

ABSTRACT

*The idea of a generalized "intelligence quotient" has been challenged by scholars, including Howard Gardner of Harvard University. His book, *Frames of Mind: The Theory of Multiple Intelligences*, proposes seven different kinds of intelligence, defining intelligence as a set of skills for problem solving and for identifying or creating problems. The seven he identifies and describes are: musical, linguistic, logical-mathematical, spatial, bodily-kinesthetic, interpersonal and intrapersonal. The concept has had considerable impact on the education of children, but very little on the training of adults. The following is a training design based on Gardner's theory and intended to equip trainers to incorporate an understanding of multiple ways of processing information into their own training designs.*

Different Kinds of Smart: Multiple Intelligences and the Training of Adults A Training Design

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Title of Workshop: Different Kinds of Smart: Multiple Intelligences and the Training of Adults

Group Type and Size: The workshop is intended as a "train-the-trainer" event. It is especially appropriate for those who design and present training for adult or mixed-age volunteers and for those who train staff-volunteer teams. The design is adaptable to almost any size group from about 10 persons to 50 or more, assuming the room and acoustics can accommodate the group.

Learning Objectives: Objectives include acquainting participants with the theory of multiple intelligences, exploring its applicability to the training of adults, experiencing and analyzing some training techniques engaging those intelligences, and exploring ways to use these techniques in designing and conducting training.

Time Required: The design is for a 90-minute workshop. Presenting it in a

shorter time would be difficult. A two-hour workshop could include more complete presentations of the group projects that conclude the training.

Materials: Handouts (see Appendices), easel, flipchart, markers, overhead projector, masking tape, tape recorder/player, a small bell or whistle, and two audiotapes one of nature sounds, such as seashore or ocean and one of quiet instrumental Christmas music, such as George Winston on piano.

Physical Setting: The room needs to be large enough to leave space between working groups of about five persons. Set up chairs theater style; but chairs should be movable. Because the working groups can get fairly noisy, it is ideal to have solid walls separating the workshop from adjacent training areas.

Process:

Step One (10 minutes): As participants enter the room, they are handed copies of the opening exercise, (Appendix A). Each

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person is asked to enter into the activity immediately. After 10 minutes, the trainer sounds the whistle or rings the bell and asks participants to be seated.

Step Two (20 minutes): Participants are given two handouts, (Appendices B and C). The trainer presents the following brief lecture, referring to the handouts as indicated:

"For centuries, people characterized others as smart, intelligent, bright—or dumb, slow, stupid—without any real standards or measurements to support their judgments. Then, in the early 1900s, the psychometric approach was developed, based on the assumption that human intelligence could be measured. A Frenchman, Alfred Binet, led the way and developed what became an almost universal instrument in Western cultures. Virtually everyone with any formal education knew his or her intelligence quotient, or IQ, as measured by one form or another of the IQ test.

"In recent decades, IQ tests have been questioned and criticized, mostly for possible cultural bias. But Howard Gardner, professor at Harvard University, went deeper in his critique, postulating that we possess not one intelligence but several, only two of which are measured by standard intelligence tests."

Gardner characterizes an intelligence as a set of innate skills for problem solving and for identifying or creating problems. An intelligence: *(This list is shown by overhead projection.)*

- Emerges early
- Can be isolated by brain damage
- Has a history
- Is susceptible to being coded in a symbol system
- Can be characterized as "know how"

"With those criteria, Gardner identified seven distinct intelligences, with no claim that the list is exhaustive. He has since postulated two more. The seven are: (Pro-

ject handout as shown in Appendix B.)
"Let's look at each intelligence."

Linguistic: Do you see yourself here? Many trainers have high linguistic intelligence. One prodigy in this area was French writer Jean-Paul Sartre. By age five, he would listen intently to his parents' adult guests, and when they left, mimic their words, inflection, cadence and style almost perfectly.

Logical-Mathematical: This, along with linguistic intelligence, is measured by the standard IQ test. Mathematicians in academia tend to have their own "monastic niche." They find patterns, as opposed to pictures and colors, in their environments. They employ long lines of increasingly abstract reasoning rather than viewing the world in concrete terms.

