

PLT eMods™

Behind The Scene

What Makes the PLT eMods™ Work in Theory and Practice

This paper looks into the theories and methodology behind the PLT eMods™. We explore the research and methodology behind PLT eMods™ that come alive through the PLT eMods™ technology. We explore PLT eMods™ as an accelerated learning tool for transformational learning and emotional intelligence building. Additionally we examine how PLT eMods™ effectively align with and implement Socratic teaching, thinking and methodology. Lastly we explore the PLT eMods™ and how it aligns with accepted brain research.

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Life Skills U-A Division of Awareness Communication Technology, LLC



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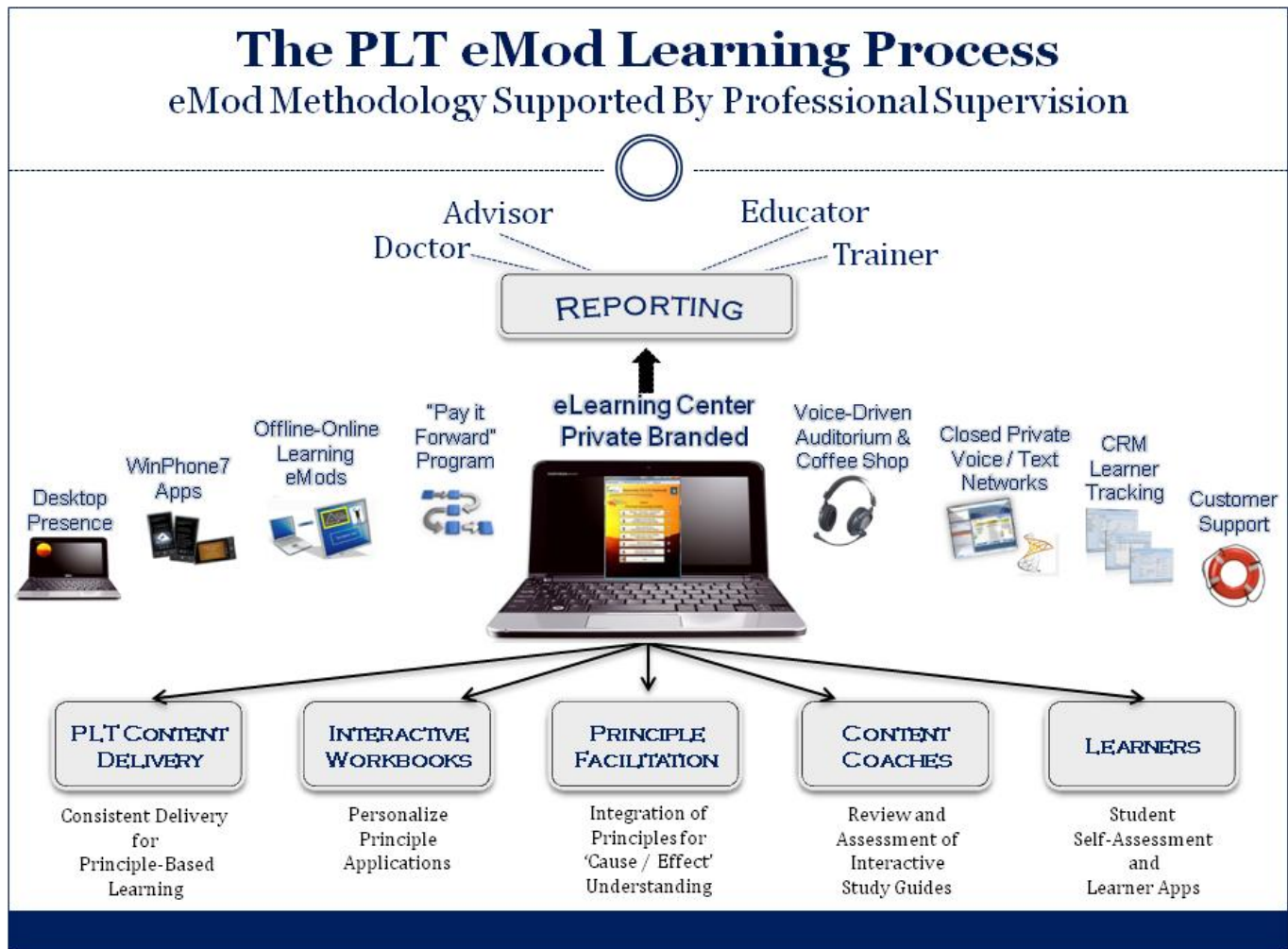
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Introduction

PLT eMod™ Learning Process is a unique blend of principle-based, Socratic learning accompanied by transformative learning tools to build emotional intelligence and resilience in ALL learners – from the gifted to the challenged and all those inbetween. PLT eMod™ Learning Process blends technology, methodology and technique to provide an effective and efficient tool to bring about empowerment and transformative change (unlearning and relearning).

The transformational learning occurs through the use of AwareComm's patented delivery called Personal Learning Technology (PLT). PLT delivers content/courses in systematic, standardized, individualized and modular (eMods¹) way. PLT eMods™ blend proven methodologies and theories into a practical and sustainable application and implementation process, as defined in "The Soul of an eMod". The "Soul of an eMod" represents the research behind the educational architecture (based on the top 87 leading educators, philosophers, psychologist and sociologists) that results in real learning (unlearning and relearning) to occur, ensuring that "People Can't Not Learn".



¹ eMods is an acronym for "Electronic Modular Online/Offline Delivery System"

The PLT eMod™ Learning Process provides a structured educational and learning process. The process uses offline/online learning, to provide people with the optimal learning experience. Using PLT eMods™ the learner goes through a process of:

- **Computer Viewings:** Principle Based PLT eMod™ Learning (offline computer viewings).
- **Interactive Workbooks / Study Guides:** Workbooks to document progress (offline workbooks).
- **Facilitation:** Online facilitation to learn about the cause and effect of principles (online ViOp).
- **Content Coaching:** Professional / Coaching review and feedback of the workbooks for personal application of material (online / email).
- **Learner Participation:** Developing Learner Applications that are published for personal ownership of the learning experience and as examples of how to attain success using the lessons and principles of the learning module.

This paper explores what is behind PLT eMods™ content delivery or computer viewings. We describe the PLT eMods™ as a new Accelerated Learning and Emotional Intelligence Building tool. We define the Socratic teaching methodology and how it aligns and applies to the PLT eMods™ process. We briefly explore the PLT eMods™ computer viewing methodology and design and learn how the PLT eMods™ work to communicate to all learners of varying intelligences, processing styles and abilities. Lastly we learn about the PLT eMods™ content and how the design of the technology enables the content to bypass barriers to learning, limiting beliefs and filters that may prevent learning.

Supporting PLT eMods™

The PLT eMod™ system content, methodology and technology are all aligned with accepted theory and methodology used in traditional Accelerated Learning tools today ([See Appendix](#)). The 10 Accelerated Learning Elements have been defined as:

1. [Knowledge about the Human Brain](#)
2. [Emotional State](#)
3. [The Learning Environment](#)
4. [The Role of Music and the Arts](#)
5. [Personal Motivation](#)
6. [Multiple Intelligences and Learning Styles](#)
7. [Imagination/Metaphors](#)
8. [Suggestion/De-Suggestion](#)
9. [Team Learning and Cooperation](#)
10. [Improvement and Results](#)

(From International Alliance of Learning, n.d.: [See Appendix: 10 Accelerated Learning Elements](#))

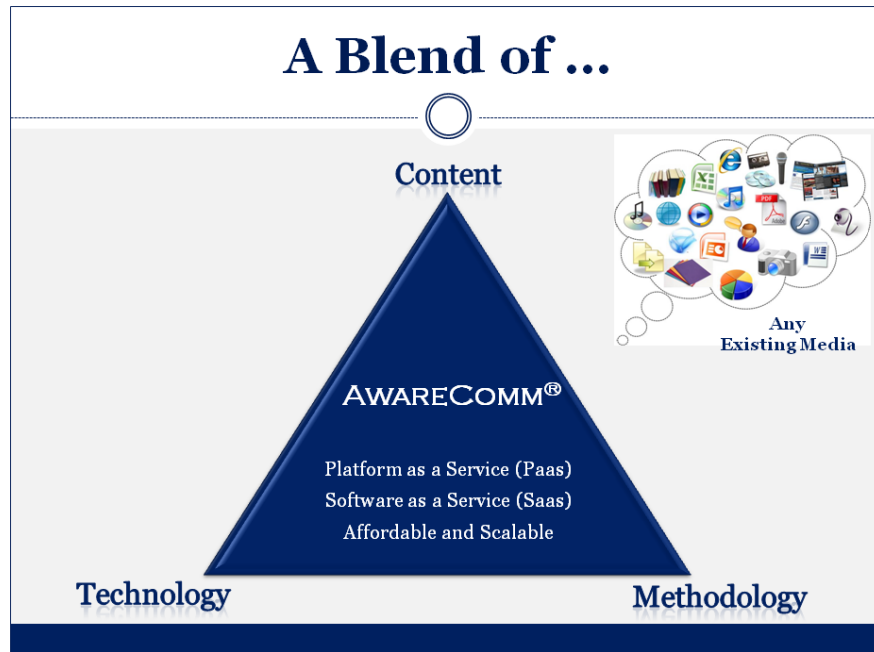
The table below outlines how PLT eMods™ fit with the Accelerated Learning Elements defined by the International Alliance of Learning:

<i>Accelerated Learning Principles / Elements</i>	<i>Personal Learning Technology Applications</i>
1. <u>Knowledge about the Human Brain</u>	The PLT eMods™ Computer Viewings support accepted brain-based methodology and applications, using music, Artificial Intelligence (A.I.) and methodology. The PLT eMods™ Computer Viewings create a brain-balancing effect on the brain through the creation of an alpha-theta state. Additionally PLT eMods™ Computer Viewings bring about neuroplasticity through the combination of A.I., transformational learning and a principle-based educational approach.
2. <u>Emotional State</u>	PLT eMods™ Computer Viewings create an optimum learning state through A.I. the technology delivery information in a way that calms emotions creating an optimal learning state of mind. The information is communicated in a way that shows the cause and effect of relationships so that learners learn how to see all their choices and make educated, adult and mature decisions about life.
3. <u>The Learning Environment</u>	PLT eMods™ Computer Viewings creates an optimal learning and holding environment. The PLT eMods™ Computer Viewings create an environment based on the 4 Absolutes of honesty, selflessness, purity of intention and reality. Bypassing barriers to learning and prejudices that may be evoked by teachers or trainers.
4. <u>The Role of Music and the Arts</u>	PLT eMods™ Computer Viewings use music to create an optimum learning environment creating an alpha-theta state in the brain. Visual images, diagrams and symbolistics are used to communicate to the right brain and stimulate visual intelligence.
5. <u>Personal Motivation</u>	PLT eMods™ Computer Viewings create a learning space and experience where learning happens quickly and naturally and people keep coming back, because they see results and want to keep seeing them.
6. <u>Multiple Intelligences and Learning Styles</u>	PLT eMods™ Computer Viewings communicate and deliver information to all 9 multiple intelligences and all learning styles – through the scientifically choreographed A.I. delivery and methodology.
7. <u>Imagination/ Metaphors</u>	PLT eMods™ Computer Viewings ignites the imagination through the delivery technology and methodology.
8. <u>Suggestion/De-Suggestion</u>	PLT eMods™ Computer Viewings allows learning to occur for all learners no matter their prejudices or barriers of learning. This is because the delivery technology allows information to bypass conscious and non-conscious prejudices that inhibit and limit learning.
9. <u>Team Learning and Cooperation</u>	PLT eMods™ Computer Viewings provide learners with a theoretical and practical understanding of what it means to be a team player and what it means to participate and contribute. Because the primary purpose of the PLT eMod™ Learning Process (like that of the Socratic Method) is to develop learners of character and moral principles and the way the technology imparts information in the PLT eMod format allows for this to occur (ie matrix writing).
10. <u>Improvement and Results</u>	Over 20 years of proven case studies, third part government testing, statistically significant results and overwhelming testimony serves to validate the PLT eMods™ process.

Many of these concepts and principles will be explored in the coming pages, as we explore the computer viewing process and some of the theories that the process brings to life. Let's take a look at the viewing process.

Computer Viewings

The Computer Viewings bring the content to life - through a blend of A.I technology, advanced content development methodology and proven information delivery techniques. The Computer Viewings allow the learner to build a trusting relationship with the computer, which is a vital part of any learning process. Like The Socratic Method, the PLT eMod™ Computer Viewing process is primarily concerned with communicating information in a way that, builds character, emotional intelligence and critical thinking and reasoning skills. Therefore while the Content is important, it works interdependently with the Technology and Methodology, to create a whole learning experience. *“Where the whole is greater than the sum of its parts.”*



Technology: The Technology component of the PLT eMod™ Learning Process offers people three choices when it comes to publishing and application of content into the delivery technology. That means that depending on the content creators needs we can publish content using our delivery technology in one of three ways:

1. “As Is” eMod™
2. “As Is” Integrated eMod™
3. “As Is” Integrated PLUS PLT eMod™

For the purposed of this paper we will discuss the benefits of the “As Is” Integrated PLUS PLT eMod™ process, because this the delivery mechanism that is the most holistic, encompassing and brings about the greatest level of change in the viewer – change as measured by the ability to learn, understand, retain and apply information.



Content: The Content is provided by our clients and evaluated by AwareComm® before publishing. Consulting is also provided with regards to which publishing format / delivery technology would be most suited for the material, its purpose and its audience.

Methodology: Methodology is intrinsic and intertwined within the whole PLT eMod™ Learning Process. The methodology behind the computer viewings applies to theories of Accelerated Learning, MetaCognitive Development, Socratic Method, Emotional Intelligence, Transformational Change/ Learning, Brain-Based Learning and Brain Entrainment to name but a few.

Technology

The information is displayed on the computer through a scientifically choreographed sequencing, teletype style text (dynamically paced), symbols, pictures and music that expand the learning experience, communicating to all 9 Multiple Intelligences and learning styles. The technology creates an alpha-theta state in the brain, balances the brain and improves information processing, resulting in real, effective and lasting learning.

The PLT eMods™ Computer Viewings have been proven to dramatically enhance assimilation and retention of material as it supports and communicates content to the conscious and the non-conscious, both hemispheres, ALL 9 Multiple Intelligences while simultaneously bringing about transformational learning (helping people unlearn old beliefs and habits and relearn new healthier and productive beliefs and habits). This occurs as the Computer Viewing communicates information in a systematic, sequential and optimum way to create an experience of brain-balanced learning and whole-brain thinking which allows the brain to more easily learn new information without the influence of conscious or unconscious barriers to learning in the form of pre-existing beliefs and prejudices / judgments.

Additionally the technology displays information in a principle based way. This process allows the mind to grasp an understanding of the cause and effect of the principles being taught, giving the mind a full picture and leaving no room for confusion.

Building a Trust Relationship

From birth to the age of seven our belief structure is formed by what we learn, experience, absorb and observe in the world around us. We understand the world from the people around us, and are never taught how to separate from those beliefs and see the world for ourselves.

Most of us grow up learning not to trust one another. We are constantly laughed at and warned as children that we are too gullible, too naïve, too nice. We are constantly told not to TRUST people. And we are constantly exposed to inconsistencies that justify and reinforce this learned belief.

We grow up learning that we are either inferior or superior to others, be it due to race, gender, religion, language, culture, age, eye color, hair color or any other issues that we are exposed to as children. These perceptions of inequality are internalized, experienced and believed, on a conscious and / or non-conscious level. Thus learning can become hindered if the messenger (teacher or trainer) triggers an emotional reaction that causes a perception of inequality which creates a state of fear in the individual.

It also helps to understand the information processing system of the brain to fully grasp the importance of creating a learning environment which is both trusted and safe. The reticular activating system (RAS), located in the

brain stem is the brain's center of alertness. Attention getting in the RAS follows a hardwired pre-determined hierarchy: first the brain notices events that affect survival; second, it notices events that affect emotions; and third, it notices events that contribute to "regular" learning (Sousa, 2001, p.43). Given this hierarchy it is clear that in order for learners to pay attention and have the possibility of learning, they must experience both physically and psychologically safe in their environment. The nature of the PLT eMod™ Computer Viewings servers to create an environment that is both safe and secure through music and frequency and systematic scientifically choreographed delivery. The PLT eMods Computer Viewings calm the nervous system, bypassing the primary fear of survival; bypasses emotional reactions so that the individual learner becomes open to learning. The PLT eMods™ Computer Viewing process however, goes beyond traditional learning, [accelerating learning](#) (as explained above).

Additionally another factor affecting attention is the competition teachers and trainers face from television, computer games and other types of multimedia that learners have become accustomed too. Sousa (2001) suggests that adding a "novelty," gives teachers an edge and helps students stay focused on learning. He emphasizes that when new information is, associated with information already known, that the new information is more easily retained, accepted and retrieved. Therefore, time needs to be given for these associations to take place. The PLT eMod™ Computer Viewing pairs the learner experience with a delivery system that people are accustomed and familiar with, the computer.

Because PLT eMods™ are delivered through a computer, the messenger is more trusted and easier to accept than a person. The computer viewing decreases potential prejudices or barriers to learning that a "traditional messenger" (teacher or trainer) would invoke as discussed above. Similarly the viewing process is presented with the help of a trusted messenger (picture, animation or symbol) who helps to communicate the principles in a non-threatening, non-confrontational and gentle way so that it doesn't trigger an emotional reaction or memory.

PLT eMods™ share information in a scientific, valuable, true and trusted way, and as the learner continues to engage in the PLT eMods™ process the learner begins to develop a relationship with the PLT eMods™ software-courseware / the messenger. The relationship that develops is one of personal power and self control as learners learn to become aware and take responsibility for all 5 dimensions of being human: perceptions, attitude, thinking, feeling and behaviors and yet at the same time learn how to separate from behaviors that are not serving them.

In psychological terms the PLT eMods™ creates the optimum learning environment as defined by Rogers and Winnicot. The technology provides the learner with a ***non-judgmental, non-threatening, empathetic and nurturing environment*** (as defined by Carl Rogers) and a learning space that is "holding" and thus secure and protected (as defined by Winnicot).

In philosophy we are reminded of the Socratic Method and how critical the teacher's involvement, perceptions and intentions are for their students. We are reminded of the Socratic Temperament which stresses that the teacher needs to be a model and embodiment of the principles for the learner to believe that the message is coming from an authentic source. The PLT eMod™ Computer Viewing process is very focused on the Socratic Method in that the primary focus of the technology, as previously stated is to provide learners with the tools to learn HOW to think, critically, rationally and holistically, and most importantly provides learners with the tools to build their emotional intelligence and thus build their "character".

So the technology provides the learner with a secure alliance between the Software-Courseware and him or herself. These two principles help to create a sense of safety and trust within learners, which grows as they engage more in the process. The benefits of this is that we know that when people experience a sense of safety and security they are more relaxed, more open and less emotionally reactive thus more able to learn. We also know that when people are in a place where they feel safe enough to experiment, challenge themselves and make mistakes, knowing

that they will not be judged or persecuted but rather encouraged and supported they are more likely to learn and growth. Finally we know that if the learner trusts the teacher and values the teachings learning occurs more quickly and is better applied.

Let's look at the viewing process a little more closely.

The Viewing Process:

1. The system first introduces a [trusted messenger \(as above\)](#). The trusted messenger can be a picture of a person, a cartoon character, animal etc. The trusted messenger is an image that evokes a sense of trusted. That being said the image is such that it creates a sense of interest, a sense of uniqueness and a sense of knowing.
2. Next the software-course introduces a picture of the concept that is to be explained in the slide. This allows for the mind to get an overall (right brain) big picture of what is being learned – calming the amygdala.
3. Lastly the logical (left brain) gets the details or specifics about the content as the concept is described verbally using **dynamically paced text** in the text box. The paced text creates a frequency in the brain creating an alpha state.

Some closing points worth mentioning:

Along with the dynamically paced text the music creates an additional frequency, set to 60 beats per minute allows for the creation of an alpha state in the brain - pivotal in the creation of an optimum learning. The alpha state allows for the learner to experience lucid learning where the brain is relaxed and open to learning through the use of chorography and biorhythms². The dynamically paced text has proven to not only balance the brain but to reduce the symptoms of ADD/ADHD as well as treat dyslexic patients.

The content is written in a format known as PLT Matrix Writing³, this format allows the mind to understand, associate, correlate and learn in a non-threatening and empowering way. Where learners are presented with information in a way that their minds can learn how to understand the cause and effect of relationships and principles.

Additionally the viewing process creates an EMDR (Eye Movement Desensitization Reprocessing) like effect as the information is systematically and consistently displayed in a way that trains the eye and crosses the mid-line. This EMDR effect promotes a state of relaxation and presence where emotions and memories can be observed, understood and resolved rather than exaggerated and re-lived. Therefore as EMDR helps people overcome and deal with trauma, so too does PLT eMods™. Furthermore the crossing of the midline evokes dual hemisphere stimulation adding to the brain-balancing effect of the technology.

² **Biorhythm** - the rhythm of a biological function such as brainwaves, heart rate, pulse, or the many bio-electromagnetic signatures of the various energy systems in the body. www.iamuniversity.ch/moodle/mod/glossary/view.php

³ **PLT Matrix Writing** – is a form of writing developed and patented by Dr Richard Jorgensen and the PLT process. It is a writing process that is taught in the incubator and used to empower learners – giving them the whole picture while also proving them with the specifics.

PLT eMods™ Content Delivery Methodology

William James said that “*psychology is the science of mental life.*” Since the time of James, numerous theories and therapies have emerged and developed; countless great practitioners have tried to bring their methods to the world in what seems like a never-ending quest to uncover the workings of the *mental life*. However while many theories and practices have helped people, there exists few proven and tested ways to effectively deliver people and bring about enduring and sustainable change.

It is *not that any-one theory is right or wrong. It is not that any-one practitioner is right or wrong.* Rather, we as a society have learned not to trust people, as we explained above. And as we touched on above as we grew up we developed barriers to learning that often impair our ability to learn new information and therefore change.

In order to overcome these barriers to learning the PLT eMods™ methodology and technology work together to communicate to all human dimensions: perceptions, attitudes, thinking, feeling and behaviors. In doing so the PLT eMods™ Computer Viewings communicates to the conscious and the non-conscious, the left and the right brain which allows learners to develop the emotional intelligence and metacognitive skills to evoke transformational learning and change.

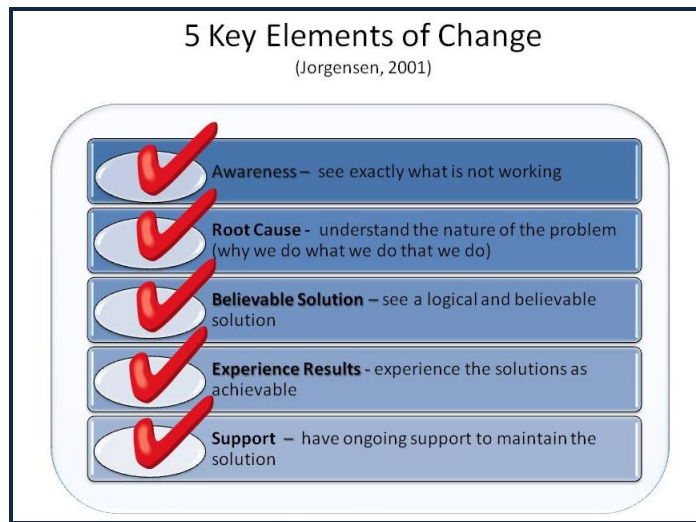


PLT eMods™ works because it doesn't just tell people what to do, but it teaches people *how to do it*. The process helps people see all their choices, learn how to make adult decisions, find the courage to walk through those decisions and let go of the outcome with trust and love, to find acceptance in what one discovers and thus the obtainment and eventually attainment of personal power and the experience of empowerment. In doing so the PLT eMod

The PLT eMods™ process brings about change through an accelerated learning process that allows people to go through the five stages of change:

- **Awareness:** Recognize EXACTLY what you are doing that is not working – quickly identify core thinking and behavior in a non-judging / non-disclosing, non-confrontational manner.
- **Root Cause:** Recognize EXACTLY what is needed that you are trying to achieve – support the thinking process to identify your core needs.
- **Believable Resolution:** Understand a BELIEVEABLE RESOLUTION to fulfilling the need – offer logical explanations the provide insight to our emotional conflicts.

- **Experience the RESOLUTION:** Experience the resolution as achievable for you – support the recognition of success and makes success undeniable.
- **Teach what you have experienced:** – Deliver a process that enables people who understand and can apply the process to become facilitators.



The PLT eMods™ process works because of the theories and methodologies that work to support and validate the process. Not to mention over 20 years of proven success ([See Case Studies Document](#)). We will now take a look at some of the theories and methodologies that work together to make PLT eMods™ work.

Socratic Method

“ Do not take what I say as if I were merely playing, for you see the subject of our discussion—and on what subject should even a man of slight intelligence be more serious?—namely, what kind of life should one live . . . ”

~ Socrates

Socrates immortal words explore how the Socratic Method can be used to promote critical thinking in classroom discussions (The Stanford University Center for Teaching and Learning (CTL), 2003).

The Socratic Method was developed by the Greek philosopher, Socrates. The Socratic Method is a didactical method of teaching, that engages the teacher and the student in an active shared dialogue in which both participants are responsible for furthering the exploration of the student’s underlying belief structure. The leader / teacher uses probing questions and inquiry “to expose the values and beliefs which frame and support the thoughts and statements of the participants in the inquiry” (The Stanford University Center for Teaching and Learning (CTL), 2003, p. 1).

“The leader of Socratic inquiry is not the purveyor of knowledge, filling the empty minds of largely passive students with facts and truths acquired through years of study” nor is he or she the “sage on the stage” (The Stanford University Center for Teaching and Learning (CTL), 2003, p. 1). Professor Reich of Stanford University had the following to say about the Socratic Method:

- “Socratic inquiry is not “teaching” per se. It does not include PowerPoint driven lectures, detailed lesson plans or rote memorization. The teacher is neither “the sage on the stage” nor “the guide on the side.” The students are not passive recipients of knowledge.
- The Socratic Method involves a shared dialogue between teacher and students. The teacher leads by posing thought-provoking questions. Students actively engage by asking questions of their own. The discussion goes back and forth.
- The Socratic Method says Reich, “is better used to demonstrate complexity, difficulty, and uncertainty than to elicit facts about the world.” The aim of the questioning is to probe the underlying beliefs upon which each participant’s statements, arguments and assumptions are built.
- The classroom environment is characterized by “productive discomfort,” not intimidation. The Socratic professor does not have all the answers and is not merely “testing” the students. The questioning proceeds open-ended with no pre-determined goal.
- The focus is not on the participants’ statements but on the value system that underpins their beliefs, actions, and decisions. For this reason, any successful challenge to this system comes with high stakes—one might have to examine and change one’s life, but, Socrates is famous for saying, “the unexamined life is not worth living.”
- “The Socratic professor,” Reich states, “is not the opponent in an argument, nor someone who always plays devil’s advocate, saying essentially: „If you affirm it, I deny it. If you deny it, I affirm it.” This happens sometimes, but not as a matter of pedagogical principle.”

Most importantly Socrates believed this method to be but an end to a means. The ultimate goal of the Socratic process was to develop the moral character of the learners. Hence he is credited as the father of critical thinking. This emphasis on building thinking skills and values is prevalent in the PLT eMods™ Process and specifically within the Computer Viewings.

The PLT eMod™ Computer Viewings take learners on a journey of principles where they learn how to discern and critically assess situations due to the programs effect on the cognitive functioning and reasoning structures in the brain. The Computer Viewings have been shown to assist people in not only learning information, but due to the delivery technology the viewings teach learners how to think. Thus the technology actually builds critical thinking skills as well as emotional self-regulation, as Socrates sort to achieve.

Learning Barriers & Habits

Learning barriers are limiting beliefs that we learn and internalize within our psyche and eventually within our biological make up (neural pathways). For example “I can’t read” and “only boys can do science and mathematics.” These beliefs are imposed by society (schools, parents, cultures, media, environments) for many reasons, including ignorance of our own capacities and capabilities (Racle, 1976). These beliefs eventually, over time become habits of perceiving, experiencing, thinking, feeling and / or behaving.

James (1980) stated that *“when we look at creatures from an outward point of view, one of the first things that strike us is that they are bundles of habits.”* James concluded that habits are *“discharges in the nerve centers’* involving pattern of reflex paths that are successively woken up” (Butler-Bowdon, 2007, pp. 165-164). He discovered

that once these paths are created it become easier for the current to pass along the same path again (Butler-Bowdon, 2007, p.164). Hence the more times we experience something the easier it becomes – like riding a bike, we learn, we ride, we fall, we practice, we learn and eventually we just ride and forget how we struggled or learned (same as driving a car).

James noted that the difference between animals and humans is that human behaviors have the ability to consciously form new habits. However he noted that the problem is that *creating new habits requires hard work and application as well as the ability to act decisively on resolutions* (James, 1890). That being said he stated that ***“action creates the motor effects in our nervous system that turn a wish into a habit; the brain has to “grow” to our wishes, and the path will not be made unless this repeated action takes place”*** (Butler-Bowdon, 2007, p.164). Thus in order to make resolutions and overcome our habits we need to take action and create new and repetitive experiences so that new paths ways can be created.

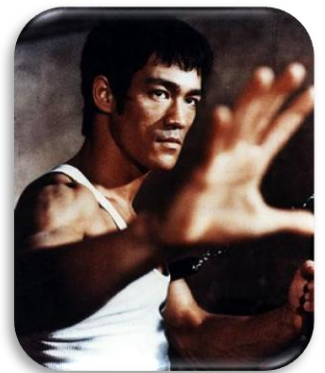
James (1890) stressed that ***“we need to make the nervous system our friend, not our enemy”*** (Butler-Bowdon, 2007, p.164). *“As we become permanent drunkards by so many separate drinks, so we become saints in the moral and authorities and experts in the practical and scientific spheres, by so many separate acts and hours of work”* (James, 1890). ***So while we engage in many behaviors without thinking about the consequences or the cause and effect of our actions, it stands to reason that our actions “taken together” account for integrity and success or disunity and failure*** (Butler-Bowdon, 2007, p.164).

Notably what James (1890) described before the technological, medical and psychological advances of today, resembles the current addiction recovery model. *The recovery model stresses that people need to resolve their problems by increasing their awareness, decreasing their ego, increasing their spiritual connection and learning how to separate from beliefs and behaviors that are dysfunctional.*

The PLT eMods™ are designed based on the principles of transformational learning – that we need to unlearn before we can relearn. PLT eMods™ process works because it bypasses pre-existing beliefs that may occur when information is delivered by a facilitator, teacher or coach i.e. gender, racial, language and cultural biases that may prevent / block or limit people from effectively learning new information – creating the transformational learning experience. In order to engage in this process we embrace a process (the recovery process) of unlearning who we are not and relearning who we decide we are. We do this through a transformational learning process.

Transformational Learning

One day a master martial artist asked Bruce Lee to teach him everything he knew about martial arts. Lee held up two cups, both filled with liquid. *“The first cup,”* said Lee *“represents all of your knowledge about martial arts. The second cup represents all of my knowledge about martial arts. If you want to fill your cup with my knowledge, you must first empty your cup of your knowledge.”* What Lee is referring to is the necessity to sometimes unlearn what you know in order to re-learn what you need to know.



For example if you have learned that ALL apples are green, in order to be open to the possibility that apples can be pink, red and yellow, one would need to unlearn that ALL apples are green. So in order to be open to change and learning, we sometimes need to let go of what we know to open the door to what we need to learn.

“The illiterate of the 21st Century will not be those who cannot read but those who cannot learn, unlearn and relearn – in essence those who cannot change.”

Alvin and Heidi Toffler

Alvin and Heidi Toffler said that *“the illiterate of the 21st Century will not be those who cannot read but those who cannot learn, unlearn and relearn – in essence those who cannot change”* (1996). Transformational learning is all about learning, unlearning and relearning for the purposes of expanding your mind and learning new information. Yet this form of learning is easier said than done, as many brilliant people Toffler included have dedicated years to facilitating this change, yet few have been successful.

