**Learning Styles**

**By Caryn Camp, August 2000**

**Introduction**

What are learning styles?  Taking into account personality traits, environmental preferences, social context, and physiological factors, they are an attempt to describe how one is most comfortable perceiving and processing the world around oneself.  Each person has a unique way of sensing and interpreting new information and experiences, and incorporating it into his/her existing stores of information and experiences.  This unique way may be called the person's *style* of learning.  It is the person's own special point of view.  By looking for patterns in all the factors that affect how people learn, researchers are able to categorize different learning styles.  Because there are so many factors that affect learning, researchers generally choose a type of factor on which to focus.  Some researchers, such as those who developed the Myers-Briggs Type Indicators, focus on the influence of personality traits.  Others, such as Kolb, Gardner, and McCarthy, focus on the influence of how the brain perceives and processes information.  Perry, Belenky, and Grasha & Reichmann focus on the influence of social interaction.  Dunn & Dunn focus on the influence of instructional and environmental preferences.  As a result of the different focuses, there are different models of learning style classification.  Because each model represents only a part of the picture, Curry came up with the analogy of an onion to represent the whole picture.  Curry considers the models that focus on personality traits to be the innermost layer of the onion.  The next layer includes the models that focus on information processing.  The third layer includes the models that focus on social interaction.  The fourth layer includes the models that focus on instruction and

environmental preferences.  The inner layers are inside a person, and the outer layers are outside influences and thus more observable.   There are some common patterns, referred to as modalities, that are evident in all four layers of the onion.  The four main modalities are visual strengths, auditory strengths, tactile strengths, and kinesthetic strengths.  While all modalities are present, generally one or two tend to predominate.  The purpose of finding patterns in learning styles is not to give labels and be defining, but to better understand the variety of ways in which people learn so as to provide educational environments that can be more effective and successful.

**Layer 1:  Personality Models:  Myers-Briggs Type Indicator**

The Myers-Briggs Type Indicator was developed by Isabel Myers in 1962.  This test, which classifies learning styles and temperaments based on psychological traits, was based on the theories of Carl Jung.  (Mamchur, 1996, p. 2).  The eight choices, or psychological preferences, on Myers-Briggs Type Indicator correspond to the categories, functions, and dimensions of human behavior outlined by Jung.  Jung believes that all human behavior can be categorized as either perceiving or judging.  The four functions of sensing, intuition, thinking, and feeling are present in everyone, but Jung theorizes that one function is most dominant and one function is least dominant.  Lastly, Jung believes that the dimensions of introversion versus extroversion affect one's learning style.  Thus, the eight qualities that affect learning are:  perception (P), judgment (J), sensing (S), intuition (N), thinking (T), feeling (F), extraversion (E), and introversion (I).  (Mamchur, p. 2).

The Extroverted Learner likes to think out loud.  "They don't really know what they know until they have the chance to talk it out" (Mamchur, p. 12).  As a doer, this learner

appreciates hands-on activities, cooperative group activities, variety, and feedback.  The teacher respects this learner by providing a place in the classroom for active involvement in projects that can get noisy at times.  The teacher provides opportunities for discussions, presentations, making things, and dramatic plays.

The Introverted Learner likes to think things through before speaking or giving an answer.  This learner is thoughtful, reflective, quiet, and private.  He/she would rather volunteer an answer than be asked to give one.  Being asked an unexpected question is difficult for this learner because a response is required before they've had time to reflect on it.  This learner likes to focus on one thing at a time, and would like to have the opportunity for uninterrupted work.  Having a sense of place, and ownership of that place, is important.  This learner is self-motivated and doesn't appreciate teachers looking over their shoulder.  This learner prefers to learn from observation and reflection before being asked to try something new. (Mamchur, p. 16).  It is important for teachers to consider these learners when designing their classroom.  Having a quiet place in the room for private or small group study is helpful.  It is also respectful of these learners to give them advance warning about questions that may be asked of them.