Spatial: We tend to think of this method of processing as visual-spatial, but children blind from birth can possess this intelligence to a remarkable degree. They perceive the physical world accurately and can manipulate it in their minds.

Musical: No words are involved in the processing and composing of music. To utilize this intelligence is to think in musical sequences. It is the easiest intelligence to identify, even in infants. A musical prodigy will repeat complex melodies after hearing them just once, and compose complex musical works before he or she can read words.

Bodily-Kinesthetic: Mimes, athletes and actors have high bodily-kinesthetic intelligence. So do many computer whiz kids who dislike school but can take a watch or a telephone apart and reassemble it with ease. This intelligence is often denigrated in some cultures but is highly regarded in others with traditions of dance and precise ceremony.

Interpersonal: If you have high interpersonal intelligence, you probably enjoyed the opening exercise. You tend to be a

leader, and are bored if alone for too long. Odds are, you don't like to eat alone.

Intrapersonal: If this is a highly developed area for you, you're probably self-aware, self-disciplined, and know your own body well. You probably enjoy or would enjoy distance learning, a concept many people who are strong in the interpersonal area find unappealing.

"Now, take the paper from the opening exercise, and match the activity to the intelligence: *(In order—musical, bodily-kinesthetic, linguistic, spatial, intrapersonal, logical-mathematical, interpersonal.)*

"Everyone, unless he or she has suffered brain damage, possesses all of these intelligences, but not to equal degrees. We generally have a couple that are strongest, with a third we can use with a fair amount of ease. None is mutually exclusive, although either intra- or interpersonal intelligence will be much stronger than its counterpart.

"This is a fascinating theory, but how can we use it? Children's educators are well aware of the usefulness of the concepts. But those of us who teach and train adults have been pretty much unaware of multiple intelligences.

"Now that we know just enough about the theory to be dangerous, let's try applying it to a training design. Before we take a very brief break, I'm going to divide you into groups of five. *(Trainer indicates who is in what group and where they should assemble).* Put your group's chairs in a circle, and then take two or three minutes to stretch and get a drink. *(Trainer places five copies of the handout labeled Appendix D on a chair in each group circle, and uses a bell or whistle to call participants back.)*

"Once I finish the instructions, would one person in each group please read the assignment aloud, and another person agree to record what the group does?

"Your earlier handouts, both the longer one we went over together and the shorter condensed version, can help you as you work. I'll let you know when your time is half over and when you have five minutes

left. You may begin."

(Trainer puts tape of nature sounds in tape player and turns it on so that it is audible throughout the room, but not overwhelming. After 10 minutes, the trainer substitutes the tape of Christmas music, restarts the tape player, and announces that there are 10 minutes left. At the proper time, the trainer announces there are five minutes left, and then calls the groups back with a bell or whistle when the 20 minutes have elapsed.)

Participants work in groups, asking questions of the trainer as necessary. Meanwhile, the trainer writes the names of the seven intelligences, one per page, on the flip chart in this order: musical, spatial, bodily-kinesthetic, intrapersonal, interpersonal, logical-mathematical, linguistic.

Step Three: (20 minutes) Trainer asks,

"Before we look at how your training design uses musical intelligence, let me ask you if you've been hearing any music." *(Typical responses: I blocked it out. It drove me nuts. I started daydreaming about the beach. I was soothed and focused by it. I was distracted. I kept trying to remember the names of the Christmas carols. Why were you playing Christmas music?)* You've just had a good demonstration of people using different intelligences to respond to an element in the training plan. Now, how does your training design utilize musical intelligence?" *(Record rapid-fire responses. Tear off page and have someone tape it to the wall. Proceed through the intelligences quickly, about three minutes for each one, but spending more time at the start of the list as these are the ones trainers usually ignore.)*

Step Four: (10 minutes) Trainer says:

"Now, if you're going to make use of insights and ideas, you'll need to do something about them as soon as you get home. Take a few minutes to write out an action plan—what you intend to do by what date and then break it down into steps. The first step should be done within the next two weeks. When you complete your plan, I'm going to ask you to

share it with one other person. That makes it a contract. Take just two or three minutes to jot down your plan. (*Trainer uses the bell or whistle after three minutes.*)

"Please turn to a neighbor, exchange outlines, and spend a minute or two explaining them." (*Trainer indicates when time is up, and thanks the group for participating fully and freely, assuming they did.*)

Variations: With a two-hour workshop rather than a 90-minute session, participants in each group of five could be asked to demonstrate part of their training design rather than just describing it rapidly.