Most schools of psychological thought (psychoanalysis, psychodynamic, behavior, cognition, gestalt...) state that we are molded from childhood as our brains absorb and learn from the world around us. In this learning process which occurs from 0-7 years of age we learn the beliefs, perceptions, attitudes, thought processes, emotional undertone and general behavior of our surroundings and our society. So in effect our foundational beliefs, perceptions, attitudes, thinking, feelings and behaviors are not our own.

Many people never have the opportunity to separate from their foundational beliefs, many people do not have the opportunity to explore the world and discover that there are other ways of perceiving and experiencing the world. And for those fortunate who have the opportunity it is often too late to change as our foundational beliefs become ingrained and reinforced to the point where learning new information becomes a filtered process where pre-existing beliefs take precedence and filter out any conflicting information. Therefore learning new information becomes near impossible the more invested we are in our beliefs- the more money we have spent on degrees, the more time we have spent in our chosen life, the more ingrained our beliefs become. And learning and changing become a process of reinforcement of what we already know rather than an experience of discovery and curiosity.

The concept and theory of Transformational Learning was firstly developed by Jack Mezirow in 1978 (Merriam, 2007). Merriam (2007) stated that *“Transformational Learning is about change, dramatic, fundamental change in the way we see ourselves and the world in which we live”* (p.123). *“The very foundation of transformational learning builds on the psychoanalytic theory and the critical social theory. Transformational learning involves becoming more reflective and critical, being more open to the perspectives of others and being less defensive and more accepting of new idea”* (Transformational Learning, 2010, para. 1.).

Robert Boyd a well respected researcher and theorist within the field of adult learning and transformational learning defined transformational learning as a *“fundamental change in one’s personality involving (together) the resolution of a personal dilemma and the expansion of consciousness resulting in greater personality integration”* (Transformational Learning, 2010, para. 7.).

The carefully and purposefully structured and choreographed nature of PLT eMods™ presents information in a way that allows transformational learning to occur. Through the PLT eMods™ technology, methodology and writing style the viewer is given choices and encouraged to explore and examine their beliefs, knowledge and the information they are being presented – as the information explains a concept as well as its complimentary.

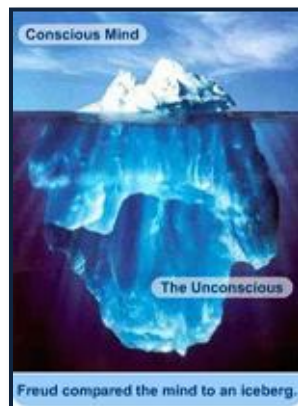
When information is taught and communicated in a transformational way it does so by by-passing conscious filters that inhibits information from entering our brain and disrupting our “equilibrium.” Our conscious mind seeks to protect us from the world by keeping things as they are, even if the way things are is not all that great.

The Conscious & Un-Conscious

In essence the ideas of Freud still remain yet they have morphed into a more scientific understanding of the unconscious. That being said the PLT eMod™ system recognizes that there are both conscious and unconscious forces that are constantly influencing our perceptions, attitudes, thinking, feelings and behaviors. However, the Jorgensen stresses that it is our unconscious that stores all events, and drives our actions and behaviors.

From a young age the mind of the child learns and internalizes survival mechanisms from the world around him / her. In that way our mind forms beliefs and assumptions based on the world around us, and adapts to what is needed to survive – be that habitually repeating certain behaviors, repressing traumatic events or memories or behaving in an aggressive or provocative way to protect oneself. Many of these behaviors are out of our scope of understanding and hence form part of our unconscious.

So how do we access these event, how do we change these behaviors, how to we challenge habitual behaviors, beliefs and perceptions stored in the un-conscious, that we cannot access? We need a way to access the unconscious in a way that will not evoke trauma and at the same time bring about resolution.



Lozanov uses the term *paraconscious* to describe our automatic behaviors, emotions and thoughts that are “normally” beyond human consciousness (Adamson, 1997, as cited in Minewiser, 2000, p.9). He explains that we have “hidden reserves” that we use in childhood but become hidden as we grow up and become influenced by suggestions of the world around us. “Belanger (1978) proposed that the role of the unconscious during learning is to facilitate the activation of the reserves of human potential in the right hemisphere, which regulates such processes as intuition, imagination, space orientation, music perception and emotions” (as cited in, Minewiser, 2000, p.9). Thus we can reach the unconscious with the method of suggestion as defined by Lozanov.

PLT eMods™ delivers the information on both a conscious and non-conscious level, starting with the left-brain (logical), through the decision process, and then into the right-brain (emotional). Through scientifically choreographed delivery (placement, music, paced text) and use of the best of educational, psychological and [neurological theories](#) the PLT eMods™ process evokes a [state of desensitization](#) putting the brain in a relaxed state making it more open to resolution and [transformational learning and change](#). While also developing emotional intelligence and metacognitive skills. Thus in effect PLT eMods™ evoke a process that is parallel to desuggestion.

Additionally, the matrix writing process also allows information to reach the unconscious in ways similar to those described and used by Milton Erikson. In that the PLT eMods™ process communicates content in an open-ended way, with definable truisms that communicate information to the conscious and the non-conscious in a flexible and adaptable way (double-bind) while communicating the information in different ways which appear repetitive yet serve to provide the learner which choices and new ways of seeing and learning the information (to bypass resistance or filters that may prevent the information being seen or learned).

Unlike most teaching styles that only deliver information to the conscious mind, PLT eMods™ deliver information to all components of consciousness. This is important because the conscious mind is NOT where all our learned behaviors reside. For instance, if you think about our habitual or automatic behaviors, we no longer have to **think** about driving a car or riding a bike.

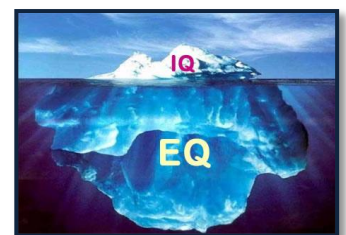
Thus the unconscious is where original learning, long term memory is stored. And this is the area of the brain that PLT eMods™ connect with. Other teachings can only talk with the conscious mind that is **reacting** to the learned patterns of perception, attitude, thinking and behavior. This is why motivational and other teachings often fade away after time, and are very difficult to integrate into our lives.

Many times, our past teaching, be it from family, school, friends or society do not serve us well in present day life. We may have **“learned” certain behaviors** or perhaps took on the thoughts and beliefs of others because we did not have the tools to successfully make our own decisions about what would aid us in our life journey. By delivering information to both the conscious and non-conscious mind concurrently, we can more effectively revisit learned information of our past, explore new present information and make new decisions as to which information serves us best.

Emotional Intelligence

Emotional intelligence (EI) describes the individual's:

*“ability, capacity, skill or, in the case of the trait EI model, a self-perceived ability to identify, assess, and control the emotions of one's self, of others, and of groups... **learned capability based on emotional intelligence...** determines our potential for learning the practical skills based on the five elements : self-awareness, motivation, self-regulation, empathy, and adeptness in relationships. Our emotional competence shows how much of that potential we have translated into on-the-job capabilities.”*



(Goleman, 1998)

The earliest reference of EI can be traced back to Darwin's work on the importance of emotional expression for survival and adaptation (Emotional Intelligence, 2010). Even as far back as the 1900s researchers began to recognize the importance of non-cognitive aspects of intelligence. “For instance, as early as 1920, E.L. Thorndike used the term social intelligence to describe the skill of understanding and managing other people” (Emotional Intelligence, 2010).

In 1940 David Wechsler described the influence of non-intellectual factors on intelligent behavior, and argued that our models of intelligence would not be complete until we could adequately describe these factors. (Emotional Intelligence, 2010). In Howard Gardner's book *Frames of Mind: The Theory of Multiple Intelligence* (1983), he introduced the idea of multiple intelligences. Amongst these intelligences he included both *Interpersonal intelligence*

(the capacity to understand the intentions, motivations and desires of other people) and *Intrapersonal intelligence* (the capacity to understand one's self, to appreciate one's feelings, fears and motivations). Gardner's multiple intelligences clearly point to the fact that traditional definitions and measures of intelligence (IQ) fail to fully explain and assess intelligences and abilities.

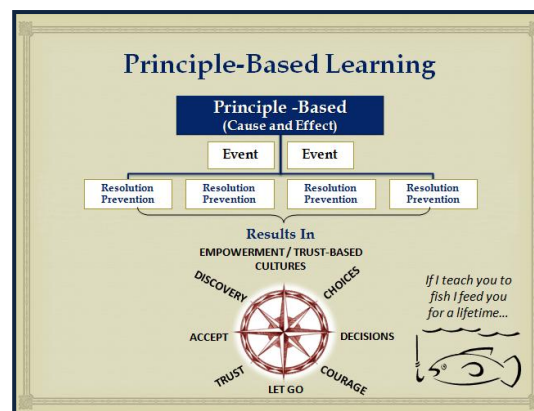
Salovey and Mayer's (2005) conception of EI strives to define EI within the confines of the standard criteria for a new intelligence (as cited in Emotional Intelligence, 2010, para, 2). Their current definition of EI is: *"The ability to perceive emotion, integrate emotion to facilitate thought, understand emotions and to regulate emotions to promote personal growth"* (Salovey & Mayer, 2005, as cited in Emotional Intelligence, 2010, para, 2).

"The ability-based model views emotions as useful sources of information that help one to make sense of and navigate one's social environment. The model proposes that individuals vary in their ability to process information of an emotional nature and in their ability to relate emotional processing to a wider cognition. This ability is seen to manifest itself in certain adaptive behaviors. The model claims that EI includes four types of abilities:

1. "Perceiving emotions – the ability to detect and decipher emotions in faces, pictures, voices, and cultural artifacts—including the ability to identify one's own emotions. Perceiving emotions represents a basic aspect of emotional intelligence, as it makes all other processing of emotional information possible.
2. Using emotions – the ability to harness emotions to facilitate various cognitive activities, such as thinking and problem solving. The emotionally intelligent person can capitalize fully upon his or her changing moods in order to best fit the task at hand.
3. Understanding emotions – the ability to comprehend emotion language and to appreciate complicated relationships among emotions. For example, understanding emotions encompasses the ability to be sensitive to slight variations between emotions, and the ability to recognize and describe how emotions evolve over time.
4. Managing emotions – the ability to regulate emotions in both ourselves and in others. Therefore, the emotionally intelligent person can harness emotions, even negative ones, and manage them to achieve intended goals."

(Salovey and Mayer, 2005 cited in Emotional Intelligence, 2010, para. 6).

PLT eMods™ teach the tools to help adults and children learn how to see all their choices and to make effective decisions based on their emotional, physical, social, mental, and ethical well-being. The PLT eMod™ system fosters emotional intelligence by teaching people about perceptions, attitudes, thinking, feeling and behaviors of self and others. Through the PLT eMods™ process people learn what it means to make adult decisions based on self-authority, self-responsibility and self-accountability.



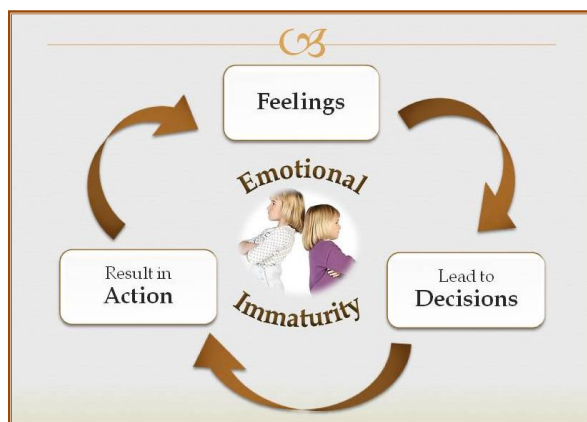
In that sense PLT eMods™ fulfills all 4 requirements cited by Salovey & Mayer, 2005 (above), teaching people: how to perceive emotions, balance emotions, understand emotions and learn from emotions. Thus PLT eMods™ build emotional intelligence.

The PLT eMods™ build **Emotional Maturity which results in Emotional Self-Control and Empowerment**. The PLT eMods™ process defines **Emotional Maturity** as:

- **Emotional Self-Authority** – the ability to make a decision based up on see all the choices.
- **Emotional Self-Responsibility** – the ability to take action with the courage to walk through fear.
- **Emotional Self-Accountability** – the ability to seek and accept feedback; to examine the decision process and effect of one’s decision.
- **Emotional Self-Control** - the result of effectively exercising self-authority, responsibility and accountability to result in self-trust and empowerment for the better of the independent person (“I”) and interdependent (“We”).

However when one has learned to live coming from a world of control, emotion and/or addiction one is living life from the mental process of the adolescent / child. A process of **Emotional Immaturity**. **Emotional Immaturity** is defined by:

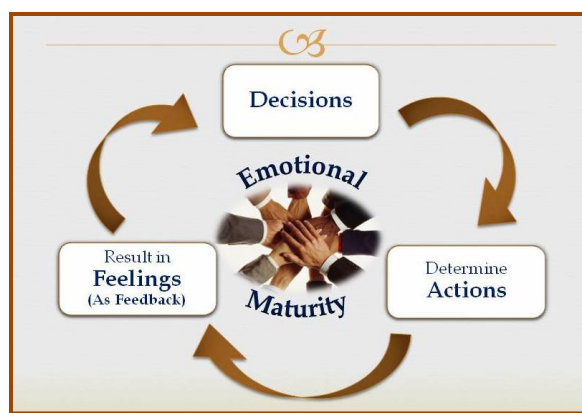
- Feelings lead to Decisions
- These Decisions result in Action



The adult mental process is the reverse of childhood and adolescence and is defined by **Mature Thinking**:

- The adult makes Decisions, which result in taking Action.
- These actions result in appropriate Feelings.
- Feelings serve as feedback for the future.

The PLT eMods™ process is one of teaching people what the difference is between mature thinking vs. child/adolescent thinking. By showing people the reality of these two worlds the PLT eMods™ process allows people to learn how to be mature and at the same time gives them a choice.



Focused Learning

Over the past thirty years, attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD) has emerged as the "disease du jour" of Westernized school children (Armstrong, n.d.). The disorder which has become a popular diagnosis amongst mental health professionals, therapists and school teachers is very obscure with unclear diagnostics and questionable treatment applications. Over the past 6 years Ritalin use has increased by 500% in the US, yet the drug only masks the symptoms, creates dependency (and has been linked to cocaine usage and addiction in later years), decreases the child's responsibility to control their behaviors and emotions and all-in-all does not resolve the problem (Armstrong, n.d.).

"Behavior modification programs used for kids labeled ADD/ADHD work, but they don't help kids become better learners. In fact, they may interfere with the development of a child's intrinsic love of learning (kids behave simply to get more rewards), they may frustrate some kids (when they don't get expected rewards), and they can also impair creativity and stifle cooperation" (Armstrong, n.d. para, 3).

Dr Thomas Armstrong explains that "ADD/ADHD is a popular diagnosis in today's world because it serves as a neat way to explain away the complexities of 21st century life in America. Over the past few decades, our families have broken up, respect for authority has eroded, mass media has created a "short-attention-span culture," and stress levels have skyrocketed. When our children start to act out under the strain, it's convenient to create a scientific-sounding term to label them with, an effective drug to stifle their "symptoms," and a whole program of ADD/ADHD workbooks, videos, and instructional materials to use to fit them in a box that relieves parents and teachers of any worry that it might be due to their own failure (or the failure of the broader culture) to nurture or teach effectively. Mainly, the ADD/ADHD label is a tragic decoy that takes the focus off of where it's needed most: the real life of each unique child. Instead of seeing each child for who he or she is (strengths, limitations, interests, temperaments, learning styles etc.) and addressing his or her specific needs, the child is reduced to an "ADD child," where the potential to see the best in him or her is severely eroded (since ADD/ADHD puts all the emphasis on the deficits, not the strengths), and where the number of potential solutions to help them is highly limited to a few child-controlling interventions" (Armstrong, n.d.).

Dr Armstrong suggests a paradigm shift from the "deficit-based ADD/ADHD paradigm", to a holistic paradigm that sees each child as unique, valuable and requiring different needs. So he created the 50 Ways to Improve Your Child's Behavior and Attention Span without Drugs, Labels, or Coercion (for detailed information about each way, see [The Myth of the ADD Child](#)).

No one can learn when they are over stimulated. PLT eMod™ system has been proven to help people diagnosed with ADD/ADHD and poor concentration and focus to really learn. The carefully and purposefully designed program works to create an optimum learning environment where the brain is balanced and calmed through the use of specifically chosen colors, specifically chosen music, specifically chosen words, specifically chosen frequencies of rhythms.

Additionally the PLT eMod™ system effectively compliments, nurtures and develops 27 of Dr Armstrong's 50 Ways to Improve Your Child's Behavior and Attention Span without Drugs, Labels, or Coercion:

1.	Find out what interests your child- your child learns to discover and develop their passion so that they can find their purpose, develop and increase their skill so that they can eventually share their passion and purpose with others.
2.	Promote a strong physical education program in your child's school, by adding an emotional maturity and emotional intelligent component to the educational experience.
3.	Discover your child's multiple intelligences – This occurs naturally through engaging in the process as ones innate intellectual strengths are communicated to while the weaker intelligences are strengthened, to promote whole brain thinking.
4.	Use background music to focus and calm – set to the biorhythms the music in the PLT eMods™ creates a calming and consistent rhythm that allows the mind to focus.
5.	Use color to highlight information – the work book process encourages that people use highlighters while reading the guide so that people learn to read every word, and avoid skim / speed reading which often allows the mind to skim over information it is not comfortable with.
6.	Teach your child to visualize. The PLT eMods™ help teach children how to find and ignite their creativity and imagination, but assisting learners in reducing their fear level.
7.	Enhance your child's self-esteem – Though building a foundational understanding of the cause and effect of life people learn how to develop a positive self-esteem through increased awareness of self, others and their spiritual connection / six sense.
8.	Provide a variety of stimulating learning activities – this is accomplished in the study guides and feedback assessments.
9.	Consider biofeedback training – the feedback assessment process provides this.
10.	Activate positive career aspirations.
11.	Teach your child physical-relaxation techniques – the PLT eMods™ process takes learners into a state of mental and physical relaxation.
12.	Use incidental learning to teach – the questions encourage learners to pull from their life experiences to evoke a sense of personal ownership of the material being learned.
13.	Provide appropriate spaces for learning – the program creates a supportive holding environment, a non-threatening, non-confrontational, non-judging and non-labeling space for learning to effectively occur.
14.	Help your child with organizational skills – the self-directed nature of the process encourages this.
15.	Help your child appreciate the value of personal effort – the PLT eMods™ process teaches values.
16.	Take care of yourself – the PLT eMods™ process helps the whole family learns how to take personal responsibility for themselves as well as how to care about and love one another.
17.	Teach your child focusing techniques – the PLT eMods™ helps the learner concentrate and focus, while providing answers to developmental, behaviors and emotional problems that the learner may experience and not understand why, what or how to change.

18. Provide immediate feedback – the feedback assessment process provides the learner with automatic feedback-biofeedback.
19. Provide your child with access to a computer.
20. Consider family therapy – the PLT eMods™ encourages cultural/familial involvement to ensure that the skills the child is learning are actively applied in all environments.
21. Teach problem-solving skills – through teaching not what but how to think the PLT process effectively teaches life skills.
22. Offer your child real-life tasks to do.
23. Help your child develop social skills – the PLT eMod™ system teaches these skills effectively to all people, and encourages cultural investment, modeling and implementation of the skills through the teaching of not what but how to implement the skills in ones daily life.
24. Contract with your child.
25. Use effective communication skills – the PLT eMods™ teaches people how to communicate and be more aware of one another through the process of learning about cause and effect, and this increasing the ability to association skills.
26. Give your child choices – the PLT eMods™ is all about learning to see all your choices. The PLT eMods™ teaches not what, but how to think... in doing so the program is very much focused on teaching people to learn how to learn and in doing to how to learn how to see all their choices and make mature adult decisions.
27. Discover and treat the four types of misbehavior.
28. Establish consistent rules, routines, and transitions – the program is structure in a way that gives the view a sense of structure, yet self-direction. Hence the program builds personal skills and teaches the viewer how to develop routines and consistency as those skills are modeled by the process of the courseware.
29. Have your child teach a younger child – the PLT eMods™ encourages peer mentoring to allow participants to take ownership of their learning experience.
30. Hold a positive image of your child- through environmental / cultural / familial involvement parents can learn how to love all their children as they are without judgment or expectations.

From Armstrong: http://www.thomasarmstrong.com/add-adhd_strategies.php (see Appendix)

Differentiated Instruction~ Differentiated Learning

Differentiated instruction / learning involves providing students with different ways to acquire information; in order to process, construct, or making sense of an idea or concept; and to developing teaching materials and styles so that all students within a classroom can learn effectively, regardless of differences in abilities and learning styles and preferences.

According to Carol Ann Tomlinson (as cited in Rock, Gregg, Elli, & Gable, 2008, p.32) differentiated instruction is the process of “ensuring that what a student learns, how he/she learns it, and how the student demonstrates what he/she has learned is a match for that student’s readiness level, interests, and preferred mode of learning”.

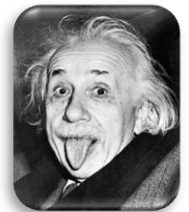
Differentiation stems from the need to teach different learners with not only different educational abilities, learning preferences, learning abilities and interest but most importantly different beliefs (Anderson, 2007). The key is finding out how students' learn best and teaching in a way that accommodates their specific needs while teaching the group.

One of the PLT eMods™ motto's are that it doesn't matter *"how smart you are, but how you are smart."* In this sense the PLT eMod™ technology and methodology teaches to all learners no matter their preferred learning style. So while the PLT eMod™ process accommodates all learning styles, it does so in a structured and methodical way.

Because the technology is so versatile and accommodates all students it gives educators time to plan and structure various activities and feedback mechanisms that would appeal to the different learners. Additionally the PLT eMod™ system allows for learners to experience different learning styles in a non-threatening and secure way as the technology teaches to their preferred style while exposing them to others, thus teaching learners to be more adaptable and flexible in future learning environments and with different materials.

Development of Meta-Cognitive Skills

***"Smart people got smart
not by knowing all the answers,
but by being better thinkers
and eliminating the bad answer choices."***



John H. Flavell of Stanford University is regarded as the first researcher in [metacognition](#) (Farvell, n.d.). Farvell was significantly influenced by [Jean Piaget](#). While many challenge many of Piaget's theories, many ideas that he proposed have been influential and applied to the development of the field of metacognition (Farvell, n.d.). Amongst those is the notion of *intentionality*. "*Intentionality presupposes thinking that is deliberate and goal-directed, and involves planning a sequence of actions*" (Farvell, n.d., para. 2).

Metacognition is defined as "cognition about cognition" or "knowing about knowing" (Metacognition, 2010, para. 1). Metacognition theories make a "basic distinction between *metacognitive knowledge* (i.e., what one knows about cognition) and *metacognitive control processes* (i.e., how one uses that knowledge to regulate cognition)" (Schraw and Moshman, 1995, p.352).

Another important form of metacognition is [Metamemory](#), which is defined as the ability to know about memory and mnemonic strategies (Metacognition, 2010.). Metacognition has been identified by many as a survival tool and thus cross culturally relevant from an evolutionary perspective. This being said the development and teaching of metacognitive skills needs to on some level be similar cross-culturally while easily adaptable to different cultures (which is what PLT provides).

Strategies for promoting and developing metacognition include:

- Self-Questioning (i.e. "What do I already know about this?" "How is this similar to a problem I encountered before?" "What can I learn from this experience?" "How have I solved problems like this before?");
- Thinking Aloud While Performing a Task;
- Making Graphic Representations (e.g. concept maps, flow charts, semantic webs) of one's thoughts and knowledge;
- Writing (Carr (2002) states that the physical act of writing plays a large part in the development of metacognitive skills (Gammil, 2006, p.754)."

(Metacognition, 2010)

PLT eMods™ teach individuals not what but how to think, while increasing self-awareness, self-reflection and self-questioning through the viewings, study guide questions and online feedback assessments which provide the viewer with automatic feedback and the opportunity to write their thoughts down and develop the skill that Carr (2002) said was vital for the development of metacognitive skills growth. PLT eMods™ also helps the learner discover the best way that they learn be it through reading, writing or drawings.

Additionally the PLT eMods™ process can be applied to all cultures and backgrounds because the technology teaches to all learners no matter their learning style, intelligence, cultural background or beliefs. The power of the technology is that all learners learn no matter who they are or where they are from... learning is unquestionable... learning just happens.

Thus the PLT eMods™ process facilitates the development of meta-cognitive skills in a gentle, non-threatening and non-confrontational way as the viewer learns and discovers who they are and what makes them tick through the proven process.

Finding the Flow

Flow has been reported and experienced throughout history and across cultures and religions. Some call it flow others pure focus and emersion; some call it meditation, connectedness, oneness, ubuntu; some call it self-awareness, or self knowledge, some call it dedication and total commitment to what you are doing and engaged in. Whatever it means to you the concept of flow has been around for centuries.

Buddha spoke of a state of mind known as the "action of inaction" or "doing without doing" this meditative space of purity very much aligns with the idea of flow" (Flow, 2010, para. 1). "Indian texts on Advaita philosophy such as Ashtavakra Gita and the Yoga of Knowledge such as Bhagavad-Gita refer to this similar state" (Flow, 2010, para. 1).

Flow is a state in which the individual is fully absorbed in the task at hand with absolute focus, clarity, conviction, awareness (of self, others and the task at hand), concentration, commitment and peace. It is a state of purity and connectedness. It can almost be equated to the natural flow of nature, when one is doing exactly what they believe and know they ought to be doing for that moment in time.

If not for the state of flow we may not have been privy to the great works of artists, musicians, writers and creators like Michelangelo, Da Vinci, Shakespeare, Mozart, Beethoven, Monet, Pollock to name but a few. Michelangelo for example was said to have painted the Vatican's Sistine Chapel while in a flow state. He was reported to paint for days at a time, without food or sleep. He only stopped when he reached a point of absolute exhaustion and he would pass out and then he awake refreshed and quickly return to the state of flow.



People in a state of flow are alert, attentive and aware, constantly processing information from their surroundings. The individuals focus is still, but he/she is aware, open-minded, honest and selfless enough to notice and adapt to external events. The total awareness with the environment is described as "expanded consciousness" by schools of meditation (Csíkszentmihályi, 1991)

The psychology of flow was proposed by [Mihály Csíkszentmihályi](#). He described flow as an experience of what makes life and experiences truly satisfying “a state of concentration so focused that it amounts to absolute absorption in an activity” (Csíkszentmihályi, 1991).

Csíkszentmihályi describes flow as focused motivation, a single-minded immersion and the harnessing of emotions for the intent of achieving (goals, objectives) and learning. In flow the emotions are not just contained and channeled, but positive, energized, and aligned with the task at hand.

According to Csíkszentmihályi one cannot force oneself to enter flow nor even predict when one is going to enter flow. It just happens. But we can learn how to be in this state.

The PLT eMods™ process trains the brain to experience this state of flow- while engaged in the process from viewings, to companion study guides, to feedback assessments. The PLT eMods™ viewings in particular train the brain to enter this state through the carefully chosen music (which create Beta, Alpha, Theta and Delta waves in the brain) as well as the way the information is presented in a flowing, sequential and purposeful way that overcomes mental filters and the conscious mind providing a meditative-like state.

Csíkszentmihályi also states that a state of flow can be entered while performing any activity, although it is most likely to occur when one is wholeheartedly performing a task or activity for intrinsic purposes (Flow, 2010).

“There are three conditions that are necessary to achieve the flow state:

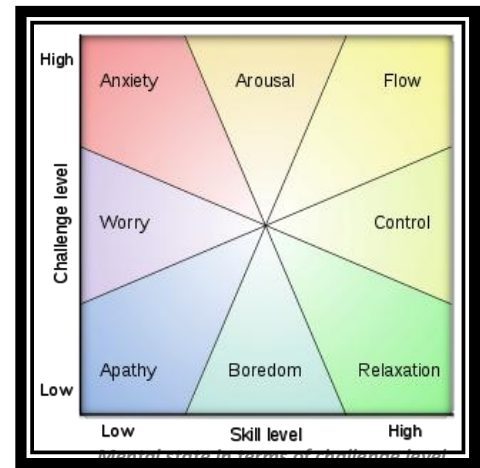
1. One must be involved in an activity with a clear set of goals. This adds direction and structure to the task.
2. One must have a good balance between the *perceived* challenges of the task at hand and his or her own *perceived* skills. One must have confidence that he or she is capable to do the task at hand.
3. The task at hand must have clear and immediate feedback. This helps the person negotiate any changing demands and allows him or her to adjust his or her performance to maintain the flow state.”

(Csikszentmihalyi, Abuhamdeh and Nakamura, 2005).

In looking at Csíkszentmihályi’s conditions it is necessary to make reference to PLT’s process in that it fulfills all the requirements and conditions. It can therefore be concluded that the process itself induces a state of flow and thus inducing an optimum learning environment.

Csíkszentmihályi	Jorgensen – PLT eMods™
One must be involved in an activity with a clear set of goals. This adds direction and structure to the task.	PLT eMods™ is self-directed in nature. The process gives direction and structure while allowing the individual to define and set his/her goals and objectives.
One must have a good balance between the <i>perceived</i> challenges of the task at hand and his or her own <i>perceived</i> skills. One must have confidence that he or she is capable to do the task at hand.	The Easy and User friendly design of PLT eMods™ makes the technology accessible to all and a skill all can learn to master. Additionally the courseware communicates to all learners meeting them at their perceived level
The task at hand must have clear and immediate feedback. This helps the person negotiate any “changing demands and allows him or her to adjust his or her performance to maintain the flow state.” (Csikszentmihalyi, Abuhamdeh and Nakamura, 2005).	The Feedback assessment gives automatic bio-feedback to the individual to allow the individual to gauge what they learned and what they missed... there by learn from mistakes and continue the learning process.

In 1997, Csíkszentmihályi published the graph to the right. This graph defines the relationship between the perceived challenges of a task and one's perceived skills. "This graph illustrates how flow can only be achieved when the activity at hand is a higher-than-average challenge (above the center point) and requires above-average skills (to the right of the center point). The center of this graph (where the sectors meet) represents one's average levels of challenge and skill. The further from the center an experience is, the greater the intensity of that state of being (whether it is flow or anxiety or boredom or relaxation)" (Flow, 2010, para. 8).



and skill level, according to Csikszentmihalyi

By setting ourselves challenges, tasks and activities that are neither too difficult nor too simple for our abilities we can learn how to be in a state of flow. With such goals, we learn to order the information that enters consciousness and thereby improve the quality of our lives (Csikszentmihalyi, Abuhamdeh and Nakamura, 2005). But how do we learn how to do this?

The challenge when looking at this model is how to help and assist people in developing into individuals who can find a balance between their skill level and their challenges?

Csikszentmihályi hypothesized that people with specific personality traits may be better able to achieve flow than the average person. He discovered that the personality traits that allowed for a state of flow were "curiosity, persistence, low self-centeredness, and a high rate of performing activities for intrinsic reasons only." People with most of these personality traits are identified as having an [autotelic](#) personality.

"An autotelic person needs few material possessions and little entertainment, comfort, power, or fame because so much of what he or she does is already rewarding. Because such persons experience flow in work, in family life, when interacting with people, when eating, even when alone with nothing to do, they are less dependent on the external rewards that keep others motivated to go on with a life composed of dull and meaningless routines. They are more autonomous and independent because they cannot be as easily manipulated with threats or rewards from the outside. At the same time, they are more involved with everything around them because they are fully immersed in the current of life."

(Autotelic Personality, 2010)

It has not yet been documented whether people with an *autotelic* personality are truly more likely to achieve a flow state. Although Abuhamdeh (2000) did find that people with an *autotelic* personality have a greater preference for "high-action-opportunity, high-skills situations that stimulate them and encourage growth" than other personalities. And as we explored in the diagram above, it is in high-challenge, high-skills situations that people are most likely to enter the flow state.

