

THE WAY WE LEARN

Intelligence can be defined as “the ability to perceive, assimilate, process and apply information in a given environment”--how quickly we are able to take in and process information. It also includes the ability to solve a problem and discover new solutions within a certain media. Think of your SAT or ACT tests that you may have taken back in High School. What did those tests measure? Simply your verbal and mathematical intelligence. Certainly, because the world that God created consists of much more than words and mathematical calculations, doesn't it make sense that we need and possess more types of intelligence than what is normally expressed and measured in school? Intelligence depends on the context, the tasks and demands of life much more than an IQ score or college degree.

When God placed man in the world he was told to rule over the creation--all of it, not just the world of words and numbers. To rule over creation requires many kinds of intelligence.

Over the past fifteen years, Harvard psychologist, Howard Gardner, in his “Project Zero” has developed the theory of multiple intelligences. He suggests that there are at least seven different ways of perceiving, processing and applying information. These intelligences are elaborated on in *Seven Kinds of Smart*, by Thomas Armstrong (Penguin Books, 1993). The intelligences are as follows:

1. Linguistic intelligence--Word Smart. People who are linguistically intelligent are great with words. They assimilate and process the world of language. They can argue, persuade, verbally entertain or instruct effectively through the spoken word. It is the intelligence of poets, lawyers, writers and journalists. Theirs is a world of words.
2. Logical-mathematical intelligence--Number Smart. This is the intelligence of numbers and logic. A person with this type of intelligence is quick in their ability to reason, sequence, think in terms of cause-and-effect, see patterns, etc. This is the

intelligence of the mathematician, computer programmer and accountant. Theirs is a world of numbers and logic.

3. Spatial intelligence--Picture Smart. This intelligence involves thinking in pictures and images. They can visualize vividly and easily think in three dimensions. They assimilate and process information through their eyes. They also have the ability to create concretely or abstractly what they see or imagine. Artists, photographers, architects, pilots and mechanical engineers usually possess this type of intelligence. Theirs is a world of pictures.

4. Musical intelligence--Music Smart. This is the capacity to perceive, appreciate and produce rhythms and melodies. A person with perfect pitch, for instance can hear any note and name it just as you or I could recognize the letter “L.” Theirs is a world of sounds, music, tunes and melodies.

5. Bodily-kinesthetic intelligence--Body Smart... is the control over the physical self. It is getting their bodies to do exactly what they want them to do. It includes controlling body movement as well as handling objects skillfully. They can see an action and duplicate it. Athletes, craftsmen, dancers, mechanics and skillful surgeons possess this type of knowledge. Theirs is a world for their bodies and hands to conquer.

6. Interpersonal intelligence--People Smart. Being people smart or street smart is the ability to understand and work with other people. In particular, it requires a capacity to perceive and be responsive to the moods, temperaments, intentions and desires of others. It is the ability to read people. Salespeople, arbitrators, public relations people and managers rate high in this intelligence. Theirs is a world of relationships.

7. Intrapersonal intelligence--Self Smart. This is the ability to easily access one's feelings and discriminate between many different kinds of inner emotional states. They know themselves. Psychologists, counselors, therapists and entrepreneurs find this intelligence useful. Theirs is a world in touch with inner thoughts and feelings.

Why just these seven types of intelligences? Among other reasons, each intelligence seems to relate to a certain area of the brain. Linguistic intelligence in the left hemisphere. Musical, spatial and interpersonal intelligences tend to be a right-brain function. Motor skill involve the motor cortex and cerebellum. The frontal lobes are important for personal intelligences. Injury to one part of the brain may affect only that one intelligence.

Similarly, you may notice that some people are very intelligent in some areas but not in others. Picasso couldn't memorize the alphabet. Einstein had trouble tying his shoes. On the other hand, history has produced people who were highly intelligent in all of these areas. We use the term "Renaissance Man" to describe such people--men like Leonardo daVinci, Benjamin Franklin, Rabs, etc. Combining intelligences produces gifted people. People who are good with music and words are song-writers. Musicians with kinesthetic intelligence become skillful performers.