APPENDIX A

Human Intelligence Hunt

Move around the room and find persons who can do the following things. For each item, find a different person. They must demonstrate the ability for you and then initial your paper.

1. ___ Whistle a few notes from "She'll Be Comin' Round the Mountain."
2. ___ Hop on one foot in a circle.
3. ___ Recite at least four lines from a poem that is not set to music.
4. ___ Draw a simple diagram explaining how an electric motor works.
5. ___ Briefly describe a dream you've had in the last two weeks.
6. ___ Complete this number sequence: 36, 42, 30, 36, 24, _____ and explain your logic.
7. ___ Can honestly say that you enjoy this kind of exercise.

APPENDIX B

Different Kinds of Smart: Multiple Intelligences and the Training of Adults WHERE DO YOUR STRENGTHS LIE?

Linguistic:

Enjoy reading and being read to.
Speak well, with good vocabulary and feel for sentence structure.
Fond of word games and story-based computer games.
Like to tell jokes or make up stories.
Got into trouble in school for talking (and sometimes still do in meetings).
Have a good memory for jokes and stories, trivia, and odd words.
Imitate others' inflections, accents and phrasing.
Express anger verbally.

Logical-Mathematical:

Did well in math and science at school.
Do mental computations quickly.
See relationships or patterns in environment.
Are always asking how things work.
Enjoy strategy games; excel at brainteasers.
Are adept with a computer; gravitate to math-based computer games.
Conduct little experiments: "What will happen if I do this?"

Spatial:

Think in visual images, which are sometimes difficult to put into words.
Understand charts, maps and diagrams readily.
Like to doodle.
Enjoy art activities, visual memory games and drawing games.
Good at puzzles and mazes, and building models.
Like illustrated books and pictures with hidden images.
Learn well when material is presented visually.
Good at finding way around, even without written directions.

Musical:

Like to sing or listen to music.
Have a good memory for melodies and lyrics.
Can tell when something is off key.
Sensitive to environmental noises—rain, wind, bird songs, traffic noises.
Tap rhythmically or hum while working.

APPENDIX B cont'd

Bodily-Kinesthetic:

Excel at sports; enjoy physical activity.

Find it hard to sit still.

Tend to touch new objects.

Have good coordination; move gracefully.

Naturally mimic others' facial expressions or physical mannerisms.

Gesture while speaking.

Learn well through hands-on activities.

Have good fine-motor skills (needlework, putting small objects together)

Express anger physically.

Interpersonal:

Enjoy being with friends; like to talk on the phone.

Have a good sense of humor.

Adapt behavior easily to different environments.

Are a natural leader.

Sensitive to others' moods and feelings.

Belong to clubs, other organizations, and networks.

Do well in group projects.

Are often bored if alone for very long.

Intrapersonal:

Prefer to work alone.

Are strong willed.

Have a realistic sense of own strengths and weaknesses.

Are not unduly influenced by peers' opinions.

Express own thoughts and opinions well, sometimes after silent reflection.

Have a highly developed sense of personal morality.

Like solitary pastimes and non-team sports (running, swimming).

Keep a diary or journal.

Express interest in important life issues such as meaning of life, existence of afterlife.

Tend to withdraw when angry or hurt.

Assembled/compiled by Nancy A. Gaston, CVA

Based on the book, *Frames of Mind: The Theory of Multiple Intelligences* by Howard Gardner (Harper/Collins, 1993).

APPENDIX C

Seven Ways of Learning (Also Referred to as Multiple Intelligences)

Word Smart* (Linguistic)

Read about it, write about it, talk about it, listen to it.**

Learn through: verbal presentations, large/small group discussions, books, worksheets, writing activities, word games, research, reports, storytelling, research, publishing newsletter, using computer (word processing), journal writing, choral reading, debates.

