

PLT eMods™ Interactive Workbooks / Study Guides

Supporting Socratic Writing and Thinking Development

This paper explores PLT eMods™ Interactive Workbooks / Study Guides from a theoretical and practical approach. It shows how the Interactive Workbook / Study Guide process assists in providing structure while improving thinking and learner ownership of the material. We briefly discuss how the PLT eMods™ Interactive Workbooks / Study Guides provide learners with a holistic, structured and personalized learning process that aligns with principles of Bloom's Taxonomy, 9 Multiple Intelligences, Johari Window and Socratic Writing and Thinking...to name but a few.

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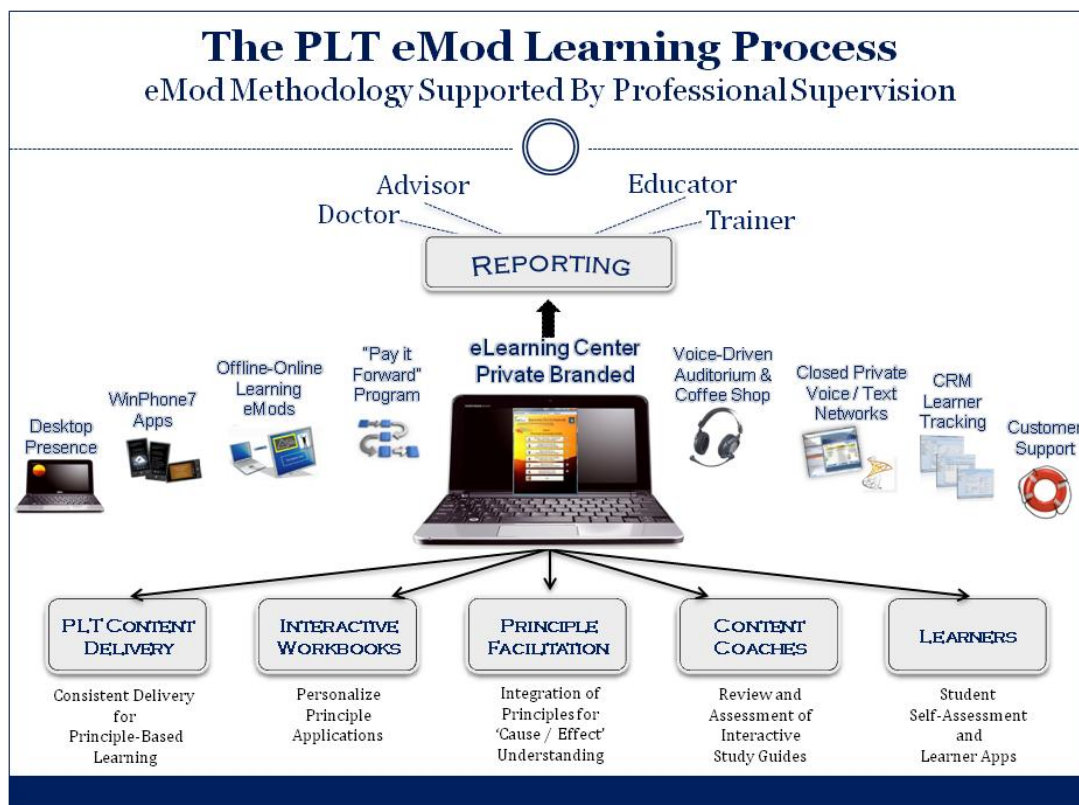
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Introduction

This second part of the five part PLT eMod™ Learning Process explores the PLT eMods™ Interactive Workbooks / Study Guides. AwareComm's PLT Methodology, Microsoft Technology and Adobe power the Interactive Workbooks / Study Guides. The writing methodology brings together principles of Socratic writing, teaching and questioning to assist in the development of metacognitive skills, emotional intelligence and experience based learning. This all works in parallel with the entire process to provide a piece that makes the PLT eMod system an Accelerated Learning Tool for transformational learning and change to occur.

A brief reminder of the Pocket Wisdom Educational Coaching 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:** Interactive personalized Workbooks to document progress (offline workbooks).
- **Facilitation:** Online facilitation to learn about the cause and effect of principles (onlineViOp Conferencing).
- **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 takes a detailed look at the PLT eMods™ Interactive Workbooks / Study Guides process and components. We examine how and why the process supports the learner. We look at how the learning methodology and theory behind the PLT eMods™ extends into the Interactive Workbooks / Study Guides. We explore various theories and how they are intergrated into the PLT eMods™ Interactive Workbooks / Study Guides, providing the learner with a continuous learning experience that evokes all multiple intelligences and all learning styles.

Interactive Workbooks / Study Guides

The PLT eMods™ Interactive Workbooks / Study Guides incorporate various components and processes. They are used in conjunction with the Computer Viewing Screens and enable the learner to gain a sense of control and ownership of the learning process. The Interactive Workbooks / Study Guides blend together AwareComm's proven writing methodology and delivery technology platform, and Microsoft Infrastructure and dynamic Adobe tools and features.

