

The Art

& Science

of Mediated Learning

The Cognitive Enrichment Advantage Approach

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Planning a CEA Mediated Learning Experience

1. Mutual Trust

- *Does everyone in the learning community feel nurtured, respected, and needed by others?*
- *What problems do I anticipate for my learner(s) in creating a safe and open learning community?*
- *What can I do to foster a climate of mutual trust?*

2. Lead & Follow

- *What is/are my goal(s) for this mediated learning experience?*
- *What expectations do I have for the learner's needs in relation to the goal(s)?*
- *What learner outcome do I want to focus upon?*
- *How can I prepare for the unexpected?*
- *How can I become aware of and respond to learner needs within the mediated learning experience?*

3. Energize

- *What meaning do I think will be important to the learner(s)?*
- *How can I help my learner(s) find Inner Meaning in this learning experience?*

4. Challenge

- *How can I make sure the learner(s) enter the construction zone where they will feel competent to seek a higher level of insight?*
- *What can I do if my learners are at different levels regarding their construction zones?*

5. Spotlight

- *What is the underlying culture of the content of the lesson for which I plan to provide a mediated learning experience?*
- *What is its structure and what aspect of this structure will be most evident in this experience?*
- *How do experts go about their work related to this content? What is their practice like? (beliefs and values about how to study this content, their thinking patterns, ways of interacting, ways of using language, other behaviors)*

6. Transform

- *How can I help my learners connect their personal experience within a learning experience to knowledge, skills, attitudes, values and beliefs beyond the current context?*
- *How can I create conditions that will help my learners transform their learning experiences?*

7. Bridge

- *What Building Block or Tool do I expect most learners will find helpful in this mediated learning experience? (Select a BB or T based on anticipated learning problems.)*
- *When in the lesson do I plan to help my learners develop and use strategies based on a specific Building Block or Tool?*
- *What bridging principle might help my learner(s) apply the Building Block or Tool in other learning experiences?*
- *How can I help my learner(s) develop their own principles?*
- *What examples can I think of for applying the bridging principle to other learning experiences at home, school, work, and in social settings?*

8. Inquire

- *What do you think you must tell the learner(s) in this mediated learning experience?*
- *How can you meet a good mediator's goal of ASK, DON'T TELL?*
- *How can you avoid co-opting a learning opportunity?*
- *What questions might you ask in this mediated learning experience?*

Questions Good Mediators Ask When Providing Cognitive Enrichment ©

- They ask learners to identify a Building Block or Tool that they can use to help solve a problem, and then help them learn how to integrate another relevant Building Block or Tool.
- They ask learners to share their personal meaning about Building Blocks and Tools, and then help them learn more by connecting this meaning to a deeper level of understanding.
- They ask learners to develop their own bridging principles, and then help them make certain the principle fits the learning experience AND can be applied in other home, school, work and social settings. (See *Advanced Bridging Worksheets* in the *CEA Family-School Partnership Handbook* and/or procedures for bridging in the *CEA Teacher Handbook*.)
- They ask learners to share learning strategies that apply bridging principles to other situations and then help them develop the strategies further to accurately fit the principle.

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More Questions Good Mediators Ask

Meir Ben-Hur (2000). *Learning and Transfer: A Tautology*, p. 50. In A. Costa (Ed.) *teaching for intelligence II: A Collection of Articles*. Arlington Heights, Illinois: Skylight Professional Development

Teachers [good mediators] contribute to meaningful learning by asking questions that otherwise would not be raised in the learners' minds.

- They ask students to look back when they are looking forward,
- They ask students to anticipate when they are fixated with a past or present experience,
- They ask students to compare an experience with other experiences when they may be content with an episode,
- They ask students to compare their experiences to their friends' when they are satisfied with their own.
- They ask students to label their experiences and define their learning outcomes when the students think they have already accomplished their learning task.
- They ask students to give examples to situations where what was learned can be applied when students are ready to move on "to the next chapter."

BUILDING BLOCKS OF THINKING

Approaching the Learning Experience

1. EXPLORATION

To search systematically for information needed in the learning experience

- I thought about what I needed to know before I started to work.
- I listened carefully before I answered questions.
- I gathered all the information or supplies I needed before I began to work.
- I searched for information or supplies in an organized way.
- I thought carefully about what others were saying before I shared my thoughts.

