided. Readings, video, news media, artifacts, and guest speakers come from real world. Quizzes, concept mapping, and debates apply factual knowledge. Prerequisite knowledge or skills are identified.</p>
Engaged Learner	<p>Learners are given choices about how they complete assignments. Explicit goals, objectives, and standards (syllabus). Auditory, visual, graphic, and text are used to convey information. Learners are given choices about what they study.</p>
Student Ownership	<p>Learners keep reading logs and content summaries, and discuss course content. Student work is placed in public places for review. Course calendar specifies timelines and deadlines for assignments. Learners are given choices about what and how they study. Learners journal and do self-critiques. Learners identify topics, problems, and cases and make informed judgments.</p>
Technology	<p>Private e-mail can be used within system or through Internet. Instructor provides protocols and conventions for communication. 24/7 access and support is provided. Simulations (virtual or role-play) are interactive. Discussions are threaded and archived. Audio options are provided. Chats are archived and accessible to all. Video enhances content. Independent or guided WebQuests are public and accessible. Users can bookmark. Journal is provided. A group project area is provided. Accessible grade book is provided. Portfolio area is provided. Asynchronous interactions are threaded and coherent.</p>

	Learning objects are used to illustrate, demonstrate, and simulate.
Design	<p>Site organization illustrates scope and sequence of the course.</p> <p>Navigation system represents course elements (communication, content, and structure).</p> <p>User makes choices about sequence.</p> <p>Interface identifies user location in site.</p> <p>Site provides multiple supports and options for learners.</p> <p>Menu and icons mean what they represent.</p> <p>System provides prompts to user errors.</p> <p>Discussion Boards and e-mail are used to communicate for specific purposes.</p> <p>Content offered in different formats: video, audio, texts, or graphic.</p> <p>Site design is organized as a learning environment.</p> <p>Activities, tasks, and assignments have criteria for performance or completion.</p> <p>Design is ADA compliant.</p>
Learning Activities	<p>Opportunities for peer coaching and mentoring are provided.</p> <p>Learners work on group projects.</p> <p>Learners collaborate and cooperate.</p> <p>Learners engage in simulation, virtual field trips, and role-playing.</p> <p>There is open access to the Gradebook.</p>
Teaching Practices	<p>Discussions are instructor-supported and objective driven.</p> <p>Group work accomplishes an objective and is assessed.</p> <p>Learners make decisions about issues, investigate, and solve problems.</p> <p>Students are given some choices about what to study, how projects are completed, and what a product might look like.</p> <p>Simulations (virtual or role-play) apply real world issues.</p> <p>Timelines, deadlines, and calendar support learning.</p> <p>Discussions engage and extend dialogue.</p> <p>Chats engage learners in purposeful interaction.</p> <p>Independent or guided WebQuests support learner knowledge acquisition.</p>

(McGee, 2003)

Chart 5. Changes in Learner and Instructor Roles

Changing Learners' Roles

- From learners as passive receptacles for hand-me-down knowledge to learners as constructing their own knowledge
 - Learners become adept at complex problem-solving activities rather than just memorizing facts
 - More activities in which learners refine their own questions and search for answers
 - More collaborative and cooperative assignments with learners working as group members; group interaction significantly increased
 - Increased multicultural awareness
 - Independent, self-motivated managers of their own time
 - Discussion of learners' own work in the classroom
 - Emphasis on knowledge use rather than observation of the teacher's expert performance or learning just to pass the test
 - Emphasis on acquiring learning strategies (both individually and collaboratively)
 - Significantly expanded access to resources
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Changing Instructors' Roles

- Instructor role changing from oracle and lecturer to consultant, guide, and resource provider
 - Instructor becomes expert questioner rather than provider of answers
 - Instructor provides structure to student work, encouraging self-direction
 - From a solitary instructor to a member of a learning team (reduces isolation sometimes experienced by instructors)
 - From instructor having total autonomy to activities that can be broadly assessed
 - From total control of the teaching environment to sharing with the participants as fellow learner
 - More emphasis on sensitivity to student's learning styles
 - Instructor-learner hierarchy is over
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(Berge, 2001, p. 12)

Chart 6. Summary of the “Eight Ways to Teaching”