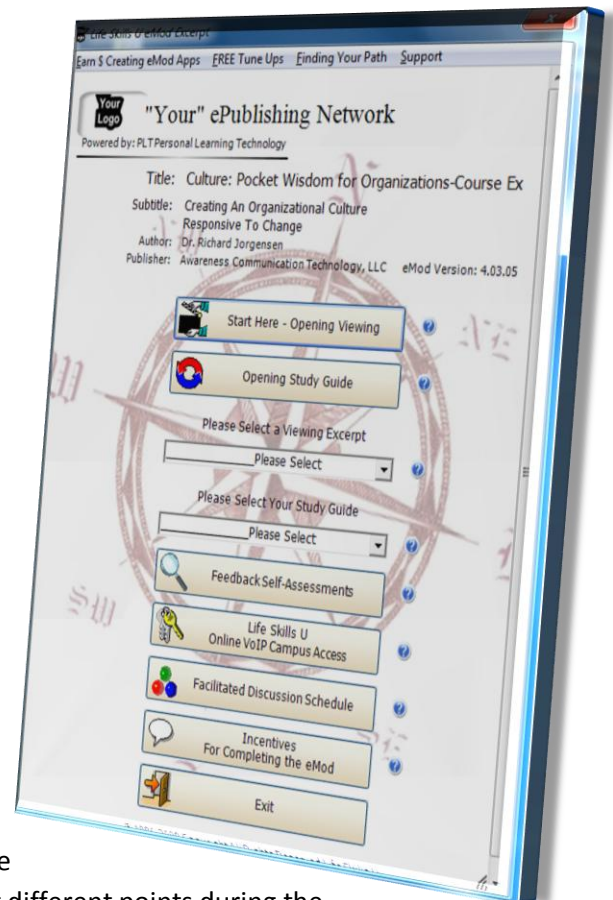
Components and Process

The Interactive Workbooks / Study Guides consist of:

- An "Opening Study Guide"
 - Introduction to the Course
 - Introduction to the Technology
 - Outlined Learning Sequence
- Chapter Study Guides
 - Content Feedback Assessment Questions
 - "How Does It Apply" Questions
 - Sequence Instruction

The "Opening Workbook / Study Guide" outlines the course and the prescribe sequence that learners need to follow, providing learners with a structured yet self-directed path to success. The Chapter "Workbook / Study Guide" includes the text from the Computer Viewings, Content Feedback Assessment Questions, "How Does It Apply" questions and instructions to the next step.

The PLT eMods™ Interactive Workbooks / Study Guides are designed in Microsoft Office and accessed from the courseware eLearning Center (see adjacent). The Interactive Workbook / Study Guide opens in Adobe Reader in a PDF format. Importantly there is an accountability password that is needed for the Interactive Workbooks / Study Guides to be opened, which learners received at different points during the computer viewing process.



Once opened the PLT eMods™ Interactive Workbooks / Study Guides can either be **printed as a hard copy** or **accessed directly onscreen via an electronic version**. Using a highlighter (electronic or tangible), learners are encouraged to read and highlight every word as they move through the content. That allows for the learner to either print the PDF out or work interactively with the dynamic tools and features available to use (as explained and outlined in the Opening Workbook / Study Guide). Additionally the Abode features allow us to copyright and protect the content ensuring that it cannot be copied.

A strategic process of questions and exercises at the end of each chapter enables the mind to revisit the information just learned and express thoughts and ideas via written expression through:

- *Content Assessment Questions* to assess logical recall and comprehension
- *How Does This Apply Exercises* to provide personal reflection and real life application

The PLT eMods™ Interactive Workbooks / Study Guides allow learners to review the viewing, picking up on what they missed and having the opportunity to examine what their mind chose to see and what it chose to miss. In this way the PLT eMods™ Interactive Workbooks / Study Guides aid in the development of:

- Metacognitive Skills (Socratic Thinking and Reasoning Skills);
- Emotional Intelligence;
- ALL 9 Multiple Intelligences;
- Emotional Maturity;
- Transformational Learning Process.

The methodology behind this process is what we will explore in the next section.

Methodology

The PLT eMods™ Interactive Workbooks / Study Guides incorporate the principles, methodology and theory behind the PLT eMods™. The process incorporates exercises and applications to assist learners in understanding, retaining and applying the content chapter / course. As well as giving them the opportunity to personally explore and understand the content.

There is a reason behind each component, structure, format, process and feature that incorporates the PLT eMods™. And the PLT eMods™ Interactive Workbooks / Study Guides are no exception. For example the instruction “to highlight the text as you read”, assists people in learning how to read properly, as we live in a world of poor readers and skim readers. The problem with skim reading is that people may miss important concepts and principles, and therefore learning potential would decrease. The Highlighting system has also shown to increase focus and concentration while assisting people to overcome dyslexia and ADD/ADHD.

Additionally the inclusion of the Computer Viewing content allows learners to revise what they learned, what they remembered and what they missed. Repetition is a big part of the PLT eMod™ process, because like any life changing process there is a lot of training (brain entrainment and neuroplasticity) that is required.

We are not going to discuss each piece in detail as people learn about the magic behind PLT eMods™ in depth in the incubator. But we will explore some theories that allows the PLT eMods™ Interactive Workbooks / Study Guides to play a key role in the educational process by discussing the methodology and theory behind the PLT eMods™ writing style and questioning process.