The Sensing Learner perceives each experience with all of his/her senses.  Being so in tune with one's experiences make it possible for this learner to notice all the details in his/her environment.  This learner dislikes abstract theory.  "They want to see, hear, and touch as they learn." (Mamchur, p. 27).  Because learning is easiest by observation of details, and by "absorbing information through all the senses" (Mamchur, p. 27), this learner prefers to learn one step at a time.  It is helpful for teachers to provide these learners

with observation time followed by hands-on activities, broken into steps, that have practical purposes.

The Intuitive Learner "makes sense of the world by creating patterns and inventing hypotheses" (Mamchur, p. 32). This learner searches for relationship between things. Because this learner likes to come up with his/her own hypotheses and explanations for things, he/she would rather "guess first and be told later" (Mamchur, p. 33). This learner likes to be given the freedom to take risks. It is important for the teacher to respect how easily this learner gets bored, and to provide a variety of opportunities for inventing, guessing, and working "independently beyond the scope of the program" (Mamchur, p. 33). When material needs to be reviewed, which is repetitive and thus boring for this learner, it may be helpful to have this student "test wits" with or teach other peers. (Mamchur, p. 33).

The Thinking Learner likes to step back and "think logically and rationally, honestly and fairly, and, if necessary, critically" (Mamchur, p. 37). This student values and respects honesty, fair play, hard work, competition, and expert knowledge. It is important to this learner that he/she appears confident. "If thinkers are made to feel incompetent in front of others, they may become so distressed that they mentally withdraw from the classroom" (Mamchur, p. 38). The teacher may respect this learner by providing well-organized activities where the cause-and-effect sequence is clear. (Mamchur, p. 38). The teacher also needs to offer lots of opportunities for success, and for competing in healthy ways – such as with oneself rather than with others.

The Feeling Learner takes everything so personally that it can be difficult for him/her to be in the room when there is criticism taking place between two people unrelated to this person. This learner needs harmony in his/her environment, and values respectful

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manners, cooperation, and consensus (Mamchur, p. 42). This learner doesn't like competition because he/she doesn't want anyone to lose. Values are a motivating factor for this learner, and he/she tends to "learn best from an instructor whom (he/she) likes as a person" (Mamchur, p. 42). It is important for the teacher to be genuine, open, honest, and careful to match verbal and nonverbal actions. The teacher needs to avoid sarcasm, and always keep in mind that these learners are "responding in a personal way to everything that happens" (Mamchur, p. 43). It is helpful for this learner when the teacher points out the value in what they're learning in real life.

The Judging Learner has a need to create order, and thus is more concerned with controlling events than understanding them (Mamchur, p. 47). This learner always needs to know what to expect so that he/she can plan. Schedules in advance are very appreciated. This student also wants to finish whatever he/she starts. Closure is important. Work ethic is valued highly, and all assignments are taken seriously. In addition, this learner wants all work to be counted and evaluated. Feedback is important. (Mamchur, p. 47). Teachers can respect these learners by carefully planning and posting the schedule for as far out as possible, and for warning the students ahead of time when and why there will be a change.

The Perceiving Learner appreciates the process a lot more than the finished product. This learner has an intrinsic motivation to explore whatever he/she is curious about. A lot of projects may be started, and few may be finished. When something no longer seems interesting, this learner will drop it and move onto something else that sounds intriguing. This learner does not appreciate a structured schedule as they don't easily stay "on task" or "on time" (Mamchur, p. 53). It is helpful for the teacher to provide as much freedom, flexibility, and spontaneity as possible (Mamchur, p. 53). While this learner is generally

open to a variety of ideas and experiences, he/she resists being pressured to do something. Being pressured may cause this learner to "silently withdraw, give up, or cause a rebellion" (Mamchur, p. 53). In consideration of this learner, the teacher needs to provide lots of opportunities for exploration.

While these eight qualities may be grouped in pairs to elaborate on one's learning style or to more fully describe temperament, sixteen combinations of four qualities each have been identified by Myers to indicate one's cognitive type preferences.

**Layer 2:  Information Processing Models:  McCarthy's 4MAT System:**

The 4MAT System, developed by Bernice McCarthy in the 1970's, is located in the second layer of Curry's onion model.  It classifies learning styles based on different ways that the brain perceives and processes information.  In creating the 4MAT system, McCarthy was influenced primarily by the research of David Kolb, but also by the theories of Carl Jung, Jean Piaget, and John Dewey.  (McCarthy, 1990).  Thus, the 4MAT system is based on research from the fields of education, psychology, and how the brain functions. The purpose of the 4MAT system is to help teachers meet the needs of different learning styles.

