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How Does the Teacher Know? One Teacher's Search for Authenticity in the Classroom

Ellen Catherine M. Eberly
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HOW DOES THE TEACHER KNOW?
ONE TEACHER'S SEARCH FOR AUTHENTICITY IN THE CLASSROOM

A Thesis Presented
by
ELLEN CATHERINE M. EBERLY

Submitted to the Office of Graduate Studies of the University of Massachusetts Boston in partial fulfillment of the requirements for the degree of

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HOW DOES THE TEACHER KNOW?
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ABSTRACT

HOW DOES THE TEACHER KNOW?
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September, 1996

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The author, a master teacher of secondary language arts, shares her reflections on how she uses CCT skills to synthesize her insights and observations of her own learning, teaching, and investigative experiences -- past and present -- in order to make VALID choices about what is worth knowing and teaching in a classroom preparing students for the 21st century.

In general, the thesis emphasizes the importance of AUTHENTICITY in determining whether a curriculum or teacher's instructional methodology is VALID for today's students. AUTHENTICITY is determined by the degree of personal connectivity experienced by both student and teacher with the subject matter taught and the quality of the END-PRODUCTS or tasks produced. These end-products should be displayed for, shared with, and/or assessed by a GENERAL AUDIENCE beyond that of the teacher and the classroom walls.
The author offers her curriculum for middle school language arts, MSX LANGUAGE ARTS CURRICULUM OVERVIEW (Appendix III: Chapter 1, only) as a MODEL for those interested in CCT and AUTHENTICITY, but does not propose that it is VALID or AUTHENTIC for other educators and student populations with different priorities.

The author also identifies and discusses the relationships she finds between CCT and the constructs of multiple intelligences (MI), the emotional quotient (EQ), video games, and the writing process. Integrated curriculum learning tasks encourage student awareness and facility using such constructs.

Ultimately, the thesis espouses that students need daily practice using critical and creative thinking processes. Such practice leads to proficiency in higher order thinking and independence from their teachers and parents in identifying and solving problems and applying what has been learned to novel situations.
ACKNOWLEDGMENTS

It is thought that too many teachers become cynical and burned out after being in the classroom for many years. Although I have witnessed such a dynamic in others, I feel that most of these teachers are not physically tired but instead are intellectually and emotionally BORED.

When I returned to teaching full-time in 1993 after taking time off for child-rearing, I promised myself that I would do all that I could to prevent my becoming one of these "burnt-out" statistics. To do so, I promised --

- to become a student myself by taking each semester, one graduate course and/or by acquiring one new "skill" or hobby;
- to meet and communicate with other adult professionals outside and beyond my school community;
- to make a change(s) IF I ever started to complain.

WITHOUT RESERVATION, the graduate program in CRITICAL AND CREATIVE THINKING at UMASS Boston provided an EXEMPLARY environment, work ethic, and dynamic wherein I could not only stave off boredom but learn to become a more facile thinker by USING "clusters" of CCT strategies or heuristics to solve AUTHENTIC problems or issues of concern to me/my students.

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Throughout my life I have remained a voracious reader; I love to read, and I love to learn. Doing both daily, I have rarely been bored. My commitment to teaching CCT and its relationship to the recursive writing process compels me to admit that my ideas mirror what I feel is the AUTHENTIC application of the innumerable theories which I have read, contemplated, practiced, and amended throughout my professional career. Since my listing of all the books I have read and reflected upon is unrealistic, suffice to say that WHAT I have written in my thesis and WHY is also WHAT I practice in my classroom and WHY -- for TODAY. As for TOMORROW, I expect to encounter students with different clusters of problems, necessitating my using different CCT strategies to solve them.

In particular, I must THANK Dr. JOHN MURRAY, who understands that REAL learning in not taught TO the student but is experienced BY the student. His trust, guidance, and support allowed me to be more creative and exhaustive in my search for better "informed" solutions to problems/issues inherent in developing curricula which promote the understanding and practicing of CCT strategies needed by students to become outstanding communicators in the 21st Century.

I also want to THANK ALL of the TEACHERS within the CCT program and to extend a SPECIAL THANK-YOU to both Dr. JOSEPH CHECK and Dr. ARTHUR MILLMAN for their advice and the generous giving of their time during the writing of my thesis.

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CHAPTER I

INTRODUCTION

How does the teacher KNOW that WHAT, HOW, and WHY he or she teaches in the classroom is VALID -- or TO WHOM it is valid? With all the thousands of published and prepackaged multi-media curriculums marketed through local and national teachers' groups, how can any of us educators feel confident that WHAT we are doing in our specific classrooms is BEST for our students?

Has anyone else wished at some time in their teaching careers that there might be at least ONE BEST curriculum out there to teach to our students day after day, year after year?

I have asked myself all these questions over the years. I have read thousands of articles and books by the experts. I have pondered possible responses to my questions and have experienced feelings of insecurity, ultimately realizing that just as we know through personal experience and observation of other's actions and scientific findings that there is NO one miracle diet to lose weight, NOR one miracle program to stop smoking, that likewise, there is NO ONE MIRACLE CURRICULUM -- although many in education do feel strongly that IF we taught a standardized curriculum such that students received high scores on a standardized assessment
test, then our schools should be judged "successful" or valid. I question again, "Successful at what? Valid for whom?"

This thesis will examine these questions further and will conclude that educators need to reprioritize curriculum design so that the teaching, modeling, and practicing of CRITICAL and CREATIVE THINKING (CCT) skills by both teachers and students is the single most productive frame of reference in which students can not only learn subject content but, more importantly, learn how to analyze, apply, synthesize, and evaluate it as well. With the frequent use of CCT strategies the quality of the individual's thinking improves resulting in the production of authentic and valid end products which are produced by using such CCT heuristics to solve the clusters of problems inherent in the creation of the end products themselves.

The number and naming of these CCT skills vary but they include those cognitive behaviors involved in the cognitive objectives of gathering and recalling information, making sense of gathered information, and applying and evaluating actions in novel situations. The specific cognitive behaviors themselves include naming, describing, matching, counting, selecting, completing, listing, recalling, explaining, stating causality, making analogies, organizing, contrasting, comparing, sequencing, inferring, speculating,
generalizing, evaluating, judging, hypothesizing, etc. (Costa, 1986, 126-128).

A critical and creative thinker observes and reflects on the world around them, recalls past experiences, applies that which was learned in the past to that which needs to be understood in the present and the future. We need our teachers to value and model such strategies so that our students, and sons and daughters, understand and practice the strategies that they will need to identify and solve the increasingly complex problems of the micro-chip-technological world of the 21st Century.

Moreover, when our students become proficient CRITICAL and CREATIVE THINKERS, this thesis contends that they most likely also will acquire those cognitive or affective skills "traditionally" valued by teachers, such as the practice of tolerance and values clarification, the acquisition of subject content "facts," the understanding and the manipulation of complex mathematical and scientific formulae, and proficiency in creative and critical writing.