The PLT eMods™ Interactive Workbooks / Study Guides bring the following theories into the learner experience:

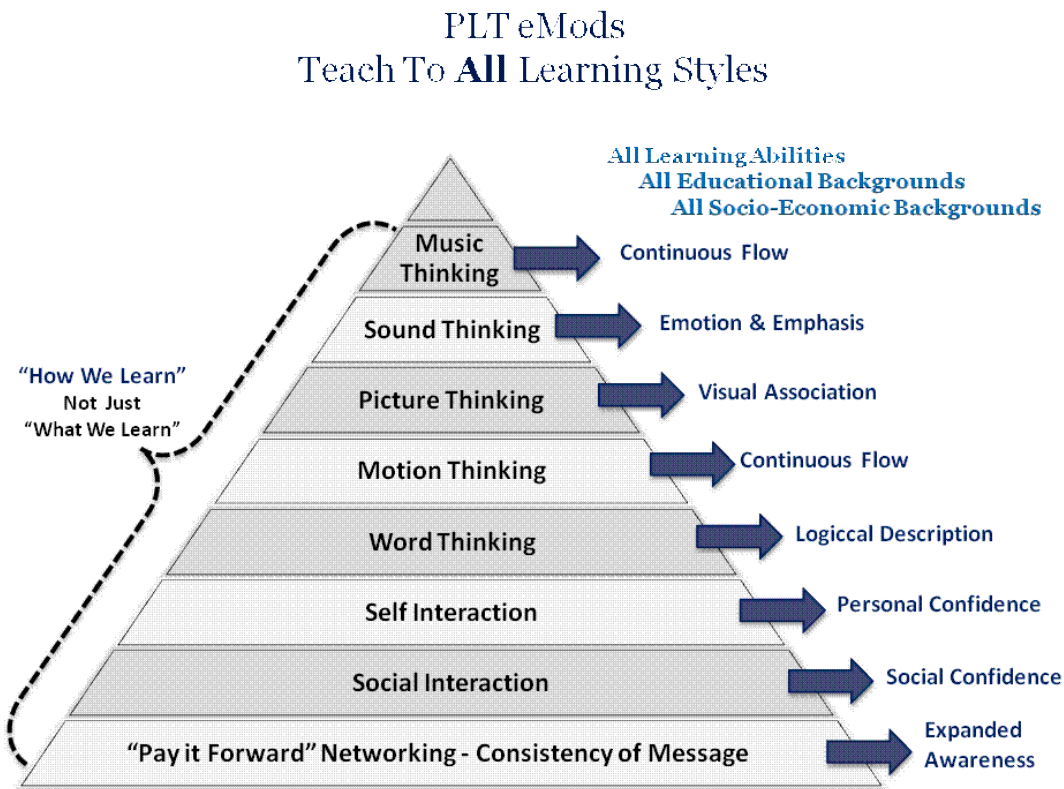
<i>Theory</i>	<i>PLT eMods™</i>
9 Multiple Intelligences	The PLT eMods™ Workbooks / Study Guides incorporate multiple intelligence through the use of Pictures; Word Pictures; Words; Language; Symbols; Principles of Nature (cause and effect); Interpersonal Content and Exploration; Intrapersonal Content and Exploration; Existential; Kinesthetic (eye and hand movement).
Emotional Intelligence Building	Encourages personal understanding of emotions and experienced in relation to principles and questions asked. Teaches self-regulation, self-authority, self-responsibility and self-accountability.
Metacognitive Development	Develops discipline, structure, organized thinking and Socratic Thinking (see below).
Differentiated Instruction	Instruction is varied so that it challenges learners while also providing them with a certain level of comfort (balance).
Blooms Taxonomy	PLT eMods™ are in alignment with Bloom’s principles and have incorporated the principles into the technology, methodology and work books.
Johari Window	Increases self-awareness of learning skills, retention, understanding and application of information
Socratic Writing and Thinking	The process educates in a Socratic way assisting people in understanding what principles they understood and then engaging them in a discovery process using opened questioning and personal experience.
Brain-Balanced Learning	The scientifically choreographed design and nature of the PLT eMods™ allows the information to access the left and the right brain simultaneously, allowing for balanced brain learning and whole brain thinking.

We will now explore the 9 Multiple intelligence, Socratic Writing and Thinking and the Johari Window in more detail as they relate to the PLT eMods™ Interactive Workbooks / Study Guides. It is important to note that each principle we have listed above works interdependently with the rest of the theories to form a holistic and rounded approach that actualizes the idiom, “*the whole is greater than the sum of its parts.*”

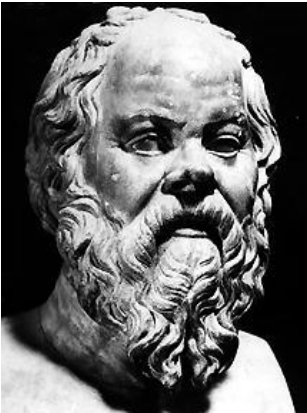
9 Multiple Intelligences

We use the theory of the 9 Multiple Intelligences as defined by Howard Gardner to communicate to all learners though the carefully written and constricted Interactive Workbooks / Study Guides (Gardner, 1983; 1999). The PLT eMods™ Interactive Workbooks / Study Guides are written in a way that communicates information to all intelligences and learning styles accommodating all learners and establishing a space where the focus is not on how smart you are, but rather on exploring, learning and defining how you are smart (Gardner, 1983, p.33). The PLT eMods™ Interactive Workbooks / Study Guides therefore allow Gardner's principles to come to life, as the process allows the learner to explore his or her intelligence while learning that everyone is different, but equal when it comes to life and learning (Jorgensen, 1993).

The 9 Multiple Intelligence theory is therefore aligned with one of the key principles of PLT eMods™ which is creating a learning environment of equality where all learns can accept and acknowledge how they are different but equal to others, and learn how to learn from one another to strength their weaknesses while teaching their strengths. The PLT eMods Interactive Workbooks / Study Guides allow for this to happen by incorporating the 9 intelligences into the process. Thus allowing learners to have a full and holistic educational experience that talks to their strengths providing them with a sense of comfort and confidence and then talks to their weaknesses and simultaneously strengthens their weak intelligences.



Socratic Writing and Thinking



“ 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). This section will take an exploratory look at the Socratic Method and how writing in a Socratic way is interdependently linked and connected to one’s thought process. Thus if you learn to write socratically, you learn to think it, and if you learn to think Socratically, you learn to write it. This is further supported by Kearney and Beazley (1991) who stated “good writing results from good thinking...then...tools used to teach good thinking should be combined with tools used to teach good writing” (p.885).