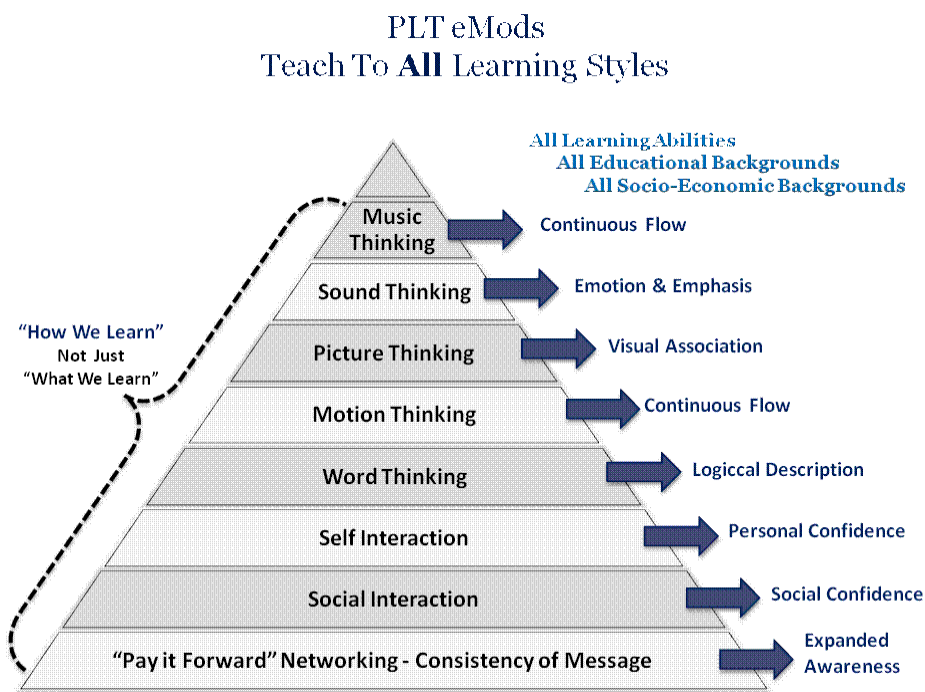
But the question that is raised is that if *autotelic* personality traits are necessary to achieve a state of flow how to we foster these traits in ourselves and others.

Most of psychology believes that personalities become fixed at a certain age, and that is who we are for the rest of our lives. "Meet a boy at 7 and meet the man at 70." However that does not have to be the case. With PLT eMods™ people have the opportunity to explore their beliefs, their minds, and their personalities and change them. Thus can help individuals uncover and discover the autotelic traits within them, thus increasing their ability to flow.

Teaching to ALL Intelligences & Learning Styles

PLT eMods™ teach to all 8 multiple intelligences defined by Howard Gardner and Robert Ornstein. The 9th intelligence was described by Robert Slavin (2010) in his book *Educational Psychology*. The nine intelligences are:

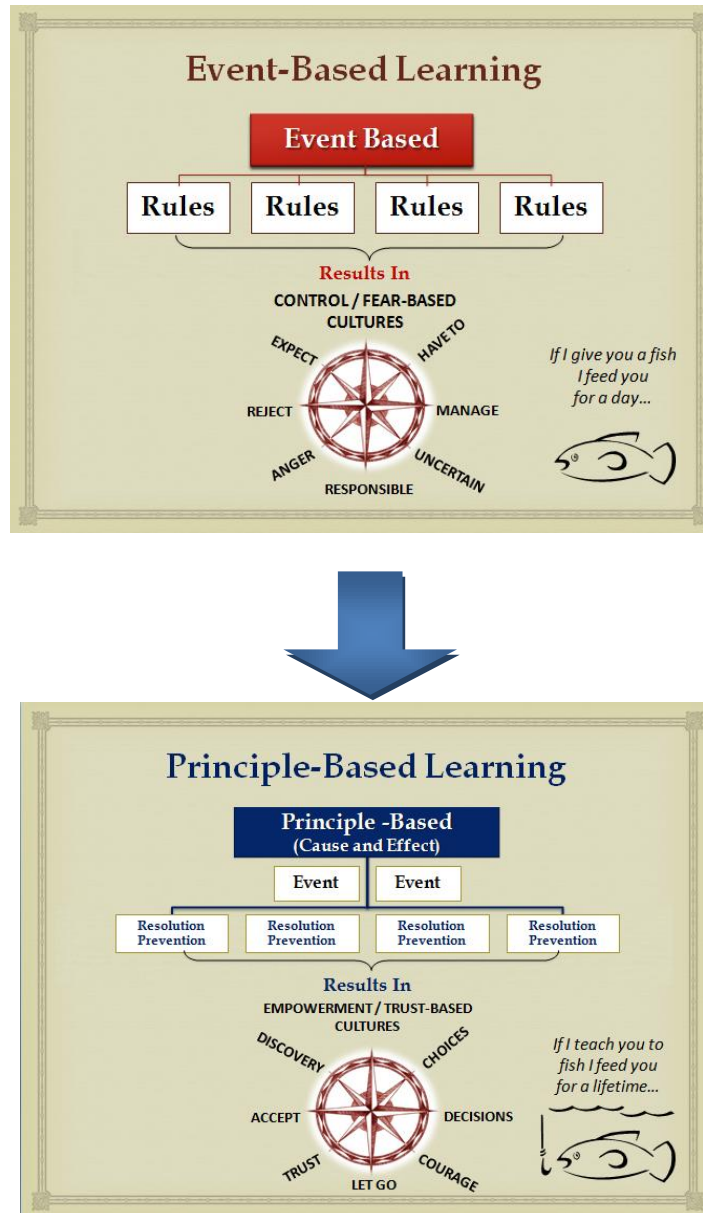
- Musical
- Spatial
- Logical-mathematical
- Kinesthetic (body/movement)
- Linguistic
- Interpersonal
- Intrapersonal
- Naturalistic
- Existential



Bringing all these intelligences to life, the PLT eMods™- technology and methodology allows information to be delivered to an individual’s intellectual strength while strengthening their weakness. Thus boosting and improving the overall intellectual functioning of all people no matter their learning preference.

Gardner and Ornstein said that real intelligence is the ability to use the brain to engage all types of intelligences. In order to do this one needs to have a balanced brain and engage in whole brain thinking (exactly what PLT eMods™ facilitate).

Process / Principles vs. Event Learning



Each of the focus of PLT eMods™ is on the delivery and development of principle based education. Principle-based education is teaches universal principles such as cause and effect in a process orientated way. A principle-based approach to education allows for resolution and preventative learning through empowerment and trust-based learning. On the other hand many educational programs that are taught as an event – as having a beginning and an end.

Event-based programs are used on occasion but not truly integrated into one's life process i.e. studying for a test. Event-based learning is based on rules that are usually enforced to maintain control. In approaching education from an event-based frame work, we in essence teach learners that life is about rules.

See the following video for a short illustration of the difference between a process/principle-based approach to life versus an event-based approach: <http://vodpod.com/watch/1511019-event-vs-process-a-leadership-culture>.

Process

Encourages development
Matures people
Is a culture issue
Changes people
Is difficult

Event

Encourages decisions
Motivates people
Is a calendar issue
Challenges people
Is easy

<http://www.czarofpr.com/event-vs-process1>

The PLT eMods™ process is an educational experience that is a **true process** and is meant to give you the tools to integrate these *Universal Life Principles* into your everyday life process for fulfillment and success. It begins to assist you to move from living life from **event to event (event-based learning)**, to an understanding of **cause and effect (principle-based learning)**.

The delivery of the process, principle-based approach to learning and content delivery is very carefully structured and designed. From the flow of the text, the writing of the text, to the music, to the presentation of the information each element plays a specific and critical role in the design, which you will learn about in the wisdom incubator.

The process of how the information unfolds creates the *flow* in which you naturally become part of, enabling you to connect with the information and truly integrate it into your life process.

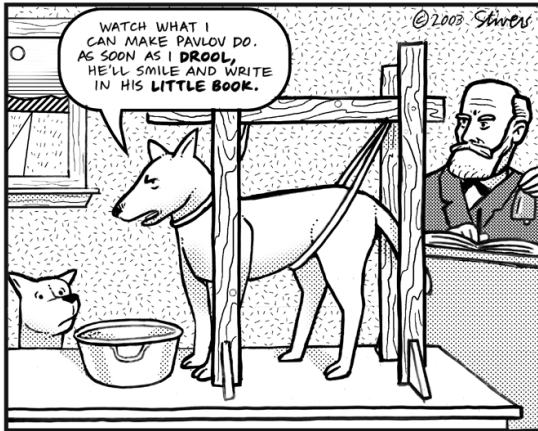


Brain -Based Learning

Behavior, Biology and Genetics:

William James saw psychology as a *natural science* that was based on the workings of the brain, but at that time he lacked the tools to thoroughly understand the functions and workings of the brain.

B.F Skinner believed that like animals human beings are shaped by their environment. Skinner said: ***“although cultures are improved by people whose wisdom and compassion may supply clues to what they do or will do, the ultimate improvement comes from the environment which makes them wise and compassionate.”***



And who could forget **Ivan Pavlov's** infamous “Pavlov's Dog” experiments where he showed how conditioned we are relative to our belief in our autonomy and free will / thinking - how controlled we are by the world around us. He explained that ***“conditioned reflexes are phenomena of common and widespread occurrence: their establishment is an integral function in everyday life. We recognize them in ourselves and in other people under such names as ‘education,’ ‘habits,’ and ‘training’; and all of these are really nothing more than the results of an establishment of new nervous connections during the post-natal experience of the organism.”***

Recent technological advances have allowed psychology to gain greater insight and understanding of the brain rather than merely extrapolating brain functioning and purpose from behaviors (Butler-Bowdon, 2007).

The new advances in technology have re-ignited the field of neuroscience – and the old “nature vs. nurture” debate. The old debate between Emerson and Rousseau which sort to determine if we are by nature relatively unchangeable or are blank slates ready to be socialized and nurtured, is alive again.

Genetic science and evolutionary psychology have shown us that “much of what we call human nature, including intelligence and personality, is wired into us in the womb or at least hormonally influenced” (Butler-Bowdon, 2007, p.5). This being said genetic and environmental factors play a role in brain development from our inception.

In *The Blank Slate* Steven Pinker notes ***“that the human mind had no inherent structure and can be inscribed at will by society and ourselves.”*** Within this statement is the assumption that we are all born into this world with equal mental abilities and potential bar severe mental, emotional or physical disabilities. Pinker points out that while “genes entail a certain *probability* – they determine nothing” (Butler-Bowdon, 2007, p.231).

The brain that changes itself written by Norman Doidge challenges the belief that the adult brain is hard wired and fixed. He argues for the case of “neuroplasticity” that is the brain's ability to change at any age through alternative treatments and technical innovation. And the brain's ability to change and form new neural pathways through experience and training. Many today like Norman Doidge, Michael Merzenich, Jeffrey M. Schwartz, Jon Kaas and Paul Bach-y-Rita emphasize the research and work that has and is being done in the field of neuroplasticity.

“Research has shown that engaging the brain’s plasticity to drive beneficial changes requires exact stimuli delivered in the appropriate sequence with “precise timing”. The training must be intensive, repetitive, and progressively challenging. Individuals must be strongly engaged in the training, paying close attention. It’s all about the minds vitality–nurturing it, reclaiming it and giving it strength.”

Michael Merzenich, Ph.D. Professor of Neuroscience, U.C.S.F.

It was once thought that the brain was fixed by the age of 7 and unable to grow or change.

“But extensive research and in depth study of epigenetics⁴ has shown that it’s remarkably adaptable, able to create new neural pathways in response to stimulus in the environment, a branch of science called neuroplasticity. Additionally, it is now understood the difficulties associated with a wide range of learning disorders and neurobehavioral disorders result primarily from environmental influences that affect genetic expression and are therefore often correctable. Because the brain can change, and because difficulties can be corrected, children suffering from Functional Disconnection can be greatly helped.”⁵

Thomas Armstrong in his book *“Neurodiveristy”* calls for the need to treat the brain in a “neurodiverse” way and instead of labeling people as ill or sick simply understanding that like people of different cultures have different values and traditions certain people have different brain and mental functioning, that while making them different also makes them unique in what they have to offer the world. This theory helps to expand the emerging consciousness that states that “disorders” like ADD/ ADHA, dyslexia, autism and learning disabilities are merely differences in thinking – to be understood and explored rather than fixed and “normalized.” And like Temple Grandin stated *“the world needs all kinds of brains.”*

Back to the biological debate, studies of the female brain, by Louann Brizendine showed how woman are affected biologically by hormones at various stages of their lives. Additionally Anne Moir and David Jessel demonstrated in their book *Brainsex* how many of our biological tendencies stem from *“the sexual biology of our brains, which are largely set by the time the fetus, is 8 weeks old”* (Butler-Bowdon, 2007, p.5).

Additionally the new advanced in neuroscience and neurology have even caused us to investigate the notion of the self, the ego... the cherished “I”. “The writings of Oliver Sacks explain how the brain continually works to create and maintain the feeling of an “I” that is in control, even if there is in fact no part of the brain that can be identified as the locus of the ‘self feeling’” (Butler-Bowdon, 2007, p.5). Ramachandran’s work with phantom limbs suggests that the sense of self is an “elaborate illusion” that our brain creates to ensure our bodies survival. His work with phantom limbs proves the brains ability to create a sense of cognitive unity even if the reality (of many selves and of many layers of consciousness) is more complex (Butler-Bowdon, 2007, p.5).

The observations of Jean Piaget and Alfred Kinsey although different both served to understand human behavior. Where Piaget focused on the developmental stages and environmental influences on a child, Kinsey focused on the biological drives that motivate and sculpt our sexuality. “The work of Piaget and Kinsey suggest that while biology is always a dominant influence on behavior, environment is critical to its expression” (Butler-Bowdon, 2007, p.6).

Even with all the genetic research being uncovered and discovered we cannot concretely conclude that human beings are 100% determined by DNA, hormones or brain structure. We can never define or determine the exact and precise cause and effect of our behavior and biology. As human beings unlike animals we are aware of our behavior and instincts and as a result have the ability to shape and control them. Thus we are neither nature nor nurture, but an interesting combination of both driving forces.

⁴ “**Epigenetics** is the study of inherited changes in phenotype (appearance) or gene expression caused by mechanisms other than changes in the underlying DNA sequence, hence the name *epi-* (Greek: *ἐπι-* over, above) -*genetics*.” (Wikipedia)

⁵ Brain Balance Center: <http://www.brainbalancecenters.com/>

The PLT eMod™ technology and methodology developed by Richard Jorgensen, takes the learner on a journey of discovery and purpose as the process implements many brain balancing theories and neuroplasticity experiences and opportunities. The process is structured in such a way that the process unfolds gently and succinctly.

Supporting the premise that biology is important, sometimes enhancing and sometimes limiting (i.e. the addictive gene), the PLT eMod™ system rests on the premise that 20% of our life is determined by what happens to us and 80 % of our life is determined by how we deal with it. The PLT eMod™ system teaches people how to deal with life and thus effectively helps nurture individuals into self-sustaining empowered individuals.

The nature of the PLT technology, methodology and content display allow for repetition and frequency through a proven process that allows beliefs to be challenged. Thus through the PLT process changes in the neurological pathways can and have been proven to occur, as the process encourages transformative learning and the creation of new experiences to create new pathways and beliefs to be formed.

Additionally because the PLT eMods™ is culture orientated in its proposed application and accessibility idea is for the system to be implemented in cultures for cultural change, growth and development. Let's take a closer look at the brain and accepted theory around brain-based learning.

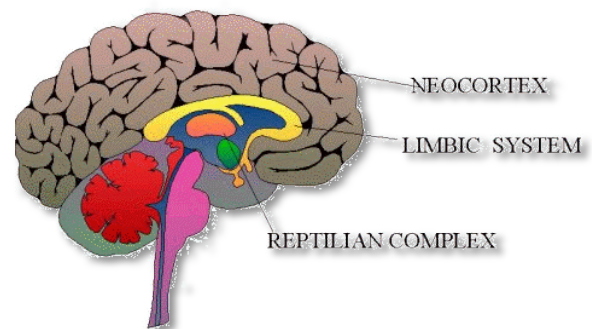
The Brain & Learning

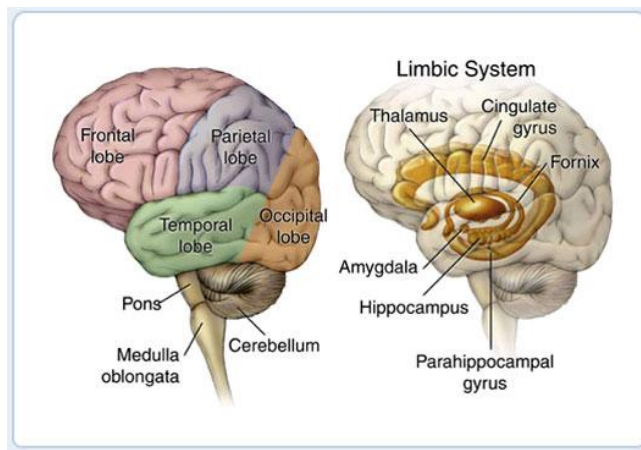
The Triune Brain

Many practitioners in the field of Accelerated Learning and “brain-based” teaching and learning base their work and understanding on the MacLean’s Triune Brain Theory (MacLean, 1973; 1990). The Triune Theory gives a clear understanding about the brain’s involvement in learning (Hart, 1998). Hart (1998) specifically stresses the “body-mind or body-brain partnership” in the learning process (p. 69).

MacLean (1973) holds that the brain evolved in three stages:

1. **Reptilian Brain:** is composed of the brain stem and spinal cord that controls our drives and automatic response system (fight or flight).
2. **Old Mammalian Brain:** is composed of the amygdala complex, hippocampus, thalamus and hypothalamus that function to regulate emotions (limbic system).
3. **New Mammalian Brain:** is composed of the cerebrum and neocortex and it is where we process language and symbols, and executive functions.





It has been proposed that the reptilian brain and old mammalian brain focus on our survival and emotional needs, while the new mammalian brain focuses on the interactions with the external world (Sylwester, 1994, as cited in Minewiser, 2000, p. 16). Memory is thought to be somewhat processes in the limbic system while the amygdala processes emotional information from “behavior and memory as it filters and interprets incoming sensory information” (Sylwester, 1994, as cited in Minewiser, 2000, p. 16). Schuster (1995) proposes that the “major factor in brain-body communication is the limbic-hypothalamic-pituitary system which is like a great funnel taking in information from neural nets all over the brain and transforming it into messenger molecules for distribution throughout the body, including of course the brain itself” (p. 32, as cited in Minewiser, 2000, p. 16). Thus the old mammalian system has a fundamental impact on the individual. And the ability to learn how to control this seemingly automatic system is what William James identified as what distinguished the human brain from animals ([See Learning Barriers & Habits](#)).

The aim of the PLT eMod™ system is to help empower people with the tools to transcend our automatic responses and develop a sense of control over our limbic-hypothalamic-pituitary system through increased awareness (of self, others and reality) through the development of metacognitive skills, our multiple intelligences and our emotional intelligences.

The Mind-Body Connection

The mind and the body are in constant communication as information flows into the brain via our senses and information flows out via neurons and hormones.

***“...neurotransmitter or hormonal stimulation associated with fear
can strengthen the emotional and weaken the factual
memories of an event if the situation
is serious and/or chronic.”***

There are numerous neural pathways in the brain that are utilized for information processing depending on the need and stimuli. The most natural and automatic neural path way runs from the thalamus to the amygdala and provides quick and immediate information and is mainly used to avoid danger and react quickly. This is the fear path way and is noted to disrupt memory and bypass rational, cognitive functioning (Minewiser, 2000). Sylwester (1994) notes that the **“neurotransmitter or hormonal stimulation associated with fear can strengthen the emotional and**

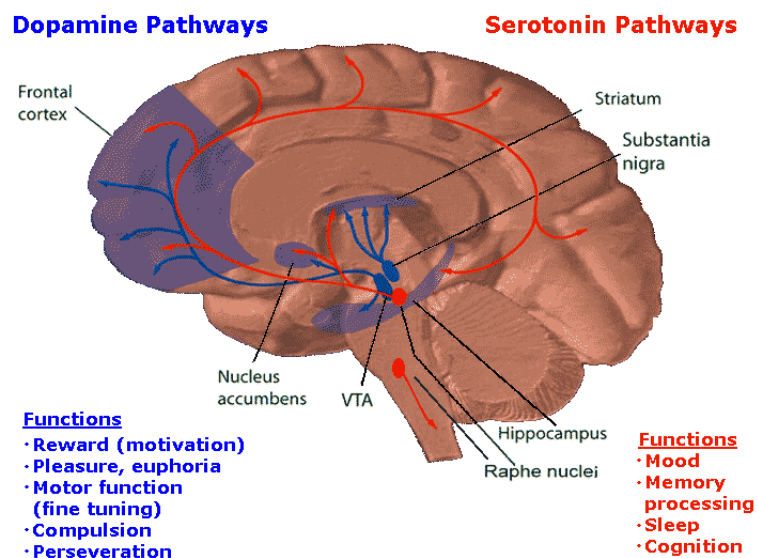
weaken the factual memories of an event if the situation is serious and/or chronic” (p. 1, as cited in Minewiser, 2000, p. 18).

The other path way runs from the thalamus to the cortex and then to the amygdala and allows for the processing of executive functions to be applied and rational decisions to be made (Minewiser, 2000, p. 18).

Low cortisol levels are said to evoke a euphoric sense of control

The influence of hormones is also noted in the mind brain connection as certain hormones and neurotransmitters facilitate or inhibit learning. Cortisol for instance is a hormone that is released when one is in a state of stress (physical or emotional the brain does not know the difference). Increased cortisol levels can damage or kill cells in the hippocampus, involved in memory (Minewiser, 2000, p. 18). ***Low cortisol levels are said to evoke a euphoric sense of control*** (Sylwester, 1994, as cited in Minewiser, 2000, p 19). Notably a low stress environment is thought to possibly facilitate the growth of new neurons in the hippocampus, which is said to be involved in learning and memory (Berger, 1998; Bower, 1998; Gould, McEwen, Tanapat, & Galea, 1997; Kemperman, Kuhn, & Gage, 1998; Larkin, 1998; Noble, 1998; van Praag, Kemperman, & Gage, 1999; all as cited in Minewiser, 2000, p. 20).

Additionally Serotonin and dopamine also have an effect on learning. As the diagram below demonstrated dopamine is needed to stimulate motivation and enjoyment and thus form a positive association in the brain so that the action will occur again, while serotonin is needed for memory processing and cognition.



<http://en.wikipedia.org/wiki/File:Dopamineserotonin.png>

From this understanding it we can infer that PLT eMods™ through its structured and well defined and tested system facilitates the understanding of the brain's innate response reaction to being based on a fear based response. With this understanding it opens the door to the possibility of embarking on a conscious and unconscious journey to train the brain to exercise our more advanced neural processing response based on rationality and cognition rather than impulse and emotion. Through the PLT eMods™ process that induces a state of relaxation and lucid learning the individual embarks on the journey of transformation on a macro and micro level (building emotional intelligence, and metacognitive skills and increasing a sense of self control while exercising the new mammalian brain and executive functioning skills).

The PLT eMods™ environment therefore reduces cortisol levels and through the music increases dopamine levels (see below). In doing so the PLT eMod™ system allows for optimum learning and memory functions.

The Phantom Brain Phenomenon & PLT

The world renowned neuroscientist V.S. Ramachandran wrote:

“There is something uniquely odd about a hairless neotenous primate that has evolved into a species that can look back over its own shoulder and ask questions about its origin. And odder still, the brain cannot only discover how other brains work but also ask questions about its own existence: Who am I? What happens after death? Does my mind arise exclusively from neurons in my brain? And if, so what scope is there for free will? It is the peculiar recursive quality of these questions – as the brain struggles to understand itself – that makes neurology fascinating.”

(Ramachandran, 1998)

Ramachandran is a unique scientist who embraces the anomalies of science and looks to understand them. He explains in his book *Phantoms of the Mind* (1998) that many diagnoses of mental illness are better understood as “malfunctions in brain circuitry.” And hence seemingly insane behaviors may not imply insanity.

From this we can also assume that seemingly insane behaviors while they may be on a physiological level, can also be on a cognitive-behavioral level. Thus these “malfunctions in brain circuitry” can be both caused by physical problems as well as learned behaviors. This is validated by taking a brief look at the work of Ivan Pavlov whose experiments with dogs proved the validity and development of becoming conditioned to a behavior, while also validating the animalistic need to adapt to ones environment.

“If the animal were not in exact correspondence with its environment it would, sooner or later, cease to exist... To give a biological example: if instead of being attracted to food, the animal were repelled by it, or if instead of running from the fire the animal threw itself into the fire, then it would quickly perish. The animal must respond to changes in the environment in such a manner that its responsive activity is directed towards the preservation of its existence.”

(Pavlov, 1927)

With this in mind we need to understand that malfunctions in the brain circuitry can be caused by either / both biological and environmental factors. And as such the solution to the problem, may lie in the resolution of faulty thinking and behaviors. Through PLT eMods™ resolution can be discovered and uncovered and malfunctions can be corrected by unlearning what one learned from the environment and relearning new information to correct / realign the circuitry.

Phantom Limbs

Ramachandran is best known for his work with people who experience phantom limbs- after an amputation or paralysis. These people experience normal sensations in their limbs even though it is physiologically impossible for this to occur. What Ramachandran discovered is that his patient's brain, retained and held on to a whole body image / representation that included arms and legs. And so when a limb is lost it takes a while for the brain to catch up.



The traditional view is that people experience shock over their loss and their defense mechanism is to deny the loss and engage in wishful thinking that their limb is still there. This is significant as it defines and explains the brain's desire to hold on to what it has become accustomed to experiencing and its view of oneself and the world, even in the face of change. It explains how the brain becomes habitually accustomed to an image, thought, behavior or emotion and will do what it must to protect that image even if it means defying reality to maintain the illusion (whatever it may be- perfection, purity, wholeness...).

Ramachandran suggests that the brain is hardwired for limb coordination and wants to enjoy that use of these functions even if the sensory information doesn't register i.e. even if the limb is not there. Ramachandran came to this conclusion during his work with several cases where the individuals were born without limbs yet still experienced the phantom limb symptoms, and because they had never had the experience of having the limbs, they had never received the sensory information from their stumps that there was a change in sensation, so their brain kept on believing that their limbs were there to use, because they had never experienced anything different. *This demonstrates the importance of experiencing another way of being in order for the brain to change.* As well as the ability of the mind to be open to the experience and the possibility of a different way of experiencing and perceiving the world.

In order for people's minds to open up to new experiences, in this day and age, we need to employ non-threatening, non-confrontational and gentle mechanisms to allow people to be open to receiving and accepting new information. In order to do this we need a trusted messenger, that can explain the cause and effect of principles so that the mind can gently assess what is right for it...and what is real vs. what is an illusion. In order to achieve these goals and by-pass defenses and pre-existing beliefs, we employ the PLT eMod™ system that has proven to reach all learners in a gentle and kind way, while presenting information in a principle-based way that allows the mind to experience for itself the pros and cons of unlearning and relearning. The PLT eMods™ allows for the development of the self-identity in a real and honest way – developing the individual's perception as a whole.

Anasognosia: The Confused Brain

Ramachandran explored and studied anosognosia which is a syndrome in which a mentally sane patient, denies paralysis of a limb (leg or arm) - but the denial only occurs if it is the LEFT arm or leg. Ramachandran's study of this phenomenon led him to explore and define the differences of the two hemispheres of the brain.

The left hemisphere he said works to create belief systems or models of reality (Butler-Bowdon, 2007, p.235). This side of the brain is conformist in nature and "always tries to cling tentatively to the way things were" (Butler-Bowdon, 2007, p.235). ***So when it is confronted with new information that does not fit into the predefined model, it employs defense mechanisms of denial or repression in order to preserve the status quo*** (Butler-Bowdon, 2007, p.235).

The right hemisphere on the other hand is tasked to challenge the status quo and look for inconsistencies and any sign of change (Butler-Bowdon, 2007, p.235). When the right hemisphere is damaged the left hemisphere is free to pursue its "denials and confabulations" (Butler-Bowdon, 2007, p.235). ***"So without the right's reality check, the mind wanders down a path of self-delusion"*** (Butler-Bowdon, 2007, p.235).

Thus Ramachandran's work with anosognosia seems to prove Freud's concept of defense mechanisms – thoughts and behaviors whose purpose is to protect the concept / idea of the self. While at the same time proves a deeper understanding as to why many people struggle with the concept of change... because our brains are not balanced and

in the world today our left brains are more developed hence making the modern mind more resistant to change and more apt and accepting of the illusion of conformity.

The PLT eMod™ process balances the brain so that the brain is better able to associate and assimilate information, experience life, discern people and situations and open to learning and exploration.

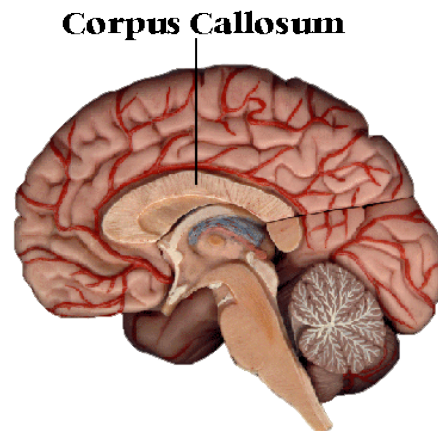
Balancing the Melon: Getting The Lesson

In order to truly learn the brain needs to be not only open to learning but balanced in a way that learning can be applied and understood in the brain. For this to happen we look to theories that explain the concept of balanced-brain learning.



In the 1960's that **Roger Sperry and Ronald Meyers** discovered that each hemisphere of the brain functioned differently, through an experiment that become known as the split-brain effect. Meyers and Sperry experimented on cats, in a process which has come to be known as "**the split brain cat**" (Bogen, 1999). These experiments showed that when a cat had its optic chiasm and corpus callosum severed, two independent learning centers were established, one in each hemisphere of the cat's brain.

Through experiments the scientists determined that without the corpus callosum information was not able to pass from one hemisphere to the other, and that each side of the brain was responsible for different functions. And in conclusion the brain consisted of "**two separate realms of conscious awareness; two sensing, perceiving, thinking and remembering systems**" (Ahmed, 2001).



<http://pegasus.cc.ucf.edu/~Brainmd1/callosum.html>

In the 1981 Roger Sperry won the Nobel Prize in Medicine for his work and findings relating to split-brain research. The work identified the dual functioning of the brain, while also clearly defining different thinking styles, functions and capabilities for different part of the brain (Michael P. Pitek III, The Performance Group).

The right hand side of the brain (gestalt) is responsible for thinking in terms of visual stimuli, images, pictures, colors, intuition and processing information on a holistic and whole manner.

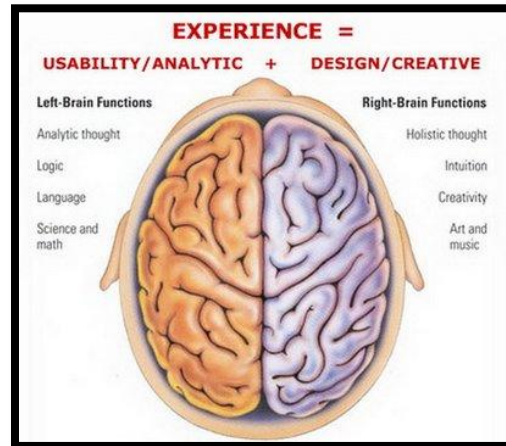
The left hand side of the brain (logic) thinks in terms of words, symbols, numbers, lists and processes information in a sequential, specific, analytical and finite manner.

