

BILL MARTIN



**Designing a Comprehensive Thinking
Program: Blending Thinking Skills and
Dispositions**

**CONFERENCE ON THINKING
NORDIC FOLLOW-UP**

SWEDEN - OCTOBER 2008

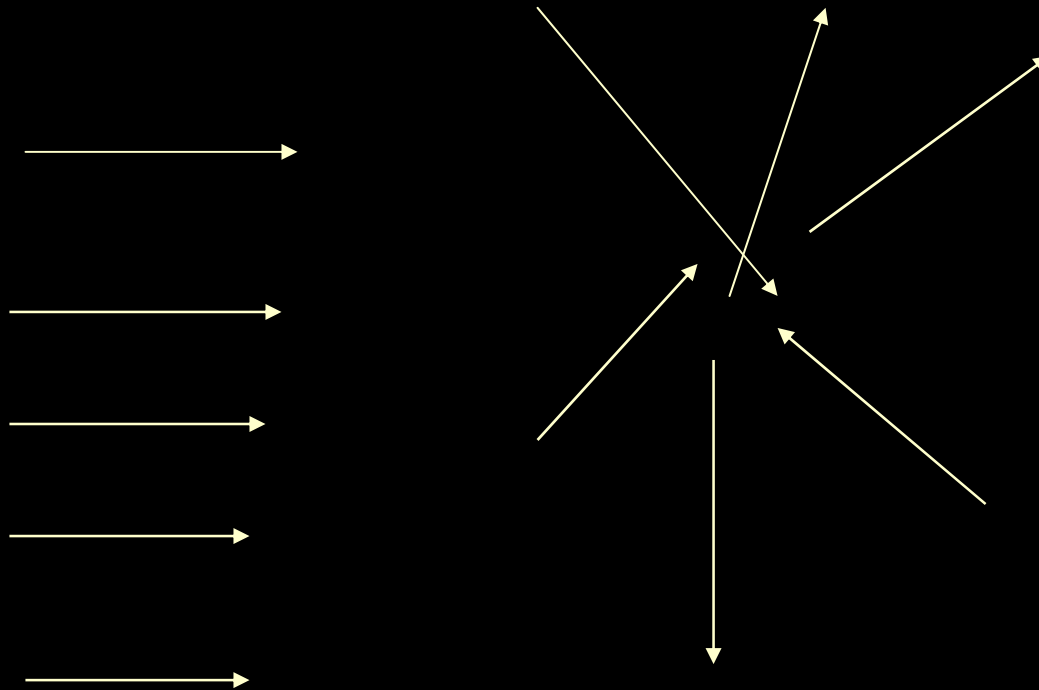
DO YOU KNOW A THINKING SCHOOL?



WHY NOT?

- The “thinker” has left!
- Star-Struck.
- We don’t have time for anything else!
- Let’s form a committee.
- Playing at thinking.
- YOU do it!
- IT TAKES YEARS OF HARD, UNIFIED WORK!

SHARING THE VISION



BLEYL JUNIOR HIGH SCHOOL VISION STATEMENT

Our school is a community continually striving to maximize individual growth for our student population. A professional, enthusiastic, and energetic staff challenges students to become the best they can be intellectually, socially, and behaviorally. A strong work ethic permeates the learning environment.

Working hard in a warm, caring atmosphere motivates each student to pursue learning by continually thinking productively at the highest levels. Our hard work is characterized by the values of persistence, sacrifice, and self-discipline. Critical thinking skills are learned in a climate that constantly articulates high expectations for all participants. The entire school community practices decency with encompasses fairness, generosity, and tolerance towards each other. Positive individual responsibility is learned through immediate, sensitive, and consistent interactions about conduct. Our pursuit of the goal of excellence is fueled by cooperation, communication, and teamwork. All members of the Bleyl community support one another in pursuit of maximum growth with pride, loyalty, and enthusiasm. Success in attaining our goals will be measured by the degree of self-esteem possessed by each community member, the quality of engagement that occurs on a daily basis, and the successes of our student population living in an unpredictable, ever-changing world.

THE BLEYL PLAN YEAR 1



Task 1 Shared Vision

Make the teaching and learning of thinking skills an implicit value in our shared vision.