The Socratic questioning that is used in the PLT eMods™ Interactive Workbooks/ Study Guides is based on developing the learner’s character and self-awareness – through increasing their awareness of their thinking through a process of writing questions and exercises. The PLT eMods process aims to assist people in the process of self-improvement through the acquisition of knowledge. And like Socrates the PLT eMod™ system is focused on developing and improving not only the information processing system but also the character and thinking process of our learners. So as learners become more receptive to and effective in the acquisition and processing of knowledge, their openness, willingness and retention also increases due to their increased ability to think more clearly and holistically.

Rob Reich a Political Science Professor, the recipient of the 2001 Walter J. Gores Award for Teaching Excellence, described four essential components of the Socratic Method in an Award Winning Teachers on Teaching lecture series in 2003 (The Stanford University Center for Teaching and Learning (CTL), 2003). He described the 4 key components of the Socratic Method, which have been extracted from the CTL Newsletter below, along with a description of how the PLT eMods™ process works to support, implement and actualized the Socratic components in the Interactive Workbooks / Study Guides.

Socratic Components By Reich	PLT eMods™ Interactive Workbooks / Study Guides
<p>1. The Socratic method uses questions to examine the values, principles, and beliefs of students.</p> <p>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</p>	<p>The PLT eMod™ Interactive Workbooks / Study Guides utilize a process of questioning that gently guides the learner through various learning and questioning styles. The process provides learners with a taste of both traditional content questioning, which they will most likely be familiar and comfortable with given their experience, as well as Socratic questions, which challenge the learner to engage in personal and meaningful self-examination.</p>

<p>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.</p>	<p>The self-directed nature of the Interactive Workbook / Study Guide process provides learner with the authority, responsibility and accountability to get the work done, not for a grade but for themselves. And while the Content Coaching component of the process does provide the learner with feedback, ultimately the process like the Socratic Model is dependent on the learners desire to learn, participate, commit and contribute to the process.</p>
<p>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.</p> <p>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 . . ."</p> <p>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."</p>	<p>The nature of the PLT eMods™ process communicates information in a way that teaches people how to think and write by teaching them how to examine the cause and effect of relationships, thoughts and experiences. Thus the nature of the Interactive Workbooks / Study Guides reinforces the principle based learning experience by giving learners the opportunity to examine what they retained, understood and could apply to their life, while simultaneously assisting learners in discovering where they struggled to make associations and accommodations.</p> <p>The PLT eMods™ Interactive Workbooks / Study Guides assists learners in challenging their beliefs and taking ownership of the content in a structured and predictable way. And the main focus of the program is on building character, metacognitive skill development, emotional intelligence development, thus helping people learn how to think, by learning how to write, review and reflect. The PLT eMods™ Interactive Workbooks / Study Guides teach people how to examine their life and their thinking, thus teaching them to appreciate and walk through life as an individual of strength, purpose, honesty, selflessness, purity of intention and reality.</p>
<p>3. The Socratic method demands a classroom environment characterized by "productive discomfort." 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. 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?</p>	<p>Some of the questions in the PLT eMods™ Interactive Workbooks / Study Guides serve the purpose of creating "productive discomfort" in individuals stretching their thinking into new avenues and intelligences. Additionally the self-directed and personal nature allows for the learner to learn in a non-threatening, non-confrontation and secure way.</p>

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."

The PLT eMods™ Interactive Workbooks / Study Guides provide the learner with a balance between traditional and Socratic thinking. The Interactive Workbooks / Study Guides allow for all areas of the brain to be stimulated as it talks to all multiple intelligences – challenging what they know, why they know it and how they can apply what they know.

The Socratic Writing and Thinking Process in a Nutshell:

1. Open the Workbook / Study Guide using the Accountability Password.
2. Read the content and highlight as one goes
3. Answer "Content Feedback Assessments" which are close-ended questions to check their retention and understanding of the material. This is an add-on in terms of the examination process. Allowing the learner to really understand what they retained and understood from the computer viewings and the text so that they see the reality of where they are in personally as well as from a learning perspective. Additionally the process provides learners with the opportunity to write their answers, check and validate the accuracy of them using the online feedback assessments which provides automatic / biofeedback.
4. Answer "How Does It Apply" which are open-ended questions which provide the learner with the experience of checking their personal understanding and self-reflection of the content, allowing learners to learn how to think critically analyze the text more deeply, express ideas with clarity and confidence, and take ownership of the material. This section asks questions which encourage the learner to personally apply the content to life situations – past, present and or future. Along with the sense of ownership this section provides the learner with a degree of emotional safety due to the personal dialogue it evokes along with a cathartic sense of resolution as people put to paper or computer what they have experienced and learn how to ask questions, as a result of the process.

The process therefore encourages learners to establish a dialogue with themselves while working through the Interactive Workbooks / Study Guides, which develops individualized and divergent thinking rather than convergent. The Socratic school defined dialogue as an exploratory process that involves the suspension of biases and prejudices. Unlike discussion/debate which is a transfer of information designed to win an argument and bring closure, something American's are renowned and feared, dialogue, is the ability to ask meaningful questions that stimulate thoughtful interchanges of ideas.

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PLT eMods™ Interactive Workbooks / Study Guides bring the Socratic methodology alive teaching learners how to both think and write in logical, clear and concise ways with clarity and conviction. The PLT eMods™ Interactive Workbooks / Study Guides do this using a multiple of different questions that assist learners in learning how to clearly, effectively and efficiently answer questions in an appropriate, discerning and honest way, in this way the Workbook / Study Guide process assist learners in developing their self identity which we will explore more in the following section.