Let's look at an example of how the brain might function and process learning about an animal. The left hand side of the brain would be responsible for remembering the animal's name and the information about the animal i.e.

its mating habits, sleeping habits, and diet etc, while the right hand side would be responsible for remembering what the animal looks like.

Additionally Sperry “discovered that when the left side of the brain is active, the right side goes into a relaxed and semi-meditative, alpha-wave state” (Moroe and Carmichael, 2002, p.43).

Further, Sperry’s wisdom warned us that “Our educational system, as well as science in general, tends to neglect the nonverbal form of intellect. What it comes down to is that modern society discriminates against the right hemisphere” (1973).⁶



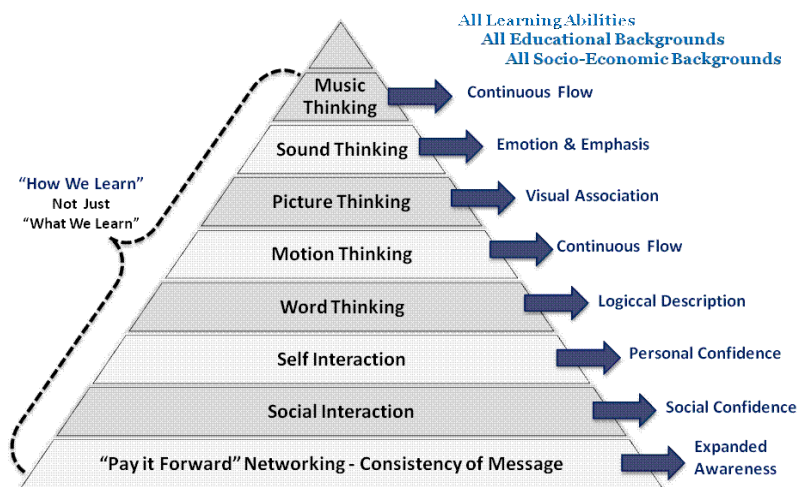
A properly functioning brain communicates between both hemispheres, through the corpus collosum, as well as within each hemisphere at lightning speed. These connections are like a relay team: they race the information where it needs to go, they connect, pass on information on, and release, repeating this process millions of times a minute. In a poorly functioning brain, these runners are often out of sync, missing each other or not passing all the information- hence people struggle to associate concepts. This miscommunication is called Functional Disconnection and is at the root of all types of neurobehavioral and learning problems.

The PLT eMod™ system communicates to both the left and the right brain simultaneously thus creating a brain balanced learning experience. By teaching to all learning styles, and intelligences through its specially [choreographed presentation](#) that incorporates all the aspects of [accelerated learning](#) and more (see diagram below).

PLT eMods
Teach To **All** Learning Styles

The PLT eMod™ process encourages and teaches people how to learn. In doing so the process effectively trains the brain to learn how to associate and apply information. Thus the PLT eMod™ system helps the brain learn how to fire, when to fire and how to connect the dots between a. and b., without skipping from a. to c.

The technology teaches the brain how to function optimally, and get in sync. While also teaching people to challenge old beliefs like: I can’t associate, I am a slow learner, I have a learning problem, and I have a comprehension problem – and overcome challenges such as ADD/ADHD, dyslexia, poor reading and comprehension skills.



⁶ Split Brain: <http://abny80-windingroad.blogspot.com/2009/07/split-brain-theory-by-roger-wolcott.html>

Brain Frequency & Learning

The human brain functions and operates on five different brain frequencies: delta, theta, alpha-theta, beta and gamma. In order for the brain to learn we need to find a way to put the brain in an optimum state / frequencies. That being said there are certain states / wavelengths evoke different states of consciousness and thus create different learning experiences (see the table below):

Brain Frequencies & Learning

DELTA = 1-2 Hertz (cycles per second)

Sleep, Deep physical relaxation, pain control & stress release.

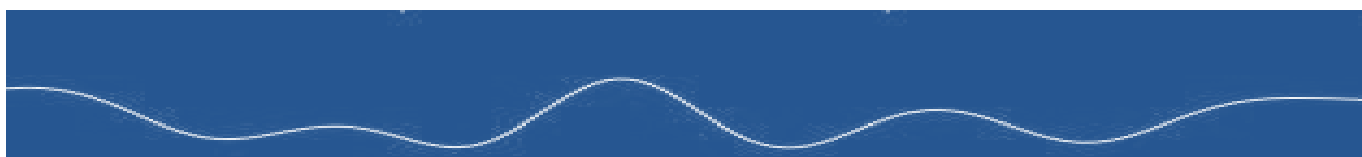
- Commonly associated with deep sleep patterns.
- High-amplitude rhythmic delta brain waves in adults are often found in brain injury or disorders.
- Loss of physical awareness / body awareness.



THETA = 3-5 Hertz (cycles per second)

Memory, both memorization and recall and IQ growth.

- Theta brain waves may be rhythmic or arrhythmic.
- Linked to enhanced levels of creativity, emotions, and spontaneity.
- Excess of theta brain waves, may cause feelings of depression, daydreaming, ADD, distraction or anxiety, unclear thinking, poor judgment and decision making, impulsivity and a decrease in reaction time
- Theta brain waves provide access to our long-term memories, repressed memories / repressed emotions, and assists in improving our spiritual connection.



ALPHA = 8-12 Hertz (cycles per second)

Learning, reading and listening.

- 8 Hz – 10 Hz = Alpha 1 (slow alpha)
- 10 Hz – 12 Hz = Alpha 2 (relaxed and al
- Associated with meditative states, visualization, and idleness of the optical system.
- Alpha activity increases when one daydreams, relaxs, or close eyes.
- *Normal alpha* is found to be balanced equally among the right and left hemispheres of the brain.
- Excessive alpha brain waves in the left-hemisphere of the brain main lead to depression.
- Excessive alpha waves in frontal lobes of the brain, it may be causing depression, ADD/ADHD, or another disorder.



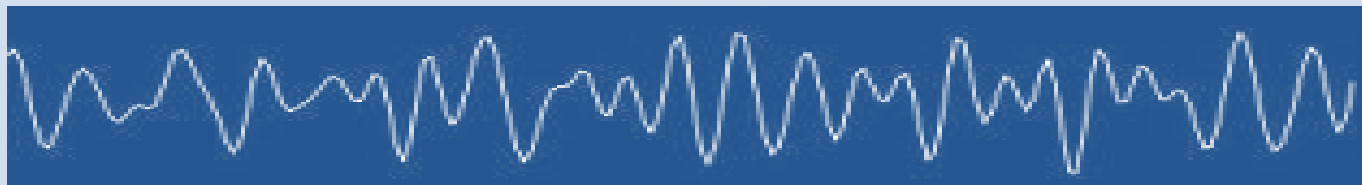
HIGH BETA = 20 – 40 Hertz (cycles per second)

- Sometimes, high beta brain waves are created in your brain to compensate for excessive theta brain wave activity.
- High Beta waves are experienced by those who are: highly alert, nervous, OCD, fearful, anxious, excessive thinkers, rapid thinkers, addicts, hypochondriacs or in a state of peak performance.

BETA = 12-20 Hertz (cycles per second)

Decision making, logic and problem solving.

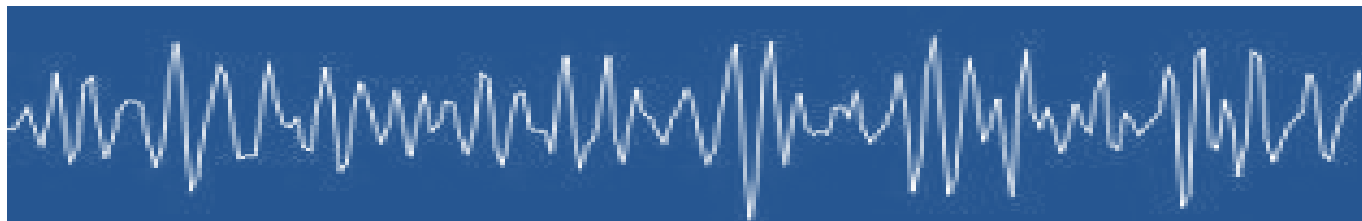
- Beta waves are considered the “fast brain wave” activity.
- Every time one focuses, analyses, perform calculations, or think about the external environment, beta waves are at work.
- Too much beta brain wave activity in the right hemisphere of the brain is linked to anxiety, tension, and worry.
- Beta waves observed in the left hemisphere of the brain are considered healthy.
- Beta brain wave increases may be of benefit to depressant.
- Excess of Beta waves is associated with disorders such as: anxiety, insomnia, and OCD (Obsessive-Compulsive Disorder). Stressful events and tension are also known to increase beta brain wave activity in the brain



GAMMA =25-100 (40Htz) Hertz (cycles per second)

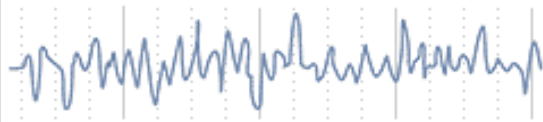
Associated with sudden insight, alertness, optimal cognitive functioning, peak concentration

- Gamma waves aid in learning and mental acuity.
- Observed through the entire brain; it is not found in one specific area.
- Individuals with learning disorders and mental deficiency often lack gamma brain-wave activity.



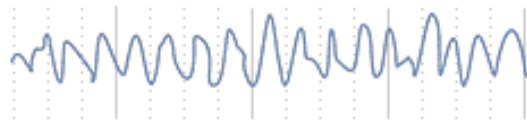
Adapted from <http://www.alpha-thetalearning.com/brainfreqtrain.htm> and <http://mrg.blogs.exetel.com.au/>

Four Categories of Brain Wave Patterns



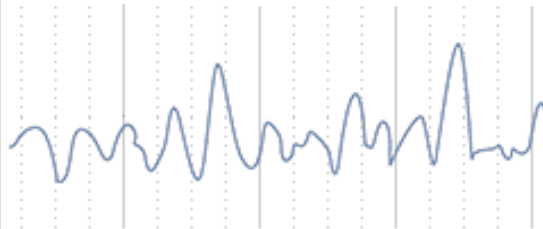
Beta (14-30 Hz)

Concentration, arousal, alertness, cognition
Higher levels associated with anxiety, disease, feelings of separation, fight or flight



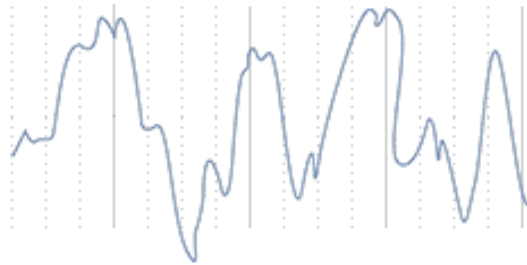
Alpha (8-13.9 Hz)

Relaxation, superlearning, relaxed focus, light trance, increased serotonin production
Pre-sleep, pre-waking drowsiness, meditation, beginning of access to unconscious mind



Theta (4-7.9 Hz)

Dreaming sleep (REM sleep)
Increased production of catecholamines (vital for learning and memory), increased creativity
Integrative, emotional experiences, potential change in behavior, increased retention of learned material
Hypnagogic imagery, trance, deep meditation, access to unconscious mind



Delta (.1-3.9 Hz)

Dreamless sleep
Human growth hormone released
Deep, trance-like, non-physical state, loss of body awareness
Access to unconscious and "collective unconscious" mind, greatest "push" to brain when induced with Holosync®

<http://mrg.blogs.exetel.com.au/>

We use the beta state while we go about our daily life – to deal with life. In the beta state however we are less open to new experiences and information as we are more focused on conscious cognitions and the fulfillment of our cognitive and behavioral needs, which as Richard Jorgensen explains are an interesting topic as often times humans confused their needs and their wants. For example the luxury car and expensive house which are wants become our needs and our minds think we need these wants for survival. In the beta state the mind has a hard time seeing beyond its instinctual needs and unless one has been taught how to examine their thoughts, one may experience an inability to see the illusion that may exist between one's needs vs. wants. This is the state that most of us are conditioned to living and hence our brains become adapt to experiencing.

The alpha state is more open, creative and receptive to experiences and new information, and still the theta state is even more open as the conscious barriers to learning and fears of the conscious animalist mind are reduced. The alpha and theta state can be reached through listening to classical music, meditation, exercise and spiritual practices (i.e. praying). Both states are known to have a positive effect on overcoming addiction and changing behaviors long-term. The alpha-theta state is experienced and cultivated through the PLT eMods™ Computer Viewing process, as will be expanded below.

The Alpha-Theta State and PLT eMods™

In the alpha-theta state “the mind experiences the body in a half-in half-out state of sleep or **detachment**. The feeling is of being **conscious** of all things around you but the body being in deep **relaxation**” ([Brain Activity by Terrance A. Bastian](#)). This is the environment that the PLT eMods™ Computer Viewing process creates.

The alpha-theta state occurs when “the **central nervous system** reduces input from the **peripheral nervous system**. The lowering of sensory input serves to normally protect the central nervous system from **sensory overload** caused by stress or physical damage. Without these outside functions for the brain to control, the brain expands its functioning powers. The normally unused portion of the brain becomes active and performs at **maximum capacity**” ([Brain Activity by Terrance A. Bastian](#)). Thus the smoothing nature of the PLT eMods™ Computer Viewing process and its effect on the brain frequency assist in making it a brain entrainment tool that not only balances the mind, but simultaneously supports the flow of learning while ensuring that the information provided is principle based and communicated.

Many cultures discovered the benefits of obtaining and attain an alpha-theta state in the mind and develop methods to achieve this state naturally and artificially. “Many of the world’s religions were founded on reaching this state and devised strict disciplines to do so. The Alpha-Theta range occurs during

- Reverie,
- Hypnogogic **imagery**,
- **Meditation**, and by
- Self-hypnosis.”

([Brain Activity by Terrance A. Bastian](#)).

Dr. Chandrakant Sardeshmukh gives us some pointers about how to strength and increase our experience of alpha waves in the table below:

Absorbed in Hobby	Music, Painting, Sports
Orient	Meditation as in Zen, Yoga
Europe	Self-directed training Method
America	Bio-Feedback Method (Use of electronic equipment/s)
Others	Training, Qigong method, Acupuncture, Music therapy

http://www.darshanam.com/brainwaves_interaction.asp

For many years Dr. Chandrakant Sardeshmukh has been researching and teaching the benefits of music on the brain, to help people strengthen their alpha waves and thereby attain a great sense of peace, creativity and spirituality in their lives. PLT eMods™ can be applied to each category of above, thus showing how PLT eMods™ can and do provide an effective tool for training the brain to be and experience an alpha state.

Topics	Chandrakant Sardeshmukh Categories	PLT eMods™
Absorbed in Hobby	Music, Painting, Sports	PLT eMods™ use music and eye movement to create an alpha state.
Orient	Meditation as in Zen, Yoga	PLT eMods™ use music and eye movement to create an alpha / meditative state.
Europe	Self-Directed Training Method	PLT eMods™ can be a self-directed learning or group learning experience.
America	Bio-Feedback Method (Use of electronic	The Feedback Assessments provide bio-feedback

	equipment/s)	to learners.
Others	Training, Qigong method, Acupuncture, Music therapy	PLT eMods™ use music and eye movement to create an alpha / meditative / therapeutic state.

PLT eMods™ use music to induce a state of relaxation, promoting an alpha -theta state (see [The Brain and Music](#)). Additionally the used of [EMDR](#) techniques, coupled with the repetition of the music and the rhythmic flow of both music and content (dynamically paced text) allows the learner’s mind to relax in almost a meditative state. A state that Jorgensen (2007) refers to as a state of lucid learning, similar to the state of lucid dreaming (alpha-theta state).

The self-directed nature of the process allows learners to take control of themselves without taking control of the process. This allows for a relationship of trust that allows the brain to calm to an alpha-theta state.

The used of [bio-feedback mechanisms](#) such as music that is synchronized to the heart beat (see [The Brain and Music](#)) again allows for the learner and the technology to form a relationship and get in flow with one another – increasing trust while, increasing learning and receptivity.

Through the use of carefully timed music, flow and text the PLT eMod™ system effectively takes the learner on a journey from a state of Beta, to Alpha, to Theta, and then gently back to Beta. Thus the PLT eMod™ process allows for an optimal state of learning, as it accesses and talks to not only the conscious but also the unconscious mind opening the door to transformative learning. Notably the PLT eMods™ technology and methodology are aligned to accelerated learning techniques and methodology. Now let’s take a closer look at the effect of music on the brain.

(Important side note: research opportunities on PLT eMods™ Computer Viewings as a tool for brain entrainment are encouraged and welcome, as are other studies around the effect of the Computer viewings on brain frequency and overall behavior.)

The Brain & Music

“LA MUSIQUE EST LA LANGUE DU COEUR”

~MUSIC IS THE LANGUAGE OF THE HEART~

JEAN-JACQUES ROUSSEAU

The influence of music on the great minds has been clearly seen throughout modern history. Thomas Jefferson used music to help him get the words on to paper while writing Declaration of Independence -when he could not figure out the right wording for a certain part he would play his violin (O’Donnell, 1999). Albert Einstein himself says that the reason he was so smart was because he played the violin – enjoying the music of Mozart and Bach the most. A friend of Einstein’s, G.J. Withrow, said that Einstein figured out his problems and equations by improvising on the violin (O’Donnell, 1999).

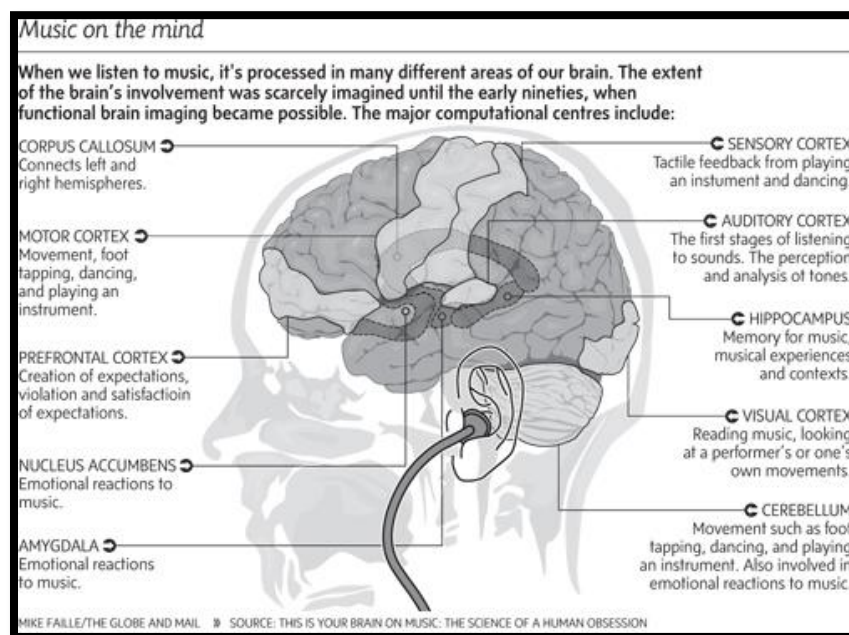
Music Affects on The Body & Mind

Research has shown that music influences humans in good and bad ways , with instant and long lasting effects (O’Donnell, 1999). Music is often linked the emotional, spiritual, and physical elements of life (O’Donnell, 1999). “Music can also be used to change a person's mood, and has been found to cause like physical responses in many people simultaneously” (O’Donnell, 1999).

Rhythm is an important aspect to analyze and understand when talking about emotional, mental, physical and spiritual responses to music (O'Donnell, 1999). There are two reciprocal responses to rhythm. These responses are:

1. The sensing / actual hearing of the rhythm; and
2. The physical response to the rhythm.

“Rhythm organizes physical movements and is very much related to the human body” (O'Donnell, 1999). For example, the biorhythms of the heart, the breath, the organs that change depending on our activity and stimuli and organizes and regulates the biological movement.



Research: Music & The Brain

Certain types of music (classical, Jazz, East-Indian) have been shown to have a number of therapeutic benefits: from improvements in motivation, participation and cooperation, to physical, mental and emotional benefits. For example “classical music from the baroque period causes the heart beat and pulse rate to relax to the beat of the music. As the body becomes relaxed and alert, the mind is able to concentrate more easily. Furthermore, baroque music decreases blood pressure and enhances the ability to learn. Music affects the amplitude and frequency of brain waves, which can be measured by an electro-encephalogram. Music also affects breathing rate and electrical resistance of the skin” (O'Donnell, 1999). Whereas other types of music for example rock and acid rock have been shown to have a negative, harmful and weakening effect on the mind and body (i.e. the work of Dr John Diamond, as cited in O'Donnell, 1999).

Research by Nayak et al. (2000) showed that music therapy is associated with a decrease in depression, improved mood, and a reduction in state anxiety, while also eliciting a positive effect on both social and behavioral outcomes of participants increasing activity involvement and cooperation in recovery. Mauritz (2003) examined the effect of music therapy on mood of stroke patients and found similar results showing how the therapy effectively decreased anxiety, fatigue, and hostile mood states. Additionally, Wheeler et al. (2003) found that group music therapy sessions increased stroke patient's receptiveness and willingness to engage in social interaction, while also

significantly increasing positive attitude reports from patient families. The researchers also noted how individual music therapy sessions helped to motivate patients for treatment.

Recent research also supports previous findings suggesting that music can increase patient's motivation, positive emotions and responsiveness to treatment (Mauritz, 2003; Kim, 2005). Thus the calming and positive effect that music has, has shown to have a positive impact on the recovery Magee and Davidson (2002) of stroke victims and their acceptance and willingness to accept treatment.

Additionally music appears to be influential in creating a more pleasant learning environment in terms of affective criteria (Schuster & Mouzon, 1982) which may improve performance. Davidson and Powell (1986) showed how music may have the potential to affect concentration and attention rate and in turn improve on-task behavior.

In a newspaper article Robert Melillo⁷ commented on the notable ***benefits of music to the brain help to stimulate the right brain while also stimulating dopamine production in the brain*** (Black, 2009). This stimulation of the right brain, the part of our brain that is often neglected in society today, allows the mind to calm and the left brain to calm.

Music also appears to be associated with physiological effects such as a lowered heart-rate (Blanchard, 1979) and increased alpha brain waves (Lozanov, 1978) which may be instrumental in improved learning performance.

Suggestopedia, Music, Memory & Learning

Music has a powerful effect on our memory and hence our ability to learn. Mozart's music and baroque music, with a 60 beats per minute beat pattern, activate the left and right brain (O'Donnell, 1999). The simultaneous stimulation of the left and right brain maximizes learning and retention of information (O'Donnell, 1999). It also needs to be noted that the human heart beats on average at a rhythm of 60 beats per minute, thus connecting with the biorhythms of the body.



Wolfgang Amadeus

The information / content being studied or presented activates the left brain (logic /specific) while the music activates the right brain (emotional/ creative/ holistic) (O'Donnell, 1999). Additionally it needs to be noted that, *“activities which engage both sides of the brain at the same time, such as playing an instrument or singing, causes the brain to be more capable of processing information”* (O'Donnell, 1999).

The use of using music to enhance learning is not new. As Rose (1985) points out, the coupling of music and learning of words was by the ancient Greeks.

.....audiences would attend a festival in the Panathenes [of the Panatheneia] once every four years. A presenter would chant the entire Iliad to the heartbeat rhythm of a softly playing lyre. From memory. Records show that many of the audience could remember large passages afterwards. (p.97)

While the type of music many have changed, the principle and technique of using music to help facilitate learning (understanding, retention and application) has not. This is identified in the teachings and principles of Lozanov's (1978) foundational work which stated that:

⁷ Dr. Robert Melillo is an internationally known lecturer, author, educator, researcher and clinician in the areas of neurology, rehabilitation, neuropsychology and neurobehavioral disorders in children. He's also an expert in nutrition with more than 20 years of clinical experience.

1. **Music can potentially create a state of relaxed alertness in students called *psychorelaxation*⁸.** Lozanov (1978) “found that the body rhythms of students adjusted to the rhythms of the baroque music he used. He recorded a significant increase in alpha brain waves during the passive concert sessions with a corresponding decrease in beta waves. He also recorded a drop in blood pressure and a slowing of the pulse” (Felix, 1989, Chap 2).
2. **The use of music during instruction / information processing evoked whole brain learning.** Lozanov (1978) “believed that the interaction of both hemispheres together with the neo-cortex had a positive effect on retention rates of learned materials. Subsequent research has found this claim to be true (Claycomb, 1978). Additionally according to Stein, Hardy, and Totten (1982). (1982) other models on brain functioning, such as the Triune Brain system (McLean, 1973), the Taxon and Locale Memory system (O'Keefe & Nadel, 1978) and the Holographic Memory system (Pribram & Coleman, 1979) also suggest, that multiple channels of stimulation and input will increase information retention” (Felix, 1989, Chap 2).

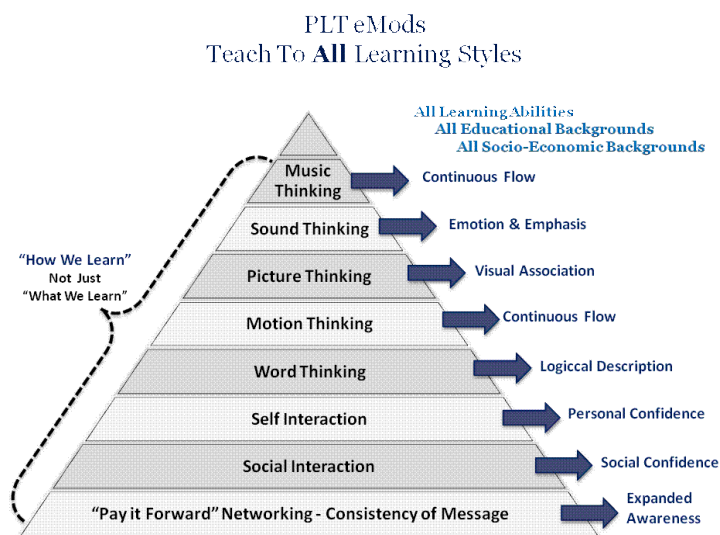
Research done by [The Center for New Discoveries in Learning](#), shows how learning can be increased by using this 60 beats per minute music. Additionally [Lozanov](#) was one of the first to prove the validity and effectiveness of using music for teaching. Lozanov (1979) designed a way to teach foreign languages in a fraction of the normal learning time and with lasting results, using his suggestopedia technique – using music from the baroque period (60 beats per minute).

Although it can be stated that music has an effect on the brain that promotes whole brain functioning and thus [whole brain learning and thinking](#), while increase information-processing abilities – [metacognitive skills](#), we still know little about how the reported effects of music on learning are actually achieved.

PLT eMods™, The Brain & Music

PLT eMods™ use baroque period music and other music (60 beat per minute). PLT eMod™ system creates an environment that relaxes the mind, much like the state that Lozanov describes in [Suggestopedia](#).

Through the PLT eMod™ system, right brain left brain balance learning occurs as music talks to the right brain while information is presented to the left brain in the form of words. As previously mentioned this process allows for information-processing systems to learn how to balance and associate between the two hemispheres.



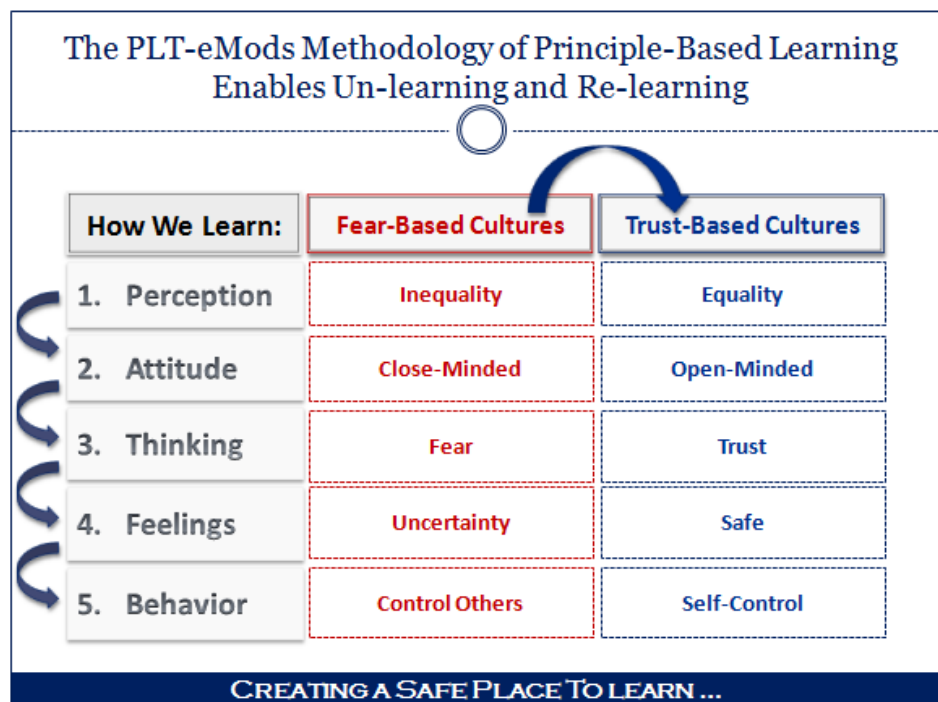
⁸ **Psychorelaxation** is a method of treating anxiety and tension by practicing general bodily relaxation, as in systematic desensitization (<http://www.encyclo.co.uk/define/Psychorelaxation>)

Additionally, the PLT eMod™ system is so advanced that it communicates to the right brain not just through music but also through pictures. While also communicating to all 9 multiple intelligences simultaneously, thus allowing increased information processing, metacognitive development and intellectual development on all levels.

The features of the system are in alignment to accelerated learning principles, with added elements of ingenuity, originality and application that make the PLT eMods™ a unique, valid and reliable for educational effectiveness across cultural, economical, social and language divides.

Conclusion

PLT eMods™ effectively bridge the best of the best of psychological theory and philosophical debate. With a proven educational platform the PLT eMods™ technology and methodology together ensure that information reaches the learner on a conscious and non-conscious level and on all 5 dimensions of the human being: perceptions, attitudes, thinking, feeling and behaviors.



The principle based approach aims to help people not only learn, but to unlearn information that is no longer serving them. This Accelerated Learning approach allows people to transcend their beliefs and transform their thinking and increase cognitive, emotional, psychological and mental faculties.

While this paper has explored PLT eMods™ in relation to Accelerated Learning and Brain-based learning principles there are numerous other applications and disciplines that are applicable beyond the scope of this paper. There are numerous research opportunities to utilize PLT eMods for individuals, organizations and institutions in the fields where Accelerated Learning and Brain-balancing techniques are needed for example autism, traumatic brain injury, schizophrenia, depression, stress and anxiety to name but a few. Notably there are numerous grant opportunities available for sustainable and technology based approaches and interventions.

In conclusion we have explored PLT eMods™ and how the technology delivers information in a proven, tested, scientific and theoretically applicable way. The PLT eMods™ provide an effective and efficient delivery system that allows content to come alive and bring about real and lasting change in the mind and life of learners and groups of individuals. The PLT eMods™ bring together proven educational and learning theories as defined by the table below.