Task 2 Development of a Thinking Skills Program Plan

Become knowledgeable of the components of a thinking skills and thinking dispositions program. Create a program that includes task identification and delegation of responsibilities.

Task 3 Create a Climate that Nurtures Thinking Skills and Dispositions

Identify the thinking skills and dispositions our students need to be successful in life. Create a climate that promotes these skills and dispositions in all school community members.

Task 4 Common Thinking Operations Taught In Existing Curriculum

Identify the common thinking operations already taught in our curriculum.

PROFESSIONAL LEARNING STRANDS



Year 1 – Building a Climate for Thinking

Questioning Strategies	2 hours
Issues of Teaching Thinking	2 hours
Test Construction Workshop	2 hours
Bloom's Taxonomy Workshop	2 hours
Teaching a Thinking Skill	2 hours
Metacognition Workshop	2 hours
Nature of Thinking Workshop	3 hours
Habits of Mind	3 hours
Expectation Articulation Workshop	3 hours
TOTAL	23 HOURS

BILL MARTIN'S MODEL TO DEVELOP A THINKING PROGRAM

- ⌘ **Select** the Thinking Skills and Dispositions to be taught.
- ⌘ **Describe** the Thinking Skills and Dispositions to be taught.
- ⌘ **Design** Professional Development Program to train staff.
- ⌘ **Construct** Lessons to teach Thinking Skills and Dispositions directly.
- ⌘ **Create Time** to teach Thinking Skills and Dispositions.
- ⌘ **Scope and Sequence** Thinking Program.
- ⌘ **Assess** Thinking Skills and Dispositions

THINKING SKILLS



- ⌘ **Strategies that allow us to live successful lives by making decisions and solving problems each day.**

Examples :

- ⌘ De Bono's Lateral and Parallel Thinking Strategies.
- ⌘ Lipman's Philosophy for Children.
- ⌘ Bloom's Taxonomy of Thinking.
- ⌘ Marzano's Dimensions of Learning.

PROBLEM SOLVING



- 1. Identifies and states the problem**
- 2. Gathers and organizes relevant information**
- 3. States hypothesis**
- 4. Lists various strategies for the solution**
- 5. Selects and implements appropriate strategy**
- 6. Compares results with hypothesis**
- 7. Determines reasonableness of solution**
- 8. Exhibits curiosity by posing questions**

THINKING DISPOSITIONS



⌘ The habits and inclination to know when and where to use a thinking skill and when and where not to use it. It is having the “wit” to know when to apply the thinking skill. It is habituating the willingness and motivation to use it.

Examples:

⌘ Costa’s Habits of Mind

⌘ Beyer’s Thinking Dispositions

Other Resources:

⌘ Perkins and Tishman (Harvard University)

FLEXIBILITY OF THINKING



1. Brainstorms options
2. Responds with receptive facial and body expressions
3. Acknowledges positively another's ideas
4. States one or more possible solutions
5. Resolves conflict of ideas through compromise

Thinking skills matrix

	SUBJECT AREA				
SKILLS	E	M	SS	Sc	H
1	X		X		X
2		X		X	X
3	X	X	X	X	
4	X	X			X
5		X	X	X	X
6	X		X	X	

THINKING VERBS FOUND IN STANDARDS

ANALYZE
APPLY
CLASSIFY
COMPARE
CONNECT
CONTRAST
DESCRIBE
DISCUSS
ELABORATE

EXPLORE
DIAGRAM
IDENTIFY
INTERPRET
JUDGE
OBSERVE
ORGANIZE
PARAPHRASE
PREDICT

RESPOND
SUPPORT
REPRESENT
VISUALIZE
REASON
VERIFY
SOLVE
SUMMARIZE
SIMPLIFY

THE BLEYL PLAN

YEAR 2



Task 5 Identify and Teach Mental Models

Begin to teach the mental models (values and beliefs) staff must have to teach the thinking skills and dispositions.

Task 6 Describe Thinking Skills and Dispositions To Be Taught.

Create descriptions of thinking skills and dispositions that includes what we observe people doing as they demonstrate the skill in an expert way.