Johari Window

Self-Identity – Feedback - JoHari WINDOW WITH The RichEarl 5th Window

The PLT eMods™ Interactive Workbook / Study Guide process teaches learners in theory and in practice, *HOW* to engage and use the Johari Window. The knowledge of the Johari Window increases personal reflection and awareness of self and others. Thus allowing ***learners to better understand their communications and relationships.***

The Johari Window is a process that has been woven into the PLT eMods™ Interactive Workbooks / Study Guides to assists learners in defining and discovering appropriate self-disclosure and appropriate feedback, so that they can learn how to discern what to say, how to say it and whom to disclose. The Johari Window's process is therefore all about expanding awareness and discovering ones true Self-Identity. The Self-Identity process occurs as people engage in the writing and feedback process that makes up the PLT eMod system disclosure and feedback process that works in conjunction with the overall integration of the principles of life work together to bring resolution to issues that hold people back from experiencing their true Self-Identity. Discovering ones self-identity is foundation for self-esteem and the road to spirituality (intuition, creativity, spontaneity and the courage to walk through fear for the purpose of discovery).

The Johari Window divides ***personal awareness*** into four different types, as represented by its four quadrants:

1. ***Things I know about me and others know about me***—this is my **public side**
2. ***Things I know about me that others don't know about me***—this is my **private side**
3. ***Things I don't know about me that others do know about me***—this is my **vulnerable side**
4. ***Things I don't know about me and others don't know about me***—this is my **unknown side** and requires trust to move through

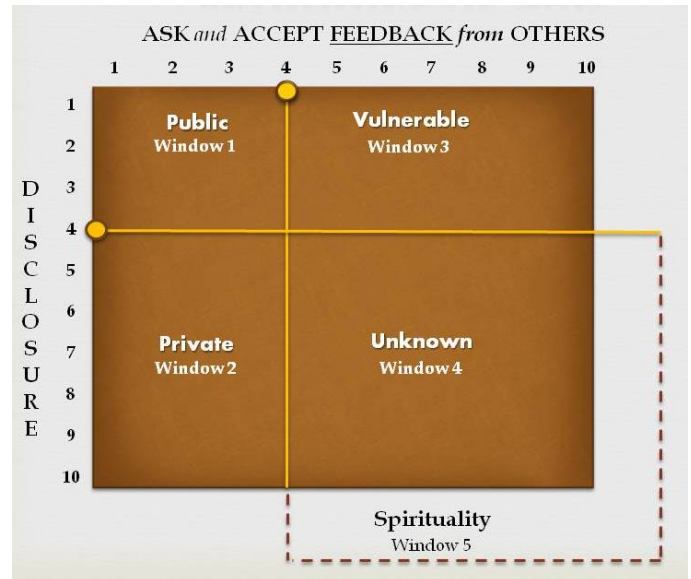


The Johari Window is determined by measuring 2 factors:

1. Disclosure – of self in writing and if desired verbally.
2. Feedback – disclosure of problems through writing and if desired verbally.

What does this mean well take a look at the graphic below. This means that the more one can disclose, the more feedback one can get the bigger our awareness and understanding is of self and others.

(Side Note: As can be seen in the diagram adjacent, the PLT eMods™ have incorporated an extra window which deals with spirituality and a person's ability to walk through fear for the purpose of discovery.)



The Interactive Workbooks / Study Guides provide learners with ample opportunities to learn how to disclose and how to do it appropriately. Additionally PLT eMods™ process also provides learners with the opportunity to get feedback from content coaches and facilitators via email, as well as fellow learners in the 24 hour online coffee shop.

The PLT eMod™ Interactive Workbook /Study Guide process allows for the journey of personal discovery to begin. And it is only through discovering oneself, one's true self and building an acceptance that people will learn how to see others for who they really are and obtain and attain the skills to discern.

Conclusion

The Interactive Workbooks / Study Guide provide a vital component to the learning structure and process that makes up PLT eMods™. The Interactive Workbooks / Study Guides provide a self-directed or group directed process that builds thinking, writing, understanding, retention and reading skills resulting in more optimal learning and thinking. The process builds critical reasoning skills, Socratic writing and thinking skills, metacognitive skills, emotional intelligence and an enhanced self-awareness.

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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 Bolwby
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

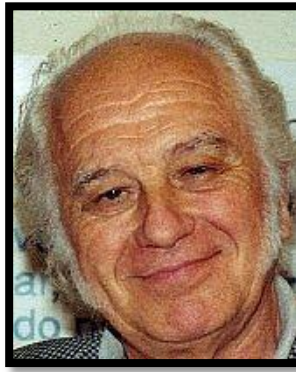
Overcoming Organizational Defenses	Chris Argyris
Paradigm Shifts	Joel Barker
Technology as a Cultural Force	Albert Borgmann
Creativity	
Active learning	Charles C. Bonwell and James A. Eison
Creativity and Imagination	Maxine Greene; Julia Cameron; Richard Jorgensen
Discovery Learning	Jean Piaget; Jerome 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