In brief, this thesis will conclude that ANY curriculum can be judged VALID IF it incorporates the following pedagogical dynamics which promote CCT or student engagement in learning HOW to learn independently of their teachers:

- The teaching and practicing of CCT strategies are built into learning tasks as often as possible. These
strategies provide students with the tools to identify and solve problems, to assess and reflect upon results, and to synthesize and revise strategies for future problem-solving tasks.

- Learning tasks are AUTHENTIC, providing opportunities for all students to find connectivity between what they are learning and how that learning can help them better understand and deal with personal experiences and concerns. If the student has difficulty identifying such connectivity, the teacher acts as facilitator in unmasking such connections.

- ASSESSMENT (the test for validity) of teaching CCT learning tasks require that students produce QUALITY END PRODUCTS which are displayed, shared, and/or assessed not only by the teacher but, more importantly, by their peers and, if possible, by a GENERAL AUDIENCE outside the school building's walls. Such assessment experiences discourage the routine use of multiple-choice and objective testing. Instead, students are encouraged to create end-products which require the use of CCT and multiple intelligence skills and that are created with an AUTHENTIC PURPOSE and AUDIENCE in mind.

To more fully discuss the aforementioned pedagogical dynamics, the following chapters will examine issues pertinent to the prioritizing of teaching CCT in the classroom:
CHAPTER 2 reviews the author's answer to the question, "How Does the Teacher Know?"

CHAPTERS 3 and 4 define and examine the implications and impact of CRITICAL and CREATIVE THINKING (CCT) on teachers and students and also examines the relationship between Multiple Intelligences (MI), the Emotional Quotient (EQ), and CCT.

CHAPTER 5 focuses on the role of writing in teaching CCT skills "across the curriculum" and that of the writing process in promoting mastery of CCT strategies.

CHAPTER 6 is the story of one of my 7th grader's poignant experiences in language arts during this past school year.

APPENDIX I identifies problems and possible strategies associated with the implementation of CCT learning tasks, and the inclusion of authentic purposes, tasks, and audiences.

APPENDIX II provides sample reference materials from her MIDDLE SCHOOL X LANGUAGE ARTS TEACHER'S RESOURCE BOOK.

APPENDIX III is the opening chapter and rationale of the author's MIDDLE SCHOOL X LANGUAGE ARTS LANGUAGE ARTS CURRICULUM OVERVIEW.
Both MSX LANGUAGE ARTS CURRICULUM OVERVIEW and MSX LANGUAGE ARTS TEACHER'S RESOURCE BOOK are published independently of this thesis and are on file in the CCT Department at UMASS Boston.
CHAPTER 2

HOW DOES THIS TEACHER KNOW?
REFLECTING ON PURPOSE, AUDIENCE, VALIDITY, AND AUTHENTICITY

Have you ever wanted to know whether the answers to WHAT, HOW, or WHY you were teaching the things you were, were VALID? I have.

How many teachers work in schools where a curriculum is handed to them, and they are depressed because they are told to "cover" the material listed in the guide? They question the validity of the curriculum they are forced to teach. Why?

How many other teachers "wing it" while teaching? Lacking quality texts and/or other resources, these teacher might feel that it is impossible to deliver a quality program for their students, yet they probably exonerate themselves for not being able to teach a valid curriculum because of their poorer resources.

Fortunately, I have had the opportunity and ample resources to design a curriculum which I feel is valid and best meets the needs of my students. However, after further reflective thought and observation, I feel that I probably could offer my students the VALID "heart" of my curriculum even if I
taught in a different school or in environments similar to the ones described above.

How? By focusing on both what I as a teacher KNOW as being true after years of "testing" in my classroom the latest pedagogical theories by questioning and responding to what I, as a parent, KNOW is VALID or true about what I want my sons to KNOW -- VALID meaning "having REAL OR AUTHENTIC worth." What my husband and I value or wish for our sons to learn in language arts most likely mirrors that which my students' parents wish their sons TO LEARN or KNOW as well. I base such an assumption on the thousands of conversations which I have had with parents over the years.

As a teacher, I concur with Arthur L. Costa that there are teacher behaviors -- QUESTIONING, STRUCTURING, RESPONDING, and MODELING -- which do enhance student thinking in the classroom (Costa, 1986). His research reiterates much that many talented teachers already know and practice in their classroom.

When teachers value QUESTIONING or INQUIRY, students are helped in collecting and recollecting information. A teacher's questions can help students process information into meaningful relationships, enabling them to apply their understanding of these relationships to different or novel situations.
When teachers STRUCTURE their classrooms in flexible constructs for individual, small-group, and total-group dynamics -- and manages well the resources of time, energy, space, and materials which improve the thinking environment-- then students will perceive thinking as a legitimate and valued activity.

When teachers RESPOND verbally, physically, or in writing to students in ways that extend a student's awareness and time spent thinking about problems or issues, then the student learns to value the thinking process and the strategies that are modeled by the teacher.

All of the three previous behaviors inherently are expressed when teachers MODEL "desirable intellectual behaviors in the day-to-day problems and strategies of the classroom and school" (Costa, 125).

From the point of view as a parent, on the other hand, I and other parents want our sons engaged in learning tasks which ask them to THINK and to use strategies needed to solve PROBLEMS or TASKS of interest BOTH to them and the society in which they live.

Thus as both an educator and parent, I feel that schools should teach our children and model SKILLS that will enable them to live independently in the REAL or AUTHENTIC WORLD outside our school buildings. I personally want my two sons to be able to live independently of their parents when they
are adults, for them to have jobs that will give them personal satisfaction and provide an income large enough that they, too, can have and support families if they choose to do so.

I also want them to practice tolerance and to feel confident that they can work in cooperation with others to solve new problems which society may have not confronted before.

What kind of classroom environment encourages such a dynamic? To reference Strickland and Strickland, a TRANSACTIONAL one (ENGLISH JOURNAL, FEB, 1996). Such a classroom is student-centered. Learning tasks are often presented in thematic frameworks, where the teacher is seen as a facilitator and not a dispenser of knowledge, and where students are part of the process when identifying problems and strategies to solve them, and where students help establish the standards or rubrics by which their end-products will be assessed.

So, again how do I, the teacher, KNOW?

Regardless of the quality of the atmosphere in which teachers teach, I feel confident that many of my worries are or have been theirs. I had come to a time in my life that I wanted to KNOW that I can teach my students HOW to learn regardless of the environment in which I teach.

I also wanted to reflect upon my extensive readings, classroom experiences, and parental concerns to create a curri-
culum which fostered the acquisition of CCT skills by my students.

In order to KNOW I applied the knowledge and insights that I had gained from the interdisciplinary courses I was taking as a graduate student in the CCT program at UMASS Boston to the learning tasks I created for my students. Each semester in the CCT program provided me with one new interdisciplinary framework -- be it critical thinking, creative thinking, cognitive psychology, foundations of philosophical thought, etc. -- to examine how CCT could impact my classroom and the way in which I taught and structured learning tasks.