	Theory	Theorist/s
1.	8 Multiple Intelligences	Howard Gardner
2.	Adult Learners	Malcolm Knowles
3.	Addiction and the Brain	Carlton Erickson
4.	Archetypes	Carl Jung
5.	Attribution Theory	Fritz Heider, Harold Kelley, Edward E. Jones, and Lee Ross.
6.	Behaviorism	John B. Watson
7.	Behaviorism: Thorndike's Theory of Learning	Edward Lee Thorndike
8.	Behaviorism	Ivan Pavlov; B. F. Skinner; Edward Lee Thorndike; Edward C. Tolman; Murray Sidman; John B. Watson
9.	Blooms Taxonomy	Benjamin S. Bloom
10.	Boolean Logic	George Boole
11.	Brain Balance Music	Robert J. Mellilio
12.	Brain Balanced Learning	Richard Jorgensen
13.	Brain-Based Learning	Eric Jensen
14.	Brain Plasticity	Michael Merzenich
15.	Cognitive Constructivism	Jean Piaget
16.	Conditions of Learning	Robert M. Gagne
17.	Conscious-Based Education	David Lynch; Richard Jorgensen
18.	Conscious and Non-Conscious Learning	Richard Jorgensen; Milton Erickson
19.	Constructivism	Jerome Bruner; Lev Vygotsky
20.	Differentiated Instruction	Howard Gardner; Robert M. Gagne; Benjamin S. Bloom; Richard Jorgensen; Linda Darling- Hammond; Edward Deming
21.	Discovery Learning	Jerome Bruner
22.	Discovery Wisdom	Richard Jorgensen
23.	Dynamic Assessment	David Holt and Coleen Willard-Holt
24.	Critical Incident Stress Management (CISM)	Jeffrey T. Mitchell; George S. Everly
25.	Critical Incident Stress Debriefing (CISD)	Jeffrey T. Mitchell; George S. Everly
26.	Ecological Systems Theory	Urie Bronfenbrenner
27.	Eye Movement Desensitization Reprocessing	Francine Shapiro
28.	Emotional Intelligence	Daniel Goleman
29.	Emotional Structural Authority	Richard Jorgensen
30.	Emotions	Antonio Damasio
31.	Essentials in Education and "The Golden Mean"	Aristotle
32.	Expeditionary Learning	Kurt Hahn
33.	Experiential Learning	David A. Kolb
34.	Flow: Optimal Learning	Michael Csikszentmihalyi; Edward Deming; Richard Jorgensen, Carl Rogers
35.	Gestalt	Wilhelm von Bode
36.	Group	Irving Yalom
37.	Group Dynamics	Kurt Lewin
38.	Interdependence and Transformation	Edward Deming; Richard Jorgensen; Joel Barker; Steven Covey
39.	Johari Window	Joseph Luft and Harry Ingham
40.	Knowledge building	Carl Bereiter and Marlene Scardamalia
41.	Language of Vision	Gyorgy Kepes

42.	Learning and The Loss Of The Stable State	Donald Schon
43.	Letting Go / 5 Stages of Loss	Elizabeth Kubler-Ross
44.	Logotherapy	Victor Frankl
45.	Lucid Learning	Richard Jorgensen
46.	Maslow's Hierarchy Of Needs	Abraham Maslow
47.	Marzano's New Taxonomy	Robert J. Marzano
48.	Optimal Learning	Michael Csikszentmihalyi
49.	Paradigm Shifts	Joel Barker
50.	Restorative Learning (Unlearning and Relearning)	Richard Jorgensen
51.	Social Development	Erik Erikson
52.	Social Learning Theory	Albert Bandura
53.	Student-Centered Education	Carl Rogers
54.	Suggestopedia/ Suggestology	Giorgi Lozanov
55.	Symbolistics	Richard Jorgensen
56.	The Zone of Proximal Development	Lev Vygotsky
57.	Transactional Analysis	Eric Bern
58.	Transformative Education	Robert Boyd; Richard Jorgensen
59.	Transformative Learning Theory	Jack Mezirow, Robert Boyd
60.	Trust vs. Fear	Jack Gibb
61.	Waldorf Education	Rudolph Steiner
62.	Whole Brain Thinking	Ned Herrmann

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Appendix

Appendix A: Topics, Books & Theories that Apply to PLT eMods

Topics	Authors and Experts
Brain, Emotions and Learning	
Addiction and the Brain	Carlton Erickson
Archetypes	Carl Jung
Brain Balance Music	Robert J. Mellilio
Brain Balanced Learning	Richard Jorgensen
Brain Plasticity	Michael Merzenich
Brain-Based Learning	Eric Jensen
Conscious and Non-Conscious Learning	Richard Jorgensen; Milton Erickson
Emotions	Antonio Damasio
Lucid Learning	Richard Jorgensen
Language of Vision	Gyorgy Kepes
Languages of Art	Nelson Goodman
Memory and Emotion	Joseph LeDoux
Symbolistics	Richard Jorgensen
The Human Brain, Mind and Matter	James Corick
The Senses	Diane Ackerman
Trust vs. Fear	Jack Gibb; Richard Jorgensen
Whole Brain Thinking	Ned Herrmann
Educational Philosophy	
Chinese philosopher, Confucius, "tell me and I will forget, show me and I may remember, involve me and I will understand."	
Boolean Logic	George Boole
Conscious Based Education	David Lynch
"Democracy and Education" and "Art as an Experience"	John Dewey
Essentials in Education and "The Golden Mean"	Aristotle
Expeditionary Learning	Kurt Hahn
Learning and The Loss Of The Stable State	Donald Schon
Montessori	Maria Montessori
Relationships of Equality (Teacher-Student)	Paulo Freire
Socratic Method of Teaching	Socrates
Student-Centered Education	Carl Rogers
Suggestopedia / Suggestology	Giorgi Lozanov
Waldorf Education	Rudolph Steiner
Current Educational Concerns	
8 Multiple Intelligences	Howard Gardner; Kerri Zajackowski
Blooms Taxonomy	Benjamin S. Bloom
Collaborative Peer Learning	Linda Darling- Hammond
Conditions of Learning	Robert M. Gagne
Curriculum	William Schubert
Differentiated Instruction	Howard Gardner; Robert M. Gagne; Benjamin S. Bloom; Richard Jorgensen; Linda Darling-

	Hammond; Edward Deming
Dynamic Assessment	David Holt and Coleen Willard-Holt
Educational Experts	Linda Darling- Hammond Chester Finn; Diane Ravitch
Emotional Intelligence	Daniel Goleman
Horace's Compromise	Ted Sizer
Johari Window	Joseph Luft and Harry Ingham
Marzano's New Taxonomy	Robert J. Marzano
The Schools Our Children Deserve	Alfie Kohn
Learning	
Experiential Learning	David A. Kolb
Optimal Learning	Michael Csikszentmihalyi
Restorative Learning (Unlearning and Relearning)	Richard Jorgensen
Transformative Education	Robert Boyd; Richard Jorgensen
Transformative Learning Theory	Jack Mezirow
Educational Psychology Theories	
Adult Learners	Malcolm Knowles
Attachment Theory	John Bowlby
Attribution Theory	Fritz Heide; Harold Kelley; Edward E. Jones; Lee Ross.
Behaviorism	John B. Watson
Behaviorism: Thorndike's Theory of Learning	Edward Lee Thorndike
Classical Conditioning	Ivan Pavlov
Cognitive Constructivism	Jean Piaget
Conscious Based Education	David Lynch
Constructivism	Jerome Bruner; Lev Vygotsky
Ecological Systems Theory	Urie Bronfenbrenner
Flow	Michael Csikszentmihalyi; Edward Deming; Richard Jorgensen; Carl Rogers
Gestalt	Wilhelm von Bode; Fritz Perls
Group Dynamics	Kurt Lewin
Letting Go / 5 Stages of Loss	Elizabeth Kubler-Ross
Logotherapy	Victor Frankl
Manufacturing Victims	Tana Dineen
Maslow's Hierarchy Of Needs	Abraham Maslow
Operant Conditioning	B. F. Skinner
Social Development	Erik Erikson
Social Learning Theory	Albert Bandura
Suggestopedia / Suggestology	Giorgi Lozanov
The Gift of Therapy	Irvin D. Yalom
The Zone of Proximal Development	Lev Vygotsky
Theory of Self-efficacy	Albert Bandura; Julian Rotter
Creating Structure	
Codependency	Melody Beattie
Emotional Structural Authority	Richard Jorgensen
Interdependence and Transformation	Edward Deming; Richard Jorgensen; Joel Barker; Steven Covey
Overcoming Organizational Defenses	Chris Argyris
Paradigm Shifts	Joel Barker
Technology as a Cultural Force	Albert Borgmann

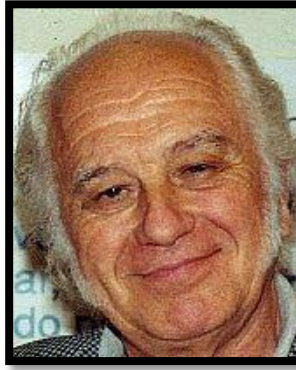
Creativity	
Active learning	Charles C. Bonwell and James A. Eison
Creativity and Imagination	Maxine Greene; Julia Cameron; Richard Jorgensen
Discovery Learning	Jean Piaget; Jerome Bruner; Seymour Papert
Discovery Wisdom	Richard Jorgensen
Knowledge building	Carl Bereiter and Marlene Scardamalia
Passion	Rhonda Watrin; Robert Solomon; Michelle Z Rosaldo
Other	
Emotions	Antonio Damasio
“Democracy and Education” and “Art as an Experience”	John Dewey
Critical Incident Stress Management (CISM) / Critical Incident Stress Debriefing (CISD)	Jeffrey T. Mitchell; George S. Everly
Collaborative Peer Learning	Linda Darling- Hammond
Conditions of Learning	Robert M. Gagne
Creativity and Imagination	Maxine Greene; Julia Cameron; Richard Jorgensen
Curriculum	William Schubert
Differentiated Instruction	Howard Gardner; Robert M. Gagne; Benjamin S. Bloom; Richard Jorgensen; Linda Darling- Hammond; Edward Deming
Educational Experts	Linda Darling- Hammond Chester Finn; Diane Ravitch
Emotional Structural Authority	Richard Jorgensen
Horace’s Compromise	Ted Sizer
Language of Vision	Gyorgy Kepes
Languages of Art	Nelson Goodman
Manufacturing Victims	Tana Dineen
Memory and Emotion	Joseph LeDoux
Overcoming Organizational Defenses	Chris Argyris
Passion	Rhonda Watrin; Robert Solomon; Michelle Z Rosaldo
Relationships of Equality (Teacher-Student)	Paulo Freire
Technology as a Cultural Force	Albert Borgmann
The Gift of Therapy	Irvin D. Yalom
The Human Brain, Mind and Matter	James Corick
The Schools Our Children Deserve	Alfie Kohn
The Senses	Diane Ackerman
Transactional Analysis	Eric Bern

	Theory	Theorist/s
63.	8 Multiple Intelligences	Howard Gardner
64.	Adult Learners	Malcolm Knowles
65.	Addiction and the Brain	Carlton Erickson
66.	Archetypes	Carl Jung
67.	Attribution Theory	Fritz Heider, Harold Kelley, Edward E. Jones, and Lee Ross.
68.	Behaviorism	John B. Watson
69.	Behaviorism: Thorndike's Theory of Learning	Edward Lee Thorndike

70.	Behaviorism	Ivan Pavlov; B. F. Skinner; Edward Lee Thorndike; Edward C. Tolman; Murray Sidman; John B. Watson
71.	Blooms Taxonomy	Benjamin S. Bloom
72.	Boolean Logic	George Boole
73.	Brain Balance Music	Robert J. Mellilio
74.	Brain Balanced Learning	Richard Jorgensen
75.	Brain-Based Learning	Eric Jensen
76.	Brain Plasticity	Michael Merzenich
77.	Cognitive Constructivism	Jean Piaget
78.	Conditions of Learning	Robert M. Gagne
79.	Conscious-Based Education	David Lynch; Richard Jorgensen
80.	Conscious and Non-Conscious Learning	Richard Jorgensen; Milton Erickson
81.	Constructivism	Jerome Bruner; Lev Vygotsky
82.	Differentiated Instruction	Howard Gardner; Robert M. Gagne; Benjamin S. Bloom; Richard Jorgensen; Linda Darling-Hammond; Edward Deming
83.	Discovery Learning	Jerome Bruner
84.	Discovery Wisdom	Richard Jorgensen
85.	Dynamic Assessment	David Holt and Coleen Willard-Holt
86.	Critical Incident Stress Management (CISM)	Jeffrey T. Mitchell; George S. Everly
87.	Critical Incident Stress Debriefing (CISD)	Jeffrey T. Mitchell; George S. Everly
88.	Ecological Systems Theory	Urie Bronfenbrenner
89.	Eye Movement Desensitization Reprocessing	Francine Shapiro
90.	Emotional Intelligence	Daniel Goleman
91.	Emotional Structural Authority	Richard Jorgensen
92.	Emotions	Antonio Damasio
93.	Essentials in Education and “The Golden Mean”	Aristotle
94.	Expeditionary Learning	Kurt Hahn
95.	Experiential Learning	David A. Kolb
96.	Flow: Optimal Learning	Michael Csikszentmihalyi; Edward Deming; Richard Jorgensen, Carl Rogers
97.	Gestalt	Wilhelm von Bode
98.	Group Dynamics	Kurt Lewin
99.	Interdependence and Transformation	Edward Deming; Richard Jorgensen; Joel Barker; Steven Covey
100.	Johari Window	Joseph Luft and Harry Ingham
101.	Knowledge building	Carl Bereiter and Marlene Scardamalia
102.	Language of Vision	Gyorgy Kepes
103.	Learning and The Loss Of The Stable State	Donald Schon
104.	Letting Go / 5 Stages of Loss	Elizabeth Kubler-Ross
105.	Logotherapy	Victor Frankl
106.	Lucid Learning	Richard Jorgensen
107.	Maslow's Hierarchy Of Needs	Abraham Maslow
108.	Marzano's New Taxonomy	Robert J. Marzano
109.	Optimal Learning	Michael Csikszentmihalyi
110.	Paradigm Shifts	Joel Barker

111.	Restorative Learning (Unlearning and Relearning)	Richard Jorgensen
112.	Social Development	Erik Erikson
113.	Social Learning Theory	Albert Bandura
114.	Student-Centered Education	Carl Rogers
115.	Suggestopedia/ Suggestology	Giorgi Lozanov
116.	Symbolistics	Richard Jorgensen
117.	The Zone of Proximal Development	Lev Vygotsky
118.	Transactional Analysis	Eric Bern
119.	Transformative Education	Robert Boyd; Richard Jorgensen
120.	Transformative Learning Theory	Jack Mezirow
121.	Trust vs. Fear	Jack Gibb
122.	Waldorf Education	Rudolph Steiner
123.	Whole Brain Thinking	Ned Herrmann

Appendix B: Suggestopedia



Suggestopedia was originally developed by Dr. Giorgi Lozanov, a Bulgarian medical doctor, psychotherapist, Yogi and educator. Lozanov developed Suggestopedia as he identified a need for an effective educational system to *accelerate learning*. He saw a new way of learning as essential for human evolution in order to keep up with technological advancements. More importantly he developed Suggestopedia in order to **help learners achieve optimum mental, physical and spiritual health**.

Suggestopedia is a learning methodology that works with *relaxation, music and suggestion* to effectively overcome barriers by *lowering the affective filter* thus enhancing the learning process (Harmer, 2001). Making use of “Baroque music, relaxed alertness, positive expectation, and highly orchestrated classroom methods to achieve increased memory and to accelerate learning” (Minewiser, 2000).

“Lozanov contends that the purpose of Suggestopedia is **to liberate and stimulate not only memory and other mental functions, but the entire personality**” (in Schuster & Miele, 1978, as cited in Minewiser, 2000, p.9). Krippner (1980) notes that Lozanov claimed to have developed a system, which activates many areas of the brain, particularly the right brain and the limbic systems (as cited in Minewiser, 2000, p.9).

Krippner (1980) stated that when he was part of the “Working Group on Suggestology as a Learning Methodology” for the United Nations Educational, Scientific and Cultural Organization (UNESCO) with Schuster, Miele, and Pollack, he found that Lozanov’s teachers:

“learn how to orchestrate classroom instruction, combining all elements of suggestopedia harmoniously.... Suggestopedic methods involve simultaneous activation of concentration and relaxation, of logic and emotion, of the brain’s left and right hemisphere, of the brain’s higher and lower centers, and of the unification of conscious and paraconscious mental activity.” (p. 133)

Lozanov’s methodology was **EXAMINED AND PROVEN EFFECTIVE** by UNESCO who now **RECOMMEND** Suggestopedia Methodology for educational environments around the world.

Lozanov maintains that the objectives of Suggestopedia are to: tap memory reserves, intellectual reserves, creativity reserves, and reserves of the entire personality, to avoid tiredness, create a pleasant learning experience, help students adapt to society, and create a positive psychotherapeutic effect (in Schuster & Miele, 1978, as cited in Minewiser, 2000, p 9).

Lozanov believes that his system enables a child to go through school without trauma and stress, while retaining their innate drive for learning, as well as allowing him/her to uncover innate but hidden capacity and talent which he calls the *reserve capacities of the mind*.

Principles of Suggestopedia

Lozanov found that learning is enhanced when tension, stress, and pre-existing concepts or beliefs are removed. Additionally he stated that true learning must engage both the analytical brain and the emotional brain, along with both states of consciousness - conscious and the unconscious. With this knowledge he formulated the following principles and concepts:

Principles Of Suggestopedia (Lozanov, 1978)

- Learning is characterized by joy and the absence of tension.
- Learning takes place on both a conscious and an unconscious level.
- The learner's reserve potential can be tapped through suggestion.

Basic Concepts Behind Suggestopedia (Integral Learning Systems LLC. Website, n.d.)

- People possess mental capacities that they seldom use under normal circumstances.
- People's response to stimuli is complex.
- The more we can do to communicate to the unconscious and the conscious faculties of the brain through effective learning, the greater our ability to break through the conditioned, automatic patterns and "open the access to the greater potential of the mental reserve."

Suggestopedia is a method that implements these principles by working not only on the conscious level of human mind but also on the subconscious level, which allows the mind to engage in a process of unlearning for the purpose of relearning. And since it works to transform learning and open the mind and brain, which are said to have unlimited capacities, one can teach more than other methods can teach in the same amount of time.

Additionally through his learning approach Lozanov's sought to equip and offer students more choices. While placing a **great emphasis on the classroom / learning environment and atmosphere**. Lozanov expresses the necessity for the "*the students feel comfortable and confident*" in order for effective learning to occur (Harmer, 2001).

Origins of the Name: Suggestopedia

The name Suggestopedia is derived from two words – "suggestion" and "pedagogy".

Suggestion is the psychological process by which one person guides the thoughts, feelings, or behaviour of another (Suggestion, 2010.).

Pedagogy is the art, study and science of being a **TEACHER** or the process of teaching. The term generally refers to strategies of instruction, or a style of instruction (Pedagogy, 2010.).

Linguistically and logically speaking the term simply meant "*learning through suggestion*" (Felix, 1989, Chap. 1). The method's main concern is the *influence of suggestion in the teaching/ facilitating/ training environment* – that is to say: *What does what an educators do to 'suggest' to the learner:*

- *That learning is easy and fun? OR*
- *That learning is difficult and that mastery is impossible?*

In examining suggestions we need to examine the suggestions that people bring into the learning environment about their capabilities, intelligences and beliefs about people and facilitators. In doing so we will explore how facilitators can help learners move beyond their limiting beliefs and reinforce the positive.

Suggestopedia, Accelerated Learning, Super learning And PLT eMods™

Accelerated Learning is an educational method that that “creates an environment and teaching processes to enable learners to move beyond limiting beliefs and misconceptions and tap into their hidden potential.” The method encompasses and incorporates detailed studies and research of the human mind and how it acquires knowledge.

To understand Accelerated Learning and what distinguishes it from other teaching philosophies and methodologies, it is important to go back to the roots of the method and look at its development over the years.

The aim of this section is to inform you about Suggestopedia / Accelerated Learning / Super Learning, while providing the framework for you to understand that PLT eMods™ are considered an Accelerated Learning tool, yet the technology and methodology extend and expand the concept and definition first proposed by Georgi Lozanov.

Suggestopedia

Suggestopedia is the scientific educational methodology that set the stage for the Accelerated Learning wave of the 70's and the Super Learning wave still occurring.

Lozanov developed Suggestopedia as he identified a need for an effective educational system to *accelerate learning*. He saw a new way of learning as essential for human evolution in order to keep up with technological advancements. More importantly he developed Suggestopedia in order to ***help learners achieve optimum mental, physical and spiritual health.***

Suggestopedia is a learning methodology that works with *relaxation, music and suggestion* to effectively overcome barriers by *lowering the affective filter* thus enhancing the learning process (Harmer, 2001). Making use of “Baroque music, relaxed alertness, positive expectation, and highly orchestrated classroom methods to achieve increased memory and to accelerate learning” (Minewiser, 2000).

“Lozanov contends that the purpose of Suggestopedia is ***to liberate and stimulate not only memory and other mental functions, but the entire personality***” (in Schuster & Miele, 1978 Cited from Minewiser, 2000, p.9). Krippner (1980) notes that Lozanov claimed to have developed a system, which activates many areas of the brain, particularly the right brain and the limbic systems (Minewiser, 2000, p.9).

The Applications of Suggestology

“The applications of Suggestology are said to be the stimulation of often unused mental capacities, referred to as *hidden reserves* of the brain and the mind. These include “long-term hypermnnesia, stimulation of creativity, and learned self-control of autonomic functions such as pain, bleeding, metabolism, etc” (Lozanov, in Schuster & Miele, 1978, p. 212, as cited in Minewiser, 2000, p19).

“Belanger (1978) proposes that the role of the unconscious during learning is to facilitate the activation of the reserves of human potential in the right hemisphere, which regulates such processes as intuition, imagination, space orientation, musical perception, and emotions “(as cited in Minewiser, 2000, p.19)

Structure of Suggestopedia

The lesson of Suggestopedia initially consisted of three phases: deciphering, concert session (memorization séance), and elaboration. However it has now expanded into four phases: introduction, concert session, elaboration, and production.

“Introduction: *The teacher teaches the material in “a playful manner” instead of analyzing lexis and grammar of the text in a directive manner.*

Concert session (active and passive): *In the active session, the teacher reads with intoning as selected music is played. Occasionally, the students read the text together with the teacher, and listen only to the music as the teacher pauses in particular moments. The passive session is done more calmly.*

Elaboration: *The students sing classical songs and play games while “the teacher acts more like a consultant*

Production: *The students spontaneously speak and interact in the target language without interruption or correction.”*

[HTTP://EN.WIKIPEDIA.ORG/WIKI/SUGGESTOPEDIA#CITE_NOTE-THREE-2](http://en.wikipedia.org/wiki/Suggestopedia#cite_note-three-2)

The 10 Elements of Accelerated Learning

From International Alliance of Learning: [HTTP://WWW.IALEARN.ORG/ALELEMENTS.PHP](http://www.ialearn.org/ALElements.php)



Knowledge about the Human Brain

Scientific knowledge and understanding of the brain supports the design of effective teaching and learning experiences. As we learn more about how the brain functions, and how that knowledge translates to classroom practices, the Accelerated Learning model adapts to integrate what we know about learning and what we do in the learning environment to support learning.



Emotional State

Without emotion, there is no learning. Our emotions powerfully influence the learning process and either hinder or enhance retention. When emotions are positive, we are open to new possibilities, our total mental capacity is available for learning. We are ready to move into new experiences. Accelerated Learning creates and maintains an environment in which each person is involved in the learning, engaged in what is happening and always feels empowered and resourceful.



The Learning Environment

Accelerated Learning aims to create a positive learning environment. One in which learners are held within an emotionally, socially and physically secure environment- one that creates an environment of relaxation and stimulation. The accelerated learning environment takes into consideration every aspect of the learning environment that can positively or negatively affect the experience, such as lighting, temperature, acoustics, seat arrangement, color, décor, as well as the emotional and mental qualities of the environment. Accelerated Learning aims to create and maintain a fun, engaging, and rewarding environment that invites learners to experiment, discover

and learn.”



The Role of Music and the Arts

Because music creates emotional engagement and memorability, it is a valuable, and often overlooked, educational tool. It can influence the entire pace, mood and energy level of the learning experience. Art in its various forms facilitates self-understanding, emotional involvement and the application of knowledge to real life situations. Research shows that the arts – everything from storytelling to drama, to the visual arts enhances learning and speaks to us at both the conscious and subconscious level. AL uses all of the Arts to promote the development of the entire person and make learning inspiring and transformational.



Personal Motivation

The desire to continue learning is based on self-confidence, intrinsic motivation, and personal expectations. Accelerated Learning supports the intrinsic motivation of the learner as opposed to extrinsic awards like grade and prizes. In the AL classroom, learning is shared, cooperation stressed, and the learning community and group cohesion supports each individual in becoming the best they can be. By enabling learners to tap into their innermost desires, goals and vision, they naturally become engaged learners.



Multiple Intelligences and Learning Styles

The theory of multiple intelligences and the many theories of individual learning and processing styles are an integral part of Accelerated Learning program design. IAL subscribes to Howard Gardner's perspective. . . "to respect the many differences among people, the multiple variations in the ways that they learn, the several modes by which they can be assessed, and the almost infinite number of ways in which they can leave a mark on the world."



Imagination/Metaphors

Imaginative games and activities enrich verbal and written information with physical movement, color, depth, and positive emotions. Visualization skills enhance spelling, memory, creativity, and other abilities, and metaphors bring stronger meaning to any subject. AL uses ritual, metaphor, similies and analogies in various forms to support learning and make it more memorable.



Suggestion/De-Suggestion

Learners come into learning with many pre-conceptions about themselves, the world, the subject matter and learning. Personal suggestions, often called beliefs or mental models, sometimes enhance our ability to learn and often limit what is possible. In Accelerated Learning, the facilitator pays attention to each individual and supports him or her in moving beyond limitations. The AL facilitator designs the program, uses both verbal and non-verbal communication carefully and intentionally to be a supporter of learning and not an added barrier. What is not spoken may often be conveyed by body language, attitude, choice of words and

thinly veiled expectations. Though subtle, positive suggestions, aided by a rich variety of learning tasks, music, movement and exercise, can create a positive mental state and raise energy levels and attentiveness.



Team Learning and Cooperation

Cooperative learning activities allow participants of all abilities to benefit as mentors and learners, develop interpersonal and time-management skills, and more fully develop their creative talents. The sharing of learning reinforces individual learning and group results.



Improvement and Results

Learning expectations should be clearly defined and shared with participants and constituents so that:

- Learners are able to comprehend the relevance of the subject matter to their lives; and
- Facilitators of learning can measure progress and generate objective data that can be used to continuously improve and add value to planning, assessment, and process improvement.

Appendix C: Gardner's Multiple Intelligences

The Nine Types of Intelligence

By Howard Gardner

Logical-Mathematical Intelligence ("Number/Reasoning" Smart)

Logical-mathematical intelligence is the ability to calculate, quantify, consider propositions and hypotheses, and carry out complete mathematical operations. It enables us to perceive relationships and connections and to use abstract, symbolic thought; sequential reasoning skills; and inductive and deductive thinking patterns. Logical intelligence is usually well developed in mathematicians, scientists, and detectives. Young adults with lots of logical intelligence are interested in patterns, categories, and relationships. They are drawn to arithmetic problems, strategy games and experiments.

Linguistic Intelligence ("Word Smart")

Linguistic intelligence is the ability to think in words and to use language to express and appreciate complex meanings. Linguistic intelligence allows us to understand the order and meaning of words and to apply meta-linguistic skills to reflect on our use of language. Linguistic intelligence is the most widely shared human competence and is evident in poets, novelists, journalists, and effective public speakers. Young adults with this kind of intelligence enjoy writing, reading, telling stories or doing crossword puzzles.

Musical Intelligence ("Musical Smart")

Musical intelligence is the capacity to discern pitch, rhythm, timbre, and tone. This intelligence enables us to

recognize, create, reproduce, and reflect on music, as demonstrated by composers, conductors, musicians, vocalist, and sensitive listeners. Interestingly, there is often an affective connection between music and the emotions; and mathematical and musical intelligences may share common thinking processes. Young adults with this kind of intelligence are usually singing or drumming to themselves. They are usually quite aware of sounds others may miss.

Spatial Intelligence (“Picture Smart”)

Spatial intelligence is the ability to think in three dimensions. Core capacities include mental imagery, spatial reasoning, image manipulation, graphic and artistic skills, and an active imagination. Sailors, pilots, sculptors, painters, and architects all exhibit spatial intelligence. Young adults with this kind of intelligence may be fascinated with mazes or jigsaw puzzles, or spend free time drawing or daydreaming.

Bodily-Kinesthetic Intelligence (“Body Smart”)

Bodily kinesthetic intelligence is the capacity to manipulate objects and use a variety of physical skills. This intelligence also involves a sense of timing and the perfection of skills through mind–body union. Athletes, dancers, surgeons, and craftspeople exhibit well-developed bodily kinesthetic intelligence.

Naturalist Intelligence (“Nature Smart”)

Designates the human ability to discriminate among living things (plants, animals) as well as sensitivity to other features of the natural world (clouds, rock configurations). This ability was clearly of value in our evolutionary past as hunters, gatherers, and farmers; it continues to be central in such roles as botanist or chef. It is also speculated that much of our consumer society exploits the naturalist intelligences, which can be mobilized in the discrimination among cars, sneakers, kinds of makeup, and the like.

Interpersonal Intelligence (“People Smart”)

Interpersonal intelligence is the ability to understand and interact effectively with others. It involves effective verbal and nonverbal communication, the ability to note distinctions among others, sensitivity to the moods and temperaments of others, and the ability to entertain multiple perspectives. Teachers, social workers, actors, and politicians all exhibit interpersonal intelligence. Young adults with this kind of intelligence are leaders among their peers, are good at communicating, and seem to understand others’ feelings and motives.

Intra-personal Intelligence (“Self Smart”)

Intra-personal intelligence is the capacity to understand oneself and one’s thoughts and feelings, and to use such knowledge in planning and directing one’s life. Intra-personal intelligence involves not only an appreciation of the self, but also of the human condition. It is evident in psychologists, spiritual leaders, and philosophers. These young adults may be shy. They are very aware of their own feelings and are self-motivated.

Spiritual/Existential Intelligence

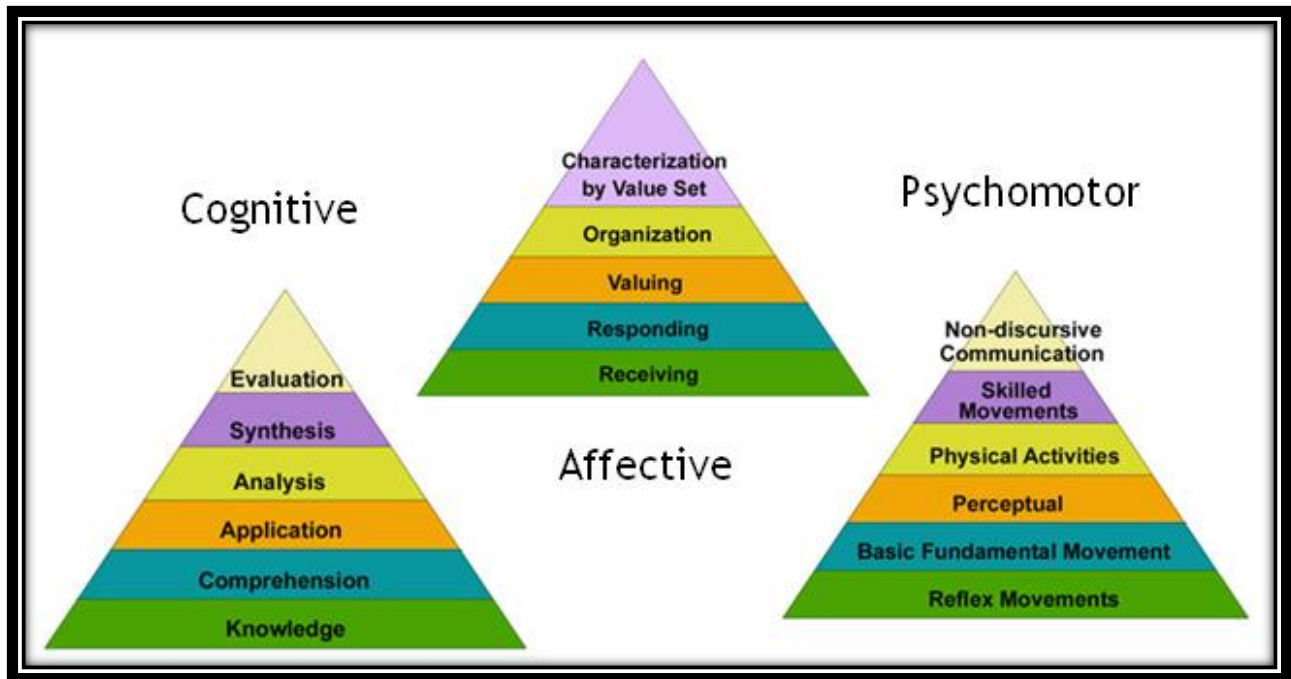
Sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

{Content from the Blog of Dr Jonathan Moch (March 26th 2010), FOTEO: Nine brain circuits - multiple intelligences (H Gardner) retrieved from [HTTP://DRJDMOCH.BLOGSPOT.COM/2010/03/FOTEO-NINE-BRAIN-CIRCUITS-MULIPLE.HTML](http://drjdmoch.blogspot.com/2010/03/fotEO-nine-brain-circuits-multiple.html) on 5 December 2010. Overview of the Multiple Intelligences Theory. Association for Supervision and Curriculum Development and Thomas Armstrong.com}

Appendix D: Bloom’s Taxonomy

In 1956 Benjamin Bloom and a committee of top psychologists identified three domains / categories / behaviors associated with learning:

- **Cognitive:** Mental Skills and Acuity (*Knowledge*)
- **Affective:** Growth in Feelings or Emotional Areas (*Attitude*)
- **Psychomotor:** Manual or Physical Skills (*Skills*)



Thus in effect Bloom's Taxonomy identified that there is more than one way of learning. So the "taxonomy of learning behaviors can be thought of as 'the goals of the learning process.' And after a learning episode, the learner should have acquired new skills, knowledge, and/or attitudes."