2. PLANNING

To prepare and use an organized approach in the learning experience

- I thought about my goal.
- I decided what steps I was going to take in order to reach my goal.
- I decided the order in which I was going to do the steps I planned.
- I used my plan while I was working.
- I changed my plan when it was not helping me reach my goal.

3. EXPRESSION

To communicate thoughts and actions carefully in the learning experience

- I clearly communicated what I want to express in this activity.
- I used my plan as I communicated my thoughts and actions.
- I expressed everything needed to make my response effective.
- I expressed my thoughts and actions in the order I intended to express them.
- I expressed my thoughts and actions without co-opting the opportunity of others to learn

BUILDING BLOCKS OF THINKING

Making Meaning of the Learning Experience

4. WORKING MEMORY *To use memory processes effectively*

- I used information stored in my brain to help me think.
- I cleared thoughts & feelings from Working Memory that kept me from learning effectively.
- I focused energy on the thoughts I needed in my Working Memory.
- I tried to use all the space I could in my Working Memory.
- I focused energy in my Working Memory on storing important information in my brain.

5. MAKING COMPARISONS *To discover similarities and differences automatically among some parts of the learning experience*

- I knew there was a need for Making Comparisons all the time in this activity.
- I automatically made comparisons while I worked.
- I thought about how two or more objects, ideas or actions were the same or different in some way.
- I compared my thoughts and actions to what I was expecting them to be and caught careless mistakes.
- I was able to make more meaning by using Making Comparisons.

6. GETTING THE MAIN IDEA *To identify the basic thought that holds related ideas together*

- I automatically thought about Getting the Main Idea while I worked.
- I thought about what several related ideas shared in common.
- I was aware of the need to think about getting the main idea in order to learn effectively.
- I tried to see how objects, ideas, and actions were related to each other.
- I talked with others to see if we agreed about the main idea.

7. THOUGHT INTEGRATION *To combine pieces of information into complete thoughts and hold onto them while needed*

- I thought about the need to combine bits of information while I worked.
- I used Thought Integration automatically when necessary.
- I held on to all the bits of information that I needed to combine in the learning experience.
- I developed strategies for using Thought Integration in the learning experience.
- I changed my strategies for using Thought Integration when I needed to do so .

8. CONNECTING EVENTS *To find relationships among past, present, and future learning experiences automatically*

- I thought about the need for Connecting Events while I worked.
- I thought about how this activity relates to events that happened in the past.
- I thought about how this activity relates to events that might happen in the future.
- I thought about how to use what I know about other events to help me learn in this activity.
- I shared my connections with others.

BUILDING BLOCKS OF THINKING

Confirming the Learning Experience

9. PRECISION & ACCURACY

To know there is a need to understand words and concepts and use them correctly and to seek information automatically when the need arises

- I thought about the need for Precision and Accuracy while I worked.
- I found appropriate ways to seek a precise understanding of words and concepts.
- I was able to get a precise understanding when needed to better understand words and concepts.
- I was able to use words and concepts accurately when expressing my ideas.
- I developed strategies for using *Precision & Accuracy* when needed.

10. SPACE & TIME CONCEPTS

To understand and use information about space and time that important in almost all learning

- I thought about the size of things as they relate to each other.
- I thought about the shape of things as they relate to each other.
- I thought about the distance things are from & the location of things in relation to each other.
- I thought about the order of events and the importance of that to my work
- I thought about how long events lasted and the amount of time between particular events.

11. SELECTIVE ATTENTION

To choose between relevant and irrelevant information and to focus on the information needed in the learning experience

- I decided what was important to think about as I worked.
- I developed learning strategies for using Selective Attention as I worked.
- I focused attention on relevant information.
- I ignored irrelevant information.
- I helped others to use Selective Attention.

12. PROBLEM IDENTIFICATION

To experience a sense of imbalance automatically and define the cause when something interferes with successful learning

- I thought about the need to use Problem Identification.
- When a problem occurred, felt it.
- I defined problems that I experienced.
- I experienced and defined problems automatically.
- I developed strategies for using Problem Identification effectively.