To begin, I QUESTIONED or used the CCT skill of INQUIRY to reexamine WHY I thought, acted, voiced aloud, and taught the way I did. No longer would I accept the premise that if a specific method or exercise in instruction worked well enough for me in the past or when I was a young student, then it must be good enough for my students today.

Instead, I acknowledged that I had to prioritize the immense amount of material that could be taught within a middle school language arts curriculum. Although exceptionally well organized, I realized that students can be motivated to enter into the learning process to a limited degree -- or so I thought.

I continued to question. In particular I asked, "What do I as a parent want MY sons to learn in language arts in the 7th
and 8th grade?" I arrived at some surprisingly complex conclusions.

The reader of this thesis might ask, "SO WHAT, WHO CARES ABOUT YOUR SONS?"

I do, and in a similar manner so do the parents of the boys I teach care about and wish similar futures for their sons. If I as a teacher can establish a personal connection between WHAT I want for my sons, what others want for their sons, and what I am teaching, then I am using critical and creative thinking strategies to answer the question, "HOW DO I KNOW that what I teach is valid."

For something to be deemed VALID, it must have REAL and AUTHENTIC VALUE to someone (Beane, 1993, 6). When I put myself in the role of parent, it was very easy for me to determine what I wished my sons to learn: I wanted them to become outstanding readers, writers, speakers, and thinkers! If I could create and teach a curriculum which could PROVE that my students had become better readers, writers, speakers, listeners, and thinkers, had I not also proven that I KNOW -- WHAT IS VALID?

I next asked, "What would the teacher have to do to ensure that students became proficient in these areas?"

The answers came fairly quickly: The teacher would have to have students PRACTICE a lot of quality reading, writing,
speaking, and thinking with an objective, general audience judging (assessing) that the students had improved.

"How could a teacher increased the chances of that happening for EVERY student?"

First, based on my own readings, observations, and past experiences motivating students, I knew that I would have to put MORE VALUE on the STUDENT'S DOING and PRACTICING -- in other words, on the PROCESS -- than on any one test or quiz that I might use as an assessment strategy.

Secondly, I felt that setting up learning tasks as a series of CHALLENGES -- rather than as assignments directed upon them by the teacher -- might appeal to the competitive spirit I have found in adolescent boys. However, the challenges (learning tasks) had to have rules or standards (rubrics) which allowed for everyone to be judged a "winner" if they satisfied the standards and/or practiced time established in the rubric. Only a few would be interested in accepting the challenges if only a few COULD win or feel that they had equal access to success.

When designing a specific learning task, the standards were such that the boys' skill levels in reading/writing/speaking/listening/and/or thinking would improve, but the standards were not so high that the students anticipated failure. Whenever possible, I invited my students to help set up the "rules" or performance standards expected to be
experienced by them during the learning task. In other words, the implicit message was, "If you work hard enough, you can "win" at some level of the game and improve your skills at the same time." Later in this thesis, the reader might recognize similarities between "games" found in a student-centered classroom and those built into popular video games (SEE Chapter 4, Section C).

More specifically, however, a student-centered classroom acknowledges and validates that we all learn or acquire knowledge in different ways or by using different pathways. Chapter 4, Section C will discuss at greater length information on multiple intelligences (MI) and the role they play in learning. If we educators understand, however, that students learn in different ways, then we also must validate and encourage the use of alternative modes of expression reflecting a student's strengths in using specific multiple intelligences other than the ones traditionally valued by schools. Ultimately, we teachers need to develop INTEGRATED curriculum learning tasks which develop and strengthen proficiencies in all of the seven pathways of MI.

Third, GRADING or EVALUATION is a reality in our classrooms. Instead of using those terms which seem to infer a methodology for identifying what the student DOES NOT KNOW, many educators now use the term ASSESSMENT, hoping to focus on the teacher, student, and "general audience" identifying what the student DOES KNOW or proves proficiency in.
In my school we teachers use varied ways of assessing student performance in our classroom. However, ultimately we must translate our assessment systems into numerical grades. Personally, I have high standards for my students. A grade of "C" or a 75% represents an average, grade-level performance by a student; it is a grade that should not be seen as "bad" but rather as typical of students at that particular grade level. My students come to realize that a grade on a piece of paper is not valued that highly by me. Instead, they realize that they should value more the reactions of their peers (and other authentic audiences) to the quality of their written and spoken words and to their final end-products which they share daily with each other.

Since I teach all of the 8th grade classes in language arts, students do not worry about some students having another eighth grade teacher who might "grade" more easily. Yes, I do have eighth graders worrying about their G.P.A.'s! Eventually, they come to appreciate the consistency in my assessment standards and most students realize that they can earn an above-average grade of B, although fewer can show proof of performance at a superior or "A" level. I emphasize the word "performance" because it implies "visible proof" or evidence -- something adolescent boys eagerly can identify, evaluate, and discuss.

At the middle school level, if a student actively participates in all class activities in a positive manner and
 completes the homework tasks as suggested, then he will receive an average grade of "C" or a "3" or a "check-mark," etc., depending on the rubric agreed upon. On the other hand, if a student proves -- usually by keeping a written portfolio or record of completed tasks -- that the quality of his thinking and performance tasks is above average or superior, then his grade in turn is higher than a "C."

At the end of major learning experiences, I have students fill out self-evaluation sheets, as well as have them evaluated each other's work according to a specific written rubric that is printed up and included in the process-record portfolio. Ultimately, I determine the grade earned but afford students ample opportunity to learn **HOW TO EVALUATE** -- the **HIGHEST** level of **KNOWING** in Bloom's Taxonomy, so that students will develop their ability to analyze, reflect, make decisions, and apply what they judge as strengths and weaknesses to what they do during their own learning processes.

Most experienced teachers have developed a grading system which works well for them in motivating their students and in keeping with the grading system mandated by their school policy. Nancy Atwell, well-known author and language arts teacher of middle school students, created a grading system within her classroom which she felt reflected the reading and writing workshop atmospheres created in her program of studies wherein students met for ten (10) periods
a week verses the traditional 5-7, found in most language arts classrooms at the middle school level (Atwell, 1987).

Although my curriculum tasks are more specifically defined than Atwell's, I believe that the students should have input into how they are evaluated. By involving students in the process of defining and establishing the standards (rubrics) of the learning task, the teacher is affording further opportunities for students to increase personal investment and to make decisions, evaluate, and synthesis higher order or CCT skills.

While Atwell's class primarily focus on students reading and writing independently with guidance from the teacher and brief whole-class input near the end of class time, I have found it more valid for my classroom environment to mirror ALL the communication skills used in the REAL world outside of school. Such WHOLE LANGUAGE skills today are often practiced by students engaging in learning activities that integrate READING (research materials from journals, books, and on-line resources); WRITING (persuasion, exposition); public SPEAKING; LISTENING (assessing other's written and spoken speeches and applying strategies learned to their own writings); and THINKING (all of the above are dependent upon this skill).