Each domain has been divided into subdivisions, starting from the simplest behavior to the most complex. However, the divisions outlined are not finite thus there are numerous other systems that have been designed and theorized in the educational and training world. "But, Bloom's taxonomy is easily understood and is probably the most widely applied one in use today."

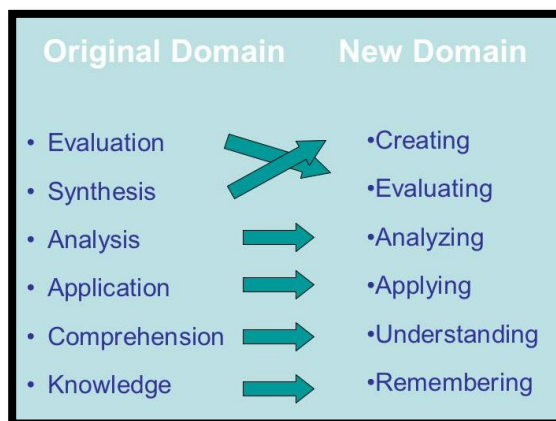
Cognitive Domain. Bloom identified six levels within the cognitive domain. He structured the description in a hierarchical fashion with the simple recall or recognition of facts, being the lowest level, through increasingly more complex and abstract mental levels, to the highest order- evaluation. Below is a list of

1. **Knowledge:** arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce state.
2. **Comprehension:** classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate,
3. **Application:** apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.
4. **Analysis:** analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test.
5. **Synthesis:** arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, write.

6. **Evaluation:** appraise, argue, assess, attach, choose compare, defend estimate, judge, predict, rate, core, select, support, value, evaluate.

Revised Bloom's Taxonomy: by Lorin Anderson, a former student of Bloom. She revisited the cognitive domain in the learning taxonomy in the mid-nineties and made some changes, with perhaps the two most prominent ones being, 1) changing the names in the six categories from nouns to verbs and 2) slightly rearranging them (Pohl, 2000).

This new taxonomy reflects a more active form of thinking and is perhaps more accurate:



The affective domain (Krathwohl, Bloom and Masia, 1973) includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major categories are listed from the simplest behavior to the most complex:

<i>Category</i>	<i>Example and Key Words (verbs)</i>
Receiving Phenomena: Awareness, willingness to hear, selected attention.	<p>Examples: Listen to others with respect. Listen for and remember the name of newly introduced people.</p> <p>Key Words: asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits, erects, replies, uses.</p>
Responding to Phenomena: Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes and may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation).	<p>Examples: Participates in class discussions. Gives a presentation. Questions new ideals, concepts, models, etc. in order to fully understand them. Know the safety rules and practices them.</p> <p>Key Words: answers, assists, aids, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes.</p>
Valuing: The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges	<p>Examples: Demonstrates belief in the democratic process. Is sensitive towards individual and cultural differences (value diversity). Shows the ability to solve problems. Proposes a plan to social improvement and follows through with</p>

from simple acceptance to the more complex state of commitment. Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's overt behavior and are often identifiable.	<p>commitment. Informs management on matters that one feels strongly about.</p> <p>Key Words: completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works.</p>
<p>Organization: Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating an unique value system. The emphasis is on comparing, relating, and synthesizing values.</p>	<p>Examples: Recognizes the need for balance between freedom and responsible behavior. Accepts responsibility for one's behavior. Explains the role of systematic planning in solving problems. Accepts professional ethical standards. Creates a life plan in harmony with abilities, interests, and beliefs. Prioritizes time effectively to meet the needs of the organization, family, and self.</p> <p>Key Words: adheres, alters, arranges, combines, compares, completes, defends, explains, formulates, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes.</p>
<p>Internalizing values (characterization): Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).</p>	<p>Examples: Shows self-reliance when working independently. Cooperates in group activities (displays teamwork). Uses an objective approach in problem solving. Displays a professional commitment to ethical practice on a daily basis. Revises judgments and changes behavior in light of new evidence. Values people for what they are, not how they look.</p> <p>Key Words: acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, verifies.</p>

[HTTP://WWW.NWLINK.COM/~DONCLARK/HRD/BLOOM.HTML](http://www.nwlink.com/~donclark/hrd/bloom.html)

The psychomotor domain (Simpson, 1972) includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. The seven major categories are listed from the simplest behavior to the most complex:

<i>Category</i>	<i>Example and Key Words (verbs)</i>
<p>Perception: The ability to use sensory cues to guide motor activity. This ranges from sensory stimulation, through cue selection, to translation.</p>	<p>Examples: Detects non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball. Adjusts heat of stove to correct temperature by smell and taste of food. Adjusts the height of the forks on a forklift by comparing where the forks are in relation to the pallet.</p> <p>Key Words: chooses, describes, detects, differentiates, distinguishes, identifies, isolates, relates, selects.</p>

<p>Set: Readiness to act. It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person's response to different situations (sometimes called mindsets).</p>	<p>Examples: Knows and acts upon a sequence of steps in a manufacturing process. Recognize one's abilities and limitations. Shows desire to learn a new process (motivation). NOTE: This subdivision of Psychomotor is closely related with the "Responding to phenomena" subdivision of the Affective domain.</p> <p>Key Words: begins, displays, explains, moves, proceeds, reacts, shows, states, volunteers.</p>
<p>Guided Response: The early stages in learning a complex skill that includes imitation and trial and error. Adequacy of performance is achieved by practicing.</p>	<p>Examples: Performs a mathematical equation as demonstrated. Follows instructions to build a model. Responds hand-signals of instructor while learning to operate a forklift.</p> <p>Key Words: copies, traces, follows, react, reproduce, responds</p>
<p>Mechanism: This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence and proficiency.</p>	<p>Examples: Use a personal computer. Repair a leaking faucet. Drive a car.</p> <p>Key Words: assembles, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.</p>
<p>Complex Overt Response: The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy. This category includes performing without hesitation, and automatic performance. For example, players are often utter sounds of satisfaction or expletives as soon as they hit a tennis ball or throw a football, because they can tell by the feel of the act what the result will produce.</p>	<p>Examples: Maneuvers a car into a tight parallel parking spot. Operates a computer quickly and accurately. Displays competence while playing the piano.</p> <p>Key Words: assembles, builds, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.</p> <p>NOTE: The Key Words are the same as Mechanism, but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc.</p>
<p>Adaptation: Skills are well developed and the individual can modify movement patterns to fit special requirements.</p>	<p>Examples: Responds effectively to unexpected experiences. Modifies instruction to meet the needs of the learners. Perform a task with a machine that it was not originally intended to do (machine is not damaged and there is no danger in performing the new task).</p> <p>Key Words: adapts, alters, changes, rearranges, reorganizes, revises, varies.</p>
<p>Origination: Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.</p>	<p>Examples: Constructs a new theory. Develops a new and comprehensive training programming. Creates a new gymnastic routine.</p> <p>Key Words: arranges, builds, combines, composes, constructs, creates, designs, initiate, makes, originates.</p>

“As mentioned earlier, the committee did not produce a compilation for the psychomotor domain model, but others have. The one discussed above is by Simpson (1972). There are two other popular versions”:

Dave's (1975):

- **Imitation** — Observing and patterning behavior after someone else. Performance may be of low quality. Example: Copying a work of art.
- **Manipulation** — Being able to perform certain actions by following instructions and practicing. Example: Creating work on one's own, after taking lessons, or reading about it.
- **Precision** — Refining, becoming more exact. Few errors are apparent. Example: Working and reworking something, so it will be “just right.”
- **Articulation** — Coordinating a series of actions, achieving harmony and internal consistency. Example: Producing a video that involves music, drama, color, sound, etc.
- **Naturalization** — Having high level performance become natural, without needing to think much about it. Examples: Michael Jordan playing basketball, Nancy Lopez hitting a golf ball, etc.

Harrow's (1972):

- **Reflex movements** — Reactions that are not learned.
- **Fundamental movements** — Basic movements such as walking, or grasping.
- **Perception** — Response to stimuli such as visual, auditory, kinesthetic, or tactile discrimination.
- **Physical abilities** — Stamina that must be developed for further development such as strength and agility.
- **Skilled movements** — Advanced learned movements as one would find in sports or acting.
- **No discursive communication** — Effective body language, such as gestures and facial expressions.

Appendix E: The 50 Strategies to Combat ADD/ADHD

by Dr Thomas Armstrong

1. Provide a balanced breakfast.
2. Consider the Feingold diet
3. Limit television and video games
4. Teach self-talk skills.
5. Find out what interests your child.
6. Promote a strong physical education program in your child's school.
7. Enroll your child in a martial arts program.
8. Discover your child's multiple intelligences
9. Use background music to focus and calm.
10. Use color to highlight information.
11. Teach your child to visualize.
12. Remove allergens from the diet.
13. Provide opportunities for physical movement.
14. Enhance your child's self-esteem.
15. Find your child's best times of alertness.
16. Give instructions in attention-grabbing ways.
17. Provide a variety of stimulating learning activities.
18. Consider biofeedback training.
19. Activate positive career aspirations.
20. Teach your child physical-relaxation techniques.
21. Use incidental learning to teach.
22. Support full inclusion of your child in a regular classroom.
23. Provide positive role models.
24. Consider alternative schooling options.
25. Channel creative energy into the arts.
26. Provide hands-on activities
27. Spend positive times together.
28. Provide appropriate spaces for learning.
29. Consider individual psychotherapy.
30. Use touch to soothe and calm.
31. Help your child with organizational skills.
32. Help your child appreciate the value of personal effort.
33. Take care of yourself.
34. Teach your child focusing techniques.
35. Provide immediate feedback.
36. Provide your child with access to a computer.
37. Consider family therapy.
38. Teach problem-solving skills.

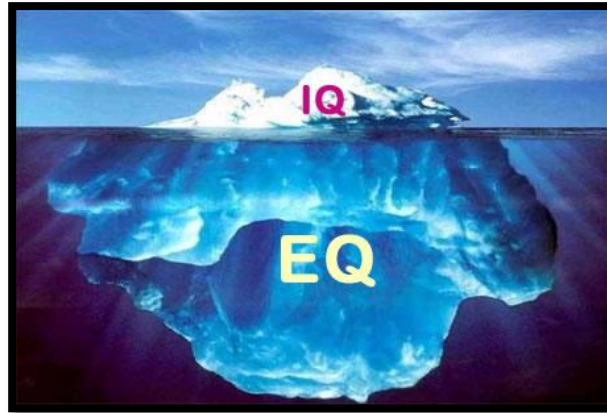
39. Offer your child real-life tasks to do.
40. Use "time-out" in a positive way.
41. Help your child develop social skills.
42. Contract with your child.
43. Use effective communication skills.
44. Give your child choices.
45. Discover and treat the four types of misbehavior.
46. Establish consistent rules, routines, and transitions.
47. Hold family meetings.
48. Have your child teach a younger child.
49. Use natural and logical consequences.
50. Hold a positive image of your child.

[HTTP://WWW.THOMASARMSTRONG.COM/ADD-ADHD_STRATEGIES.PHP](http://www.thomasarmstrong.com/add-adhd_strategies.php)

Note: Yellow highlighting are provided by the PLT eMod™ Learning Process

Appendix F: Emotional Intelligence

Development of Emotional Intelligence (EI)



[HTTP://BLOGS.MONOGRAFIAS.COM/SISTEMA-LIMBICO-NEUROCIENCIAS/2010/05/27/EMOTIONAL-INTELLIGENCE-EMOTIONAL-COMPETENCE/](http://blogs.monografias.com/sistema-limbico-neurociencias/2010/05/27/emotional-intelligence-emotional-competence/)

Emotional intelligence (EI) describes the individual's *"ability, capacity, skill or, in the case of the trait EI model, a self-perceived ability to identify, assess, and control the emotions of one's self, of others, and of groups."*

"A learned capability based on emotional intelligence that results in outstanding performance at work. Our emotional intelligence determines our potential for learning the practical skills based on the five elements : self-awareness, motivation, self-regulation, empathy, and adeptness in relationships. Our emotional competence shows how much of that potential we have translated into on-the-job capabilities."

(Goleman, 1998)

The earliest reference of EI can be traced back to Darwin's work on the importance of emotional expression for survival and second adaptation. Even as far back as the 1900s researchers began to recognize the importance of non-cognitive aspects of intelligence. "For instance, as early as 1920, E.L. Thorndike used the term social intelligence to describe the skill of understanding and managing other people."

In 1940 David Wechsler described the influence of non-intellective factors on intelligent behavior, and argued that our models of intelligence would not be complete until we can adequately describe these factors.

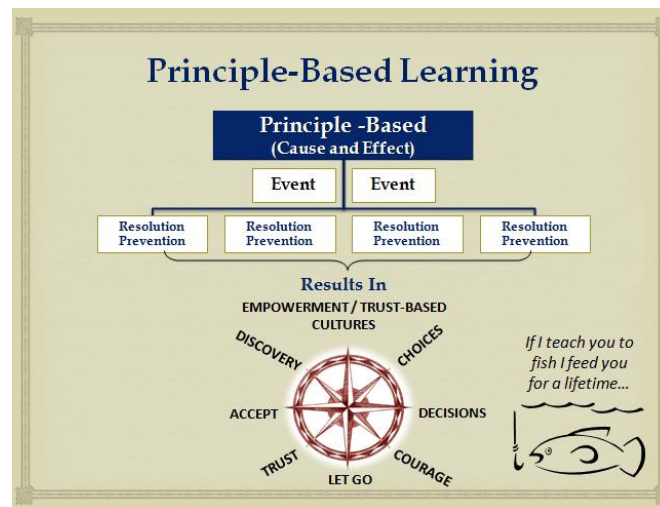
In Howard Gardner's book *Frames of Mind: The Theory of Multiple Intelligence* (1983), introduced the idea of multiple intelligences. Amongst these intelligences he included both *Interpersonal intelligence* (the capacity to understand the intentions, motivations and desires of other people) and *Intrapersonal intelligence* (the capacity to understand oneself, to appreciate one's feelings, fears and motivations). Gardner's multiple intelligences clearly point to the fact that traditional definitions and measures of intelligence (IQ) fail to fully explain and assess intelligences and abilities.

Salovey and Mayer's (2005) conception of EI strives to define EI within the confines of the standard criteria for a new intelligence. Their current definition of EI is: ***"The ability to perceive emotion, integrate emotion to facilitate thought, understand emotions and to regulate emotions to promote personal growth."***

“The ability-based model views emotions as useful sources of information that help one to make sense of and navigate one’s social environment. The model proposes that individuals vary in their ability to process information of an emotional nature and in their ability to relate emotional processing to a wider cognition. This ability is seen to manifest itself in certain adaptive behaviors. The model claims that EI includes four types of abilities:

1. Perceiving emotions – the ability to detect and decipher emotions in faces, pictures, voices, and cultural artifacts—including the ability to identify one's own emotions. Perceiving emotions represents a basic aspect of emotional intelligence, as it makes all other processing of emotional information possible.
2. Using emotions – the ability to harness emotions to facilitate various cognitive activities, such as thinking and problem solving. The emotionally intelligent person can capitalize fully upon his or her changing moods in order to best fit the task at hand.
3. Understanding emotions – the ability to comprehend emotion language and to appreciate complicated relationships among emotions. For example, understanding emotions encompasses the ability to be sensitive to slight variations between emotions, and the ability to recognize and describe how emotions evolve over time.
4. Managing emotions – the ability to regulate emotions in both ourselves and in others. Therefore, the emotionally intelligent person can harness emotions, even negative ones, and manage them to achieve intended goals.”

PLT teaches the tools to help adults and children learn how to see all their choices and to make effective decisions based on their emotional, physical, social, mental, and ethical well-being. The PLT system fosters emotional intelligence by teaching people about perceptions, attitudes, thinking, feeling and behaviors of self and others. Through the PLT process people learn what it means to make adult decisions based on self-authority, self-responsibility and self-accountability.



In that sense PLT fulfills all 4 requirements above, teaching people: how to perceive emotions, balance emotions, understand emotions and learn from emotions.

The Ten Habits of Emotionally Intelligent People

Extract

EMOTIONAL INTELLIGENCE & EMOTIONAL COMPETENCE

EMOTIONAL INTELLIGENCE:

A form of intelligence relating to the emotional side of life, such as the ability to recognize and manage one's own and others' emotions, to motivate oneself and restrain impulses, and to handle interpersonal relationships effectively.

- Originated by Daniel Goleman, psychologist, denoting the cluster of traits/abilities relating to the emotional side of life
- major components of emotional intelligence: knowing our own emotions, managing our own emotions, motivating ourselves, recognizing the emotions of others, and handling relationships

The Ten Habits of Emotionally Intelligent People

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High EQ people:

1. Label their feelings, rather than labeling people or situations.	"I feel impatient." vs "This is ridiculous." "I feel hurt and bitter". vs. "You are an insensitive jerk." "I feel afraid." vs. "You are driving like a idiot."
2. Distinguish between thoughts and feelings.	Thoughts: I feel like...& I feel as if.... & I feel that Feelings: I feel: (feeling word)
3. Take responsibility for their feelings.	"I feel jealous." vs. "You are making me jealous."
4. Use their feelings to help them make decisions.	"How will I feel if I do this?" "How will I feel if I don't"
5. Show respect for other people's feelings.	They ask "How will you feel if I do this?" "How will you feel if I don't."
6. Feel energized, not angry.	They use what others call "anger" to help them feel energized to take productive action.
7. Validate other people's feelings.	They show empathy, understanding, and acceptance of other people's feelings.
8. Practice getting a positive value from their negative emotions.	They ask themselves: "How do I feel?" and "What would help me feel better?" They ask others "How do you feel?" and "What would help you feel better?"
9. Don't advise, command, control, criticize, judge or lecture to others.	They realize it doesn't feel good to be on the receiving end of such behavior, so they avoid it.
10. Avoid people who invalidate them, or don't respect their feelings.	As much as possible, they choose to associate only with other people with high EQ.

EMOTIONAL COMPETENCE:

"A learned capability based on emotional intelligence that results in outstanding performance at work. Our emotional intelligence determines our potential for learning the practical skills based on the five elements : self-awareness, motivation, self-regulation, empathy, and adeptness in relationships. Our emotional competence shows how much of that potential we have translated into on-the-job capabilities." (Goleman, Working with Emotional Intelligence)

The table below lists Goleman's 5 dimensions of emotional intelligence and the 25 emotional competencies. The emotional intelligence capabilities are Independent (each contributes to job performance); Interdependent (each draws to some extent on certain others with strong interactions); Hierarchical (the emotional intelligence capabilities build upon one another); Necessary, but not sufficient (having an emotional intelligence doesn't guarantee the competencies will be demonstrated); Generic (different jobs make differing competence demands).

THE EMOTIONAL COMPETENCE FRAMEWORK

Personal Competence

SELF-AWARENESS

- **Emotional Awareness:** recognizing one's emotions and their effect
- **Accurate Self-assessment:** knowing one's strengths and limits
- **Self-confidence:** A strong sense of one's self-worth and capabilities

SELF-REGULATION

- **Self-control:** Keeping disruptive emotions and impulses in check
- **Trustworthiness:** Maintaining standards of honesty and integrity
- **Conscientiousness:** Taking responsibility for personal performance
- **Adaptability:** Flexibility in handling change
- **Innovation:** Being comfortable with novel ideas, approaches and new information

MOTIVATION

- **Achievement drive:** Striving to improve or meet a standard of excellence
- **Commitment:** Aligning with the goals of the group or organization
- **Initiative:** Readiness to act on opportunities
- **Optimism:** Persistence in pursuing goals despite obstacles and setbacks

Social Competence

EMPATHY

- Understanding others: **sensing others' feelings and perspectives, taking an active interest in their concerns**
- Developing others: **Sensing others development needs and bolstering their abilities**
- Service orientation: **Anticipating, recognizing, and meeting customers' needs**
- Leveraging diversity: **Cultivating opportunities through different kinds of people**
- Political Awareness: **Reading a group's emotional currents and power relationships**

SOCIAL SKILLS

- **Influence:** Wielding effective tactics for persuasion
- **Communication:** Listening openly and sending convincing messages
- **Conflict management:** Negotiating and resolving disagreements
- **Leadership:** Inspiring and guiding individuals and groups
- **Change Catalyst:** Initiating or managing change
- **Building bonds:** Nurturing instrumental relationships
- **Collaboration and cooperation:** Working with others toward shared goals
- **Team capabilities:** creating group synergy in pursuing collective goals

The Competencies:

PERSONAL COMPETENCE

SELF-AWARENESS

1. **Emotional Awareness-- People with this competence:**
Know which emotions they are feeling and why
Realize the links between their feelings and what they think and say
Recognize how their feelings affect their performance
Have a guiding awareness of their values and goals
2. **Accurate Self-Assessment -- People with this competence:**
Are aware of their strengths and weaknesses
Reflective, learning from experience
Open to candid feedback, new perspectives, continuous learning, and self-development
Able to show a sense of humor and perspective about themselves
BLIND SPOTS: Blind Ambition-need to win or be right at any cost
Unrealistic Goals- sets overly ambitious, unattainable goals for group
Relentless Striving- compulsively hardworking at expense of all else, vulnerable to burnout
Drives Others-pushes others too hard, takes over instead of delegating
Power Hungry- seeks power for own reason rather than for company
Insatiable need for recognition- addicted to glory-takes credit for other's work and blames them for mistakes
Preoccupation with Appearance-needs to look good at all costs-craves material trappings
Need to seem perfect-enraged by or rejects criticism, can't admit mistakes
3. **Self Confidence --People with this competence:**
Present themselves with self-assurance; have "presence"
Can voice views that are unpopular and go out on a limb for what is right
Are decisive, able to make sound decisions despite uncertainties and pressures

SELF-REGULATION

1. **Self-control --People with this competency:**
Manage their impulsive feelings and distressing emotions well
Stay composed, positive and unflappable even in trying moments
Think clearly and stay focused under pressure
2. **Trustworthiness and conscientiousness --People with this competency:**
Trustworthiness--Act ethically and are above reproach
Build trust through their reliability and authenticity
Admit their own mistakes and confront unethical actions in others
Take tough, principled stands even if they are unpopular
Conscientiousness --Meet commitments and keep promises
Hold themselves accountable for meeting their objectives
Are organized and careful in their work
3. **Innovation and Adaptability --People with this competency:**
Innovation - Seek out fresh ideas from a wide variety of sources
Entertain original solutions to problems
Generate new ideas
take fresh perspectives and risks in their thinking
Adaptability - Smoothly handle multiple demands, shifting priorities, and rapid change

Adapt their responses and tactics to fit fluid circumstances
Are flexible in how they see events

MOTIVATION

1. **Achievement Drive --People with this competency:**
Are results-oriented, with a high drive to meet their objectives and standards
Set challenging goals and take calculated risks
Pursue information to reduce uncertainty and find ways to do things better
Learn how to improve their performance
2. **Commitment --People with this competency:**
Readily make sacrifices to meet a larger organizational goal
Find a sense of purpose in the larger mission
Use the group's core values in making decisions and clarifying choices
Actively seek out opportunities to fulfill the group's mission
3. **Initiative and Optimism --People with this competency:**
Initiative: Are ready to seize opportunities
Pursue goals beyond what's required or expected of them
Cut through red tape and bend the rules when necessary to get the job done
Mobilize others through unusual, enterprising efforts
Optimism: Persist in seeking goals despite obstacles and setbacks
Operate from hope of success rather than fear of failure
See setbacks as due to manageable circumstance rather than personal flaw

SOCIAL COMPETENCE

EMPATHY

1. **Understanding Others --People with this competency:**
Are attentive to emotional cues and listen well
Show sensitivity and understand others' perspectives
Help out based on understanding other people's needs and feelings
2. **Developing Others --People with this competency:**
Acknowledge and reward people's strengths and accomplishments
Offer useful feedback and identify people's needs for further growth
Mentor, give timely coaching, and offer assignments that challenge and foster a person's skills
3. **Service Orientation --People with this competency:**
Understand customers/clients needs and match them to services or products
Seek ways to increase customers' satisfaction and loyalty
Gladly offer appropriate assistance
Grasp a customer's perspective, acting as a trusted advisor
4. **Leveraging Diversity --People with this competency:**
Respect and relate well to people from varied backgrounds
Understand diverse worldviews and are sensitive to group differences
See diversity as opportunity, creating an environment where diverse people can thrive
Challenge bias and intolerance
5. **Political Awareness --People with this competency:**
Accurately read key power relationships

Detect crucial social networks

Understand the forces that shape views and actions of clients, customers, or competitors

Accurately read organizational and external realities

SOCIAL SKILLS

1. Influence --People with this competency:

Are skilled at winning people over

Fine-tune presentations to appeal to the listener

Use complex strategies like indirect influence to build consensus and support

Orchestrate dramatic events to effectively make a point

2. Communication --People with this competence

Are effective in give-and-take, registering emotional cues in attuning their message

Deal with difficult issues straightforwardly

Listen well, seek mutual understanding, and welcome sharing of information fully

Foster open communication and stay receptive to bad news as well as good

3. Conflict Management --People with this competency:

Handle difficult people and tense situations with diplomacy and tact

Spot potential conflict, bring disagreements into the open and help to de-escalate

Encourage debate and open discussion

Orchestrate win-win solutions

4. Leadership --People with this competency:

Articulate and arouse enthusiasm for a shared vision and mission

Step forward to lead as needed, regardless of position

Guide the performance of others while holding them accountable

Lead by example

5. Change Catalyst --People with this competency:

Recognize the need to change and remove barriers

Challenge the status quo to acknowledge the need for change

Champion the change and enlist others in its pursuit

Model the change expected of others

6. Building Bonds --People with this competency:

Cultivate and maintain extensive informal networks

Seek out relationships that are mutually beneficial

Build rapport and keep others in the loop

Make and maintain personal friendships among work associates

7. Collaboration and Cooperation --People with this competency:

Balance a focus on task with attention to relationships

Collaborate, sharing plans, information and resources

Promote a friendly, cooperative climate

Spot and nurture opportunities for collaboration

8. Team Capabilities --People with this competency:

Model team qualities like respect, helpfulness, and cooperation

Draw all members into active and enthusiastic participation

Build team identity, esprit de corps, and commitment

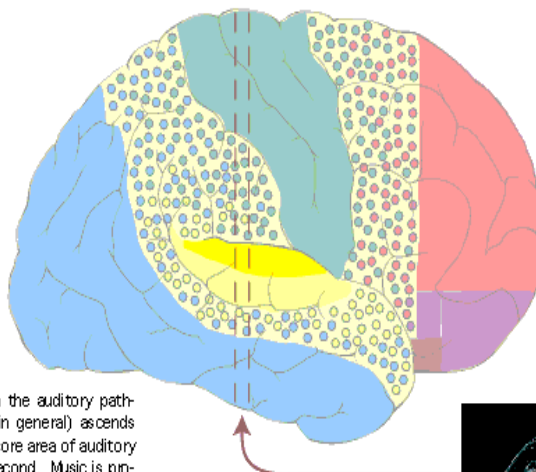
Protect the group and its reputation, share credit

Emotional Intelligence by Daniel Goleman (1995), Working with Emotional Intelligence by Daniel Goleman (1998)

Appendix G: Music and the Brain

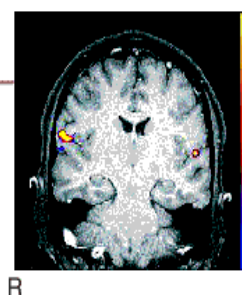
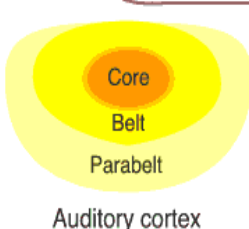
BRAIN STRUCTURES INVOLVED IN MUSIC PERCEPTION, PERFORMANCE, AND COGNITION.

The sound of music takes shape in our brains through the concerted activity of millions of neurons in the cerebral hemispheres and brainstem. These central auditory neurons are connected directly or indirectly to peripheral auditory neurons in the organ of Corti, which resides in the cochlea of the inner ear (see the illustration on the next page). The lateral surface of the right hemisphere is shown below; the colors indicate brain regions that may perform the music-related functions listed in boxes of the same color.

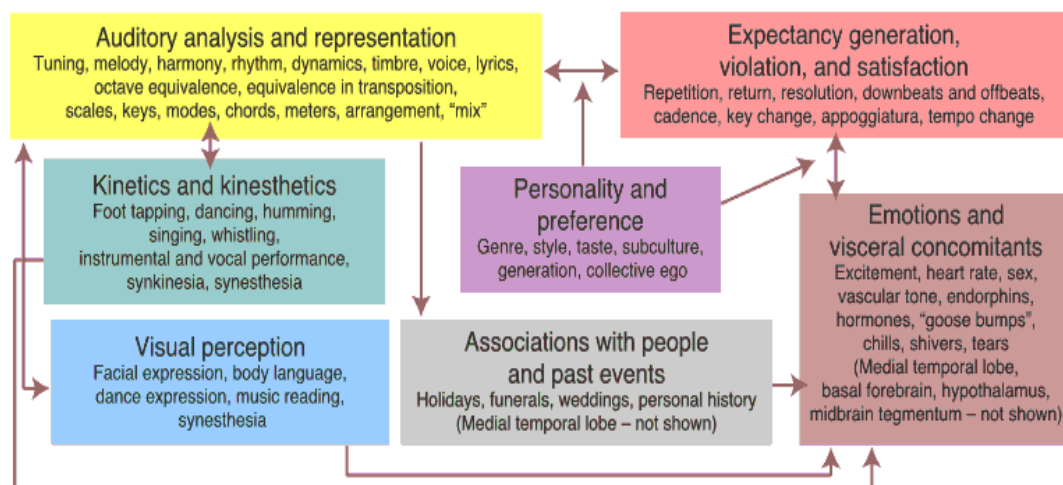


The popular notion that the right hemisphere is the "musical hemisphere" is overstated: both the left and right hemispheres are involved in music perception, performance, and cognition. Pitch perception (e.g., the ability to discern whether one note is slightly higher or lower than another) is one music-related function that does depend heavily, if not entirely, on the integrity of the right hemisphere's auditory cortex — especially its core area. This assertion holds true for most right-handers without absolute pitch ability.