TOOLS OF LEARNING

Understanding Feelings within the Learning Experience

1. INNER MEANING

To seek deep, personal value in learning experiences that energizes thinking and behavior and leads to greater commitment and success

- I thought about why this work is important to me.
- I thought about why this work is interesting to me.
- I thought about why this work is useful for me to do.
- I thought about how this work relates to my world at home, at school or other situations.
- I encouraged others to find their Inner Meaning.

2. FEELING OF CHALLENGE

To energize learning in new and complex experiences by focusing on the learning process rather than fear and anxiety about a possible unsuccessful product

- I was aware of any positive or negative feelings of challenge.
- I changed behaviors that were helping me avoid challenges in the learning experience.
- I focused more of my attention on positive feelings about the learning process and less on fear and anxiety about a possible unsuccessful product.
- I broke complex learning into manageable parts.
- I thought about what I already knew in the learning experience that could help me with the challenge.

3. AWARENESS OF SELF-CHANGE

To recognize and understand feelings related to personal growth and to learn to expect and welcome change and development

- I thought about how I have changed in my ability to do this work.
- I thought about how I expect to change because of learning to do this.
- I welcome change and felt comfortable with it.
- I understood the feelings I had about change.
- I welcomed change.

4. FEELING OF COMPETENCE

To energize feelings, thoughts, and behaviors by developing beliefs about being capable of learning and doing something effectively

- I was aware of my secure/insecure feelings about my ability to do or learn to do this work.
- I looked for reasons to believe that I am capable of learning to do this work effectively.
- I thought about things I know I can do well that would help me be able to do this work.
- I thought about how important it is to overcome doubts about my ability to do this work.
- I helped others to build by giving them reasons to believe they are capable of doing or learning to do this work.

TOOLS OF LEARNING

Motivating Behavior within the Learning Experience

5. SELF-REGULATION *To reflect on thoughts and actions as they occur to energize, sustain, and direct behavior toward successful learning and doing*

- I thought about my thoughts and actions while they were occurring.
- I made changes in the way I approached the learning experience with this special thinking.
- I used Self Regulation to help me think about Building Blocks and Tools that I could use to be more effective as I worked.
- I developed learning strategies to help solve my problems based upon this special thinking.
- I regulated how fast or slow I worked based upon how complex, how familiar, and how much time I needed to do well with this kind of work.

6. GOAL ORIENTATION *To take purposeful action in consistently setting, seeking, and reaching personal objectives*

- I set goals for myself that were important to me.
- I persisted in working toward my goals even when it was difficult.
- I felt energized by trying to reach my goals.
- I reached those goals that could be reached while I was doing this work.
- I shared my goal oriented behavior with others.

7. SELF-DEVELOPMENT *To appreciate special qualities in everyone and to enhance personal potential*

- I thought about what I can do best in relation to this work.
- I worked on goals related to my strengths to develop them more.
- I thought about what I don't do so well that keeps me from using my strengths effectively.
- I worked on goals related to improving in ways that let me use my strengths more effectively.
- I helped others to see how much I appreciate their strengths.

8. SHARING BEHAVIOR *To energize life and learning for everyone by sharing thoughts and actions through effective interdependent learning skills*

- I shared my thoughts and actions with others.
- I listened carefully to what others were saying.
- I asked questions that helped me better understand the thoughts of others.
- I tried to learn from the ideas of others.
- I tried to learn new things by combining my thoughts with those of others.

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Our Workshop Objectives

- › To learn from each other's stories
- › To listen to the voices of expert CEA teachers
- › To reflect on the insight we find related to aspects of mediated learning

My Intent as Your Facilitator

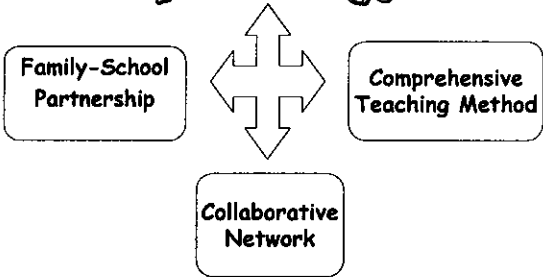
To establish a community of learners where we will:

- › Learn from teachers' stories
- › Talk at the boundaries of our knowing
- › Inquire as much as advocate
- › Listen to be influenced
- › Engage in *Messing About*