In the early 1970's, Kolb determined that how people perceive and process information is what makes up their unique styles of learning.  People perceive the world around them, and then they process their perceptions.  Perception and processing of information each occur on a continuum.  On one end of the perception continuum, experiences are sensed and felt in the here and now.  This is perception through concrete experience.  On the other end, experiences are thought through and abstracted.  On one end

of the processing continuum, people think first and act later.  These people, the watchers, reflect on their observations before they decide how to act.  On the other end, people act first and think later.  These people, the doers, want to actively experiment.  They decide what they think about it after they have tried it out.  When these two continuums are crossed, four quadrants are formed.  Each quadrant represents the place on these two continuums where the learner is most comfortable.  (McCarthy, 1990).

Quadrant One is home to the Type 1 Learner, also referred to as the Imaginative or Innovative Learner.  This learner perceives through concrete experience.  In other words, he/she senses and feels in the here and now.  But when processing information, this learner is very reflective.  These learners need experiences that have personal meaning.  The Type 2 Learner, also known as the Analytic Learner, resides in quadrant two.  This learner thinks through and reasons experiences in abstract ways.  Like the Type 1 Learner, he/she processes information reflectively.  These learners need to understand concepts.  Schools have traditionally been geared toward the learning styles of the Analytic Learner.  The Type 3 Learner, in quadrant three, is referred to as the Common Sense Learner.  This learner thinks through and reasons experiences, and then actively processes his/her perceptions by applying them to real life.  This learner wants to know how things work, and how they are useful in real life.  Finally, The Type 4 Learner of the fourth quadrant is referred to as the Dynamic Learner.  This learner senses and feels experiences in the here and now, and then processes those perceptions actively.  This learner has a need to create.  This learner likes change, and adapts easily.  (McCarthy, 1990; Guild & Garger, 1985; McCarthy, 1997).

Within each quadrant, the two hemispheres of the brain process information differently.  People who use the left hemisphere more than the right hemisphere are referred

to as being *analytic* in their processing of information. People who use the right

hemisphere more are referred to as being *global* in their processing of information.

Research has shown the left mode of the brain to be primarily analytic, sequential, and

verbal. It likes structure, examples, and clear goals. The left mode tends to make decisions

based on common sense or logic. It plans and organizes well. It is detail-oriented (Carbo,

1996). Using this mode of the brain, problems are systematically solved part by part. The

right mode, on the other hand, is global and visual. This mode is able to see patterns and

make connections, and it is able to solve problems by looking at the whole picture. It is

holistic. (McCarthy, 1990). The right mode is less interested in planning, and more

interested in following one's intuition and emotions. It likes spontaneity. It is creative and

inventive. It enjoys open-ended activities.

A goal of the 4MAT System is to engage the *whole* brain. An example would be

using colored pencils or markers when writing. Even though one's language processing

and written expression occurs primarily in the left mode, the visual nature of the right mode

responds to colors. Thus, by writing with colors, both modes of the brain are engaged. In

her effort to engage both modes of the brain in each of the four learning styles, or

quadrants, McCarthy developed an eight step process for teachers. While the learner will

be most comfortable in one quadrant, and with one mode of the brain predominating, it is

also useful for this student to be exposed to teaching strategies focused on the other

quadrants, as well as the non-predominant mode of their brain. Just as it is important for

the learner to be taught according to how one learns best, it is also important to be taught in

other ways so as to stretch a person's potential. The eight steps, then, are divided into two

per quadrant. In each quadrant, there is one step focused on engaging the left mode of the

brain, and one step focused on engaging the right. In this effort, the whole brain will be engaged in the learning process.