Intelligence	Teaching Activities	Teaching Materials	Instructional Strategies
Linguistic/ verbal	Lectures, discussions, word games, storytelling, choral reading, Journal writing, etc.	Books, tape recorders, typewriters, stamp sets, books on tape, etc.	Read about it, write about it, talk about it, listen to it
Logical/ mathematical	Brain teasers, problem solving, science experiments, mental calculations, number games, critical thinking, etc.	Calculators, math manipulatives, science equipment, math games, etc.	Quantify it, think critically about it, conceptualize it
Spatial/ visual	Visual presentations, art activities, imagination games, mindmapping, metaphors, visualizations, etc.	Graphs, maps, video, LEGO sets, art materials, optical illusions, cameras, picture library, etc.	See it, draw it, visualize it, color it, mindmap it
Bodily/ kinesthetic	Hands-on learning, drama, dance, sports that teach, tactile activities, relaxation, exercises, etc.	Building tools, clay, sports equipment, manipulatives, tactile learning resources, etc.	Build it, act it out, touch it, get a “gut feeling” of it, dance it, tap it
Musical/ rhythmic	Super-learning, rapping, songs that teach, etc.	Tape recorders, tape collections, musical instruments, etc.	Sing it, rap it, listen to it, tap it
Interpersonal/ social	Cooperative learning, peer tutoring, community involvement, social gatherings, simulations, etc.	Board games, party supplies, props for role plays, etc.	Teach it, collaborate on it, interact with respect to it
Intrapersonal/ reflective	Individualized instruction, independent study, options in courses of study, self-esteem building, etc.	Self-checking materials, journals, materials for projects, etc.	Connect it to your personal life, make choices with regard to it
Naturalist			

From *Multiple intelligences in the classroom* by T. Armstrong, 1994, Alexandria, VA: Association for Supervision and Curriculum Development, 52.

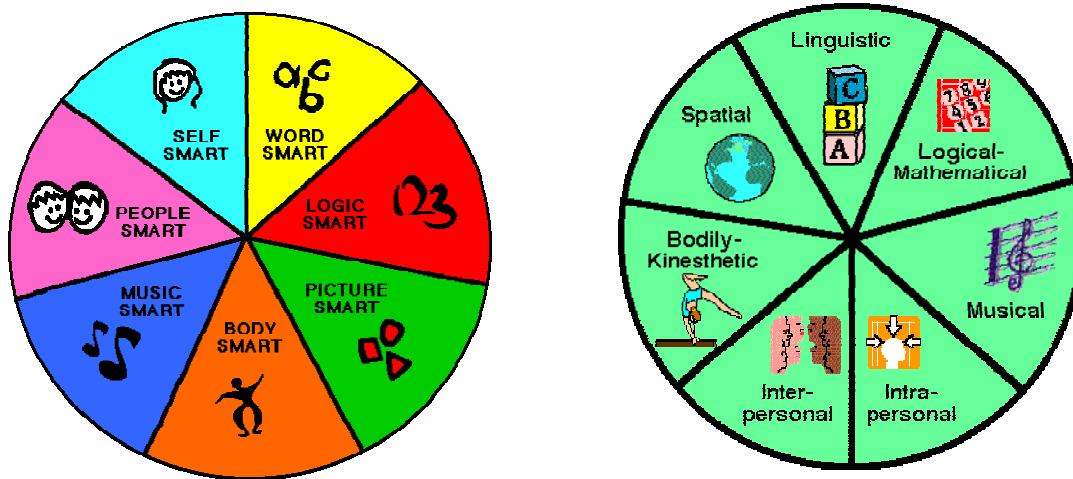
Chart 7. Seven Myths and Realities Concerning MI Theory

Myths	Realities
Myth 1. Now that eight intelligences have been identified, one can create seven tests and secure seven scores.	Reality 1. MI theory represents a critique of “psychometrics-as-usual.” A battery of MI tests is inconsistent with the major tenets of the theory. Comment. Intelligences should be assessed in ways that examine the intelligence directly rather than through the lens of linguistic or logical intelligence (as ordinary paper-and-pencil tests do).
Myth 2. An intelligence is the same as a domain or a discipline.	Reality 2. An intelligence is a new kind of construct, and it should not be confused with a domain or a discipline. Comment. An intelligence is a biological and psychological potential that is capable of being realized to a greater or lesser extent as a consequence of the experiential, cultural, and motivational factors that affect a person.
Myth 3. An intelligence is the same as a “learning style,” a “cognitive style,” or a “working style.”	Reality 3. The concept of style designates a general approach that an individual can apply equally to every conceivable content. In contrast, an intelligence is a capacity, with its component processes, that is geared to a specific content in the world (such as musical sounds or spatial patterns). Comment. There is little authority for assuming that an individual who evinces a style in one milieu or with one content will necessarily do so with other diverse contents.
Myth 4. MI theory is not empirical.	Reality 4. MI theory is based wholly on empirical evidence and can be revised on the basis of new empirical findings. Comment. MI theory is constantly being reconceptualized in terms of new findings from the laboratory and from the field.
Myth 5. MI theory is incompatible with g (general intelligence), with hereditarian accounts, or with environmental accounts of the nature and causes of intelligence.	Reality 5. MI theory questions the explanatory power of these accounts. Comment. MI theory centers on those intelligences and intellectual processes that are not governed by g and rejects the “inherited versus learned” dichotomy by stressing the interaction, from the moment of conception, between genetic and environmental factors.
Myth 6. MI theory so broadens the notion of intelligence that it includes all psychological constructs and thus vitiates the usefulness of the term.	Reality 6. MI theory holds that intelligence is more than simply a certain set of “talents” in the linguistic and/or logical-mathematical spheres. Comment. MI theory holds that there are a number of semi-independent intelligences rather than a single “bell curve” of intellect.
Myth 7. There are several other intelligences.	Reality 7. Howard Gardner is working on it. Comment. MI theory has added an eighth intelligence—the intelligence of the naturalist. (Gardner, 1995)