The auditory cortex is the highest station in the auditory pathway. Information about music (and sound in general) ascends from the ear to the brainstem and on to the core area of auditory cortex in approximately one hundredth of a second. Music is processed hierarchically [core to belt to parabelt to multimodal areas (colored dots) and supramodal areas (pink, purple, brown, gray)]. There is also parallel processing: some information sent from the brainstem bypasses the core area and goes directly to the belt area. Strokes, tumors, and other brain lesions that destroy the core areas in both hemispheres cause transient deafness and permanent deficits in music, voice, speech, and environmental sound perception. Lesions that destroy the belt and parabelt areas in both hemispheres do not cause deafness or loss of pitch perception but do affect melody and rhythm perception.



This functional magnetic resonance image (fMRI) shows where neurons are consuming large quantities of oxygen in the cerebral hemispheres of a young volunteer who is listening to Beethoven's Seventh Symphony. "Hot spots" (yellow, red) of neuronal activation are seen in the core areas and adjacent belt areas of right (R) and left (L) auditory cortex (J.R. Melcher, Auditory Neurology Unit, Eaton-Peabody Laboratory, Massachusetts General Hospital and Massachusetts Eye & Ear Infirmary)



Emotion and meaning in music derive from several different types of associative brain functions. Songwriters and composers use a number of music-specific devices (e.g., appoggiatura, key changes, cadences) that affect our emotional state and effect changes in our autonomic state (e.g., a change in heart rate, "goose bumps"). These music-induced changes take shape via numerous connections between the auditory cortex (especially its parabelt area) and supramodal cortex (pink, purple, brown, gray). When we move to music, the motor and somatosensory cortices (green) influence our emotional and autonomic states. When we watch music videos, movies, and musical theatre, information processed by the visual cortex (blue; e.g. facial expressions, dance, scene design, lighting) also influences how music makes us feel. Another powerful route for evoking emotion is through associations with people and episodes in one's life. At some unknown level of interaction between sensory systems and supramodal systems, preference, personality, acculturation, and identification with different cultures, subcultures, and generations influence how we feel about the music we are listening to; evidence from neurological patients with neurodegenerative disease (e.g., frontotemporal dementia) suggests portions of the anterior frontal lobe (purple) may play an important role in deciding what music we like to listen to. Many of the structures that generate emotions and their visceral concomitants (brown, gray) lie towards the middle of the anterior hemispheres and upper brainstem and cannot be seen from this lateral view.

Adapted from "Music of the Hemispheres", *MJ Trama, Science* 2001; Vol. 291, pp. 54-55. Copyright 2001 by the American Association for the Advancement of Science.

Appendix H: EMDR

(Eye Movement Desensitization & Reprocessing)

One day in 1987, **DR FRANCINE SHAPIRO** was walking in the park when she realized that eye movements served to decrease negative emotions associated with her own distressing / traumatic memories. From this chance observation Shapiro hypothesized and assumed that eye movements had a desensitizing effect. She went on to experiment with this and she found that others also had the same response to eye movements. It became apparent however that eye movements by themselves did not create comprehensive therapeutic effects and so Shapiro added other treatment elements, including a cognitive component, and developed a standard procedure that she called Eye Movement Desensitization (EMD).

Shapiro wrote “a single session of the procedure was sufficient to desensitize subjects’ traumatic memories, as well as dramatically alter their cognitive assessments⁶.” Unfortunately, Shapiro has often been erroneously cited as claiming that “EMDR can cure [posttraumatic stress disorder] PTSD in one session (F. Shapiro, 1989).”⁷ Shapiro never made this statement; what she actually wrote was that the EMD procedure “serves to desensitize the anxiety ... not to eliminate all PTSD-related symptomatology and complications, nor to provide coping strategies for the victims⁸” and reported “an average treatment time of five sessions”⁸ to comprehensively treat PTSD.

Dr. Shapiro studied this effect scientifically and, in 1989, she reported success using EMDR to treat victims of trauma in the *Journal of Traumatic Stress*.

1989 was the first year that controlled studies investigating the treatment of PTSD were published. Besides Shapiro’s article, three other studies were published. Shapiro continued to develop this treatment approach, incorporating feedback from clients and other clinicians who were using EMD. In 1991 she changed the name to Eye Movement Desensitization and Reprocessing¹ (EMDR) to reflect the insights and cognitive changes that occurred during treatment, and to identify the **INFORMATION PROCESSING THEORY** that she developed to explain the treatment effects.

Since the initial studies were published in 1989, hundreds of case studies have been published, and there have been numerous controlled outcome studies. These studies have demonstrated EMDR’s effectiveness in PTSD treatment and EMDR is now recognized as efficacious in the treatment of PTSD [See **EFFICACY OF EMDR** and **SUMMARY OF PTSD STUDIES**].

Despite its demonstrated effectiveness, similar to most new approaches in psychotherapy, EMDR has been surrounded by controversy. While some critics have labeled EMDR a “**PSEUDOSCIENCE**” others have commented that these conclusions are based on misinterpretations of the literature [see “**CONFUSION, MISINFORMATION, AND CHARGES OF ‘PSEUDOSCIENCE’**”]. Another area of debate is the role of eye movements in EMDR [See **EYE MOVEMENTS AND ALTERNATE DUAL ATTENTION STIMULI** and **WHAT HAS RESEARCH DETERMINED ABOUT EMDR’S EYE MOVEMENT COMPONENT?** In the Commonly Asked Questions section.

The therapy process and procedures are according to Shapiro (2001)

Phase I

In the first sessions, the patient's history and an overall treatment plan are discussed. During this process the therapist identifies and clarifies potential targets for EMDR. Target refers to a disturbing issue, event, feeling, or memory for use as an initial focus for EMDR. **MALADAPTIVE** beliefs are also identified.

Phase II

Before beginning EMDR for the first time, it is recommended that the client identify a safe place, an image or memory that elicits comfortable feelings and a positive sense of self. This safe place can be used later to bring closure to an incomplete session or to help a client tolerate a particularly upsetting session.

Phase III

In developing a target for EMDR, prior to beginning the eye movement, a snapshot image is identified that represents the target and the disturbance associated with it. Using that image is a way to help the client focus on the target, a negative cognition (NC) is identified – a negative statement about the self that feels especially true when the client focuses on the target image. A positive cognition (PC) is also identified – a positive self-statement that is preferable to the negative cognition.

Phase IV

The therapist asks the patient to focus simultaneously on the image, the negative cognition, and the disturbing emotion or body sensation. Then the therapist usually asks the client to follow a moving object with his or her eyes; the object moves alternately from side to side so that the client's eyes also move back and forth. After a set of eye movements, the client is asked to report briefly on what has come up; this may be a thought, a feeling, a physical sensation, an image, a memory, or a change in any one of the above. In the initial instructions to the client, the therapist asks him or her to focus on this thought, and begins a new set of eye movements. Under certain conditions, however, the therapist directs the client to focus on the original target memory or on some other image, thought, feeling, fantasy, physical sensation, or memory. From time to time the therapist may query the client about her or his current level of distress. The desensitization phase ends when the SUDS (Subjective Units of Disturbance Scale) has reached 0 or 1.

Phase V

The "Installation Phase": the therapist asks the client about the positive cognition, if it's still valid. After Phase IV, the view of the client on the event/ the initial snapshot image may have changed dramatically. Another PC may be needed. Then the client is asked to "hold together" the snapshot and the (new) PC. Also the therapist asks, "How valid does the PC feel, on a scale from 1 to 7?" New sets of eye movement are issued.

Phase VI

The body scan: the therapist asks if anywhere in the client's body any pain, stress or discomfort is felt. If so, the client is asked to concentrate on the sore knee or whatever may arise and new sets are issued.

Phase VII

Debriefing: the therapist gives appropriate info and support.

Phase VIII

Re-evaluation: At the beginning of the next session, the client reviews the week, discussing any new sensations or experiences. The level of disturbance arising from the experiences targeted in the previous session is assessed. An objective of this phase is to ensure the processing of all relevant historical events.

Appendix I: Socratic Method

Essential Components of the Socratic Method

Extract from <http://cgi.stanford.edu/~dept-ctl/cgi-bin/tomprof/posting.php?ID=810>

It is from the newsletter, Speaking of Teaching, produced by the Center for Teaching and Learning (CTL), Stanford University, <http://ctl.stanford.edu/Newsletter/> Fall 2003, Vol. 13, No.1. Speaking of Teaching is compiled and edited by CTL Associate Director Mariatte Denman at [mdenman@stanford.edu.]

1. **The Socratic method uses questions to examine the values, principles, and beliefs of students.**

Through questioning, the participants strive first to identify and then to defend their moral intuitions about the world which undergird their ways of life. Socratic inquiry deals not with producing a recitation of facts, or a questioning of the logic of various and sundry abstractions which are held up for comparison, but demands rather that the participants account for themselves, their thoughts, actions, and beliefs. Socratic inquiry aims to reveal the motivations and assumptions upon which students lead their lives. Thus, practitioners of the Socratic method may want students to know facts, but they want to focus more on what the student thinks about these facts, not what others think! It's no use citing authorities.

2. **The Socratic method focuses on moral education, on how one ought to live.**

Socratic inquiry necessarily proceeds in an ad hominem style. That is, rather than making arguments or asking questions designed to convince any or all people, all comments in a Socratic inquiry are directed at specific participants in the discussion. The subject of inquiry is not what is thought or said about the world in general, but what each participant thinks or says about the world. The goal is not to consider depersonalized propositions and abstractions, but to probe the underlying values and beliefs of each inquirer.

Since the substance of Socratic inquiry is the belief and value system of the participants, when those beliefs or values are challenged, or refuted, it is nothing less than the coherence of the lives of the people that is at stake. As Socrates says often in Plato's dialogues, he is primarily concerned with how one ought to live. In Plato's Gorgias, Socrates says, "Do not take what I say as if I were merely playing, for you see the subject of our discussion- and on what subject should even a man of slight intelligence be more serious?-namely, what kind of life should one live . . ."

Refutation of one's beliefs about how best to live delivers an implicit verdict that, to paraphrase Rilke's poem, "The Archaic Torso of Apollo" (1908), you must change your life. Socrates is famous for saying "the unexamined life is not worth living." Equally true, though less appreciated, is the fact that the unlive life is not worth examining.

3. **The Socratic method demands a classroom environment characterized by "productive discomfort."**

In the best of Socratic dialogues, there is real tension among the interlocutors. The stakes are high. Will one be called on, be called to account?

4. The Socratic method is better used to demonstrate complexity, difficulty, and uncertainty than at eliciting facts about the world.

Bertrand Russell once wrote, "As usual in philosophy, the first difficulty is to see that the problem is difficult. If you say to a person untrained in philosophy, 'How do you know I have two eyes?' he or she will reply, 'What a silly question! I can see you have.' It is not to be supposed that, when our inquiry is finished, we shall have arrived at anything radically different from this un-philosophical position. What will have happened will be that we shall have come to see a complicated structure where we thought everything was simple, that we shall have become aware of the penumbra of uncertainty surrounding the situations which inspire no doubt, that we shall find doubt more frequently justified than we supposed, and that even the most plausible premises will have shown themselves capable of yielding implausible conclusions. The net result is to substitute articulate hesitation for inarticulate certainty."

Socratic Questioning and Facilitation

Adapted from: http://changingminds.org/techniques/questioning/socratic_questions.htm

The Six Types of Socratic Questions In Detail:

1. Conceptual clarification questions

Facilitators help people to think more about what they are asking and thinking. Encourage people to prove the concepts behind their argument. Basically the purpose of conceptual clarification questions is to ask people 'tell me more' questions that get them to go deeper. For Example:

- *Why are you saying that?*
- *What exactly does this mean?*
- *How does this relate to what we have been talking about?*
- *What is the nature of ...?*
- *What do we already know about this?*
- *Can you give me an example?*
- *Are you saying ... or ... ?*
- *Can you rephrase that, please?*

2. Probing Assumptions

The facilitator needs to probe the participant's assumptions to assist them in becoming aware of the presuppositions, inconsistencies and unquestioned beliefs they may not hear. This way of questioning is a way to challenge participants without attacking them, and coming from a place of... "help me understand what you are saying...." For Example:

- *What else could we assume?*
- *You seem to be assuming ... ?*
- *How did you choose those assumptions?*

- *Please explain why/how ... ?*
- *How can you verify or disprove that assumption?*
- *What would happen if ... ?*
- *Do you agree or disagree with ... ?*

3. Probing Rationale, Reasons and Evidence

People will often give unclear, dissociative, un-thoughtful or weak support for their arguments. When this occurs the facilitator needs to ensure that she/he understands the rationale, reasoning and cause of the information being given. If the facilitator is not clear on either the rationale, reasoning or evidence she/he needs to probe for deeper understanding, ask for specific examples to more clearly understand (for both the participant and the facilitator). When they give a rationale for their arguments, dig into that reasoning rather than assuming it is a given. For Example:

- *Why is that happening?*
- *How do you know this?*
- *Show me ... ?*
- *Can you give me an example of that?*
- *What do you think causes ... ?*
- *What is the nature of this?*
- *Are these reasons good enough?*
- *Would it stand up in court?*
- *How might it be refuted?*
- *How can I be sure of what you are saying?*
- *Why is ... happening?*
- *Why? (keep asking it -- you'll never get past a few times)*
- *What evidence is there to support what you are saying?*
- *On what authority are you basing your argument?*

4. Questioning Viewpoints and Perspectives

Most people argue from a singular particular point of view. In other words it's "their way or the highway." The facilitator needs to show the participants that there are other, equally valid, viewpoints. For Example:

- *Another way of looking at this is ..., does this seem reasonable?*
- *What alternative ways of looking at this are there?*
- *Why it is ... necessary?*
- *Who benefits from this?*
- *What is the difference between... and...?*
- *Why is it better than ...?*
- *What are the strengths and weaknesses of...?*
- *How are ... and ... similar?*
- *What would ... say about it?*

- *What if you compared ... and ... ?*
- *How could you look another way at this?*

5. Probe Implications and Consequences

Facilitators can also probe the implications and consequences of proposed arguments to increase the participant's awareness and understanding of cause and effect. To assess if what they say makes sense and if the desired results are achieved. For Example:

- *Then what would happen?*
- *What are the consequences of that assumption?*
- *How could ... be used to ... ?*
- *What are the implications of ... ?*
- *How does ... affect ... ?*
- *How does ... fit with what we learned before?*
- *Why is ... important?*
- *What is the best ... ? Why?*

6. Questions About the Question

Facilitators can be even more challenging by getting reflexive and turning a participants question in on him/herself. In a sense the facilitator is using their attack against themselves, and "bounce the ball back into their court." For Example:

- *What was the point of asking that question?*
- *Why do you think I asked this question?*
- *Am I making sense? Why not?*
- *What else might I ask?*
- *What does that mean?*

Changing minds.org http://changingminds.org/techniques/questioning/socratic_questions.htm

As A Socratic Facilitator The Goals Are To:

1. Create an environment conducive to discussion, debate and open-ended communication.
 - a. Develop a trust relationship based on the 4 Absolutes before expecting extensive participation in discussion. Note: students are more likely to participate if they feel they are among friends.
 - b. Learn all the students' names
 - c. Take the time to chat with each client individually and informally.
2. Keep the discussion focused by providing questions that advance the discussion (see above).
3. Be respectful of each person's contributions. And be responsible by dealing carefully and fairly with contributions from every member of the class.
 - a. Show respect of and for each person's contribution and opinion.
 - b. By modeling this behavior as the facilitator, students will learn how to show respect for their peers' thoughts and opinions.
4. Stimulate the discussion with probing questions (***"what," "how," and "why" questions are open-ended and further discussion; "can," "are," and "do" questions are closed***) (see above).
 - a. By modeling these questions, this style of communication and reasoning becomes internalized by students, who learn how to ask themselves the same questions.
5. Periodically summarize what has and what has not been dealt with or resolved in regards to the discussion.
 - a. This assists participants in the discussion by providing to guide the rest of the dialogue.
6. Include as many participants as possible into the discussion.
 - a. If everyone feels that his or her contributions to the discussion are valued and respected, participation will become more naturally.
7. Take a position of the 4 Absolutes: nonjudgmental attitude, listen, share something of yourself, and be honest.

The Socratic Temperament

[by Max Maxwell](#)

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The most basic goal of Socrates' work as a philosopher and teacher was not, through questioning, to induce a person to realize a particular fact or to cause a person to rethink an idea. For Socrates, the Socratic Method was just a means to an end. The end that Socrates sought was the excellence of human character. Excellence of character and the quality of living that results from good character was the holy grail of Socrates' quest. Socrates believed that a continuous journey of self-improvement was essential for every person. He believed this self-improvement is to be realized through the acquisition of knowledge. It is the fundamental goal of the Socratic Teacher to improve the character of her students. This is done by making them more receptive to and effective in the process of acquiring knowledge and increasing their understanding.

Prior to looking at the structure of Socratic Dialogue, we must look at the most important foundation for Socratic teaching, which is the personal temperament of the Socratic Teacher. In order to be effective at using the Socratic Method, the Socratic Teacher must be able to live and model positive attitudes regarding the discipline of inquiry and must also be experienced in the practice of her own self-examination. A teacher, who is completely lacking in what I call the Socratic Temperament, will have a difficult time bringing the Socratic Method to life in the classroom.

Characteristics of the Socratic Temperament:

1. **The Socratic Teacher loves to discover her own errors.** There is no shame in discovering that we are in error or are lacking in understanding. The Socratic Teacher embraces the discovery of error as a joyful moment. Even if the realization of her fault causes difficulties, the Socratic Teacher cherishes this moment of realization because a step towards knowledge and understanding is taken with every error and lack of knowledge we uncover. It is important that you are able to naturally express this positive attitude about the discovery of your own lack of understanding. The aggressive, thorough and productive examination of your own knowledge and ideas is the hallmark of an excellent thinker. It is also the hallmark of the Socratic Teacher. The capacity to examine our own cherished ideas and beliefs without the fear of replacing them with something better is an essential part of the Socratic Temperament and the Socratic Method. Students learn this best by watching their teachers live it. If you cannot develop the capacity to model a positive attitude about discovering and dealing with your own lack of knowledge, you cannot be a Socratic Teacher. Errors pave the grand highway that leads to understanding. The Socratic Teacher treats the discovery of error as an essentially valuable asset in the journey to gain knowledge. In contrast, the fear of having your worldview challenged is the greatest inhibition to developing excellence in critical thinking. A teacher who is afraid of such challenges will telegraph this fear to her students, and do great damage to the value of the use of the Socratic Method in the classroom.
1. **The Socratic Teacher is in touch with her own ignorance.** Socrates said that the only thing he knew was that he knew nothing. This disavowal of knowledge, which became known as Socratic irony, was more than a rhetorical stance designed to make the Socratic Method function. Because the Socratic Teacher knows that her ignorance touches every area of life, student participation and answers are naturally treated with respect. This awareness of ignorance is much more than just acknowledging that there are some things you do not know. The Socratic Teacher knows that her ignorance touches every thought she has and every fact she knows. For example, if a student told you that “one plus one equals four,” there is no doubt that you would recognize this simple error. Many teachers would naturally be inclined to assume that this is absolutely and always wrong. However, did you know that sometimes one plus one can equal four? If you add two triangles together as left helix and right helix, you will get a six edged tetrahedron with four triangle faces. In this case one plus one equals four. (Buckminster Fuller, [Synergetics 108.02](#)) The Socratic Teacher realizes that her ignorance touches even her understanding of the possibilities of something as simple as one plus one. There is always an abiding knowledge in the heart of the Socratic Teacher that she is ignorant in some way that touches every word she speaks, every thought she has and every perspective she embraces. The realization of her own ignorance fosters humility about her status as a teacher, inspires empathy for her students and provides an illustration to her students of the most important psychological reality of a quality thinker (i.e. the self knowledge of our own ignorance). This also helps the Socratic Teacher to see her students as teachers and to embrace a love of learning from them. Because the Socratic Teacher knows that her ignorance touches her understanding of even the simplest facts, she feels a profound awe in wondering what depths of ignorance are in her mind pertaining to more complex subjects. Just as it is possible for the teacher to be ignorant about some aspect of one plus one, the Socratic Teacher knows that it is possible for the students to be wise in unexpected ways. This realization makes it easy for the Socratic Teacher to treat all students as living sources of understanding, who have the power to teach the teacher. This is most commonly expressed in attitude and good manners. The Socratic Teacher realizes she is more ignorant than not and thus always expresses a positive, open and earnestly seeking attitude when dealing with disagreements of fact or interpretation. The Socratic Teacher’s vivid awareness of her own ignorance makes it natural and easy to communicate respect and appreciation to her student’s for their class participation.

The Socratic Teacher is always looking for opportunities to grow under the tutelage of her students.

3. **The Socratic Teacher models the joy of hard work in the quest for knowledge.** The Socratic Teacher sees knowledge as a great treasure for all humanity. Obtaining knowledge is a goal of the utmost importance and worthy of every effort. The Socratic Teacher experiences a joyful satisfaction in working hard to gain knowledge. The Socratic Teacher knows when she is found to be wrong in some way that this is actually a sign she is on an active and successful journey towards knowledge (as opposed to those who do not even know they lack correct knowledge). Thus, the Socratic Teacher does not allow any measure of failure to get her down and expresses patience, persistence and a positive attitude while working to gain knowledge. The Socratic Teacher knows that, without knowledge, her students will live miserable and destructive lives. She feels an extraordinary urgency to ensure that her students will be successful in learning. Thus, the Socratic Teacher takes opportunities to demonstrate and communicate the value of hard work to her students and the joy that can be found in the work of learning.
4. **The Socratic Teacher experiences deep curiosity and the desire for self-improvement.** It is impossible to value knowledge so greatly yet remain uncurious. A teacher that is not curious cannot be a Socratic Teacher. A lack of curiosity is a lack of insight into the tremendous value of knowledge. This lack of curiosity can result from the self-satisfaction of being out of touch with your own ignorance. A lack of curiosity can also result from not being willing to live the patience and hard work needed to gain knowledge. The Socratic Teacher is deeply curious and always desires to improve her understanding. The improvement of understanding is seen as an essential self-improvement. This means that the Socratic Teacher is not content to remain stagnant and actively works to improve herself throughout her life. The Socratic Teacher usually has some personal project or subject that she is engaging for the purpose of improving herself. The Socratic Teacher makes opportunities to present her deep curiosity and passionate desire for self-improvement as a model for the students.

Some readers may wonder at the extent to which they do not recognize themselves in the above description of the Socratic Temperament. These characteristics were at home in the natural temperament of Socrates, but may not be completely descriptive of your natural inclinations. Do not worry. If you are at all open to positively embracing the discovery of your own lack of knowledge and have any desire at all for self-improvement, then you will be surprised at how much good you can do by applying yourself to increase the quality of your understanding and the productivity your living. Just realize that you must earnestly stoke the fires of your heart with the desire to grow and improve. Combine that fire with work and you can forge yourself into fine form. If, on the other hand, you have no desire to productively engage your errors and failures and want to avoid applying yourself to the task of self-improvement, then perhaps teaching is not for you. How well you know this or that subject matter is not even relevant. The failure of a teacher to be alive to her own journey of growth in life will completely destroy the very best she has to offer her students.

When a teacher has a well developed Socratic Temperament and uses the Socratic Method, this combination brings an extraordinary power of inspiration to the classroom. As I wrote in the introduction on the home page, "Without true Socratic irony (Socratic Temperament), the Socratic Method can easily become an exercise in shallow manipulation that lacks the power to inspire." When a teacher uses methods that have the power to bring the process of learning alive in the minds of her students, this very important awakening must be conducted with humility and grace. If you always need to be the one who is right, always think of yourself in terms of what you know and have achieved, are lazy about the acquisition of new knowledge in your own life, have no curiosity and no desire for self-improvement, then you will never be able to use the Socratic Method for even 1/100th of what it is worth.

The first step in learning the Socratic Method is to open yourself to the task of developing your own Socratic Temperament.

The Necessity of the Socratic Temperament

The most fundamental and powerful contribution to education by the Socratic Method is not as a method to communicate specific facts. It is in the demonstration and communication of the Socratic Temperament to the students. To cultivate the Socratic Temperament in the students is to lay the ultimate foundation for the development of superior critical thinking later in life. Deep curiosity, fearless questioning, productive critical thinking and a lifelong quest for self-improvement are the fruits of the Socratic Temperament. The opportunity to develop their own Socratic Temperament is the finest gift you can give to your students. This is done best by teachers who are living the Socratic Temperament in the classroom. It is absolutely necessary to develop the Socratic Temperament in students. The fear of having their own beliefs and assumptions challenged must be replaced with joy. Students must learn to take joy at questioning everything, especially their own ideas. If a student remains uncomfortable in questioning their own ideas, they will be emotionally handicapped with regard to the development of their capacity for critical thinking and their ability to face the uncertainties of life in a productive and reasoned manner. As Plato wrote, "The unexamined life is not worth living."

* On a side note, the law school version of their so-called Socratic Method is not compatible with the Socratic Temperament as demonstrated by Socrates. This is not to say that law school professors do not have a Socratic Temperament or employ such temperamental characteristics in their teaching. Although there is nothing genuinely Socratic about the violently contentious law school version of the method, the fact that a law student's exposure to this very intense type of questioning will often break her down and force her to dig deep and perform better does have something of the flavor of the Classic Socratic Method. The purpose of this style of questioning in law school is to prepare students for the extremely rough environment of courtroom litigation. Even though the law school form has the flavor of the deconstructive nature of the Classic Socratic Method, the actual structure of Socratic Dialogue and the nurturing gentleness, which was characteristic of Socrates and his method, are absent. The law school form of the method is not what will be discussed in future essays, nor is it appropriate in most educational contexts. If you want to see a balanced presentation of law student's reactions to the "Socratic Method" used in law school, check out this [video](#).

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http://www.socraticmethod.net/the_socratic_temperament.htm

Appendix J: Group Therapy

Extracted from Center for Substance Abuse Treatment, 2005b, p6-23.

GROUPS COMMONLY USED IN SUBSTANCE ABUSE TREATMENT

Substance abuse treatment professionals employ a variety of group treatment forms, which TIP 41 divides according to their *model, type, or purpose*. In the hands of a skilled leader, each form of group treatment can provide powerful therapeutic experiences for group members.

Five Group Therapy Models

TIP 41 describes five *models* of group therapy that are effective for substance abuse treatment:

- Psychoeducational Groups
- Skills Development Groups
- Cognitive–Behavioral/Problem-Solving Groups
- Support Groups
- Interpersonal Process Groups

1. Psychoeducational Groups

Psychoeducational groups are designed to educate clients about substance abuse and related behaviors and consequences. This type of group presents structured, group-specific content, often taught by means of videotapes, audiocassette, or lectures.

Psychoeducational groups provide information that aims to have a direct application to clients' lives, such as instilling self-awareness, suggesting options for growth and change, and prompting people using substances to take action on their own behalf.

Some of the contexts in which psychoeducational groups may be useful are

- Helping clients in the precontemplative or contemplative stage of change to reframe the impact of substance use on their lives, develop an internal need to seek help, and discover avenues for change.
- Helping clients in early recovery learn more about their disorders, recognize roadblocks to recovery, and deepen understanding of the path they will follow toward recovery.
- Helping families understand the behavior of a person with a substance use disorder in a way that allows them to support the individual in recovery and learn about their own needs for change.
- Helping clients learn about other resources that can be helpful in recovery, such as meditation, relaxation training, anger management, spiritual development, and nutrition.

Principal characteristics.

Psychoeducational groups generally teach clients that they need to learn to identify, avoid, and eventually master the specific internal states and external circumstances associated with substance abuse.

Leadership skills and styles.

Leaders in psychoeducational groups primarily assume the roles of educator and facilitator.

Techniques.

Techniques for conducting psychoeducational groups are concerned with (1) how information is presented and (2) how to assist clients to incorporate learning so that it leads to productive behavior, improved thinking, and emotional change.

2. Skills Development Groups

Skills development groups teach skills that help clients maintain abstinence, such as

- Refusal skills
- Social skills
- Communication skills
- Anger management skills
- Parenting skills
- Money management skills

Principal characteristics.

Because of the degree of individual variation in client needs, the particular skills taught to a client should depend on an assessment that takes into account individual characteristics, abilities, and background.

Leadership skills and styles.

In skills development groups, as in psychoeducation, leaders need basic group therapy knowledge and skills, knowledge of the patterns that show how people relate to one another in groups, skills in fostering interaction among members and managing conflict that inevitably arises among members in a group environment, and helping clients take ownership for the group.

Techniques.

The specific techniques used in a skills development group will vary depending on the skills being taught.

3. Cognitive–Behavioral Groups

Cognitive–behavioral groups are a well-established part of the substance abuse treatment field and are particularly appropriate in early recovery.

Cognitive processes include a number of different psychological activities, such as thoughts, beliefs, decisions, opinions, and assumptions. A number of thoughts and beliefs are affected by an individual's substance abuse and addiction. Some common errant beliefs of individuals entering recovery are

- "I'm a failure."
- "I'm different."
- "I'm not strong enough to quit."
- "I'm unlovable."
- "I'm a (morally) bad person."

Principal characteristics.

Cognitive–behavioral therapy groups work to change learned behavior by changing thinking patterns, beliefs, and perceptions. The group leader focuses on providing a structured environment within which group members can examine the behaviors, thoughts, and beliefs that lead to their maladaptive behavior.

For example, one model of a cognitive–behavioral group for individuals with posttraumatic stress disorder (PTSD) and substance abuse is designed to:

- Educate clients about the two disorders
- Promote self-control skills to manage overwhelming emotions
- Teach functional behaviors that may have deteriorated as a result of the disorders
- Provide relapse prevention training

The group format is an important element of the model, given the importance of social support for PTSD and substance use disorders. In addition, group treatment is a relatively low-cost modality, so it can reach a larger number of clients.

Leadership skills and styles.

Some cognitive–behavioral approaches focus more on behavior, others on core beliefs, still others on developing problem-solving capabilities. The level of interaction by the counselor in cognitive–behavioral groups can vary from quite directive to relatively inactive. Perhaps the most common leadership style in such groups is active engagement and a consistently directive orientation.

Techniques.

Specific techniques may vary by the specific orientation of the leader but, in general, include the ability to (1) teach group members about self-destructive behavior and thinking that leads to maladaptive behavior, (2) focus on problem-solving and short- and long-term goal setting, and (3) help clients monitor feelings and behavior, particularly those associated with substance use.

4. Support Groups

Many people with substance use disorders avoid treatment because the treatment itself threatens to increase their anxiety. Support groups bolster members' efforts to develop and strengthen their ability to manage their own thinking and emotions and to develop better interpersonal skills as they recover from substance abuse. Principal characteristics. The focus of support groups can range from strong leader-directed, problem-focused groups in early recovery, which focus on achieving abstinence and managing day-to-day living, to group-directed, emotionally and interpersonally focused groups in middle and later stages of recovery.

Principal characteristics.

The focus of support groups can range from strong leader-directed, problem-focused groups in early recovery, which focus on achieving abstinence and managing day-to-day living, to group-directed, emotionally and interpersonally focused groups in middle and later stages of recovery.

Leadership skills and styles.

Support group leaders need a solid grounding in how groups grow and evolve and the ways in which people interact and change in groups. The leader facilitates group discussion and helps group members share their experiences and overcome difficult challenges. The counselor provides positive reinforcement for group members, models appropriate interactions between individuals in the group, respects individual and group boundaries, and fosters open and honest communication.

Techniques.

Counselor interventions in support groups are likely to be more interpretive and observational and less directive

than in many other groups. The goal is not to provide insight to group members, but to facilitate the evolution of support within the group.

5. Interpersonal Process Groups

Interpersonal process groups use psychodynamics, or knowledge of the way people function psychologically, to promote change and healing. All therapists using a “process-oriented group therapy” model continually monitor three dynamics:

- The psychological functioning of each group member (intrapsychic dynamics)
- The way people are relating to one another in the group setting (interpersonal dynamics)
- How the group as a whole is functioning (group as-a-whole dynamics)

Principal characteristics.

Interpersonal process group therapy delves into major developmental issues, searching for patterns that contribute to addiction or interfere with recovery.

Leadership skills and styles.

In interpersonal process groups, content is a secondary concern. Instead, leaders focus on the present, noticing signs of people recreating their past in what is going on between and among members of the group.

