

THE THINKING ACADEMY

A school which embraces
cognitive education across the
curriculum

David S. Martin, Ph.D., USA
2011

RATIONALE

THINKING STRATEGIES SHOULD BE
FOUNDATION FOR THE ENTIRE
CURRICULUM

NO CURRICULUM CHANGE WITHOUT
TEACHER CHANGE

SIMILARITIES WITH OTHER THINKING SCHOOLS

- Thinking permeates the entire school program
- Required commitment by entire staff
- Required involvement by the administrator
- Careful Planning
- A Thinking “Language” in the School
- A Coordinator at the School site
- Use of Metacognition

DIFFERENCES

Based on a single model—in this case,
Feuerstein's Instrumental Enrichment (FIE)
A single theoretical framework—structural
cognitive modifiability; mediation
In-Depth Extensive Teacher Development
A Required Parent Contract
Assessment at the school site
Post-secondary applications
Governing Board

STEPS TO IMPLEMENTATION

- Commitment by the school community(ages 3 upward)
- Start of in-depth teacher development
- Parent Contract
- Teachers “**cognify**” their curricula--analyse their subject matters in relation to the underlying embedded cognitive strategies, using the cognitive functions within the phases of:
 - Input
 - Elaboration
 - Outputand learning activities according to the “Cognitive Map”.

STEPS,cntd.

- Pre-Assessments for students
- Pre-Assessments for teachers
- Begin classroom mediation
- On-going consultation for teachers
by on-site coordinator

In-Depth teacher development continues
(5 days per year for 3 years, plus team
collaboration and consultations with on-site
coordinator)

COGNITIVE FUNCTIONS— PHASES OF PROBLEM-SOLVING

INPUT

Using all senses

Having a systematic plan

Labeling

Temporal and spatial referents

Organising sources of information

Being precise

ELABORATION

Defining the problem

Staying relevant

Make a mental picture--Visualize

Make a plan

Keep all information in mind

Finding relationships

Comparisons

Categorizations

Making hypotheses

Using logic to prove a point

OUTPUT

Overcome egocentricity

Take your time

Avoid trial-and-error

Overcome blocking

COGNITIVE MAP

ANALYZE LEARNING TASKS ACCORDING TO
THEIR:

Content

Operation

Modality

Phase of Problem-Solving Process

Level of Complexity

Level of Abstraction

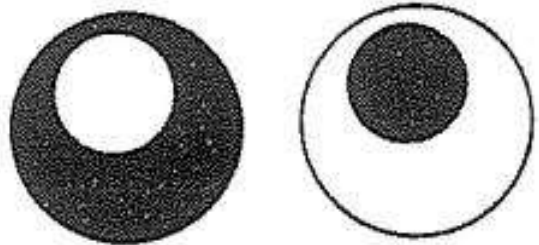
Level of Efficiency

Achieving a BALANCE

THREE-PART PROCESS FOR LEARNING EPISODES

- MEDIATION
 - METACOGNITION—3 Kinds
 - TRANSFER OR “BRIDGING”
 - Near-Bridges
 - Far-Bridges
 - Bridging before, during, and after
problem-solving activity
- An FIE example from Comparisons

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



Common: _____		
Different: _____		Different: _____

Common: _____		
Different: _____		Different: _____

Common: _____		
Different: _____		Different: _____

Common: _____		
Different: _____		Different: _____

Common: _____		
Different: _____		Different: _____

“INSTRUMENTS”

“BASIC” (Ages 3-8 and special needs):

Tri-Channel (Tactile, Visual, Draw, Match)

Projecting Geometric Relationships

Orientation in Space (Position Words)

Unit to Group (Foundations of Maths)

Know and Identify (Classifying Objects)

Compare and Discover the Absurd

Identifying Emotions

Empathy

Preventing Violence

Reading Comprehension

“INSTRUMENTS”

“STANDARD” (Ages 9 through Adult):

Projecting Geometric Relationships

Orientation in Personal Space (Different Points of View)

Orientation in Geographic Space

Comparisons

Analytic Perception

Instructions

Understanding Absurdities

Categorisation

Temporal Relationships

Numerical Progressions—Sequence

Hierarchical Relationships

Symbolic Logic

Verbal Logic

Synthesis

LANGUAGE ARTS

SKILL

Main Idea

Prediction

Draw Conclusions

Word Choice

Author Intent

FIE ACTIVITY

Systematic Exploration

Find Relationships

Using Logic

Comparisons

Identify patterns

MATHEMATICS

SKILL

FIE ACTIVITY

Word Problems

Multiple-step problems

Make Estimates

Reasoned Guess before
starting

Describe

Metacognitive Discussion

strategy used

Spatial Relations

Orientation in Personal
Space

SOCIAL STUDIES

SKILL

Time Concepts

Patterns in Events

People

Relationships

Geographic

Orientation

Deep Understanding
of S.A. Constitution

FIE ACTIVITY

Temporal Relationships

Categorisation

Hierarchies

Orientation in Universal
Space

Empathy

THE SCIENCES

SKILL

Data Collection

Hypothesizing

Manipulating

Symbols

Alternative

Explanations

FIE ACTIVITY

Organisation of Dots, etc.

Verbal Logic

Symbolic Logic

Synthesis

COGNITIVE EDUCATION CENTER

For Students with a need or an interest

After-school tutorial experiences

STUDENT ASSESSMENT

- Comparisons of scores on standardised examinations
- Narrative responses to a problem-solving situation
- Teacher observation of thinking habits using checklist
- Standardised Measure of Reasoning
- Self-Reporting on “my thinking”

TEACHER ASSESSMENT

PORTFOLIO, Including—

Sample Lesson Plans

Weekly Reflective Journal entries

Interviews about impact of program
on students and teachers

Observation and feedback of teachers,
using a specific protocol

BENEFITS, SHOWN BY STUDIES

STUDENTS

Improved Academic Achievement

Improved school attendance

Improved school behavior/emotional control

Understanding of thinking strategies which
underlie all subjects

Development of Thinking Habits(persistence,
collaboration, problem-definition, multiple
solutions to problems)

TEACHERS

Asking more open-ended questions

Incorporating cognitive strategies across
the curriculum

Encouraging classroom verbal interactions

Facilitating metacognitive discussions

Deepened understanding of subject matter

PARENTS

Giving children responsibility for problem-solving

Including some “thinking” language into
conversations with children

Better understanding of children’s thought
processes

Better understanding of children’s learning
challenges

BUDGET

- Teacher Materials
- Student Materials
- In-Depth Professional Development
- Assessment Tools
- Released-Time for some teacher development activities
- Full-time on-site Program Coordinator

A ROOT PROBLEM

THE REFORM OF PRE-SERVICE
TEACHER EDUCATION – A TOPIC
FOR SEPARATE DISCUSSION.

FOR MORE INFORMATION

- David S. Martin, President of the
North American Feuerstein Alliance(NAFA)

Fax: 001-508-420-1588

Email: davidchina_2000@yahoo.com

- OR Lilian Lomofsky, South Africa

Email: llomofsky@mweb.co.za

A NEW PUBLICATION

BOOK ENTITLED:

THE THINKING ACADEMY

APPEARS IN APRIL 2011, CO-AUTHORED
(David Martin and Irving Schein), PRODUCED
BY IC&TA, Inc., AFFILIATED WITH THE
FEUERSTEIN INSTITUTE (Israel).

AVAILABLE FOR PURCHASE AT A NOMINAL
FEE FOR PRINTING AND MAILING COSTS.

AN OLD CONFUCIAN PROVERB