An example of an elaborate WHOLE LANGUAGE activity follows: Each year all of my 8th grade students (approximately 100) write and deliver a five-minute persuasive speech to a large
audience. Although I want students to improve their ability to show competency in expository writing and research skills, I do tell them, "Today, you will learn how to write and document a research paper." If I did, I would only hear groans.

Instead, 8th grade students are eager to participate in an activity in which as 7th graders they served as judges as part of a larger "general audience which helped evaluate the preliminary and final rounds of our spring Eighth Grade Original Oratory Festival. As 8th graders each write, practice, and deliver a 5-minute speech while standing, using a microphone in front of a small general audience of classmates, schoolmates, parents, and guests.

If they are judged a daily "better" speaker, then they have a chance at being a finalist who will speak in the high school gym in front of an audience of over 200 students, high school faculty judges, and innumerable guests.

Yes, they are nervous, but they have practiced their public speaking skills by using a microphone frequently in class, and they realize that all of the thinking, writing, speaking, and sharing that they have been practicing throughout the year has prepared each of them to do the best that he is capable of doing. They know that their peers can "see" how much each of them has improved since the beginning of the year. Their goal: For EACH one of them to write the best speech possible for HIM and to give his personal best performance.
At the end of the year when students evaluate their learning and the course, over 95% of them continually write that the month that they spent learning how to select an issue, research it, draft, revise, publish, and publicly perform their speech was THE most challenging and confidence-building learning activity that they had ever done in school.

One of the major reasons why I feel the students were able to acknowledge specifically what that learning experience had done for them was that they had established from the beginning a separate 3-ring binder on the entire learning process. We modeled and identified the kinds of writing and thinking processes that we were practicing; we were researching, recording, and establishing VISIBLE and VALID PROOF that the CRITICAL and CREATIVE THINKING skill that were being modeled and learned in the classroom were AUTHENTIC -- that they were skills needed to communicate ideas effectively with an authentic/real general audience.

These students had found that the many whole language learning tasks they had to complete as part of the original oratory experience were not only challenging and fun, but that they had the confidence to use the CCT strategies which had been valued in class throughout the year to solve the many problems they encountered. They appreciated both the TIME given them to solve problems, revise, and polish; and that there would be several forms of ASSESSMENT, focusing on specific sets of skills. Each student felt he could show
general COMPETENCY in all facets of the whole language experience and PROFICIENCY in specific areas. Some students performed better in the oral delivery of their speech; others in the final written product; still others in the time, effort, and quality of the work completed and recorded within the portfolios as they experienced the month-long process.

Why do I share this learning activity with the reader? For many reasons, foremost because of the number of CCT skills that are built into this month-long learning activity. For another, the students perceive this task -- the ability to get up in front of a large audience and persuade others to agree with their informed conclusions -- as a cluster of valuable and VALID skills that they can use in REAL life outside of school. Third, the boys agree that it takes courage, hard work, and strategy to write, practice, and deliver a speech that is interesting to the speaker and also to the audience. Fourth, each student experiences a great deal of personal investment in the process of the learning activity. He gets to choose his topic; he controls the quality of both the WRITTEN and SPOKEN end-product (it is later published as well). Even though in class time his teacher and classmates will model and share ways in which he can improve its quality, he knows that he has been given ENOUGH TIME to revise and improve his end-product; and that he will be given MORE CREDIT for participating in the PROCESS if he keeps a WRITTEN RECORD of all his RESEARCH, DRAFTING, REVISIONS, etc.
In summary, I have found that if the TEACHER places more value on the student's ENGAGEMENT in the LEARNING PROCESS and can provide FAIR ways to document a student's engagement or participation in the process, then more -- if not ALL-- of the students in the class tend to be more highly motivated to engage in the learning task assigned. When a student KNOWS that hard work, accompanied by expert instruction, will lead to an improved end-product -- and that the engagement in the process is valued more highly -- then the student is more highly motivated to accept the challenge. Not surprisingly, I have found that every student who can document significant engagement in the process also produces a QUALITY END PRODUCT(S) of a level of quality far superior to that if I had said in more traditional teaching fashion, "In four weeks, you will turn in a research paper that you also will read aloud to an audience."

And FINALLY, a task, a curriculum, or a teacher's philosophy of teaching is VALID if the AUDIENCE or people the teacher instructs VALUE the end-products created and find that they have worth in the REAL or AUTHENTIC world outside the school building walls.

My students and their audiences value the quality and personal investment evident in my students' speeches, their letters and editorials to real people, their displays of writings and MI projects within the classroom and school buildings, and their willingness to compete in writing and
public speech contests, not because they feel that they will win or lose but because they are willing to deliver their best, personal "performance" to date and to practice diligently to achieve that specific level of performance. Understandably, most educational research measures what students KNOW on the score they receive on a standardized test. In particular, there have been many studies on the relationship between achievement in basic skills and both the TIME spent engaged in learning (Borg, 1980) and the time spent practicing thinking strategies (Costa, 1984).

However, I question whether the manner in which the basic skills are tested prove proficiency in using skills in ways valued by the REAL WORLD. I think that there comes a time when a parent and a teacher demand to see how the student's skills perform in real-life venues. Can our students and children talk coherently with others? Can they listen thoughtfully and respond in kind? Can they read newspapers, books, view TV, movies, or video games and understand their content? their biases? whether the content is based on fact and opinion? If our students embarrass themselves and feel uncomfortable dealing with "whole language" experiences in the real world, then what validity do their standardized test scores hold if high? Is not the MOST AUTHENTIC test of our schools' successes or failures based on our students' ability to communicate and participate in the positive activities of the real world?
It would be foolish of me to refute the validity of standardized testing given the history of their expansive role in quantitative research, but there is something dreadfully askew when educators keep trying to come up with a standardized test that measures a student's success in the classroom and student's keep failing to measure up.

In truth, the classroom is NOT the REAL WORLD, and whether my sons score highly on a standardized test will not necessarily mirror their ability to find personal success in the real world. I want my sons and students to be able to leave their classrooms at some appropriate time and to be able to use the skills that they have acquired and practiced in the classroom in ways that benefit them and the society in which they live.

So, is it not more appropriate to test frequently their level of competency by having them share or perform their learning with objective audiences from the real world? I think such evaluation opportunities will show parents and students how well the latter are learning to APPLY and SYNTHESIZE what content and skills they are learning in school to tasks or end-products that are valued by REAL world audiences.

Ultimately, this thesis is one TEACHER's attempt at proving that the TEACHER CAN KNOW that her language arts curriculum (and for other teachers, their curriculums) is VALID if concrete end-products designed with a specific AUTHENTIC PURPOSE and AUDIENCE in mind are valued by these REAL AUDIENCES in the REAL WORLD. Thus, this thesis will promote
that all curricula, in particular language arts, should PRIORITIZE the teaching of CRITICAL AND CREATIVE THINKING PROCESS SKILLS because these are the skills which provide students with the problem-solving strategies needed to INCREASE the amount of TIME, the level of PERSONAL INVESTMENT, as well as IMPROVED QUALITY of end-products created by and found useful by students. End-products created by using CCT strategies hold MORE VALIDITY for students, parents, and the society in which they live, than multiple-choice or standardized tests because CCT end-products are judged as having more VALUE or WORTH in the REAL, AUTHENTIC everyday WORLD outside school buildings.