Chart 8. Eight Ways of Learning

Students who are highly:	Think	Love	Need
<u>Linguistic</u>	in words	reading, writing, telling stories, playing word games	books, tapes, writing tools, paper, diaries, dialogue, discussion, debate, stories
<u>Logical-Mathematical</u>	by reasoning	experimenting, questioning, figuring out logical puzzles, calculating	materials to experiment with, science materials, manipulatives, trips to the planetarium and science museum
<u>Spatial</u>	in images and pictures	designing, drawing, visualizing, doodling	art, LEGOs, video, movies, slides, imagination games, mazes, puzzles, illustrated books, trips to art museums
<u>Bodily-Kinesthetic</u>	through somatic sensations	dancing, running, jumping, building, touching, gesturing	role play, drama, movement, things to build, sports and physical games, tactile experiences, hands-on learning
<u>Musical</u>	via rhythms and melodies	singing, whistling, humming, tapping feet and hands, listening	sing-along time, trips to concerts, music playing at home and school, musical instruments
<u>Interpersonal</u>	by bouncing ideas off other people	leading, organizing, relating, manipulating, mediating, partying	friends, group games, social gatherings, community events, clubs, mentors/apprenticeships
<u>Intrapersonal</u>	in relation to their needs, feelings, and goals	setting goals, meditating, dreaming, planning, reflecting	secret places, time alone, self-paced projects, choices
<u>Naturalist</u>	through nature and natural forms	playing with pets, gardening, investigating nature, raising animals, caring for planet earth	access to nature, opportunities for interacting with animals, tools for investigating nature (e.g., magnifying glass, binoculars)

Chart 9. Multiple Intelligences Wheels



<http://images.google.com/imgres?imgurl=http://www.mcmel.org/erica.mi/GardnersPieChart7int.gif&imgrefurl=http://www.mcmel.org/erica.mi/mainpage.html&h=367&w=367&sz=12&tbnid=7Bu7skeIrfcJ:&tbnh=118&tbnw=118&start=1&prev=/images%3Fq%3Dmultiple%2Bintelligences%2Bchart%26hl%3Den%26lr%3D%26ie%3DUTF-8%26sa%3DG>

Chart 10. The Seven Laws of the Learner

SEVEN LAWS OF A LEARNER	
1. The Law of the Learner	Teachers are responsible to cause students to learn.
2. The Law of Expectation	Expect the best from your students
3. The Law of Application	The purpose of content is lifechange.
4. The Law of Retention	The art of how to teach the student the most information in the shortest time with the least effort and the greatest retention. Use signs, posters
5. The Law of Need	If your class isn't motivated, perhaps the reason is that you did not have a worn on the hook. Seize attention. Stir Curiosity. Stimulate felt need. Surface real need. Satisfy real need.
6. The Law of Equipping	Equipping is best evaluated by what the student does after class and should impact both character and conduct.
7. The Law of Revival	Teaching impacts is directed to the emotions and the will.

Chart 11. Seven Laws of the Teacher

Seven Laws of the Teacher	
1. The Law of the Teacher	The teacher must know that which he would teach.
2. The Law of Education	The true function of the teacher is to create the most favorable conditions for self-learning.
3. The Law of Activity	Knowledge cannot be passed like a material substance from one mind to another, for thoughts are not objects. Ideas must be rethought; experience must be re-experienced.
4. The Law of Communication	It is the teacher's mission by sympathy, by example, and by every means of influence—by objects for the senses, by facts for the intelligence—to excite the mind of the pupils, to stimulate their thoughts.
5. The Law of the Heart	Teaching that impacts is not head to head, but heart to heart.
6. The Law of Encouragement	Motivation unlocks the mind.
7. The Law of Readiness	The teaching-learning process will be most effective when both student and teacher are adequately prepared thru pre-session work.