**Layer 3: Social Interaction Models: Grasha & Reichmann**

Social Interaction Models, in the third layer of the onion, consider ways in which individuals in specific social contexts will select certain strategies for learning. One model, developed by Grasha and Reichmann, addresses how students interact in the classroom environment among other students and teachers. This social interaction model addresses mainly adults or college students. The Grasha and Reichman model is based on students' responses to actual classroom activities rather than on an assessment approach of personality or cognitive traits. This model focuses on the learning process of a student's interaction with peers and teachers.

The other distinguishing characteristic of the Grasha-Reichmann approach to learning styles is that it has a corresponding typology of teaching styles, similarly based on actual classroom behaviors. Learning and teaching styles are mapped together to describe the social dynamics of the classroom setting.

The Grasha and Reichmann model does not advocate attempting to accommodate all learning style preferences at all times, but instead that teachers have an awareness of learning styles in order to augment their methods of presentation. (Montgomery and Groat, No Date p. 6)

| Style | Characteristics | Classroom preferences |
|---|---|---|
| Competitive | Compete with other students | Teacher-centered, class activities |
| Collaborative | Share ideas with others | Student-led small groups |
| Avoidant | Uninterested, non -participant | Anonymous environment |
| Participant | Eager to participate | Lectures with discussions |
| Dependent | Seek authority figure | Clear instructions, little ambiguity |
| Independent | Think for themselves | Independent study and projects |

**Layer 4: Models Based on Instructional & Environmental Preferences: Dunn & Dunn**

The outermost layer of the onion encompasses the models of learning styles based on Instructional and Environmental Preferences.  These models address an individual's preferences for learning.  These models stress the importance of identifying and addressing individual differences in the learning process.  "However, there are important differences among the models in that some models stress accommodation of individual style preferences while others stress flexibility and adaptation." (Griggs, 1991 p. 1).

The Dunn and Dunn model identifies learning styles as the way that students are affected by their immediate environment, emotions, sociological needs, physical characteristics, and psychological inclinations when processing new or difficult information or skills.

The model traces its roots to two distinct learning theories.  Cognitive Style Theory states that individuals process information differently on the basis of either learned or inherent traits.  Brain Lateralization Theory states that the two halves of the brain have different functions.  The left brain handles verbal-sequential abilities, and the right brain deals with spatial holistic processing. (http://geocities.com/~educationplace/ls.html)

The Dunn & Dunn model identifies five major stimuli to which students respond to learning situations — environmental, emotional, sociological, physical, and psychological. The Dunn and Dunn model identifies conditions external to the learner, rather than factors that affect a person's ability to manipulate information.  These factors affect the external instructional conditions rather than learning strategies internal to the learner. (Whitefield, 1995 p. 1)

The five stimuli are further broken down into 21 elements:

> 1. Environmental preferences incorporate sound, light, temperature, and class design.
> 2. Emotional preferences address motivation, persistence, responsibility, and structure.
> 3. Social preferences include private, pair, peer, team, adult, or a variety thereof.
> 4. Physical preferences relate to perception, intake time, and mobility.
> 5. Psychological preferences include analytic mode, hemisphericity, and action (reflective vs. impulsiveness).
> (O'Connor, http://www-isu.indstate.edu/ctl/styles.learning.html#VIEW)

Not all 21 elements are in use by the individual at all times. Usually an individual has a combination of 14 elements in effect.

Some elements are considered developmental such as those found in the emotional preferences—motivation, persistence, and responsibility. These elements are learned and can change over time with an outgrowth of new experiences.

Other elements such as physical strengths are biological in nature "because of the way people's eyes, ears, nose, skin and bodies," are in general. They can change but usually it is slow and gradual due to a person's maturation— how quickly or how slowly someone physically grows.

**The Modalities**

"Modalities generally refer to the sensory channels through which we receive and give messages"(Guild, Garger, p 62). Learning style modalities have been identified to help us understand the ways in which children and adults learn. The four learning modalities are visual, auditory, tactile, and kinesthetic.

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Visual learners learn best by observation.  Students with a visual preference prefer to actually see what they are learning.  They would rather see the words or instructions written down, or the picture or image of that which is being described.   Visual learners learn best from environmental print, computer graphics, maps, charts, graphs, or just by watching the teacher write down what is being taught on the board.