	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.	Emotional Intelligence	Daniel Goleman
28.	Emotional Structural Authority	Richard Jorgensen
29.	Emotions	Antonio Damasio
30.	Essentials in Education and "The Golden Mean"	Aristotle
31.	Expeditionary Learning	Kurt Hahn
32.	Experiential Learning	David A. Kolb
33.	Flow: Optimal Learning	Michael Csikszentmihalyi; Edward Deming; Richard Jorgensen, Carl Rogers
34.	Gestalt	Wilhelm von Bode
35.	Group Dynamics	Kurt Lewin
36.	Interdependence and Transformation	Edward Deming; Richard Jorgensen; Joel Barker; Steven Covey
37.	Johari Window	Joseph Luft and Harry Ingham
38.	Knowledge building	Carl Bereiter and Marlene Scardamalia
39.	Language of Vision	Gyorgy Kepes
40.	Learning and The Loss Of The Stable State	Donald Schon
41.	Letting Go / 5 Stages of Loss	Elizabeth Kubler-Ross
42.	Logotherapy	Victor Frankl
43.	Lucid Learning	Richard Jorgensen

44.	Maslow's Hierarchy Of Needs	Abraham Maslow
45.	Marzano's New Taxonomy	Robert J. Marzano
46.	Optimal Learning	Michael Csikszentmihalyi
47.	Paradigm Shifts	Joel Barker
48.	Restorative Learning (Unlearning and Relearning)	Richard Jorgensen
49.	Social Development	Erik Erikson
50.	Social Learning Theory	Albert Bandura
51.	Student-Centered Education	Carl Rogers
52.	Suggestopedia/ Suggestology	Giorgi Lozanov
53.	Symbolistics	Richard Jorgensen
54.	The Zone of Proximal Development	Lev Vygotsky
55.	Transformative Education	Robert Boyd; Richard Jorgensen
56.	Transformative Learning Theory	Jack Mezirow
57.	Trust vs. Fear	Jack Gibb
58.	Waldorf Education	Rudolph Steiner
59.	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*¹ 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 behavior 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*¹ 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).

PRINCIPLES OF SUGGESTOPEDIA (Lozanov, 1978)

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- 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, Date Unknown)

- 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.

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

The 10 Elements of Accelerated Learning

From International Alliance of Learning: <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.”¹



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, similes 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

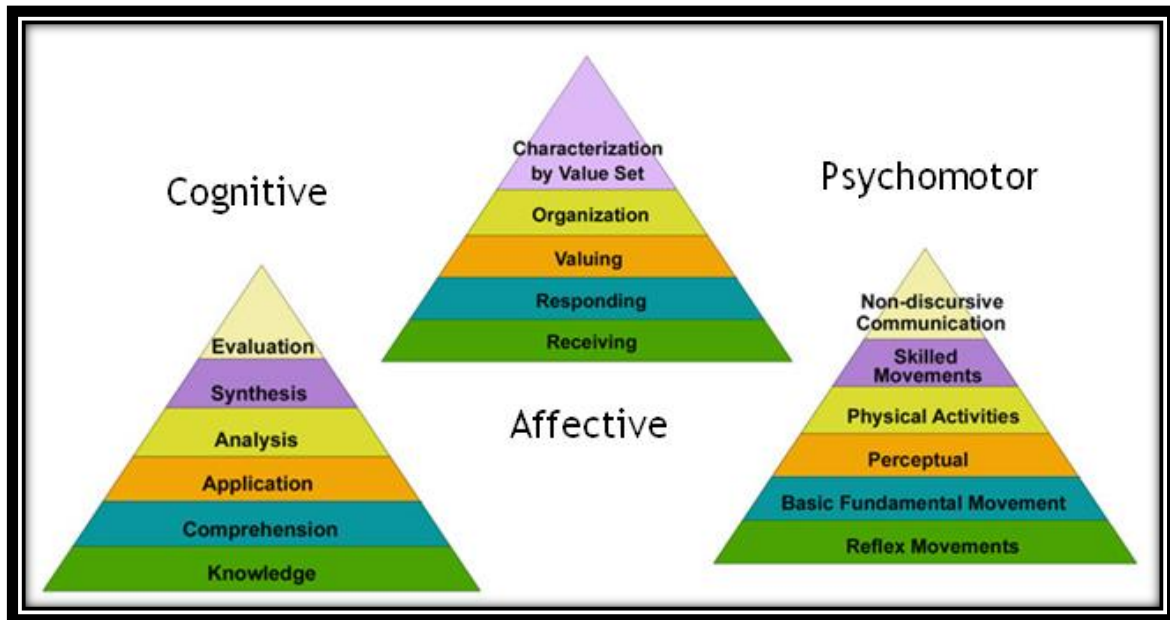
Sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

{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-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."¹

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."¹

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

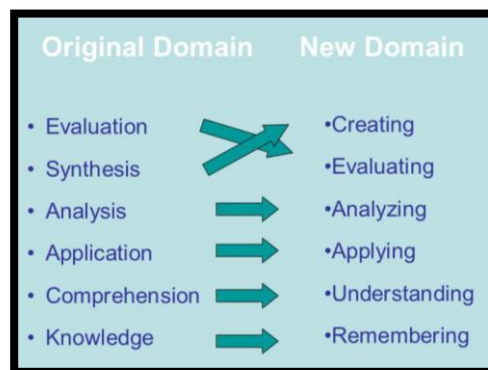
1. **Knowledge:** arrange, define, duplicate, label, list, memorize, name, order, recognize, relate, recall, repeat, reproduce state.
2. **Comprehension:** classify, describe, discuss, explain, express, identify, indicate, locate, recognize, report, restate, review, select, translate,
3. **Application:** apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, write.

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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,</p>

	tells, writes.
<p>Valuing: The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges 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>	<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 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>

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</p>	<p>Examples: Responds effectively to unexpected experiences. Modifies instruction to meet the needs of the learners. Perform a task with a machine</p>

special requirements.	that it was not originally intended to do (machine is not damaged and there is no danger in performing the new task). Key Words: adapts, alters, changes, rearranges, reorganizes, revises, varies.
Origination: Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.	Examples: Constructs a new theory. Develops a new and comprehensive training programming. Creates a new gymnastic routine. Key Words: arranges, builds, combines, composes, constructs, creates, designs, initiate, makes, originates.