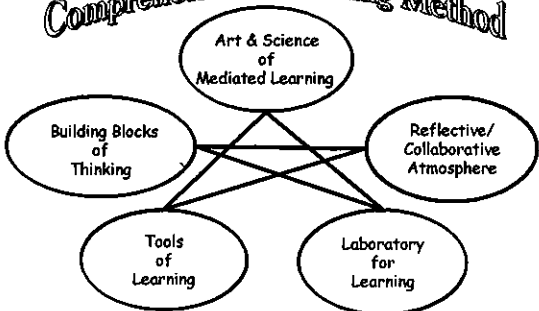
Sources of our MLE Stories

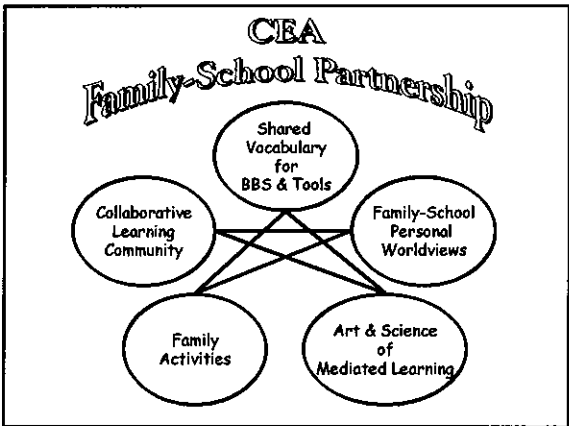
- CEA teachers who participated in our research about their lived experience as teachers of underachievers
- Stories you share with us today.

Cognitive Enrichment Advantage



CEA Comprehensive Teaching Method





MLE definition

The way in which stimuli emitted by the environment are transformed by a "mediating" agent, who is guided by her intentions, culture, and emotional investment to select and organize the world of stimuli

Reuven Feuerstein

If high quality MLE

Learners:

- > Develop the ability and desire to adapt and to contribute to an ever changing world
- > Learn how to learn in all situations
- > Transfer what is learned

If low quality MLE

Learners:

- develop bad habits for learning
- transfer little of what is learned
- display limited motivation to learn independently

MLE and the Teacher-Mediator

Two goals in a learning experience:

1. To help learners understand the subject
2. To help learners understand **explicitly** how to develop **personal learning strategies**.

The **Art** of Mediated Learning

A Mediator flows with a learner like improvisational jazz musicians:

- intentionally focusing the learner's attention on specific objects or events
- sharing personal cultural values and meaning
- facilitating insight beyond the immediate context

The Science of Mediated Learning

A Mediator facilitates explicit understanding by:

- > **labeling Building Blocks of Thinking and Tools of Learning**
- > **comparing cultural values and meanings**
- > **helping the learner develop personal learning strategies**

Essential Qualities of Effective Mediators

- > **Reciprocity**
establishing a positive connection of acceptance, trust, and understanding
- > **Intent**
catching and focusing attention
- > **Meaning**
energizing awareness and making the experience personally relevant
- > **Transcendence**
expanding understanding beyond the current context.

ENERGIZE

Motivation


Share your Meaning
& Help Learners
Find Personal
Meaning



Challenge

Motivation


Encourage
& Support
Learning in the
Construction Zone



Bridge

Cognition

Connect
Content & Process
With BB & Tool
Strategies
beyond the
Current Context

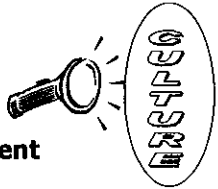


Spotlight

Cognition

focus attention
on the underlying
culture of the content

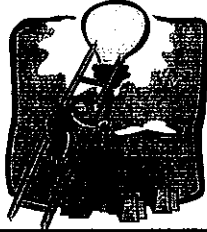
- * Its structure
- * Its practice



Transform

Cognition

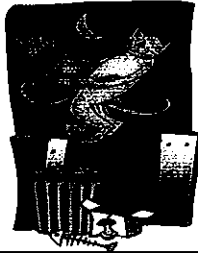
Create conditions for the evolution of personal experience into knowledge, skills, attitudes, values & beliefs that go beyond the current context



Lead & Follow

Cognition

Know your goal for the learning experience while simultaneously flowing with the learners' needs