Example of authentic end products include, but are not limited to the following:

- PUBLISHED writings and class booklets of any kind.
- PUBLIC SPEAKING experiences inside and outside the school community.
- DISPLAYED WRITINGS and/or accompanied ARTISTIC interpretations.
- (an infinite number of) INTEGRATED products reflecting a student's interest and proficiencies in any of the Seven MULTIPLE INTELLIGENCIES (SEE Chapter 4). For example, the creation of a computer game, accompanied by a written explanation of purpose, process, and evaluation of task completed.
CHAPTER 3

WHY TEACHERS NEED TO BE CRITICAL AND CREATIVE THINKERS WHO MODEL CCT STRATEGIES

Curriculum pioneers, be they theorists or practitioners such as the classroom teacher, face daunting roadblocks as they try to design curricula which provide students with opportunities to acquire mastery of the CCT STRATEGIES or heuristics NEEDED in the 21st century -- a century where "facts" will be ephemeral at best; and most likely, those with the cognitive and affective skills adept at sorting, sifting, and making sense of a seemingly incomprehensible amount of data will feel competent to participate in improving the quality of life for themselves and others in the world in which they live.

Without question, SCHOOL REFORM is one of the education buzzwords of the 1990's. Is reform needed? Absolutely -- but not because there is a single better curriculum guide "out there" to access. Rather, reform is needed in the way educators themselves think, in the way they teach material, and in the way too many adhere to the teaching of STATIC curricula which fail to make connections between what is being taught and what needs to be taught to deal with the REAL or AUTHENTIC world "out there." As stated before, students who are taught in classroom which encourage
participation in the identification and solving of issues or problems important to them (and their communities) are more likely to perceive those experiences as VALID and AUTHENTIC, increasing the student's motivation to participate more actively in such problem solving experiences.

Too often CURRICULUM GUIDES are used as static icons, vehicles for validating the status quo; instead, they should have elements of FLEXIBILITY and OPEN-MINDEDNESS built into them so that teachers feel freer to access materials or themes from the REAL WORLD when events occur of importance in their students' life.

For example, a few weeks ago, a gregarious young boy named Albert, who had completed the 7th grade in my school, died in a tragic accident. All who knew him were devastated by his death, especially his parents, who were well known within the school community. This fall I feel it is appropriate that I introduce the themes of "grief" and "loss" into a thematic unit which usually focuses on "transitions," in general. Yes, GRIEF and LOSS can be perceived as stages of transition, but if I was not a critical thinker, I would not brainstorm and investigate ways in which the REAL WORLD can be brought into my classroom, so that my students can make connections between what problems they deal with in life and those they deal with in school. I foresee that my students will be motivated to write with greater emotion and personal feeling.
because we all can draw upon our personal feelings of loss concerning Albert.

If I were a slave to the parameters of a static written curriculum guide, my students and I would have lost an opportunity to personalize the universal themes of grief and loss. A similar argument could be said for bringing into the classroom any highly charged event or topic which dominates the news locally or world wide. Thus, curriculum should be designed with flexibility and open-mindedness; AUTHENTICITY increases everyone's motivation to become involved in the learning process.

AUTHENTICITY also ensures that students learn about the multiplicity of cultures which exist in American society and the world at large. I still remember the look of egocentric disbelief on my 8th graders' faces when we were discussing the percentage of the world's population that was white in comparison with other races and ethnic groups. By introducing and practicing the CCT skill of open-mindedness and the seeking out of multiple points of view in order to make more valid, informed decisions, a teacher also fosters a student's awareness and appreciation of cultural differences and similarities, increasing the student's understanding of the universality of emotions shared by people as s/he reads about and investigates different literatures, religions, customs, traditions, and beliefs.
In particular, the teacher can promote the use of integrated and MULTIPLE INTELLIGENCE (MI) learning tasks as students investigate cultures and share their findings with authentic audiences.

Such learning tasks ask students to engage in innumerable CCT strategies which promote the development of higher order thinking: questioning, researching; identifying underlying issues or problems, making decisions, planning, drawing conclusions, etc.

By now, it must seem obvious that in order to teach CCT, teachers first must become competent critical and creative thinkers themselves, so that they can create and, more importantly, implement valid curricula which meet the needs of their students today and which will prepare these students for the world of tomorrow -- a world very different from that in which their teachers earned diplomas.

School systems today can foster critical and creative thinking environments if their teachers are empowered to be ongoing learners and thinkers; if their teachers are encouraged to question, research, analyze, apply, assess, and revise varied learning theories and strategies; and if the most valued assessment strategies are AUTHENTIC, in that authentic means "real" and useful in dealing with issues of importance in our everyday lives.
In other words, every one concerned with the quality of education today in America -- parents, teachers, administrators, employers, employees, and all students -- young and old -- need to develop INQUIRY SKILLS and ask themselves, "What do we need TO KNOW and WHY? What should we know how to do today and in the future? What kinds of learning processes will help students acquire this knowledge? What teaching strategies better ensure that every student learns to be an OUTSTANDING COMMUNICATOR?

Teachers of CRITICAL and CREATIVE THINKING SKILLS can make a difference and help model new teaching strategies for those less practiced in using such aforementioned heuristics.
CHAPTER 4

CRITICAL AND CREATIVE THINKING: THEORY AND PRACTICE

A. WHAT IS CRITICAL THINKING? WHAT CHARACTERISTICS AND BEHAVIORS DO CRITICAL AND CREATIVE THINKERS EXHIBIT?

Over the past four years while a part-time CCT graduate student at UMASS Boston and a full-time teacher at a Greater Boston, independent middle school, I immersed myself in the study, metacognitive reflection, and application of the many behaviors, skills, and heuristics/strategies that innumerable experts in the field of CRITICAL and CREATIVE THINKING have attributed to the CCT process, itself.

For the purpose of reference clarification in this thesis, I now offer my working definition of CRITICAL and CREATIVE THINKING:

CRITICAL and CREATIVE THINKING IS the engagement in a RECURSIVE PROCESS wherein one makes an INFORMED DECISION(S) based on the use of varied strategies which might include, but are not limited to, one's exhibiting evidence of the following behaviors:

- being able to IDENTIFY the underlying or core PROBLEM or TASK to be solved or analyzed. In some instances, the "understanding of the problem" might also mean the "understanding of the purpose" of a task.
- showing a willingness to QUESTION the ramifications of the problem addressed; to MANIPULATE through BRAINSTORMING, REFLECTION, INQUIRY (What if...? What might...? etc.), and METAPHOR (seeing similarities in the seemingly dissimilar) myriad facets of the problem addressed, so that one might understand the dimensions of the "problem" more fully.