Number Smart (Logical-Mathematical)

Quantify it, conceptualize it, think critically about it.

Learn through: classifying or categorizing subject matter, logical puzzles or games, creating codes, scientific demonstrations, problem solving, Socratic questioning.

Picture Smart (Spatial)

See it, draw it, color it, mind-map it, symbolize it.

Learn through: charts, graphs, maps, diagrams, photography, slides, visual puzzles, painting, drawing, collage, montage, art prints, illustrating, graphic symbols, video.

Body Smart (Bodily-Kinesthetic)

Act it out, dance it, build it, touch it.

Learn through: drama, puppets, mime, movement, signing, crafts, role playing, competitive and cooperative games, hands-on activities, building projects, physical expression.

Music Smart (Musical)

Sing it, rap it, play it, listen to it.

Learn through: singing, humming, playing musical instruments, rhythms, creating songs, listening to recordings, background music, rhythmic recitation.

People Smart (Interpersonal)

Teach it, discuss it, collaborate on it, interact with respect to it.

Learn through: cooperative group activity, board games, peer coaching, simulations, conflict mediation, interaction, brainstorming, group planning, conversation.

Self Smart (Intrapersonal)

Think about it, connect it to one's personal life, make choices regarding it.

Learn through: independent study, self-paced instruction, individualized projects and games, journal keeping, self-esteem activities, personal goal setting, personal action plan.

*This way of describing the intelligences is from Carol Wehrheim in *Course One, Friends and Family in Faith*, of the Faith for Life Curriculum published by the LOGOS System Associates.

**The descriptions are from *Multiple Intelligences in the Classroom* by Thomas Armstrong, published in 1994 by the Association for Supervision and Curriculum Development.

APPENDIX D

Different Kinds of Smart: Multiple Intelligences and the Training of Adults

Challenge: You are designing a training for persons (individuals, couples, and some families, including children) to prepare them to take pets into a day care center for older adults. Two 2-hour sessions one week apart is the prescribed format.

They need to know:

- 1) The purpose of the program: To stimulate, engage and provide touch experiences for the center clients.
- 2) Some basic rules:
 - Get permission of client before bringing him or her into contact with pet.
 - Ask the client for his/her name, and share your name.
 - Get on eye level with clients to speak with them.
 - Do not try to help client stand or walk. This requires special training.
 - Keep pet under control at all times.
- 3) Some understanding of the physical, mental and psychological challenges faced by some clients: Visual impairment, hearing impairment, mobility impairment, dementia.
- 4) Directions to the day care center—where to park, how to introduce oneself to staff, what door to enter, where to go once inside.
- 5) How to report back on the results of the visit or visits.

A SELECT BIBLIOGRAPHY ON MULTIPLE INTELLIGENCES

Books by Howard Gardner

The Arts and Human Development. New York: BasicBooks, 1973.

Creating Minds: An Anatomy of Creativity. New York: BasicBooks, 1993.

Frames of Mind: The Theory of Multiple Intelligences. New York: BasicBooks, 1993. (Tenth Anniversary Edition)

Leading Minds: An Anatomy of Leadership. New York: BasicBooks, 1996.

The Unschooled Mind. New York: BasicBooks, 1991.

Books about Multiple Intelligences by other Authors

Armstrong, Thomas. *Multiple Intelligences in the Classroom.* Alexandria, Virginia: Association for Supervision and Curriculum, 1994.

Armstrong, Thomas. *In Their Own Way.* New York: G.P. Putnam's Sons, 1987.

Campbell, Linda; Campbell, Bruce; and Dickinson, Dee. *Teaching and Learning Through Multiple Intelligences.* Needham Heights, Massachusetts: Allyn and Bacon, 1996.

Forte, Imogene and Schurr, Sandra. *Curriculum and Project Planner for Integrating Learning Styles, Thinking Skills, and Authentic Instruction.* Nashville, Tennessee: Incentive Publications, 1996.

Lazear, David. *Seven Pathways of Learning.* Tucson, Arizona: Zephyr Press, 1994.

Zephyr Press (502-322-5090) has a catalog of books on multiple intelligences.