

# 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

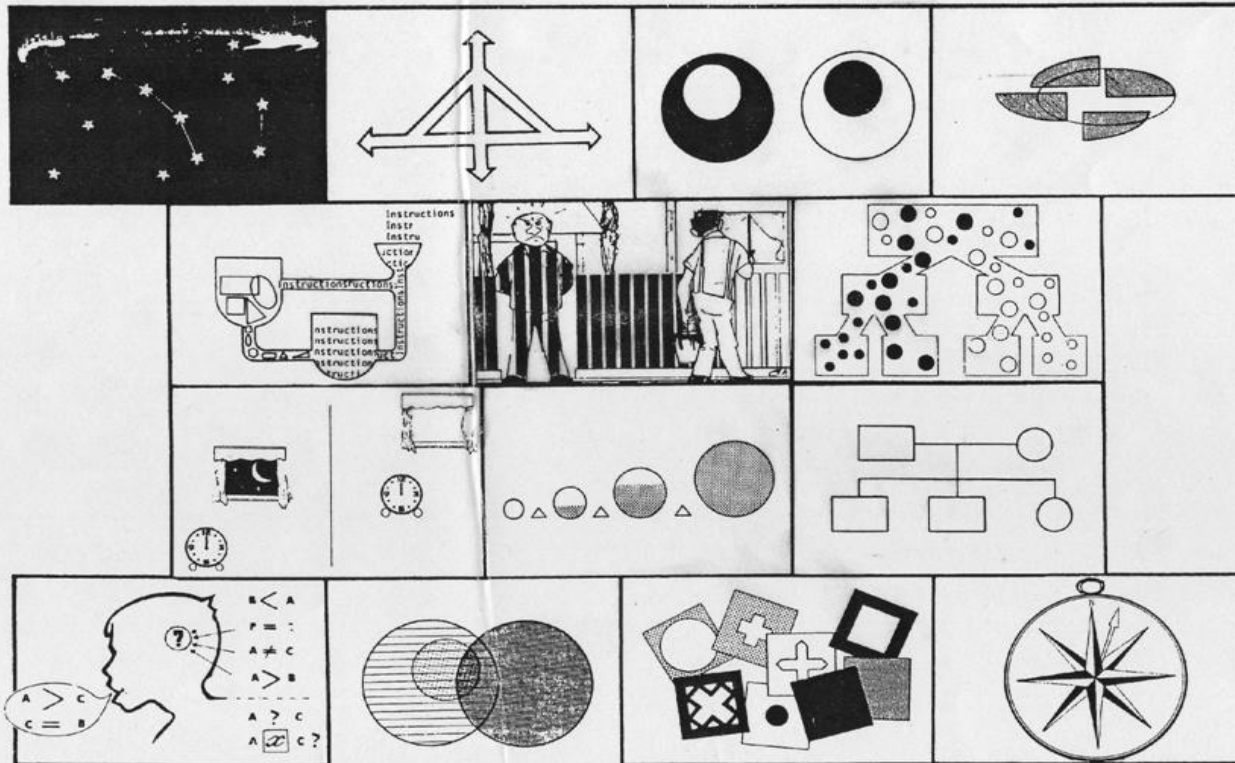
# IE COGNITIVE FUNCTIONS

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



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# 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





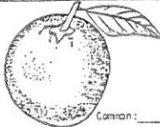


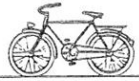


# COMPARISONS

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

# COMPARISONS--Pictures

Name \_\_\_\_\_

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

	
Common: _____	Different: _____
Different: _____	Different: _____
	
Common: _____	Different: _____
Different: _____	Different: _____
	
Common: _____	Different: _____
Different: _____	Different: _____
	
Common: _____	Different: _____
Different: _____	Different: _____
	
Common: _____	Different: _____
Different: _____	Different: _____

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Comp 1

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# COMPARISONS--Words

Name \_\_\_\_\_ 2

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 Coca Cola	} _____	_____
Movie Television	} _____	_____
Baby Old man	} _____	_____

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Comp 2

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# 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](http://www.icelp.org)
- The Hope Centre  
[www.hope-centre.org.uk](http://www.hope-centre.org.uk)
- Southeastern Center For The Enhancement of Learning  
[www.scel.org](http://www.scel.org)
- Quality Learning Systems International  
[www.qlsi.com](http://www.qlsi.com)