- showing a willingness and patience to RESEARCH or gather pertinent data (from facts, statistics, narratives, written analyses, expert opinion, textual references, etc.), from as many varied sources or MULTIPLE POINTS OF VIEW pertinent to the problem or task in question; and to be able to distinguish FACT from OPINION, truth from untruth.

- entering the problem-solving process with an OPEN-MIND, willing to entertain divergent thoughts as well as convergent ones; also, admitting to any prior biases and hoping to prevent such biases from invalidating the value of the data collected.

- analyzing METACOGNITIVELY the DATA collected; MAKING INFERENCES; DRAWING CONCLUSIONS; MAKING DECISIONS and/or PLANS; PREDICTING OUTCOMES; IMPLEMENTING; TESTING; EVALUATING; and REVISING or MODIFYING plan(s) as needed.
B. THE ROLE OF CREATIVITY IN THE CRITICAL AND CREATIVE THINKER.

Creative people are adept at using metaphor and manipulating the parameters of a problem. If they cannot solve or resolve a problem or task by use of one strategy, they might rely on their skills of FLEXIBILITY, ELABORATION, and ORIGINALITY to access other strategies which might help them solve the problem.

"Creative people tend to be (or have):
- Aware of their own creativeness
- Original
- Independent
- Risk taking
- Energetic
- Curious
- Sense of Humor
- Attracted to complexity and novelty"

(Davis, 1992, 69)

Understandably, an effective critical thinker needs to be a creative thinker as well. Ironically, however, one can be creative and NOT be a critical thinker. Why? Because critical thinkers not only are creative as they generate multiple ideas and solutions, but they also access appropriate strategies, exhibiting the self-discipline needed to make valid inferences and draw valid conclusions.

Critical thinkers make INFORMED decisions based on the context of the problem addressed. Some creative thinkers,
enamored by a world of whimsy, might not be able to temper their reasoning strategies or develop thoughtful plans which predict accurate or appropriate outcomes.

C. CCT AND THE IMPLICATIONS OF RESEARCH ON MULTIPLE INTELLIGENCES.

Over the past twenty years, significant research in the area of learning continues to focus on the strategies people use both to acquire knowledge and to interact with others in the world around them. Of special interest is the research on MULTIPLE INTELLIGENCES (MI) conducted by Howard Gardener and others who categorize such learning strategies into SEVEN (MULTIPLE) INTELLIGENCES or PATHWAYS OF LEARNING. These pathways have been identified and named as follows:

THE SEVEN MULTIPLE INTELLIGENCES OR PATHWAYS TO LEARNING:

- Verbal/linguistic
- Mathematical/logical
- Visual/Spatial
- Bodily/Kinesthetic
- Musical/Rhythmic
- Interpersonal
- Intrapersonal

(Lazear, 1991, 134)

These researchers suggest that ALL learning strategies can be divided metaphorically into "bundled sets" associated with a particular skill or talent area, calling them as a whole, the
SEVEN INTELLIGENCES or PATHWAYS to LEARNING. Each pathway denotes a "bundle" of interrelated strategies that a person uses to manipulate and process sensory data into the COGNITIVE and AFFECTIVE domains of his/her brain.

With further analysis, however, one can compare the NAMING of these "bundles" or pathways with the innumerable strategies that CRITICAL and CREATIVE THINKERS use during the thinking process. Thus, CRITICAL and CREATIVE THINKERS have a greater chance of efficiently processing input, solving problems, and developing new ideas because they access or use more often, more of these seven INTELLIGENCES than those without CCT skills.

Historically, students have been taught new information in schools chiefly by READING textbooks (linguistic; logical), by muddling through SOME WRITING tasks (kinesthetic; linguistic; logical), and the completion of MATHEMATICAL worksheets (logical; spatial; kinesthetic).

Meanwhile, outside of school, too many students spend their free time WATCHING TV (visual; verbal; musical), PLAYING VIDEO GAMES (SEE below), and LISTENING to their CD PLAYERS (musical/rhythmic) rather than reading books for pleasure of increasingly difficulty and scope of information (linguistic; logical).

As the popular, interactive video games so blatantly spotlight, people who are physically DOING are more
fully engaged in learning because they are accessing more of the MULTIPLE intelligences or pathways they are compelled to use in order to "play" or "participate in the process" of the game.

Unfortunately, those concerned with educating our children want them to think, read, write, and communicate about issues of substance rather than about the exploits of a video game's action heroes. Regrettably, however, our youth will NOT do so unless schools find ways to increase the amount of time students think critically and creatively, nor until schools capitalize on students' practiced and proficient use of some of the multiple intelligences accessed in video games and during their non-school hours -- intelligences that schools have not validated to any great extent in the past.

To illustrate more fully, let us examine the dynamic of playing video games. People love to learn to "play" the game and repeat that process over and over because the more they play, the more proficient they become, resulting in increased scores and bragging rights among their video game cohorts. In other words, video game aficionados understand that "PRACTICE MAKES BETTER."

As they practice/play, video-game students use "bundles of strategies" to advance to higher levels of difficulty and expertise, learning and retaining more strategies for "solving the problems" of the game.
WHY do they learn to become proficient learners? First, because they are motivated to practice more often because playing the game or the LEARNING PROCESS IS FUN. Why? Because the design of the game is interactive (hands-on)--player, machine, and software program constantly interact with each of the other components. Secondly, while playing, s/he PRACTICES the following MULTIPLE INTELLIGENCES or CCT "bundles" of strategies:

- **physical/kinesthetic** The excited player pushes buttons and joy sticks, manipulating the figures and action on the video screen, learning cause and effect; striving for immediate feedback, hopefully earning a reward (more points).

- **mathematical/logical** The player must outmaneuver opponents and plan strategies to defeat obstacles met during the hero's battles, quest, or travels.

- **musical/rhythmic** The drama of the play is intensified by strident sound effects used to mark a warning, a killing blow, or a tragic error in judgment.

- **visual/spatial** The player is mesmerized by a multi-colored, frenetic visual tableau used to dramatize (and
stereotype) good and evil in characters, actions, settings, and outcomes of the journey, quest, or battle.

- intrapersonal

Earning points, the player is "rewarded" or "punished," based on his/her timing and pushing of a button. Who really knows how the video game player INTERNALIZES and REFLECTS upon the glorification of battle, weaponry, and humiliating defeat?

- interpersonal

Who really knows how the video game player will apply what s/he "learns" about goals, rewards, ethical behavior, or "conflict resolution" between individuals or groups?

- linguistic/verbal

The player BRIEFLY reads the directions on the screen, the score, and the occasional exclamatory phrase.

IS IT REALLY SURPRISING that many students prefer to play a video game rather than to read a book? Educators can learn from the creators of video games: if we want students to be excited about learning in the classroom, then we need
to make the learning process more interesting and "fun" by having students more actively involved in the process. In other words, we need to provide them with learning tasks which COMPEL them to use their MULTIPLE INTELLIGENCES or "bundles" of CCT strategies. CURRICULUM REFORM at the MIDDLE SCHOOL level (Beane, 1995) promotes the development of thematic, INTEGRATED learning tasks which most likely will require students to use often most of these multiple intelligences or CCT "bundles" of strategies.