"Auditory learners use their voices and their ears as the primary mode for learning"(Guild, Garger, p 63).   They learn best by listening, speaking, and following verbal instructions.  Auditory learners can recreate what they have learned from discussions and lectures.  The Dunn and Dunn model has found that the younger children are, the less likely they are to be auditory. (Carbo, Dunn and Dunn, p 13).  Auditory learners enjoy talking, interviewing, participating in group discussions, asking and answering questions, and giving oral reports. (Carbo, p 53)

Children who like to use their hands and fingers while engaged in learning are tactile learners.  They recall better when they are able to doodle, draw, or move their fingers.  Tactile learners learn best by touching and manipulating materials and objects, such as tracing, constructing, building, and designing. (Carbo, p 53)

Children with a kinesthetic preference often learn best when they are involved in a lesson that requires activity.  These children prefer movement and tend to have problems in conventional classrooms that require constant sitting and listening.  They process information better when they can perform or rehearse, play floor games, assemble or disassemble objects, build models, or set up experiments.  (Carbo, p 11) (Carbo, Dunn and Dunn, p 15)

**Applying Learning Styles in the Classroom**

Incorporating a learning style model into the classroom can be as simple as taking into account the four modalities when developing curriculum, or it can be as complex as formally assessing children's learning styles with learning style inventories. The importance of learning style models when applied are that teachers gain an awareness of each child's individuality and that children learn best when they use their own learning style characteristics.

The question for the teacher becomes: To what extent? Does the teacher try to meet the learning style of each student with individualized lessons or does he/she teach to all children keeping in mind all of the styles? One teacher, Geri McCleod, recommends both. Geri does both by designing instruction that touches upon the four modalities and then providing children with choices in work centers.

One of the easiest ways that a teacher can incorporate all of the modalities into the classroom is to integrate art, music, and drama into the subject areas. There has been a lot of research on how the arts, particularly music, improve learning. (Jensen, E., 2000; Brown & Brown, 1997; Visser, D., 1996; Green, F. 1999; Sylwester, R., 1998). Music encompasses all four of the modalities. In addition, "both the right and left hemispheres of the brain are involved in processing music" (Green, F., 1999). Music "reduces mental fatigue, calms tension, focuses thinking, and stimulates creativity and sensitivity…Music also evokes alpha and theta brain wave states, which are conducive to memory and enhanced creativity. Specific selections of music can therefore be used to set the tone for discovery and learning in the classroom." (Brown & Brown, 1997). Most of all, music and drama are fun!

**Criticisms of Learning Styles**

Criticisms of learning styles tend to fall into two main areas: 1) confusion of definitions and 2) accuracy and reliability of measurements.

Lynn Curry-Swann, who first organized learning styles into the levels of the Onion model, writes: "like the blind men in the fable about the elephant, learning style researchers tend to investigate only a part of the whole thus have yet to provide a definitive picture of the matter before them." ( p. 1, 1990). The very definition of learning styles can be confusing since researchers use it to mean different things based on what layer of the onion their model is focusing. Even the term modalities causes some confusion. Some people think of the modalities as the actual learning styles rather than as the sensory channels by which one gives and receives information. According to the American Heritage Dictionary, modalities are "the persistence of a general pattern among individuals" (Morris, 1979, p. 843). It is true that, when looking for patterns in learning styles, the four modalities become very clear. Because learning styles are generally named by researchers, and the modalities are physiological processes of the brain, modalities affect learning styles but aren't named by researchers as learning styles.

The second criticism is the weakness in the accumulated evidence for the reliability and accuracy of measurement. Critics also complain that children may not have the metacognitive skills necessary to do self-assessment required by these inventories. For example, critics ask if a young child is able to determine whether they work better alone or in a group. Steven Stahl (1999) writes that "reliabilities of these measures are relatively low. The self-reported reliabilities of Carbo's Reading Style Inventory and Dunn and