<http://www.nwlink.com/~donclark/hrd/bloom.html>

“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”¹:

Dave's (1975)¹:

- **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)¹:

- **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.

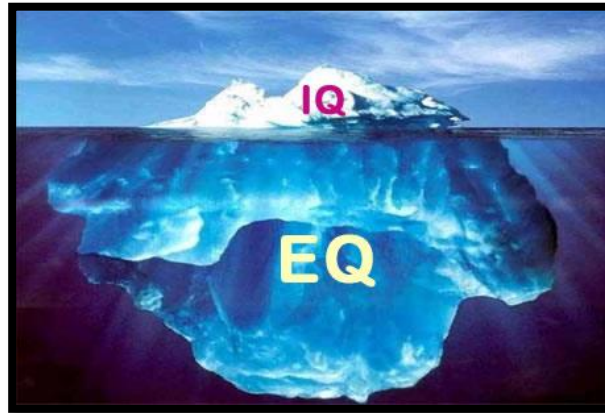
36. Provide your child with access to a computer.
37. Consider family therapy.
38. Teach problem-solving skills.
39. Offer your child real-life tasks to do.
40. Use "time-out" in a positive way.
41. Help your child develop social skills.
42. Contract with your child.
43. Use effective communication skills.
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

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/>

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."*¹

"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)¹

The earliest reference of EI can be traced back to Darwin's work on the importance of emotional expression for survival and second adaptation.¹ 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."¹

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.

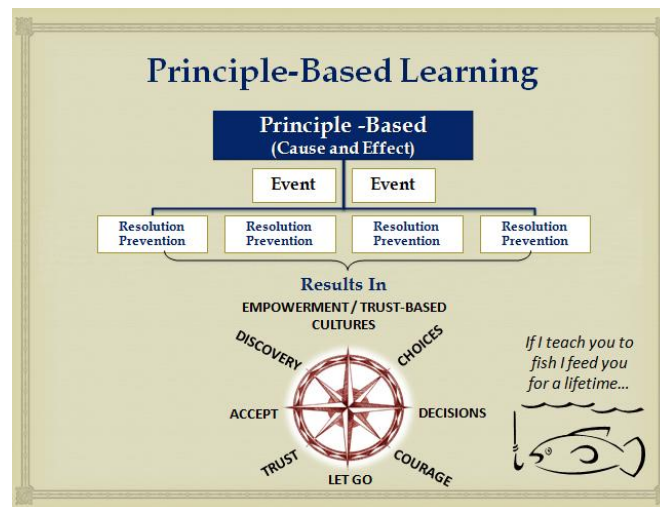
Salovey and Mayer's (2005) conception of EI strives to define EI within the confines of the standard criteria for a new intelligence. Their current definition of EI is: ***"The ability to perceive emotion, integrate emotion to facilitate thought, understand emotions and to regulate emotions to promote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

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“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.”¹

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?"

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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 Golemans' 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	<ul style="list-style-type: none">Emotional Awareness: recognizing one's emotions and their effectAccurate Self-assessment: knowing one's strengths and limitsSelf-confidence: A strong sense of one's self-worth and capabilities
SELF-REGULATION	<ul style="list-style-type: none">Self-control: Keeping disruptive emotions and impulses in checkTrustworthiness: Maintaining standards of honesty and integrityConscientiousness: Taking responsibility for personal performanceAdaptability: Flexibility in handling changeInnovation: Being comfortable with novel ideas, approaches and new information
MOTIVATION	<ul style="list-style-type: none">Achievement drive: Striving to improve or meet a standard of excellenceCommitment: Aligning with the goals of the group or organizationInitiative: Readiness to act on opportunitiesOptimism: 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

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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

RESOURCES:

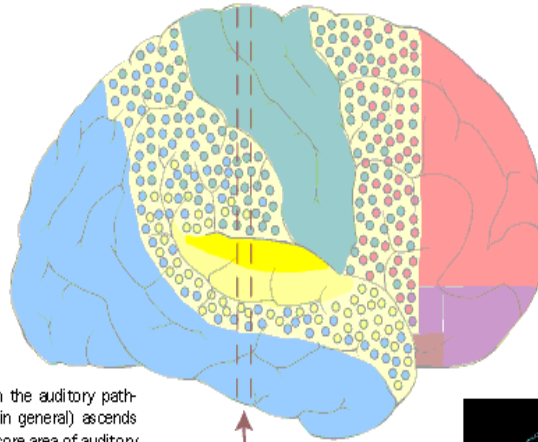
Books:

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

Appendix G: Music and the Brain

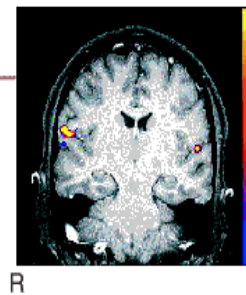
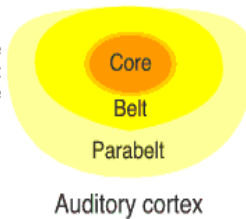
BRAIN STRUCTURES INVOLVED IN MUSIC PERCEPTION, PERFORMANCE, AND COGNITION.

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.