Chart 12. Memorization Techniques

Memorization Techniques	
1. Outline	8. Make connections
2. Underline	9. Alliteration
3. Summarize	10. Graphics
4. Reorganize	11. Objects
5. Read aloud	12. Jokes
6. Regive the lecture to someone	13. Mnemonics
7. Develop questions and study with others	14. Acrostic

Chart 13. PowerLearning for Adult Students

Adult PowerLearning Applications	
1	Implement contact between students and faculty through weekly emails, phone calls, potlucks, having meals together, sports, games, and other team-building activities.
2	Implement interaction and cooperation among students through discussion, group projects, peer-review, group study, pair-and-share, and presentations.
3	Implement active learning methodologies: project-based, inquiry-based, real-life, case-studies, discussion, experiments, mentoring, interviews with experts, charts, research papers.
4	Implement high expectations through incorporating real-life situations and problems, peer review, exhibiting samples of exemplary work. Allow students to customize their assignments to deal with ministry situations that they are currently facing.
5	Implement prompt feedback through emailing reactions to papers and returning work by the next session
6	Implement time on task. Time + focus = learning. Students should expect to spend at least five hours each week for 14 weeks on their studies.
7	Implement choice and multiple ways of learning. Allow students to utilize their diverse learning strengths in doing their assignments—as well as strengthening their areas of weakness.
8	Accommodate verbal/linguistic learners through stories, providing notes, reading and discussing books and articles, acrostics, case studies, short essays, research papers, jokes, analogies, illustrations.
9	Accommodate logical/mathematical learners through spreadsheets, experiments, classifying and organizing information, problem-solving, flow charts, outlines, formulas.
10	Accommodate visual/spatial learners through PowerPoint, photos, detailed graphics, charts, flow charts, maps, graphical organizers, visual puns, visual analogies, mind-mapping, diagrams, streaming video, videos, photo essays.
11	Accommodate musical/rhythmic learners through playing and composing worship, hymns, poems, rap that relates to the subject matter.
12	Accommodate bodily/kinesthetic learners through hands-on manipulation of objects, typing, note taking, video-games, drama, skits, fieldtrips, choreography,
13	Accommodate interpersonal/social learners through small group discussion, role play case studies, role reversal, consensus building, multiple perspectives, conflict management, motivation, team-building.
14	Accommodate intrapersonal/reflective learners through reflection, meditation, role play, personality and assessment surveys, discussing feelings, metacognitive activities, dramatic videos.
15	Accommodate naturalist/outdoor learners through trips to zoos, museums, parks, farms, deserts, mountains, oceans, camping trips, hiking, retreats, meeting outdoors, nature photos, churches
16	Incorporate community building through discussion, small group projects, peer review, sharing testimonies and brief autobiographies, writing a resume, going on a hike or retreat.
17	Incorporate faculty initiated contact through emailing weekly encouraging announcements, responding to reflection paper questions and concerns, and proactively contacting students who miss a session.
18	Incorporate worldwide technologies such as email attachments, Internet research, PowerPoint, search engines, external links to resources.
19	Incorporate scaffolding/structure through FAQs and rubrics, samples of exemplary work, guidelines, intermediate deadlines, tutorials, and standardized syllabi.
20	Incorporate good workload through explaining in syllabus each assignment's connection with learning how to learn, communicate, and collaboration in ministry and the workplace.
21	Incorporate encouragement and enthusiasm in each lesson through opening remarks, storytelling, illustrations, humor and jokes, sharing personal autobiographical stories, sharing funny stories, video clips, emoticons, comic strips, music, and rewards for work well done.

Chart 14. How We Learn

How We Learn

10% of what we **READ**

20% of what we **HEAR**

30% of what we **SEE**

50% of what we **SEE** and **HEAR**

70% of what is **DISCUSSED** with **OTHERS**

80% of what is **EXPERIENCED PERSONALLY**

95% of what we **TEACH TO SOMEONE ELSE**

William Glasser

<http://members.shaw.ca/priscillatheroux/Glasser.htm>

Cone of Learning*

How much we retain varies with how we learn

After 2 weeks, we remember ...

10% of what we read	Reading
20% of what we hear	Hearing words
30% of what we see	Looking at pictures
50% of what we hear and see	Watching a movie/show Watching a demonstration
70% of what we say	Seeing a thing done on location Participating in a live discussion
90% of what we say and do	Giving a talk, teaching someone else Simulating the real experience, modeling Doing the real thing; participating in activities

*Based on the work of Edgar Dale