Dunn's Learning Style Inventory are moderate, especially for a measure of this kind—in the neighborhood of the .60s and the .70s. Similar reliabilities are reported for the Myers-Briggs Inventory, another learning styles assessment." (Stahl, 1999).
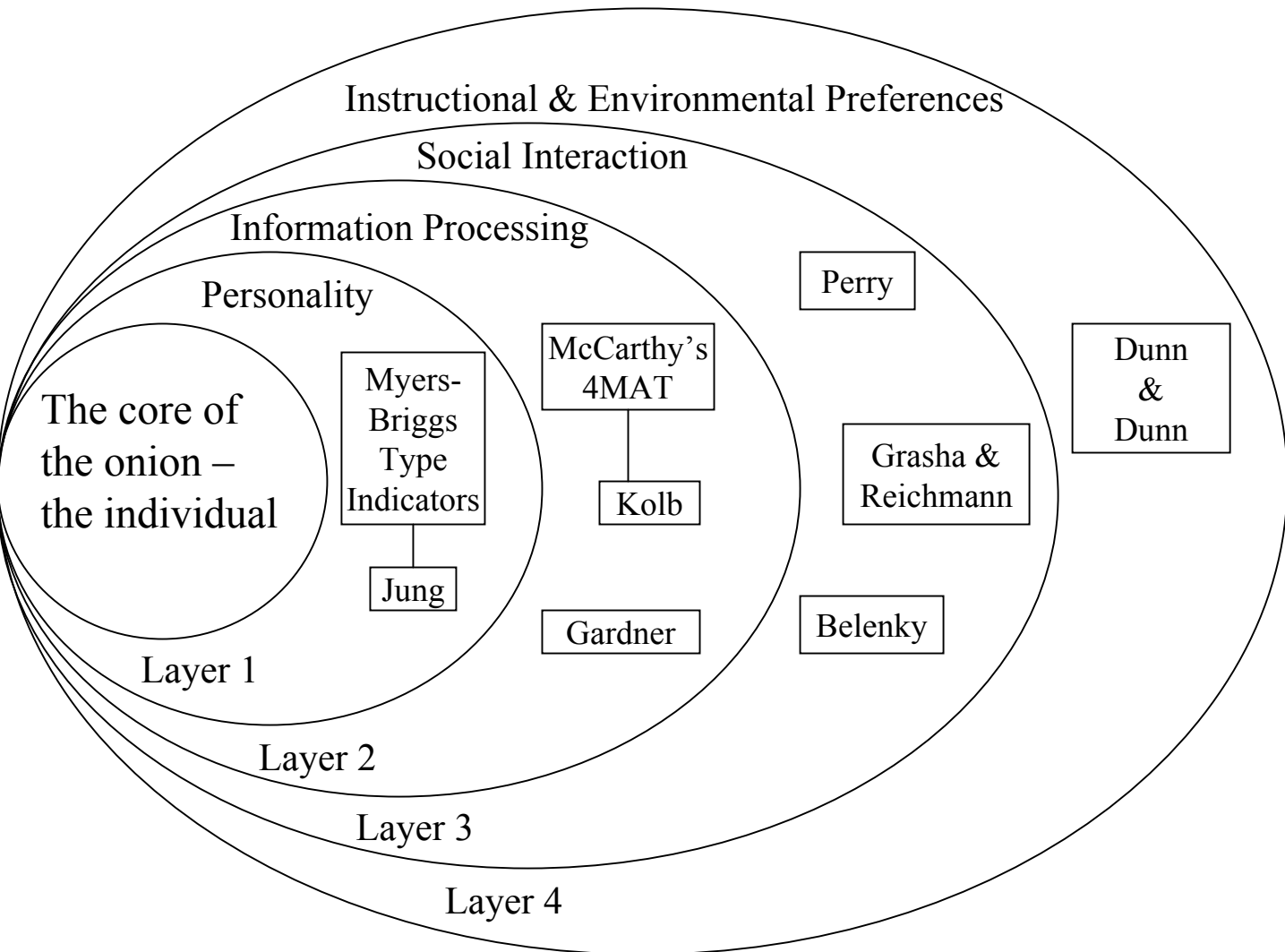
**Conclusion:**

While testing will always be questionable, it is clear that different people perceive and process the world in different ways. Different people have different personalities and inborn temperaments. Different people interact socially in different ways. Different people prefer different styles of instructional and environmental settings. In other words, not everybody learns in the same way. It follows, then, that a standard style of teaching is not going to be effective for everyone. Nor is a standard style of testing! Research in learning styles is important because the more that educators can know about the variety of ways that people learn, the more that the educational system can attempt adjustments. The goal is meet the needs, and stretch the potential, of every learner.