Task 7 Scope and Sequence Chart for Thinking Skills and Dispositions

Describe the scope and sequence of thinking skills and dispositions to be taught by grade level, subject areas and form.

LEVELS OF PERSPECTIVE

Vision



Mental Models



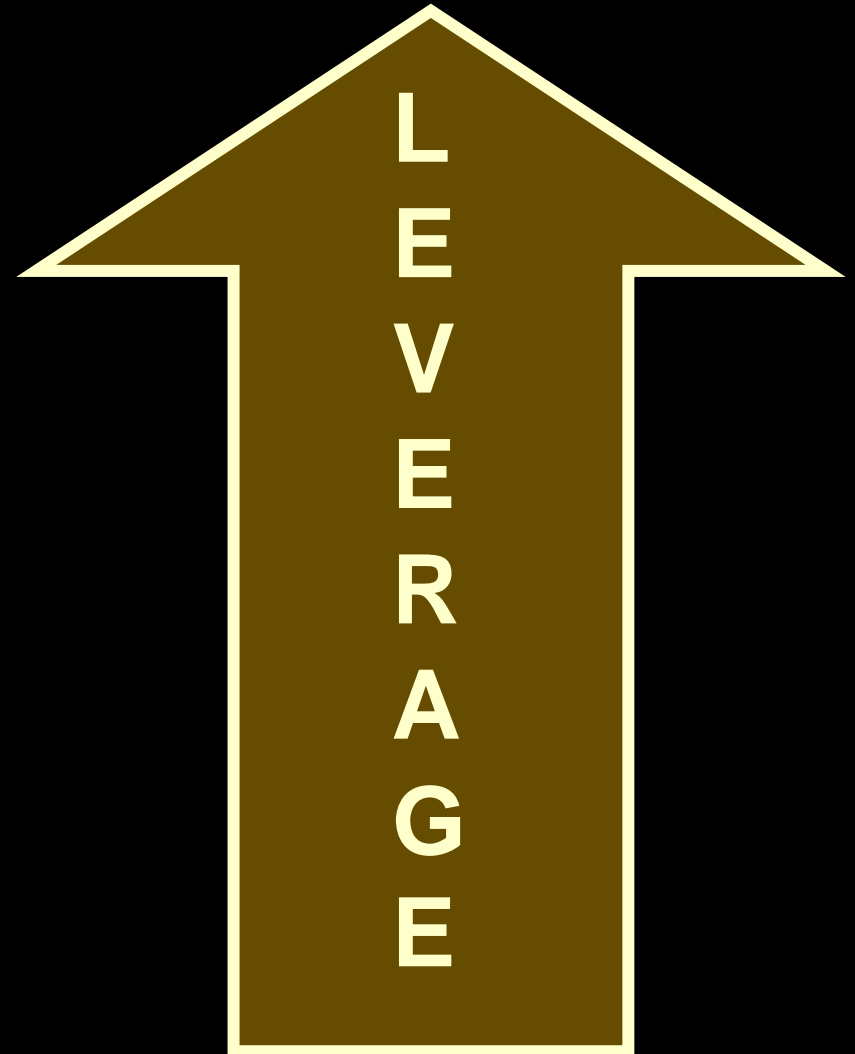
Systemic Structures



Patterns of behaviour



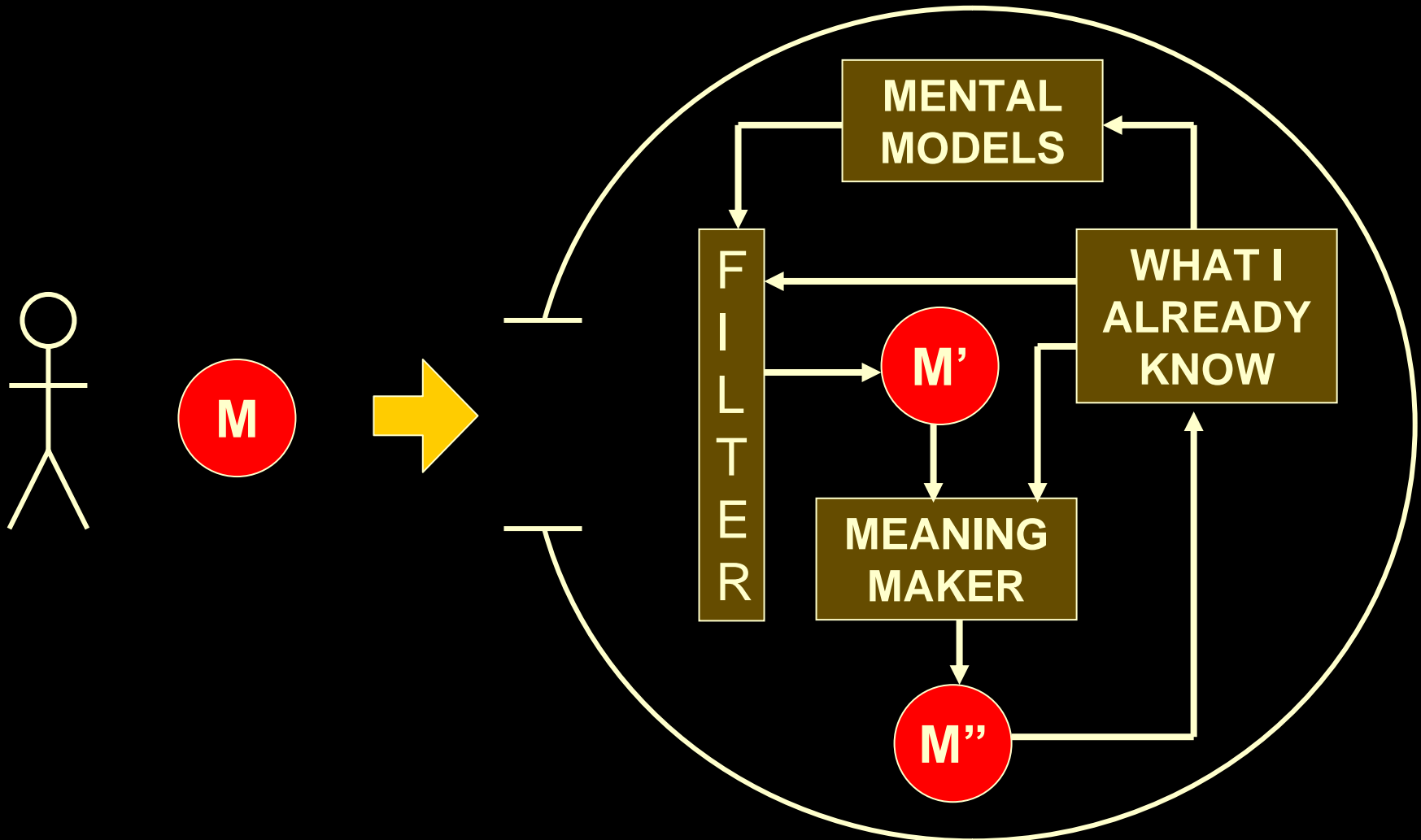
Events



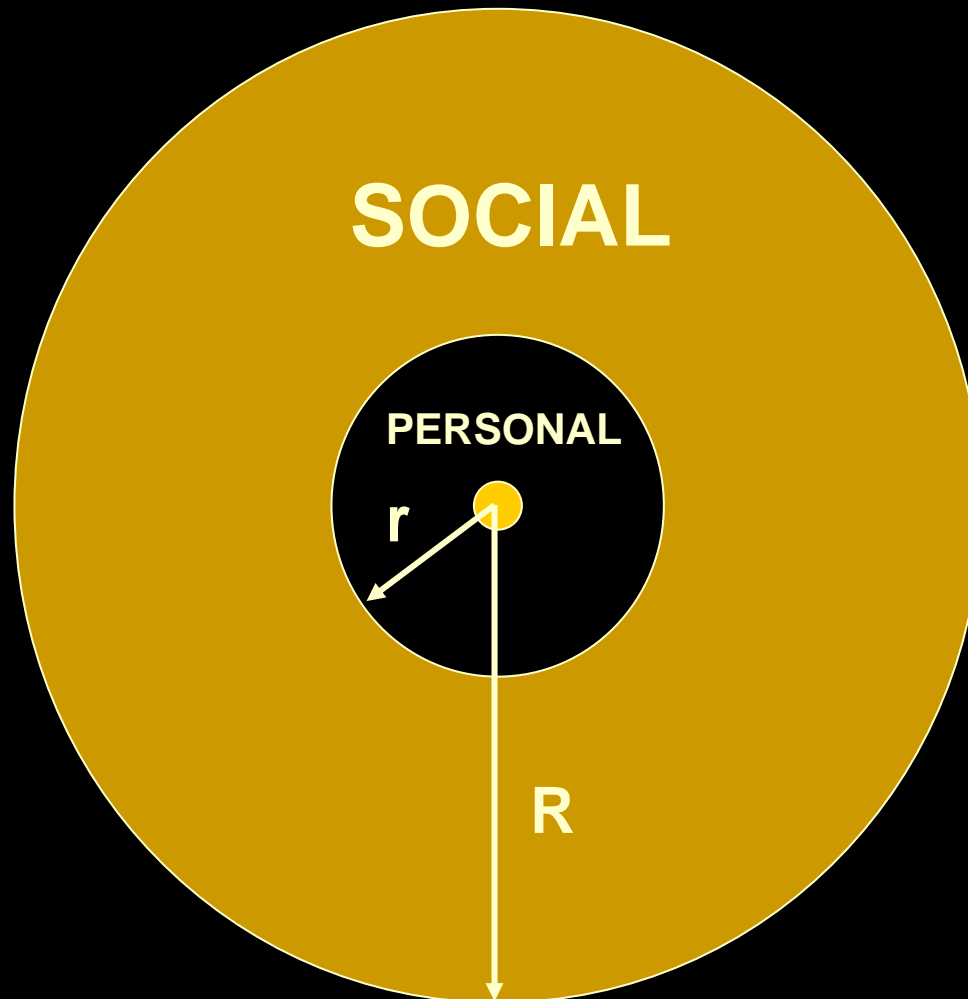
TEACHING THINKING - MENTAL MODELS

- ⌘ We are already teaching thinking skills and dispositions in our school, but we must teach them explicitly.
- ⌘ We construct our own meanings.
- ⌘ Our learning is socially constructed.
- ⌘ Teaching thinking demands choosing depth over quantity.
- ⌘ We will get worse before we get better.