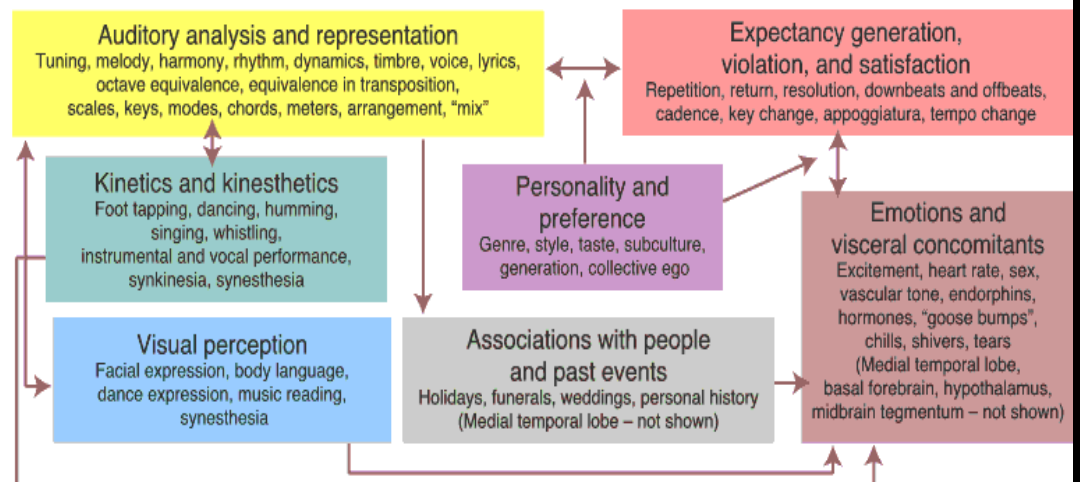


The popular notion that the right hemisphere is the "musical hemisphere" is overstated: both the left and right hemispheres are involved in music perception, performance, and cognition. Pitch perception (e.g., the ability to discern whether one note is slightly higher or lower than another) is one music-related 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. 54-56. 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.¹ 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*.¹

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

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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."

Appendix J: Writing Exercise Examples

Two exercises specifically help to facilitate change through personal experience and learning value and gratitude are:

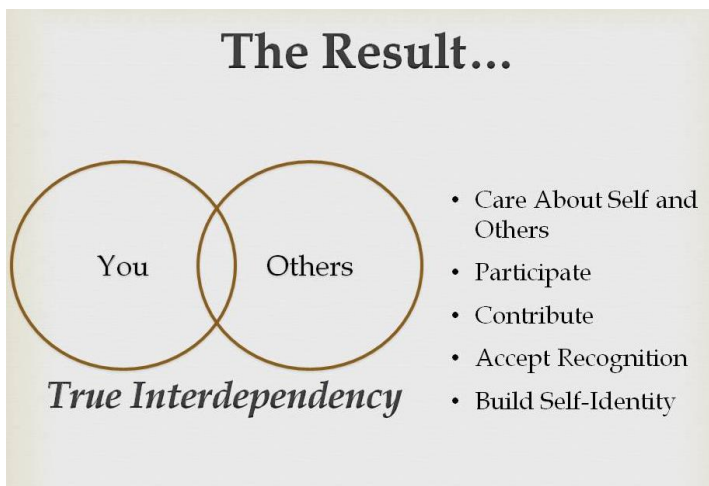
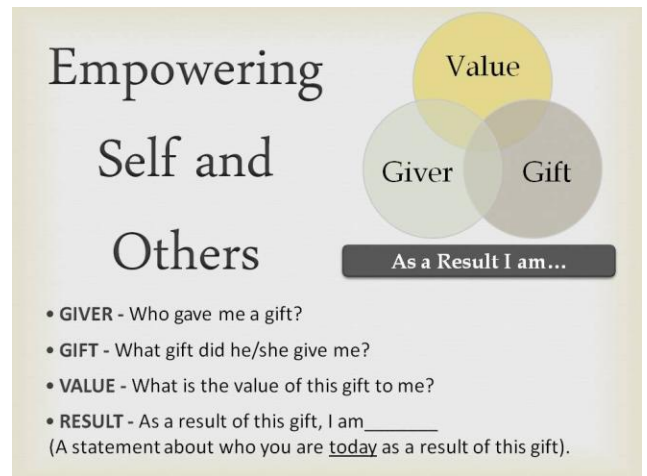
1. RichEarl Acknowledgement Process™
2. RichEarl Awareness Thinking Process™

The RichEarl Acknowledgment Process™: Moving from Awareness to Acceptance to Resolution

The “RichEarl Acknowledgement Process” nick named “GGVR” encompasses and teaches many aspects of Emotional Maturity such as:

- Growing Self-Identity, Self-Perception without Growing Ego
- Grows Emotional Maturity
- Provides a Formal Process towards the Letting Go Process for Resolution
- Creates an Awareness of Value
- Creates the Process for True Acceptance
- Facilitates the “Transitional Passage”

This “simple” exercise is not easy, particularly the Finding Value step. To see why something is valuable to oneself requires real self examination and reflection to go beyond surface talk and assistance in the place of acceptance. Finding “Value” is a difficult task for most people... why is it important to oneself.



Additionally the ability to state what one is going to be able to do as a result of the give bring and one to a place of deeper acceptance and integration into one’s life moving from awareness to acceptance to resolution.

The RichEarl Awareness Thinking™ Process

The RichEarl Awareness Thinking Process™ (sometime known as the 6-step process) provides a tool and measure on one’s ability to identify examine ones beliefs (including un-truths) and though this process and begin to apply the

principles to those beliefs and reconstruct beliefs and how to practically implement the change including what to stop doing and what to start doing. This process is wrapped up with a GGVR acknowledgement sealing in the awareness, acceptance and resolution process.