What are the implications? Picture our great big world (if you have visual intelligence, you could do this quickly). Intelligence is our ability to take in information from this world. What is "out there" has to be processed through one of our intelligences. We may be missing a world of people or hurts, or beauty because we have let an area of intelligence lie dormant. Like all intelligence, these types of intelligence depend on natural ability and refinement of skill. In other words for normal, healthy people each intelligence can be somewhat developed through education and experience. We may never be protégés but we can develop our intelligence in each of these areas. If you have ever taken an art or music appreciation course or even a photography or public speaking course, you have opened yourself up to a brand new world.

Here's a spiritual implication. Each intelligence may be a gate through which God wants to communicate to us and through which we worship God. Is this some new age teaching? Are we abandoning the Bible? Of course not. For instance, God says that

we learn wisdom from the Word (Psalm 19:7)--for the verbal learner, from observing life (Proverbs 6:6-8, 24:32)--for the visual learner, through people (Proverbs 13:20)--for the relational learner, through conscience (Romans 1:19, 2:15)--for the Intrapersonal learner, etc. How about worship? We leave room for the person who can pray eloquently (verbal) or sing choruses of praise (musical) but does that imply that they are more spiritual or walk closer with God than those with other intelligences? Can people worship God through their intelligences? Think of how students respond to a conference. What was it each liked best? "The messages" (verbal), "the singing and music" (musical), "the apologetic seminar" (math-logical) "the small groups" (interpersonal), "being in God's creation" (visual). Each person processed the conference through his or her intelligences. Walking with God is not limited to those with verbal intelligence. They simply have the ability to express what others may feel and experience.

How we learn

Learning (and learning disability) has to do with how we take in and process information. The ability to learn is the most important skill we can acquire. David A. Kolb developed what he called his "Learning Style Inventory." We learn in four different ways. Through:

1. Concrete experience (CE)--Learning from feelings
Learn best from experiences
Learn by interacting with people
Learn best from peer group
Are sensitive to feelings and people
2. Reflective Observation (RO)--Learning by watching and listening
Careful observation before making judgments
Views issues from different perspectives
Looking for the meaning of things
Learn by reading or listening to tapes
3. Abstract conceptualization (AC)--Learning

by thinking

Logically analyzes ideas

Systematic planners

Acting on an intellectual understanding of a situation

They learn best from experts or systematic research

4. Active experimentation (AE)--Learning by doing

Have the ability to get things done

Risk takers

Influences people and events through action

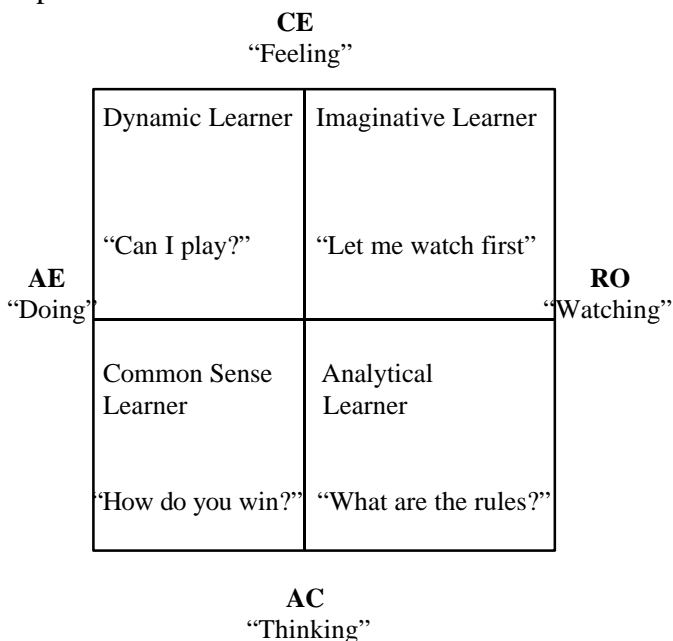
They dislike fuzzy ideas, groupwork and unclear deadlines. They like to get to the point.

Analytical Learners

Analytical learners perceive information abstractly and processes it reflectively. They are organized, precise, thorough and careful.. They work well independently. They enjoy following directions, defining problems and developing theories. Research, repetition and routine are well-liked. They tend to dislike creative projects, role plays, small talk impracticality and irrelevance.

Learning styles

Each person's learning style is a combination of the above learning modes. The following diagram explains the combinations:



Imaginative Learners

These learners perceive information concretely and process it reflectively. They believe in their own experience and learn by listening and sharing ideas. Understanding people is a real strength. They are team players but enjoy thinking alone first and then with the group. They like cooperative endeavors and dislike debates, lectures, being rushed, rote learning, sterile learning environments and "coverage" at the expense of depth.