Unfortunately, some educators get defensive when hearing references to multiple intelligences. Some feel that proponents are recommending that teachers become entertainers who should pull out a MULTIMEDIA bag of tricks and WOW their students. Others misinterpret the importance of MI theory by suggesting that more traditional curricula priorities will be sacrificed on the altar of "light weight" arts-and-crafts components.

NOT SO! By now, every educator SHOULD understand either through personal experience an/or the reading of current pedagogical research that we learn or retain knowledge better BY DOING or PRACTICING (engaging in the process). We become better readers and better writers and better public speakers when we PRACTICE DOING each of these skills! Too many classrooms still find students sitting, listening, and taking notes on what others have done or thought.
We need to design the learning of concepts around specific, concrete tasks that will SHOW students the concept in action as THEY try to "solve" the problem -- be it writing a 5-minute persuasive speech to be delivered in front of an audience of fifty or DOING a science lab experiment which asks students to explain, in writing and diagrams, WHY the WHAT happens!

Some teachers may exclaim, "Yes, MY students are assigned and complete such tasks!"

YES? BUT--

Can these students IDENTIFY and REPEAT the process-strategy "steps" they used to complete such tasks? (Probably not!)

Did they PRODUCE OUTSTANDING END-PRODUCTS with respect to each student's ability? (Probably not!)

Did their parent's HELP them and/or DO the project with them? (Hopefully not! Who's the student??)

In reality, too many students wait until a few days before a major deadline arrives to begin to complete a long-term, significant assignment.

Fortunately, educators who value and use CCT skills -- and who understand that students learn by PRACTICING CCT STRATEGIES that lead to the repetition of successful outcomes -- DO NOT ASSIGN learning tasks. INSTEAD, they provide the
TIME NEEDED to MODEL or SHOW HOW a PROCESS can be used to solve the underlying problem(s) of the task. Committed participation in such processes usually increases student (not parent!) production of OUTSTANDING END-PRODUCTS.

To INCREASE student MOTIVATION and to PROVE that teachers really do VALUE THE PROCESS, teachers and students, TOGETHER, also need to establish assessment RUBRICS (standards) which assign MORE VALUE to the PROCESS rather than to the END-PRODUCT.

For IF a student shows evidence that s/he participated in the RECURSIVE LEARNING PROCESS (using CCT strategies), THEN the QUALITY of the end-product will be far greater for larger numbers of students undertaking the assigned task.

The word "OUTSTANDING" is used to characterize the desired level of proficiency expected in a student's end-product because SCHOOLS OF EXCELLENCE should have high STANDARDS and EXPECTATIONS, believing that ALL STUDENTS can MAXIMIZE their INDIVIDUAL abilities by the REPEATED PRACTICE of CCT STRATEGIES/PROCESSES.

If students understand and practice the HOW often, then their INDIVIDUAL end-products will be OUTSTANDING in comparison to any end-products they would have produced when NOT participating in CCT processes. Most PARENTS would be SATISFIED that their children were obtaining an EXCELLENT education IF they repeatedly saw evidence that their
children were immersed in the DOING of PROCESS "STEPS" in order to complete -- ON THEIR OWN -- an authentic learning task. Such tasks would COMPEL students to use many MI/CCT skills.

CRITICAL and CREATIVE THINKERS immerse themselves in a PROCESS of RESEARCH, OBSERVATION, EXPERIMENTATION, DECISION MAKING, SHARING, AND REVISION. One CANNOT be a critical and creative thinker without DOING or PRACTICING THE PROCESS.

Students, however, are NOT learning CCT strategies if they are in CLASSES which ONLY have them listen to lectures, take notes, and regurgitate back on a test that which someone else has said or done (Goodland, 1983).

Consequently, teachers of CCT skills will use TEXTBOOKS as RESOURCES, and will INTEGRATE the material found in them with resources from other "content" disciplines (across the curriculum) -- as well as with resources found in the REAL WORLD -- in order to create learning tasks in which STUDENTS become immersed in a PROCESS of research, problem solving, and evaluation -- ideally "public" display/scrutiny of the students' understanding of the problem or task solved by using MULTIPLE "bundles" of CCT strategies.

The more INTEGRATED and AUTHENTIC the design of the task, the more likely that students will be compelled to access MULTIPLE INTELLIGENCES/CCT "bundles" of strategies in order to solve the problems inherent in the task. Such tasks will
provide students with PRACTICE TIME in "DOING," and will give them feedback from AUTHENTIC AUDIENCES that matter to the students involved.

D. EQ = EMOTIONAL QUOTIENT. FACT or FANCY?
More recently, interest in TWO of the MI pathways -- INTRAPERSONAL and INTERPERSONAL -- has made national headlines, the talk-show circuit, and the scuttlebutt in faculty rooms. The buzzword is EQ or the EMOTIONAL QUOTIENT (Daniel Goleman, 1995).

Yes, indeed, some researchers believe that when predicting one's chances for adult success -- defined as being a content, productive person in society -- one should not put as much emphasis on one's IQ or Intelligence Quotient, but instead one should allocate more value to one's EQ or Emotional Quotient!

It appears that those individuals surveyed who were better at accessing successful INTERPERSONAL strategies and INTRAPERSONAL ones -- inherent in METACOGNITIVE THINKING or the reflecting upon WHAT, HOW, and WHY they think the way they do -- are more likely to be judged when adults as the WINNERS in society; they being more able to interact well with others, handle stress and failure in more healthful ways, reflect and prioritize their daily schedules and goals, and access more readily the CCT and MI strategies needed to SOLVE REAL PROBLEMS in the REAL WORLD.
Once again, IF such a theory is sound -- and these claims seems to be validated in other literature focusing on the AFFECTIVE (emotional) realm of the brain -- THEN CURRICULUM REFORM should also recommend that learning tasks include a INTERPERSONAL and INTRAPERSONAL component which compel students to develop increased proficiency in accessing these two MULTIPLE INTELLIGENCES or CCT "bundles" of EQ strategies.

E. CCT/MI CURRICULUM REFORM AND THE REAL WORLD.

We educators cannot continue to ignore the realities of the world outside the classroom, -- a world of sophisticated computer machinery and interactive, multimedia (MULTIPLE INTELLIGENCE) software programs -- a world where students in the 21st Century WILL be reading and learning NOT FROM TEXTBOOKS, but from video screens with INTERACTIVE, MULTIPLE INTELLIGENCE, computer programs!

In such a future world of M.I. information, students who are CRITICAL and CREATIVE THINKERS will be best able to SIFT through the unlimited data available "on-line" on the "Information Highway." Only those with much-practice using CCT strategies will be able to analyze with any confidence the degree of reliability and the value of the information collected. Confronted with "computer "bulletin boards," will they be able to differentiate between fact and personal opinion? Will they know whether they are reading validated scientific research or conjecture?
Teachers of language arts/English, in particular, must reinforce the CCT strategies which most often help students comprehend and analyze reading materials regardless of whether they are reading literature, political essays, mathematical word problems, scientific journals, or statistical graphs.