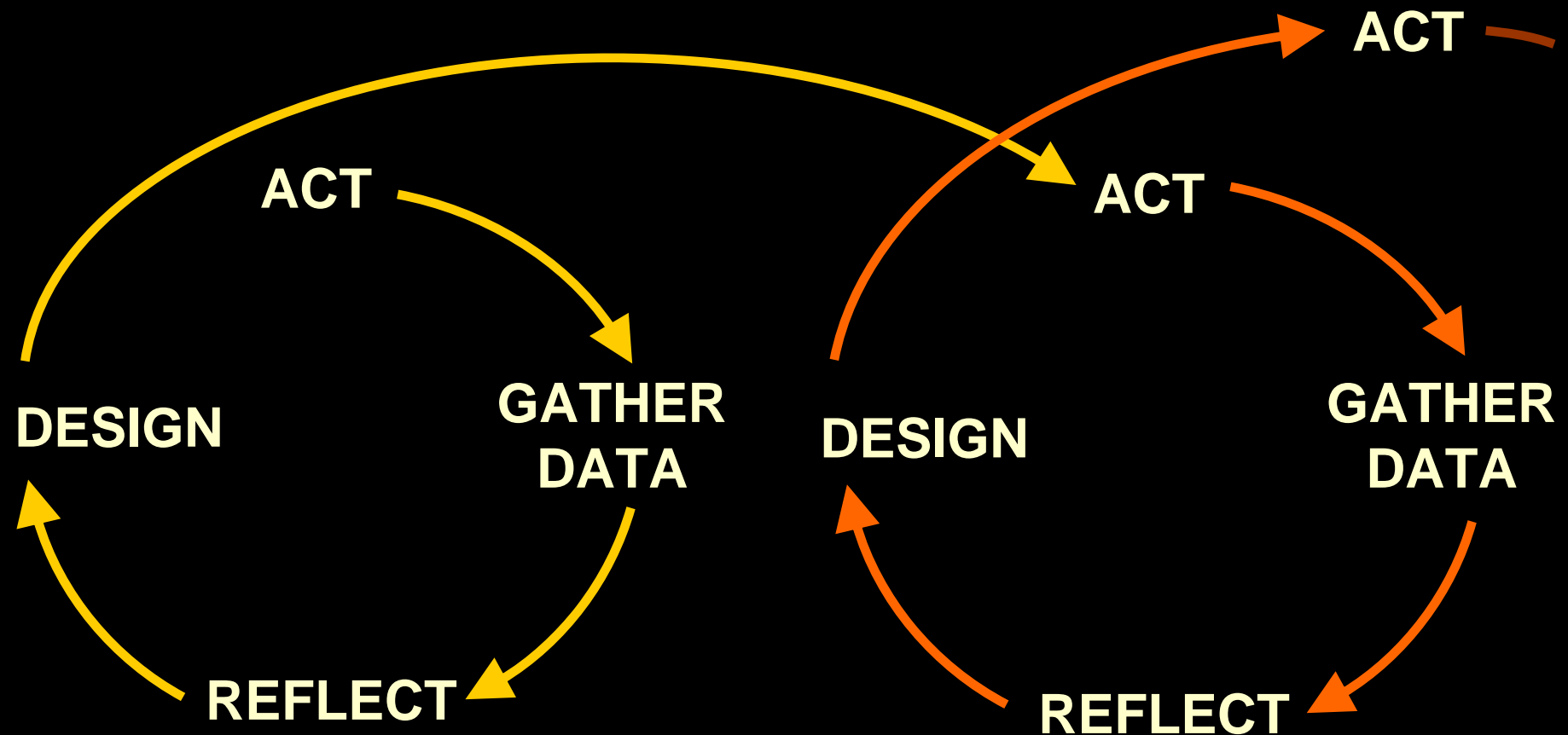
MENTAL MODEL - CONSTRUCTIVISM



SOCIAL CONSTRUCTIVISM



ACTION LEARNING - Revans



STRUCTURE DECISIONS



CHOOSE DEPTH
OVER COVERAGE

MAKE TIME TO TEACH THINKING

HERCULEAN TASK



⌘ NEEDS TO KNOW

⌘ NICE TO KNOW

⌘ WHO CARES

LISTENING WITH UNDERSTANDING AND EMPATHY



1. Focuses attentively on the speaker
2. Summarizes or paraphrases
3. Elaborates
4. Clarifies
5. Asks relevant questions
6. Maintains eye contact
7. Demonstrates positive facial expressions/body language
8. Makes non-judgmental comments
9. Takes notes when appropriate

THE BLEYL PLAN

YEAR 3



Task 8 Restructure Lesson Plans

Create lesson plans for teaching thinking skills and dispositions.

Task 9 Develop Authentic Assessment Tools for Thinking Skills and Dispositions Program

Develop the assessment tools that will evaluate student and program progress.