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# Curry's "Onion" Model:

# The Whole Picture of Learning Styles

Instructional & Environmental Preferences

Social Interaction

Information Processing

Personality

The core of
the onion –
the individual

Myers-Briggs Type Indicators

Jung

McCarthy's 4MAT

Kolb

Gardner

Perry

Grasha & Reichmann

Belenky

Dunn & Dunn

Layer 1

Layer 2

Layer 3

Layer 4

|  | Quadrant 4 | Quadrant 1 |  |
|---|---|---|---|

**Perception: Sensing/Feeling, Perceive Information Concretely**

| | | |
|---|---|---|
| Processing: Doers, <u>Active</u> Experimentation | **The Type 4 Learner: Dynamic**<br><br>✓ *Senses & feels* experiences in the here & now (<u>concrete</u> experience)<br>✓ Processes information in an <u>active</u> way - doing<br><br>▪ Need for *creating*<br><br>▪ Question: <u>IF</u> I do this, what possibilities will it create? | **The Type 1 Leaner: Imaginative/Innovative**:<br><br>✓ *Senses & feels* experiences in the here & now (<u>concrete</u> experience)<br>✓ Processes information in a <u>reflective</u> way - watching<br><br>▪ Need for *experiencing*, for personal meaning<br><br>▪ Question: <u>WHY</u> do I need to know this? | Processing: Watchers, <u>Reflective</u> Observation |

<div align="center">McCarthy's<br>4MAT</div>

| | | |
|---|---|---|
| Processing: Doers, <u>Active</u> Experimentation | **The Type 3 Learner: Common Sense**<br><br>✓ *Thinks through* experiences, perceives <u>abstractly</u><br>✓ Processes information in an <u>active way</u> – doing<br><br>▪ Need for *application* in real-life<br><br>▪ Question: <u>HOW</u> does this work? <u>HOW</u> will I use this in my life? | **The Type 2 Learner: Analytic**<br><br>✓ *Thinks through* experiences, perceives <u>abstractly</u><br>✓ Processes information in a <u>reflective</u> way - watching<br><br>▪ Need for *conceptual* understanding<br><br>▪ Question: <u>WHAT</u> exactly is this content or skill? | Processing: Watchers, <u>Reflective</u> Observation |

**Perception: Thinking Through, Perceive Information Abstractly**

|  | Quadrant 3 | Quadrant 2 |  |
|---|---|---|---|

**Summary of Learning Style Modalities**

I.     **Modalities**

A.  **Visual:**
1.  Students with Perceptual Strengths Can Easily:
    a.  Recall what they see
    b.  Follow written or drawn instructions
    c.  Learn by observing people, objects, pictures, etc.
2.  Enjoy/Learn best by:
    a.  Using computer graphics; performing visual puzzles; looking at or designing maps, charts, graphs, diagrams, cartoons, posters, bulletin boards
3.  Learn to Read Best:
    a.  With sight methods, dissimilar words, silent reading, words accompanied by pictures or slides, stories in filmstrips or videos

B.  **Auditory:**
1.  Students with Perceptual Strengths Can Easily:
    a.  Recall what they hear
    b.  Follow spoken instructions
    c.  Learn by listening and speaking
2.  Enjoy/Learn Best by:
    a.  Talking, interviewing, debating, participating on a panel, asking and answering questions, memorizing, making oral reports
3.  Learn to Read Best:
    a.  With phonics, choral reading, by listening to stories and recordings of books, discussing stories, reading orally.

C.  **Tactile:**
1.  Students with Perceptual Strengths Can Easily:
    a.  Recall what they touch
    b.  Follow instructions they write or touch
    c.  Learn by touching or manipulating objects
2.  Enjoy/Learn Best By:
    a.  Doodling, sketching, playing board games, building models, constructing dioramas and relief maps, setting up experiments, writing, tracing.
3.  Learn to Read Best:
    a.  With writing/tracing methods, such as Fernald, language experience.
    b.  By playing games or reading instructions, then making something.

