Feuerstein's Instrumental Enrichment
THINKING STRATEGIES

INSTRUMENTAL ENRICHMENT:

A WELL-RESEARCHED

COGNITIVE EDUCATION PROGRAM

(Standard Version, Ages 9-Adult)
OVERVIEW

- Why Teach Thinking Skills
- Theory Behind FIE
- Examples
- Research and Evaluation Results
- FIE In Westport
Why Teach Higher-Level Critical Thinking?

“THE KNOWLEDGE EXPLOSION”*

- 1750 – 1900  Knowledge Doubles Once
- 1900 - 1950  Knowledge Doubles Again
- 1950 - 1960  Knowledge Doubles Again
- 1960 – Present Knowledge Doubles About Every 5 Years
- By 2020      Knowledge Will Double Every 73 Days (!)

*Courtesy of World Future Society, Bethesda, Maryland
THINKING SKILLS FOR INSTRUCTION

- Finding Relationships and Patterns
- Comparison
- Classification or Categorization
- Analysis (Parts and Wholes)
- Sequencing
- Following and Creating Instructions
- Making Inferences
- Finding Reasons
- Drawing Conclusions
- Creating Alternative Solutions To Problems
- Setting Priorities
- Making Predictions
History Of Instrumental Enrichment

- Formation of Israel’s School System
- Dr. Reuven Feuerstein
- Observed Differences In Yemenite and Moroccan Children
- “Teach – Test”
- Lack of “Mediation”
- Theory of Cognitive Modifiability
THEORY OF COGNITIVE MODIFIABILITY

• Hopeful Message - IT’S NEVER TOO LATE!
• Views the human organism as open, adaptive and amenable to change
• Possible to modify a person’s cognitive level through mediated experiences
• Intelligence is viewed as a propensity of organism to modify itself when confronted with the need to do so
• Intelligence is NOT FIXED – It is DYNAMIC
KEY INSTRUMENTAL ENRICHMENT CONCEPTS

- Cognitive Modifiability
- Mediation
- Metacognition
- Bridging
- Retarded Performance
MODEL FOR A THINKING EPISODE

1. Label and Teach the Thinking Skill Through the IE Experience
2. Ask Metacognitive Questions
3. Make “Bridges” to Subject Matter and to Life Applications
IE COGNITIVE FUNCTIONS

I. Gathering All the Information We Need (Input)
II. Using the Information We Have Gathered (Elaboration)
III. Expressing the Solution To A Problem (Output)
SCHEMATIC OF FIE STANDARD
FIE STANDARD’s 14 Instruments

1. Organization of Dots
2. Orientation in Space
3. Comparisons
4. Analytic Perception
5. Instructions
6. Illustrations
7. Categorization
8. Temporal Relations
9. Numerical Progressions
10. Family Relations
11. Syllogisms
12. Transitive Relations
13. Representational Stencils
14. Orientation in Space II
SAMPLING OF THE INSTRUMENTS

- Comparisons
- Organization of Dots
- Orientation in Space
COMPARISONS

• Similarities and Differences
• Precision
• More Than One Right Answer AS LONG AS YOU CAN DEFEND IT LOGICALLY!
• Pictures vs. Words
COMPARISONS--Pictures

Indicate what is common to each pair of pictures and the differences between them.

Different: Common:

Different: Common:

Different: Common:

Different: Common:

Different: Common:

Different: Common:
COMPARISONS--Words

Indicate what is in common to the things named by each pair of words and the differences between them.

- Church
  Factory

- Love
  Hate

- Earring
  Ring

- Bread
  Meat

- Milk
  Coke Cola

- Movie
  Television

- Baby
  Old man
ORGANIZATION OF DOTS

RULES:

• Work in Sequence
• Be Precise – Always Compare Visually to the Model
• Can’t Rotate the Page – Turn the Figure With Your Mind!
• Large Dots Are Cues That Help
• Use every dot only once; none left over
ORIENTATION IN SPACE

- Right, Left, Front, Back
- Learn About *Point Of View*
- Possibilities
IN SUMMARY, FIE IS ............

• A process by which learners identify and then overcome specific difficulties in input of, processing of, and responding to stimuli in the environment
• An approach where teachers become mediators
  – A mediator’s role is to:
    • Understand, with the learner, the process whereby the learner learns; ask questions; lead; guide—not tell
    • To evaluate learning strategies with the learner
    • Partner with the learner to improve the learner’s learning process
WHEN HAS IT BEEN USED?

• Developed in half a century of experimentation, mostly with young people classified with learning disorders such as:
  – Holocaust death camp survivors
  – Ethiopian Jews resettling in Israel
  – Specific learning disability
  – Language impairment
  – Down’s Syndrome
  – Spinabifida
  – Autism
  – ADD
  – Head injuries

• Results have been hailed around the globe.
• Results with “normal” and “gifted” students have been very positive as well

Rooted in Feuerstien’s belief that

INTELLIGENCE IS MODIFIABLE – NOT FIXED.
Why Bring FIE to Fairfield County?

- Immediately address the higher level critical thinking skills of students with Special Needs
- Address the needs of regular education students
- Address the needs of underachieving gifted students
- Maximize all students COGNITIVE POTENTIAL in order to increase self esteem and therefore lower the incidence of risky behaviors.
What are the benefits of FIE?

• Nearly 400 research studies show definitive improvements in problem solving, academic progress, and generic reasoning -- Corrects cognitive functions that fail to develop

• Develops the language necessary for the analysis of, and insight to, students' own thinking.

• Produces intrinsic motivation as a prerequisite of problem solving,

• Creates insightful and reflective thinking
  - Helps the mediator create motivation in the learner

• Alters the self image of the student
Sample Results

Taunton, Mass Public Schools

SAT-R (Stanford Achievement Test for Reading)
Changes in Group Mean Scores
Sample Results

Ben Bronz Academy – West Hartford, CT

Reports:

• Increased scores on Woodcock Johnson
• Increased scores on Ravens Progressive Matrices
• Increased abilities in thinking skills and problem solving
PROVES OLD CHINESE PROVERB...

“Give me a fish, I’ll eat tomorrow...
Teach me to fish, I’ll eat for a lifetime!”
THINK’s Approach to Implementing FIE

- Educate
- Assess Interest
- Develop Program for Mediators
- Have Mediators implement program for children through after school programs and private learning centers
- Our FIE Authorized Training Center, IC&TA (International Consulting and Trade Associates) will train and monitor the mediators progress and methods to keep them on track
- Advertise our success through a newsletters, e-mail, information sessions
- Keep Boards of Education apprised of our successes
- Move toward having a “Mediated Learning Center” down the road.
- Move toward giving BOEs an opportunity to integrate FIE into their curriculum
OUR PILOT PROGRAM

- February to June 2004
- One Elementary Group
- One Middle School Group
- Two One-On-One Participants
- We found improvements in students' analogical reasoning on a standardized test, and on the quality of their written solutions to a real-world problem
MOVING AHEAD….

- Level II Training
- Pilot Program Group Combined Elementary and Middle School Group Will Move Into Level II In The Winter
- New Level I Training For Our New Mediators and Parents
- Preparing for New Students for
ADDITIONAL RESOURCES

• International Center For The Enhancement of Learning Potential
  www.icelp.org

• The Hope Centre
  www.hope-centre.org.uk

• Southeastern Center For The Enhancement of Learning
  www.scel.org

• Quality Learning Systems International
  www.qlsi.com