Task 10 Select Instructional Materials

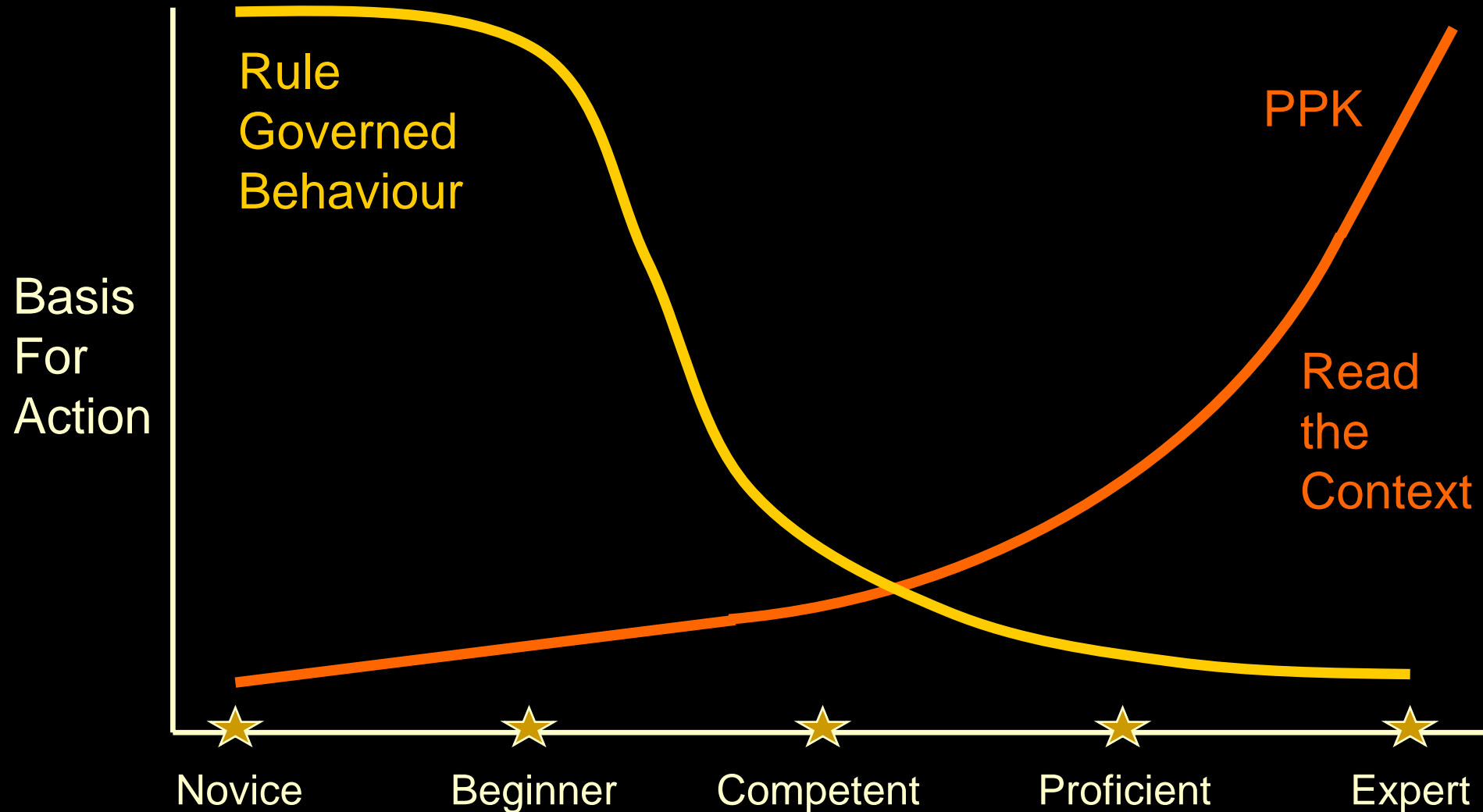
Create and/or purchase the instructional materials needed to implement the strategies and lesson plans.