D.  **Kinesthetic:**
1.  Students with Perceptual Strengths Can Easily:
    a.  Recall what they experience
    b.  Follow instructions that they perform or rehearse
    c.  Learn when engaged in physical activity
2.  Enjoy/Learn Best By:
    a.  Playing floor games, assembling and/or disassembling objects, building models, participating in fairs, setting up experiments, acting, role playing, hopping, running, scavenger hunts.
3.  Learn to Read Best:
    a.  By pantomiming, acting in plays
    b.  Riding a stationary bike while listening to a book
    c.  Recording and reading, reading instructions and then building/doing something

II. **Global vs. Analytic**

    **A. Global:**
        1. Tendencies (Often):
            a. Make decisions based on emotions and intuition
            b. Are spontaneous, random
            c. Focus on creativity and inventiveness
            d. Care less about a tidy environment
        2. Enjoy/Learn Best with:
            a. Information presented in an interesting or humorous story, with examples, interesting materials, group work and activities
        3. Learn to Read Best:
            a. With holistic reading methods, such as recorded books, story writing, choral reading, with books computer software, audiovisual materials, projects and games.

    **B. Analytic:**
        1. Tendencies (Often):
            a. Make decisions based on logic or common sense
            b. Plan and organize well
            c. Focus on details and facts
            d. Like a tidy environment

        2. Enjoy/Learn Best with:
            a. Information presented in sequential steps, with rules and examples, structured materials, teacher-directed lessons, clear goals and requirements
        3. Learn to read best:
            a. With auditory phonics, programmed materials, puzzles, some worksheets – reinforced by strategies appropriate for global learners

# From *Marching to Different Drummers* by Guild and Garger

"If a man does not keep pace with his companions, perhaps it is because he hears a different drummer.  Let him step to the music which he hears, however measured or far away." – Henry David Thoreau

"First of all," he said, "if you can learn a simple trick, Scout, you'll get along a lot better with all kinds of folks.  You never really understand a person until you consider things from his point of view…"
"Sir?"
"…until you climb into his skin and walk around in it."
- Harper Lee, To Kill a Mockingbird

"A trifling matter, and fussy to me, but we all have our little ways."
- Eeyore to Pooh, A. A. Milne, The House at Pooh Corner

"Understanding one's own magical mystery is one of the teacher's most important assets if he is to understand that everyone is thus differently equipped.
- Buckminster Fuller

Try to see it my way,
Only time will tell if I'm right or I am wrong,
While you see it your way,
There's a; chance that we may fall apart before too long.
We can work it out.
We can work it out.
- John Lennon and Paul McCartney

Instruction begins when you, the teacher, learn from the learner, put yourself in his place so that you may understand what he learns and the way he understand it…
- Kierkegaard

"Everything, men, animals, trees, stars, we are all one substance involved in the same terrible struggle.  What struggle?…Turning matter into spirit."
Zorba scratched his head (and said,) "I've got a thick skull boss, I don't grasp these things easily.  Ah, if only you could dance all that you've just said, then I'd understand…Or if you could tell me all that in a story, boss."
- Nikos Kazantzakis, Zorba the Greek

Two roads diverged in a wood and I –
I took the one less traveled by,
And that has made all the difference.
- Robert Frost, "The Road Not Taken"

"I desire that there be as many different persons in the world as possible; I would have each one be very careful to find out and preserve his own way.
- Henry David Thoreau

"…Irvin Feld had found that their talents complemented each other.  Kenneth, for example, takes particular interest in the beginning of a concept.  He has a gift for picturing in his mind how the show will look on opening night even before the first rehearsal has been held.  Irvin Feld, on the other hand, looks forward to the final rehearsals – when a detail can be added, a refinement made, that will make the highlights of the show really sparkle – the way a jeweler polishes the facets of a diamond.  This combination of the son who likes to look at the big pictures and the father who pays attention to the tiniest detail, gives a depth to their productions that is part of the Feld Approach."
- Souvenir Program, Ringling Brothers and Barnum & Bailey Circus