Dynamic Learners

Dynamic learners perceive information concretely and process it actively. They are usually enthusiastic, comfortable with others and apt at giving leadership because they like getting things done. They tend to jump right in and bring their creative energies into the mix. They like new things action and accomplishment along with cooperation, self-discovery and group work. They dislike formality, theory, following directions and doing research.

Common Sense Learners

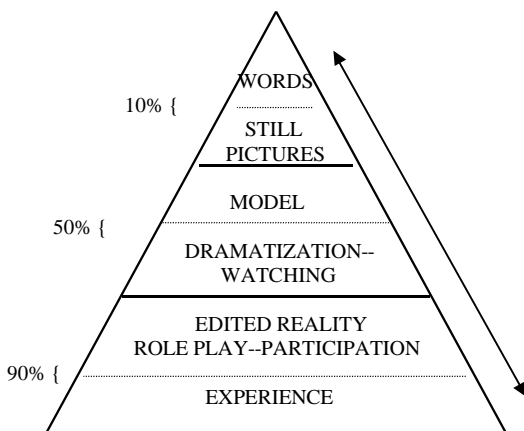
Common sense learners perceive information abstractly and process it actively. These learners integrate theory and practice by being pragmatists. They look for what really works more than theory. They are hard workers and like to be in control of the situation. They value strategic thinking, practical applications and results.

What does all this mean? As teachers and trainers, in every setting (small groups, weekly meeting, etc.) we need to vary our methods of delivery to take advantage of the different intelligences and learning styles.

How people learn

Perhaps the most important component of learning spiritual truth is the condition of our hearts, our receptivity to truth and our willingness to apply what God shows us. Jesus always spoke of learning in the context of obedience, not just knowledge (Luke 6:46-49, 8:21, 11:28, John 14:21, etc.). Jesus said in Luke 8:18 “...*consider carefully how you listen. Whoever has will be given more; whoever does not have, even what he thinks he has will be taken from him.*” Every learning style is overridden by our teachability.

“Cone of Experience” by Edgar Dale



- Conclusion: If the information was given in the six different formats, within six months the percentage retained by the individuals was:
- Hearing (Words, Still Pictures) 10%
- Seeing (Motion picture, Model, Dramatized Role Plays--Watching) 50%
- Doing: (Edited Reality, Experience) 90%

Through research, the ancient Chinese proverb has proven itself true--“*I hear, and I forget. I see, and I remember. I do, and I understand.*”

There are four basic teaching methods that we can tap into during our teaching and training sessions that take advantage of hearing, seeing and doing:

1) Lecture--Jesus often used this method to communicate his ideas. What made them come alive was their connection with real life. He illustrated

with frequent parables, metaphors and similes that took people from the known into the unknown. Our lectures can come alive if we are well-prepared, use visuals and ask questions. Jesus asked sixteen questions in his “Sermon on the Mount.” Questions help people process the information and application.

2) Demonstration-Performance Method. The majority of Jesus’ teaching took place out of doors where he could ask people to “look,” “observe,” and “see” (Matthew 6:26-28). What they saw, they remembered. Taking this a step deeper, Jesus served as a model for his disciples (Luke 6:40). In Luke 11 Jesus was praying, his disciples observed him and asked him to teach them to pray. We too can model, provided video clips, etc. that help people remember and apply what they’ve learned.

3) Group discussion. This method is great for drawing from the insight and experience of many men. It potentially involves everyone. People with different intelligences and learning styles enhance the learning of all of us.

4) Role-playing method. This is “edited reality. To realize its maximum effectiveness as an instructional method, a role-playing session must be carefully planned and conducted. You must determine the objective of the episode, prepare the audience and participants, play the situation and analyze and evaluate what everyone saw.

When have we learned?

Social scientist, Abraham Maslow discovered four levels that help us understand our need for ongoing training:

- Unconscious incompetence--I am ignorant and I don’t know it.
- Conscious incompetence--I now know what I don’t know.
- Conscious competence--I can now do it and am consciously aware of it (like driving a car).
- Unconscious competence--I can now do it without thinking about it.

Our goal in training is to move students from unconscious incompetence to unconscious competence.

Abstract-----Concrete

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