Techniques.

In practice, group leaders may use different models at various times and may simultaneously influence more than one focus level at a time.

Three variations of the interpersonal process group are

- Individually focused groups. This group concentrates on individual members of the group and their distinctive internal cognitive and emotional processes
- Interpersonally focused groups. In these groups, members evaluate each other’s behavior. The group leader monitors the way clients relate to one another, reinforces therapeutic group norms, and works to prevent contratherapeutic norms.
- Group-as-a-whole focused groups. In this group, the group leader focuses on the group as a single entity or system.

For more information on these group models, see Chapter 2 of TIP 41.

Three Group Therapy Types

There are three specialized types of groups that do not fit into the five model categories, but which function as unique entities in the substance abuse treatment field:

- Relapse Prevention Groups
- Communal and Culturally Specific Groups
- Expressive Groups

1. Relapse Prevention Groups

Relapse prevention groups focus on helping a client maintain abstinence or recover from relapse. This kind of group is appropriate for clients who have attained abstinence, but who have not necessarily established a proven track record indicating they have all the skills to maintain a drug-free state.

Purpose.

Relapse prevention groups help clients maintain their sobriety by providing them with the skills and knowledge to anticipate, identify, and manage high-risk situations that can lead to relapse while also making security preparations for their future by striving for broader life balance.

Principal characteristics.

Relapse prevention groups focus on activities, problem-solving, and skill building. They may also take the form of psychotherapy.

Leadership skills and styles.

Leaders of relapse prevention groups need to have a set of skills similar to those needed for a skills development group, along with a well-developed ability to work on group process issues.

Group leaders need to be able to monitor client participation to determine risk for relapse, to perceive signs of environmental stress, and to know when a client needs a particular intervention. Above all, when a group member does relapse, the leader should be able to help the group process the event in a nonjudgmental, nonpunitive way.

Techniques.

Relapse prevention groups draw upon techniques used in a variety of other types of groups, including the cognitive-behavioral, psychoeducational, skills development, and process-oriented groups.

2. Communal and Culturally Specific Groups

Communal and culturally specific wellness activities and groups include a wide range of activities that use a specific culture's healing practices and adjust therapy to cultural values. Such strengths-focused activities can be integrated into a substance abuse treatment program in several ways:

- Culturally specific group wellness activities may be used in a treatment program to help clients heal from substance abuse and problems related to it.
- Culturally specific practices or concepts can be integrated into a therapeutic group to instruct clients or assist them in some aspect of recovery. For example, Hispanics/Latinos generally share a value of personalismo, a preference for person-to-person contact. Alternately, a psychoeducational group formed to help clients develop a balance in their lives might use an American Indian medicine wheel diagram.
- Culturally or community-specific treatment groups may be developed within a services program or in a substance abuse treatment program serving a heterogeneous population with a significant minority population of a specific type. Examples might include a group for people with cognitive disabilities, or a bilingual group for recent immigrants.

Purpose.

Groups and practices that accentuate cultural affinity help curtail substance abuse by using a particular culture's healing practices and tapping into the healing power of a communal and cultural heritage.

Principal characteristics.

Different cultures have developed their own views of what constitutes a healthy and happy life. These ideas may

prove more relevant to members of a minority culture than do the values of the dominant culture, which sometimes can alienate rather than heal.

Leadership characteristics and style.

A group leader for a culturally specific group will need to be sensitive and creative. How much authority leaders will exercise and how interactive they will be depends on the values and practices of the cultural group. The group leader should pay attention to a number of factors, all of which should be considered in any group but which will be particularly important in culturally specific groups. Clinicians should

- Be aware of cultural attitudes and resistances toward groups.
- Understand the dominant culture's view of the cultural group or community and how that affects members of the group.
- Be able to validate and acknowledge past and current oppression, with a goal of helping to empower group members.
- Be aware of a cultural group's collective grief and anger and how it can affect countertransference issues.
- Focus on what is held in common among group members, while being sensitive to differences.

Techniques.

Different cultures have specific activities that can be used in a treatment setting. Some common elements in treatment include storytelling, rituals and religious practices, holiday celebrations, retreats, and rites of passage practices.

3. Expressive Groups

This category includes a range of therapeutic activities that allow clients to express feelings and thoughts—conscious or unconscious—that they might have difficulty communicating with spoken words alone.

Purpose.

Expressive therapy groups generally foster social interaction among group members as they engage either together or independently in a creative activity.

Principal characteristics.

Expressive therapy may use art, music, drama, psychodrama, Gestalt, bioenergetics, psychomotor, games, dance, free movement, or poetry.

Leadership characteristics and style.

Expressive group leaders will generally have a highly interactive style in group. They will need to focus the group's attention on creative activities while remaining mindful of group process issues.

Techniques.

The techniques used in expressive groups depend on the type of expressive therapy being conducted. Generally, these groups set clients to work on an activity, and client participation is a paramount goal if the therapy is to exert its full effect.

Groups Focused on a Specific Purpose

In addition to the five models of therapeutic groups and three specialized types of groups discussed above, groups can be classified by purpose. The purpose-focused group is a specific form of cognitive-behavioral therapy used to eliminate or modify a single problem, such as shyness, loss of a loved one, or substance abuse.

Purpose.

The primary purpose of a group focused on a specific problem is to target, alter, and eliminate a group member's self-destructive or self-defeating behavior. Such groups are usually short-term and historically have been used with addictive types of behavior (smoking, eating, substance use) as well as when the focus is on symptom reduction or behavioral rehearsal.

Principal characteristics.

Groups focused on a purpose are short (commonly 10 or 12 weeks), highly structured groups of people who share a specific problem. The group's focus, for the most part, is on one symptom or behavior, and they use the cohesiveness among clients to increase the rate of treatment compliance and change. These groups are particularly helpful for new clients; their focus helps to allay feelings of vulnerability and anxiety.

Leadership characteristics and style.

The group leader usually is active and directive. Interaction within the group is limited typically to exchanges between the clients and the group leader; the rest of the group acts to confront or support the client according to the leader's guidance.

Techniques.

In practice, group leaders may use different models at various times, and may simultaneously influence more than one focus level at a time. For example, a group that focuses on changing the individual will also have an impact on the group's interpersonal relations and the group-as-a-whole. Groups will, however, have a general orientation that determines the focus the majority of the time. This focus is an entry point for the group leader, helping to provide direction when working with the group.

Appendix K: Advantages of Group Therapy

Some of the numerous advantages to using groups in substance abuse treatment are described below (Brown and Yalom 1977; Flores 1997; Garvin unpublished manuscript; Vannicelli 1992). Extracted from Center for Substance Abuse Treatment (2005) <http://www.ncbi.nlm.nih.gov/books/NBK26210/>

- *Groups provide positive peer support and pressure to abstain from substances of abuse.* Unlike AA, and, to some degree, substance abuse treatment program participation, group therapy, from the very beginning, elicits a commitment by all the group members to attend and to recognize that failure to attend, to be on time, and to treat group time as special disappoints the group and reduces its effectiveness. Therefore, both peer support and pressure for abstinence are strong.
- *Groups reduce the sense of isolation that most people who have substance abuse disorders experience.* At the same time, groups can enable participants to identify with others who are struggling with the same issues. Although AA and treatment groups of all types provide these opportunities for sharing, for some people the more formal and deliberate nature of participation in process group therapy increases their feelings of security and enhances their ability to share openly.
- *Groups enable people who abuse substances to witness the recovery of others.* From this inspiration, people who are addicted to substances gain hope that they, too, can maintain abstinence. Furthermore, an interpersonal process group, which is of long duration, allows a magnified witnessing of both the changes related to recovery as well as group members' intra- and interpersonal changes.
- *Groups help members learn to cope with their substance abuse and other problems by allowing them to see how others deal with similar problems.* Groups can accentuate this process and extend it to include changes in how group members relate to bosses, parents, spouses, siblings, children, and people in general.
- *Groups can provide useful information to clients who are new to recovery.* For example, clients can learn how to avoid certain triggers for use, the importance of abstinence as a priority, and how to self-identify as a person recovering from substance abuse. Group experiences can help deepen these insights. For example, self-identifying as a person recovering from substance abuse can be a complex process that changes significantly during different stages of treatment and recovery and often reveals the set of traits that makes the system of a person's self as altogether unique.
- *Groups provide feedback concerning the values and abilities of other group members.* This information helps members improve their conceptions of self or modify faulty, distorted conceptions. In terms of process groups in particular, as specific themes emerge in a client's group experience, repetitive feedback from multiple group members and the therapist can chip away at those faulty or distorted conceptions in slightly different ways until they not only are correctable, but also the very process of correction and change is revealed through the examination of the group processes.
- *Groups offer family-like experiences.* Groups can provide the support and nurturance that may have been lacking in group members' families of origin. The group also gives members the opportunity to practice healthy ways of interacting with their families.

- *Groups encourage, coach, support, and reinforce as members undertake difficult or anxiety-provoking tasks.*
- *Groups offer members the opportunity to learn or relearn the social skills they need to cope with everyday life instead of resorting to substance abuse.* Group members can learn by observing others, being coached by others, and practicing skills in a safe and supportive environment.
- *Groups can effectively confront individual members about substance abuse and other harmful behaviors.* Such encounters are possible because groups speak with the combined authority of people who have shared common experiences and common problems. Confrontation often plays a part of substance abuse treatment groups because group members tend to deny their problems. Participating in the confrontation of one group member can help others recognize and defeat their own denial.
- *Groups allow a single treatment professional to help a number of clients at the same time.* In addition, as a group develops, each group member eventually becomes acculturated to group norms and can act as a quasi-therapist himself, thereby ratifying and extending the treatment influence of the group leader.
- *Groups can add needed structure and discipline to the lives of people with substance use disorders, who often enter treatment with their lives in chaos.* Therapy groups can establish limitations and consequences, which can help members learn to clarify what is their responsibility and what is not.
- *Groups instill hope, a sense that "If he can make it, so can I."* Process groups can expand this hope to dealing with the full range of what people encounter in life, overcome, or cope with.
- *Groups often support and provide encouragement to one another outside the group setting.* For interpersonal process groups, though, outside contacts may or may not be disallowed, depending on the particular group contract or agreements.

Appendix L: Benefits and Challenges of Online Therapy

Extract from: Rochlen, A. B; Zack, J.S; Speyer, C. (2004). Online Therapy: Review of Relevant Definitions, Debates, and Current Empirical Support. *Journal of Clinical Psychology*, 60: 269–283

Benefits

Convenience and Increased Access

One of the most frequently cited benefits of online therapy is convenience and increased access for both clients and therapists. Online therapy also has the potential to serve people with limited mobility, time restrictions, and limited access to mental health services. Besides people living in remote locations or areas that lack access to an appropriate therapist, there are people working, traveling, and relocating in countries where they would not consult a mental health professional due to language barriers. People who are physically disabled, or their caretakers, represent another group with significant barriers to visiting a psychotherapist. In addition, potential consumers who feel stigmatized by the counseling process may be more likely to seek help online if they feel the initial shame is diminished when they are not in the therapist's physical presence (Mitchell & Murphy, 1998).

Disinhibition and Internalization

The disinhibiting effect of online communication has been discussed extensively by observers of Internet behavior (Joinson, 1998). In the context of online therapy, disinhibition can encourage therapeutic expression and self-reflection (Suler, 2002b). Since the process circumvents a client's overt persona, there are few, if any, social masks to remove, and clients tend to "cut to the chase" of core issues. Some online therapists report anecdotally that relating through text-based self-disclosure can have the effect of inducing a high degree of intimacy and honesty from the first exchange of e-mail. At the same time, the power differential can be diminished, as both parties become co-authors of client insights. To this end, the presenting problem can be externalized while the helper is being internalized. Both these time-honored therapeutic values are naturally enhanced by the medium and the closeness/distance of those engaged in it. The client can always (even years hence) re-read, rehearse, and reinforce the solutions and resolutions contained in the correspondence.

The Zone of Reflection

Online therapy communications may have the potential advantage of enhanced self-reflection and ownership of the therapeutic process gained through the act of writing. Once ongoing contact between client and therapist has been established, there is an opportunity for both parties to enter what Suler (2002b) called the "zone of reflection." For example, in an asynchronous e-mail exchange, the normal process of therapy is mediated by the text, allowing both writers to pay close attention to their own process while still engaged in a dialogue. There also may be an enhanced sense of emotional containment, as the client is able to set the pace, tone, volume, and parameters of self-disclosure (Suler, 2000).

Writing is Therapeutic

The contemplative process of writing about one's problems or conflicts may in and of itself be therapeutic for some clients (Murphy & Mitchell, 1998). In fact, Pennebaker (1997) provided empirical evidence that writing about emotional experiences is generally helpful. This research can logically be extended to a possible advantage of online therapy practice. As one online practitioner observed, "In an in-person session, you may talk for an hour and not get

to the heart of the matter. In contrast, an online therapy client may sit in silence for an hour and then say more in one typed line than she has ever revealed to anyone.”

Telepresence and Transference

When conditions on both sides of the dialogue enhance the advantages described earlier, then the text-based bond may allow the client and therapist to experience “telepresence.” This is the feeling (or illusion) of being in someone’s presence without sharing any immediate physical space (Fink, 1999). Some online therapy supporters claim that textonly talk carries clients past the distracting, superficial aspects of a person’s existence and connects the person more directly to the other’s psyche (Suler, 2002a).

Hypertextuality and Multimedia

Another advantage of online therapy is the ability to use the power of the Internet to feed relevant supplementary material to clients quickly and easily. Links to informational Web sites, video clips, documents, and assessment tools are readily supplied via all online therapy modalities. Whereas traditional therapy takes place in the therapist’s office, limiting the therapist to whatever resources he or she has on the bookshelf, online therapy always takes place in a context with limitless resources (Grohol, 2000).

Challenges

Missing Non-verbals

One frequently noted challenge to the process of online therapy is the lack of visual cues. There is no access to the nonverbal behaviors (besides reported ones) that are undeniably important ingredients in the counseling process. This limitation may rule out highly experiential therapeutic approaches that necessitate in-person presence (Alleman, 2002).

Misreading

In addition, online therapy creates a potential for misunderstanding in the absence of spontaneous clarification. Clients with poor ego strength or paranoid tendencies may suffer from the loss of reassuring visual and auditory cues. For therapists lacking appropriate training in text-based communication, important information about the client may remain “between the lines,” with the real issues evading assessment. The increased room for error in online assessment makes traditional diagnosis virtually impossible and limits the clinician to making provisional hypotheses (Childress, 1998).

Time Delay

Another technical challenge is that online therapy conducted by e-mail, for instance, is asynchronous and has a built-in time delay altering the nature of the counseling process. Clients may wonder about the meaning of unexplained delays in a therapist’s response. Ultimately, although time delay can be good (time to think about and digest responses), it also can increase anxiety, leading to what Suler (2002a) called the “black hole phenomenon.”

Skill Deficiency

Both therapist and client must be reasonably good writers and typists, and need to be computer literate to manage the medium (Stofle, 2001; Zack, 2002). The effectiveness of online therapy could be lost on those not comfortable expressing themselves in writing. The medium appears best suited to those who value written self-expression and have the creative independence it takes to hold up their end of the written dialogue (Mitchell & Murphy, 1998).

Crisis Intervention

Another debatable concern noted about online therapy relates to how therapists deal with crisis. Some authors have suggested there are significant problems that can surface when a client becomes suicidal/homicidal or the therapist is otherwise concerned about the client's safety (Mitchell & Murphy, 1998). These authors note that there can be no certainty of an immediate e-mail response from the therapist, so the ability to reliably deal with crisis is challenging, if not impossible. In contrast, Fenichel et al. (2002) concluded that there is no evidence suggesting online therapy cannot be done with clients in crisis nor is it more difficult in locating a client in online therapy compared to telephone hotline clinical work.

Cultural Clashes

Technology could lead some therapists to adopt a "carte blanche" approach to the indiscriminate crossing of cultures, time zones, and social systems. If it appears a therapeutic relationship is prone to conflict of interest, misunderstanding, or compromises the client's needs, then ease of access may prove to be a secondary consideration.

Identity

Verifying clients' identities can be a challenge for online therapy. This is another reason why professional online therapy often makes identifying and emergency contact information a prerequisite for intake. Most Web sites require a password before the client can access the Web-site's interactive communication system (Childress, 1998).

Security

Another common concern is the confidentiality of communications and client records. Without special precautions, there are a number of key security issues in the process of online counseling (Zack, 2004). Technology has the potential to keep client records more secure than conventional systems, but without awareness of Internet protocols and utilization of encryption solutions, online therapists may inadvertently increase the risk of divulging sensitive information (Grohol, 1999).

Appendix M: The Oxford Group

The 4 Absolutes: Honesty, Selflessness, Purity of Intention & Love

Please note: The reference to the 4 Absolutes express its origins. The fact that they stem from the Oxford Group and are now used in Alcoholics Anonymous (AA) by no means limit its application to other religions and beliefs. The PLT eMods™ Learning Process apply these principles to the progress in their most basic and universal context, with no religious connotations or references, yet within all religions these principles are stressed and valued.

(From a booklet distributed by Cleveland Central Committee of AA, n.d.. Retrieved from <http://www.barefootsworld.net/aaogfourabsolutes.html>)

Foreword

Spelled out as such, the Four Absolutes are not a formal part of our AA philosophy of life. Since this is true, some may claim the Absolutes should be ignored. This premise is approximately as sound as it would be to suggest that the Bible should be scuttled.

The Absolutes were borrowed from the Oxford Group Movement back in the days when our society was in its humble beginning. In those days our founders and their early colleagues were earnestly seeking for any and all sources of help to define and formulate suggestions that might guide us in the pursuit of a useful, happy, and significant sober life.

Because the Absolutes are not specifically repeated in our Steps or Traditions, some of us are inclined to forget them. Yet in many old time groups where the solid spirit of our fellowship is so strongly exemplified, the Absolutes receive frequent mention. Indeed, you often find a set of old placards, carefully preserved, which are trotted out for prominent display each meeting night.

There could be unanimity on the proposition that living our way of life must include not only an awareness but a constant striving toward greater achievement in the qualities which the Absolutes represent. Many who have lost the precious gift of sobriety would ascribe it to carelessness in seeking these objectives. If you will revisit the Twelve Steps with care, you will find the Four Absolutes form a thread which is discernible in a sober life of quality, every step of the glorious journey.

The Four Absolutes

Honesty.....Unselfishness..... Purity..... Love

We walked into this large group of which we had heard so much, but had never attended. From the vestibule we saw a placard on the corner of the far wall which said "**Easy Does IT**". We turned left to park our coat. We turned back and there on the other corner of the same wall was a twin placard which said, "**First Things First**". Then facing to the front of the room, high above the platform we saw in the largest letters of all, "**But for the Grace of God**". Then as our eyes descended, there directly on the front of the podium was another with four words, "**Honesty, Unselfishness, Love and Purity**".

In the next ten minutes as we sat unnoticed in the last row waiting for the meeting to start, many thoughts tumbled through a mind that was really startled by this first face to face meeting with the four Absolutes for a very long time.

We started to grade ourselves fearlessly on our own progress toward these Absolutes through long years of sobriety. The score was a pitiful, lonely little score. We thought of a fine lead recently heard in which a patient

humble brother had told his story, and had mentioned his overwhelming sense of gratitude as an important ingredient of his fifteen years of sobriety.

And in listing things for which he was so grateful, he mentioned how comfortable it was to be completely honest. Certainly he meant nothing prideful. He simply meant that he told his wife and friends the truth as best he could, had no fishy stories to reconcile, was honest with money and material things, etc.

This was a truly grateful, humble fellow. Certainly he did not resemble the man pictured in the cartoon, speaking to a large audience, pounding on the table and with a jutting chin proclaiming in a loud voice that he had more humility than anyone there and could prove it.

But just think of "complete honesty". Is it not the eternal search for the truth which is endless, and in which none achieve perfection?

What do the four Absolutes mean to most of us? Words are like tools. Like any other tools they get rusty and corroded when not used. More importantly, we must familiarize ourselves with the tools, understand them, and ever improve our skill in their use. Else the end product, if any, is pathetically poor.

We thought of a dear friend in the fellowship, prone like other alcoholics to move quickly from one hobby or interest to another, without really doing much with any of them. (Does that sound like someone you know?) Once this friend decided that working with his hands would solve some problems, quiet his nerves, perhaps help him to achieve serenity and balance. So he reviewed an impressive collection of tool catalogues with friends already addicted to the woodworking hobby.

He bought a large expensive collection of tools, and a lot of equipment. He hired a carpenter to build a shop in his basement, install the equipment, and make custom-built racks to house the tools. But in the end not one shaving and not one tiny bit of sawdust graced its floor. The idle tools serve just as well did to keep our friend occupied while he doesn't go to meetings, do Twelfth Step work or engage in other happy activity in AA.

How many of you will be completely honest and admit that you have put the four Absolutes in the attic, a little rusty from non-use perhaps, but none the worse for wear? Give or take a little, how many of us who still maintain the workshop for the Absolutes, will admit that not too many shavings or much sawdust from our activity have ever graced its floor? Or even assuming that the activity has persisted, how many will admit that the end product did not win a prize for its quality?

Such lack of quality can only mean lack of objectives or lack of all-out effort toward such objectives. We must recognize the Absolutes as guideposts to the finest and highest objectives to mortal man. But recognition is not enough. We must use the tools.

Honesty

Over and over we must ask ourselves, "Is it true or is it false?" For honesty is the eternal search for truth. It is by far the most difficult of the four Absolutes, for anyone, but especially for us in this fellowship.

The problem drinker develops genuine artistry in deceit. Too many (and we plead guilty) simply turn over a new leaf and relax. That is wrong. The real virtue in honesty lies in the persistent dedicated striving for it. There is no relaxed twilight zone, it's either full speed ahead constantly or it's not honesty we seek. And the unrelenting pursuit of truth will set you free, even if you don't quite catch up to it. We need not choose or pursue falsity. All we need is to relax our pursuit of truth, and falsity will find us.

The search for truth is the noblest expression of the soul. Let a human throw the engines of his soul into the doing or making of something good, and the instinct of workmanship alone will take care of his honesty. The noblest pleasure we can have is to find a great new truth and discard old prejudice. When not actively sought, truth seldom

comes to light, but falsehood does. Truth is life and falsity is spiritual death. It's an everlasting, unrelenting instinct for truth that counts. Honesty is not a policy. It has to be a constant conscious state of mind.

Accuracy is close to being the twin brother of honesty, but inaccuracy and exaggeration are at least "kissing cousins" of dishonesty. We may bring ourselves to believe almost anything by rationalization, (another of our fine arts), and so it's well to begin and end our inquiry with the question, "Is it true?" Any man who loves to search for truth is precious to any fellowship or society. Any intended violation of honesty stabs the health of not only the doer but the whole fellowship. On the other hand if we are honest to the limit of our ability, the basic appetite for truth in others, which may be dormant but not dead, will rise majestically to join us. Like sobriety, it's the power of example that does the job.

It is much simpler to appear honest, than to be honest. We must strive to be in reality what we appear to be. It is easier to be honest with others than with ourselves. Our searching self-inventories help because the man who knows himself is at least on the doorstep of honesty. When we try to enhance our stature in the eyes of others, dishonesty is there in the shadows. When falsehood even creeps in, we are getting back on the merry-go-round because falsehoods not only disagree with truth, they quarrel with each other. Remember?

It is one thing to devoutly wish the truth may be on your side, and it is quite another to wish sincerely to be on the side of truth. Honesty would seem to be the toughest of our four absolutes and at the same time, the most exciting challenge. Our sobriety is a gift, but honesty is a grace that we must earn and constantly fight to protect and enlarge. "Is it true or false?". Let us make that a ceaseless question that we try to answer with all the sober strength and intelligence we have.

Unselfishness

At first blush, unselfishness would seem to be the simplest of all to understand, define and accomplish. But we have a long road to travel because ours was a real mastery of the exact opposite during our drinking days.

A little careful thought will show that unselfishness in its finest sense, the kind for which we must strive in our way of life, is not easy to reach or describe in detail. In the final analysis, it must gain for us the selflessness which is our spiritual cornerstone, the real significance of our anonymity.

Proceeding with the question method of digesting the absolute, we suggest you ask yourself over and over again in judging what you are about to do, say, think or decide, "How will this affect the other fellow?"

Our unselfishness must include not merely that we do for others, but that which we do for ourselves. I once heard an old timer say that this was a 100% selfish program in one respect, namely that we had to maintain our own sobriety and its quality before we could possibly help others in a maximum degree. Yet we know that we must give of ourselves to others in order to maintain our own sobriety, in a spirit of complete selflessness with no thought of reward. How do we put these two things together.

Well, for one thing, it points up that we shall gain in direct proportion to the real help we give others. How many of us make hospital calls simply because we think that we need to do it to stay sober? Those who think only of their own need and who reflect little on the question of doing the fellows at the hospital some genuine good, are missing the boat. We know, for we used to make hospital calls in much the same way that we took vitamin pills.

Then one day in our early sobriety, we were asked to call on a female patient. There weren't enough gals to go around in those days and the men were called in to help. Never will we forget the anxiety on the way to that nursing home. And after nearly two hours of earnest talk we left one of the noblest women we will ever meet, worried about whether we had helped, or hurt, or perhaps had accomplished nothing at all. Some of her questions stayed with us. We thought of better answers later on, and returned to see her several times.

We are helped on our long journey to unselfishness by our great mission of understanding which sometimes seems as precious as the gift of sobriety itself. But the quality cannot be confined alone to that which we do for

others. We must be unselfish even in our pursuits of self-preservation. Not the least of our aid to others comes from the examples of our own lives.

Is there any protection against that first drink which equals our thought of what it may do to others, those whose unselfish love guided us in the beginning, and those whom we in turn guided later on? We are again reminded of the last verse of an anonymous poem:

"I must remember as I go
Though sober days, both high and low,
What I must always seem to be
For him who always follows me."

Purity

Purity is simple to understand. Purity is flawless quality. Gerard Groot in his famous fourteenth century book of meditation, has an essay entitled, "Of Pure Mind and Simple Intention", in which he says, "By two wings a man is lifted up from things earthly, namely by Simplicity and Purity. Simplicity doth tend towards God; Purity doth apprehend and taste Him."

Purity is a quality of both the mind and the heart, or perhaps we should say the soul of a man. As far as the mind is concerned, it is a simple case of answering the question, "Is right, or is it wrong?" That should be easy for us. There is no twilight zone between right and wrong. Even in our drinking days we knew the difference. With most of us, knowing the difference was the cause or part of the cause of our drinking. We did not want to face the reality of doing wrong. It isn't in the realm of the mental aspects of purity that our problem lies. We can all answer the question quoted above to the best of our ability and get the correct answer.

It's in the realm of the heart and spirit that we face difficulty. We know which is right, but do we have the dedicated will to do it? Just as a real desire to stop drinking must exist to make our way of life effective for us, so we must have a determined desire to do that which we know is right, if we are to achieve any measurable degree of purity. It has been well said that intelligence is discipline. In other words knowledge means little until it goes into action. We knew we should not take the first drink, remember? Until we translate our knowledge into the action of our own lives, the value of it is non-existent. We are not intelligent under such circumstances. So it is with the decency of our lives. We know what is right, but unless we do it, the knowledge is a haunting vacuum.

In discussing unselfishness we mentioned that it includes more than just doing for others. We repeat that it includes all that we do, since much of our help to others comes through our own example. Nowhere is this more true than in the decency and rightness of our life. Were we to contemplate the peace and contentment that a pure conscience would bring to us, and the joy and help that it would bring to others, we would be more determined about our spiritual progress. If our surrender under the Third Step has not been absolute, perhaps we should give the Eleventh Step more attention. If you have turned your will and your life over to God as you understand Him, purity will come to you in due course because God is Good. Let us not just tend toward God, let us taste of him.

In Purity as in Honesty the virtue lies in our striving. And like seeking the truth, giving our all in its constant pursuit, will make us free even though we may never quite catch up to it. Such pursuit is a thrilling and challenging journey. The journey is just as important as the destination, however slow it may seem. As Goethe says: "In living as in knowing be intent upon the purest way."

Love

We often learn more by questions, than by answers. Did you ever hear a question that caused you to think for days or even weeks? The questions which have no easy answer are often the key to the truth. However, in this series on the four Absolutes, we are concerned with the questions we should be asking ourselves over and over again in life. The integrity of our answers to these questions will determine the quality of our life, may even determine the continuance of our sobriety.

The old song tells us that love is a many splendored thing. In giving it we receive it. But the joy of receiving can never match the real thrill of giving. Consider that this great mission of love which is ours is seldom experienced by the non-alcoholic, and you have a new reason for gratitude. Few are privileged to save lives. Fewer have the rich experience of being God's helper in the gift of a second life. Love is a poor man's beginning toward God. We reach our twelfth step when we give love to the new man who is poor today, as we were poor yesterday.

A man too proud to know he is poor, has turned away from God with or without alcohol. We have been there too. But if he has a drinking problem, we can show him the way through love, understanding and our own experience.

When we live for our own sobriety, we again become beggars in spiritual rags, blind once again with the dust of pride and self. Soon we shall be starving with the hunger of devouring ourselves, perhaps even lose sobriety, Love is "giving of yourself" and unless we do, our progress will be lost. Each one owes the gift of this second life of sobriety to every other human being he meets in the ceaseless presence of God, and especially to other alcoholics who still suffer. Not to give of himself brings the desolation of a new poverty to the sober alcoholic.

When we offer love, we offer our life; are we prepared to give it? When another offers us love, he offers his life; have we the grace to receive it? When love is offered, God is there; have we received Him. The will to love is God's will; have we taken the Third Step? Ask yourself, "Is this ugly or is it beautiful?" If it's truly beautiful then it is the way of love, it is the way of A.A., and it is the will of God as we understand Him.

The Absolutes - A Summary

Our consideration of the absolutes individually leads to a few conclusions. The Twelve Steps represent our philosophy. The Absolutes represent our objectives in self-help, and the means to attain them. Honesty, being the ceaseless search for truth, is our most difficult and yet most challenging objective. It is a long road for anyone, but a longer road for us to find the truth. Purity is easy to determine. We know what is right and wrong. Our problem here is the unrelenting desire to do that which is right. Unselfishness is the stream in which our sober life must flow, the boulevard down which we march triumphantly by the grace of God, ever alert against being sidetracked into a dark obscure alley along the way. Our unselfishness must penetrate our whole life, not just our deeds for others, for the greatest gift we bestow on others is the example of our own life as a whole. Love is the medium, the blood of the good life, which circulates and keeps alive its worth and beauty. It is not only our circulatory system within ourselves, but it is our medium of communication to others.

The real virtue is in our striving for these Absolutes. It is a never-ending journey, and our joy and happiness must come each step of the way, not at the end because it is endless. Cicero said, "if you pursue good with labor, the labor passes and the good remains, but if you court evil through pleasure, the pleasure passes and the evil remains." Our life is a diary in which we mean to write one story, and usually write quite another. It is when we compare the two that we have our humblest hour. But let's compare through our self-inventory and make today a new day. Men who know themselves, have at least ceased to be fools. Remember if you follow the Golden Rule, it's always your move too. To love what is true and right and not to do it, is in reality not to love it, and we are trying to face reality, remember? The art of living in truth and right is the finest of fine arts, and like any fine art, must be learned slowly and practiced with incessant care.

We must approach this objective of the Absolutes humbly. We pray for these things and sometimes forget that these virtues must be earned. The gates of wisdom and truth are closed to those wise in their conceit, but ever open to the humble and the teachable. To discover what is true and to practice what is good are the two highest aims in life. If we would be humble, we should not stoop, but rather we should stand to our fullest height, close to our Higher Power that shows us what the smallness of our greatness is.

Remember our four questions, "Is it true or false?", "Is it right or wrong?", "How will this affect the other fellow?", and "Is it ugly or beautiful?". Answering these queries every day with absolute integrity, and following the dictates of those answers one day at a time, will surely lead us well on our journey toward absorbing and applying the Absolutes.