LESSON DESIGN

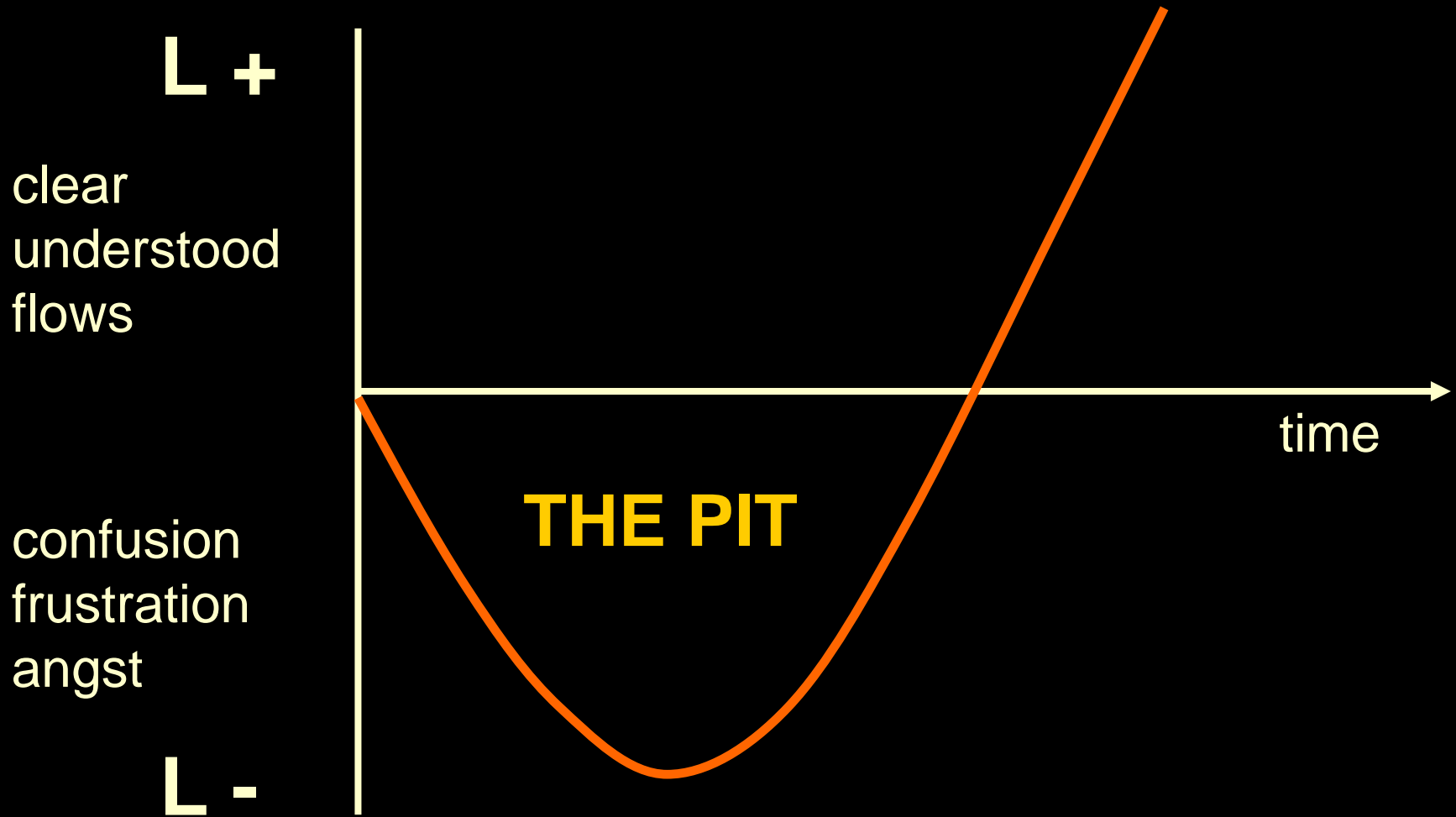


- ⌘ Art Costa's 4-step lesson design
- ⌘ Bob Swartz's infusion design
- ⌘ Richard Paul's critical thinking design

DREYFUS MODEL



TRANSFORMATIONAL LEARNING



SAMPLE RUBRIC FOR PERSISTING



EXPERT:

Stays on task no matter how difficult to find the answers to solutions. Evaluates the use of a variety of strategies to solve the problem. Draws on wide range of resources.

PRACTITIONER:

Stays on task when trying to find answers or solutions to problems. Draws on available resources

APPRENTICE:

Tries to complete tasks when the answers or solutions are not readily available, but gives up when task is too difficult. Gets off task easily. Draws on limited range of resources.

NOVICE:

Gives up easily and quickly on difficult tasks. Is unaware of resources.

STUDENT DEVELOPED RUBRIC FOR CLASSROOM BEHAVIOR

1. Don't talk. Sits on chair and lissens to teacher. Works hard. Good.
2. Talks a little. Sits on chair and mostly lissens to teacher. Works. Pretty good.
3. Talks a lot. Sits on knees and maybe lissens. Works a little bit. Bad.
4. They talk loud and never lissens. Walk all around. Don't write a thang.
Bad to the bone!

SUCCESS STORY



BLEYL

OTHER SCHOOLS

CREDITS	93%	84%
SAT	1023	947
GPA	3.21	2.86
TESTS	91%	84%

A “National Blue Ribbon School”

**Ranked one of top 150 schools out of 36,000 in
USA**