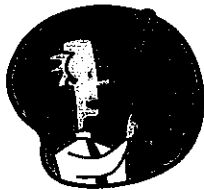


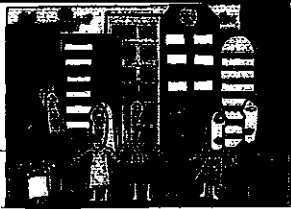
Inquire

Cognition

Create opportunities for learners to see how they are accommodating & assimilating new ideas

- * Avoid Co-opting
- * Ask, Don't Tell
- * Implicit to Explicit





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- › A Climate of Mutual Trust
- › An Open Learning Community
- › A Safe Place for Being-in-the-World

Building Blocks of Thinking

Approaching the learning experience
exploring, planning, and expressing
thoughts and actions

**Making meaning of the learning
experience**
retrieving, comparing, integrating and
relating ideas

Confirming the learning experience
clarifying, validating, correcting and
defining needs

Tools of Learning

Understanding Feelings
thoughts, actions, and values

Motivating Behavior
choosing, initiating, & persisting
in specific actions

CEA Steps to Mediated Learning

Step One: Determine Intent

How will I catch the attention of the learners to focus on Building Blocks and Tools?

How will I integrate curriculum with Building Blocks and Tools?

CEA Steps to Mediated Learning

Step Two: Facilitate meaning

What questions can I ask to help students value the learning experience and become aware of the need for specific Building Blocks and Tools?

CEA Steps to Mediated Learning

Step Three: Build a bridge that transcends the immediate needs of the learning experience

If I achieve my intent, how will I help students construct a bridging principle and share examples from home, school, work and social settings?

Questions Good Mediators Ask

- Which BB or Tool?
- What makes this one important to you?
- What principle shares something important about this BB or Tool?
- What learning strategies connect to this principle?

More Questions Good Mediators Ask

- How does this connect to what we have already learned?
- What will happen next?
- How is this the same and different?
- What just happened?
- How can you use this?

Stories and Themes of South African Teachers of Underachievers

- Expert users of the Cognitive Enrichment Advantage Approach
- General & Special Educators & Therapists
- Working with underachieving learners

The Best Thing that would Help
 Let's Go and Find Out

Stumbling Blocks
 Stepping Stones

I want to make a difference in their lives

Joy & Privilege
 Challenge & Frustration

The Results were Amazing
 Miss, I am Clever Now

The Practical Theory of Teachers

...theory and practice meet in a teacher's intentional attitudes.
 (Chisholm, 1988, in Jarvis, 1999, p. 44)

My practical knowledge works for me, and because it does, I develop my own ways of doing things in accordance with my own values, beliefs, and feelings. (Jarvis, 1999, p. 46)

About the learners

As educators we try to help them ... to turn these stumbling blocks into stepping-stones

They can all achieve

About how to go and find out

- *What would help Mark right now?*
- *Caring and love – Space and safety*
- *Look at the whole child*
- *You must look for ways and means*
- *It must be me and you together*
- *What is still my role?*

About how it feels to teach

- *There is a challenge and frustration - but it's my joy and privilege*
- *It is amazing that you can make a difference like that (about CEA).*

About what happens

- *The results were amazing*
- *That was a miracle (teachers' reports)*
- *Miss, this is the first time in my life that I feel that I am clever (students' reports)*

Willie & Self: A Case Study

My Life

An Art Project

*How do you see yourself?
"Write" about your life using visual
vocabulary so others can "read"
your emotional and intellectual
expressions of yourself.*



Carol: An Art Therapist

I came to school one day thinking we are going to [draw] a slice of earth and we are going to see the earth worms and the stones and the roots of the trees, and they are going to [represent the slice of earth from the perspective of moles] and they are going to draw. So we would have these wonderful pictures, lovely drawings...

Nothing happened.

They haven't had that hands-on experience and I could not take them there with words.

So, I have just to throw out this whole idea

and no drawing today.

So, now we are moles, and we are crawling around acting like moles..., living in holes.

And we know moles don't see very well but they smell very well.

So then I say "You are sticking your noses up in your hole and you smell.

What do you smell?

We smell carrots....

So, then the whole thing becomes a concert and we move from the visual arts through the dramatic component.
