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
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.
## Year 1 – Building a Climate for Thinking

<table>
<thead>
<tr>
<th>Course</th>
<th>Duration</th>
</tr>
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<tbody>
<tr>
<td>Questioning Strategies</td>
<td>2 hours</td>
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<tr>
<td>Issues of Teaching Thinking</td>
<td>2 hours</td>
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<tr>
<td>Test Construction Workshop</td>
<td>2 hours</td>
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<tr>
<td>Bloom’s Taxonomy Workshop</td>
<td>2 hours</td>
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<tr>
<td>Teaching a Thinking Skill</td>
<td>2 hours</td>
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<tr>
<td>Metacognition Workshop</td>
<td>2 hours</td>
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<tr>
<td>Nature of Thinking Workshop</td>
<td>3 hours</td>
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<tr>
<td>Habits of Mind</td>
<td>3 hours</td>
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<tr>
<td>Expectation Articulation Workshop</td>
<td>3 hours</td>
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</table>

**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

<table>
<thead>
<tr>
<th>SKILLS</th>
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<td>Elaborate</td>
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<td>Explore</td>
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<td>Solve</td>
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<td>Summarize</td>
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<td>Simplify</td>
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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

LEVERAGE
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

WHAT I ALREADY KNOW

MENTAL MODELS

MEANING MAKER

M'

M''

FILTER

M

M'
SOCIAL CONSTRUCTIVISM
ACTION LEARNING - Revans

ACT
GATHER DATA
DESIGN
REFLECT

ACT
GATHER DATA
DESIGN
REFLECT

ACT
STUCTURE 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

Rule Governed Behaviour

Basis For Action

Novice | Beginner | Competent | Proficient | Expert

PPK
Read the Context
TRANSFORMATIONAL LEARNING

L +

clear
understood
flows

confusion
frustration
angst

L -

time

THE PIT
## SAMPLE RUBRIC FOR PERSISTING

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXPERT</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>PRACTITIONER</strong></td>
<td>Stays on task when trying to find answers or solutions to problems. Draws on available resources.</td>
</tr>
<tr>
<td><strong>APPRENTICE</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>NOVICE</strong></td>
<td>Gives up easily and quickly on difficult tasks. Is unaware of resources.</td>
</tr>
</tbody>
</table>
STUDENT DEVELOPED RUBRIC FOR CLASSROOM BEHAVIOR

4. They talk loud and never lissens. Walk all around. Don't write a thang.
   Bad to the bone!
## SUCCESS STORY

<table>
<thead>
<tr>
<th></th>
<th>BLEYL</th>
<th>OTHER SCHOOLS</th>
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</thead>
<tbody>
<tr>
<td>CREDITS</td>
<td>93%</td>
<td>84%</td>
</tr>
<tr>
<td>SAT</td>
<td>1023</td>
<td>947</td>
</tr>
<tr>
<td>GPA</td>
<td>3.21</td>
<td>2.86</td>
</tr>
<tr>
<td>TESTS</td>
<td>91%</td>
<td>84%</td>
</tr>
</tbody>
</table>

A “National Blue Ribbon School”
Ranked one of top 150 schools out of 36,000 in USA