When students are provided opportunities to be critical and creative thinkers, then they will be able to draw valid conclusions from their readings and apply their increased knowledge of the world in which they live and work.

F. THE REAL WORLD of AUTHENTIC LEARNING TASKS and AUTHENTIC AUDIENCES.

Over the last twenty-five years, much CURRICULUM REFORM has occurred at the MIDDLE SCHOOL level, reflecting the importance of AUTHENTICITY. As discussed in greater detail in the chapter included in APPENDIX III, learning tasks for middle schoolers should be centered around themes or a set of interrelated problems of personal concern to adolescents. Students should have a voice in the PURPOSE of a TASK, and a RUBRIC or a SET OF ASSESSMENT STANDARDS should be created and agreed upon BOTH by teacher and students BEFORE the beginning of the CCT process.

In particular, to ensure validity learning tasks should be AUTHENTIC or mirror "real world" problems/tasks as often as possible. They should reflect on how students view and need to interact with the real world around them. By designing
curricula with emphasis on AUTHENTIC tasks to be solved for AUTHENTIC AUDIENCES, teachers can expect an increase in the motivation and interest level of students because the latter are able to make personal connections with such tasks and better understand WHY they need to learn CCT strategies to help them solve such HIGHER ORDER THINKING problems.

Again, if a TASK is truly AUTHENTIC, then it reflects real-world issues or problems motivating the student to DO and THINK in more sophisticated ways than traditional in-school-only curriculum tasks which often focus too much on WHAT, instead of WHY; or on practice worksheets, INSTEAD of REAL PROBLEMS. Why would students be highly motivated to complete practice worksheets on writing compound and complex sentences, when they are apt to be much more interested in improving their thinking and writing skills if they had to convince a REAL AUTHENTIC AUDIENCE "out there" that their opinions are VALID, and might make a difference to those listening?

Students would be more likely to PROVE mastery of complex sentence structure if they had to express COMPLEX thoughts, for example, in written EDITORIALS and SHARE them with AUTHENTIC or REAL AUDIENCES that could include their --
- reading aloud to classmates, the entire school, and/or a community gathering, using a microphone;
- displaying a typed, polished draft on a community bulletin found in the school lobby, library, or community youth center;

- submitting a polished draft to a school or community newspaper, a magazine, or cable TV program.

Learning Tasks which promote REAL TASKS completed for REAL AUDIENCES -- those beyond that of a teacher or a grade -- FOSTER increased student involvement and the practice of CCT skills. In contrast, WORKSHEETS, MULTIPLE CHOICE and SHORT-ANSWER TESTS primarily ASSESS a student's knowledge of the WHAT questions and the less complex reasons for those asking WHY. Moreover, when we educators provide AUTHENTIC TASKS FOR AUTHENTIC AUDIENCES, our students are more likely to experience visible proof that the more often they participate in the writing and CCT processes, the better the quality of their end-products and their ability to access higher order, complex thinking strategies.

IN SUMMARY, given the far-reaching implications of MULTIPLE INTELLIGENCES and its inherent relationship with CRITICAL AND CREATIVE THINKING SKILLS in the solving of problems, curriculum reform should promote the designing of learning tasks which COMPEL students to think critically and creatively in ways that will make them proficient oral and written communicators, problem solvers, and inventors of new products and ideas. Regardless of the quality of the curriculum guides handed to us, or the reality of our
students needing to take standardized tests at the end of the year proving that we teachers have "covered" designated content, we educators still CAN provide students, on a regular basis, with AUTHENTIC learning experiences wherein they can learn to APPLY the content that we have "covered," and they can PRACTICE (BY DOING) the higher order thinking "strategy clusters" of the SEVEN PATHWAYS of LEARNING!
A. IS THERE ANY ONE BEST CCT INSTRUCTIONAL TOOL THAT EVERY TEACHER COULD USE TO PROMOTE THE LEARNING OF CCT SKILLS IN HIS/HER CLASSROOM?

YES, briefly HAVE STUDENTS WRITE DOWN DAILY ONTO PAPER what they think is being taught and learned.

IF A STUDENT is able to WRITE DOWN, so that someone else can understand what is being "said," THEN it is also probably true that the STUDENT WRITER comprehends or "KNOWS" only that which he or she has written with clarity of idea.

For example, if in math class the teacher has finished a unit on quadratic equations, and he asks his students to EXPLAIN by writing IN COMPLETE SENTENCES the REASONS WHY the equation is used, then whatever a student is able to put down onto paper reflects the degree of KNOWING that he or she is experiencing. If the student cannot explain -- by writing coherent sentences on paper -- the reasoning behind the question asked, then the student really does NOT understand the CONCEPT or HIGHER ORDER THINKING strategies needed to KNOW or understand about quadratic equations and their use.

Inherent in this example, is the ASSUMPTION that every teacher helps his or her students UNDERSTAND WHY concepts are
being taught. If the math teacher had asked that the students ONLY write down the formula for quadratic equations without asking them to explain WHY they are used, then the teacher would be losing an opportunity to promote higher order thinking in his or her students -- "higher order" meaning a level of knowledge "higher" than that of identification of "what." (SEE Bloom's Taxonomy of Knowledge, MIDDLE SCHOOL X LANGUAGE ARTS TEACHER'S RESOURCE BOOK, Section III).

What is more important for students TO KNOW? The WHAT or the WHY? Which question, when answered, will best help the student SYNTHESIZE and APPLY the mathematical concept in the REAL, AUTHENTIC world? If the student can explain the WHY, then s/he can usually explain the WHAT.

As an educator, parent, and teacher of secondary language arts/English, this author hopes that her children and students acquire OUTSTANDING communication skills. To be considered "outstanding" in the ability to communicate also implies that one is an "outstanding" CRITICAL and CREATIVE THINKER.

WHY SO? To communicate well, one must be able to read and comprehend well; think about what one has read and observed; write about one's ideas and reflections; share these ideas by speaking aloud confidently to other individuals, small groups, or large public audiences; seek and understand the value of information sought from the superhighways of
technology; and seek out ways to improve communication with peoples and places different from what they usually know.
To be able to DO or PRACTICE all of the aforementioned, one must be using CCT strategies and skills!

B. HOW CAN WRITING FACILITATE THE TEACHING AND LEARNING OF CCT SKILLS AND STRATEGIES IN ALL CLASSROOMS?

After years of reflective thought, personal practice, and teaching experience at the secondary level in the field of language arts/English, this author strongly believes that the teaching and STUDENT PRACTICING of the WRITING PROCESS will guarantee that many of the more difficult CCT strategies skills will be learned IF STUDENTS are asked to put into writing their thoughtful reasoning.

As explained in the pages published by the ILLINOIS WRITING PROJECT (SEE "Writing," Section V, MIDDLE SCHOOL X TEACHER'S RESOURCE BOOK), there are many different kinds of short writing tasks that compel students to access CCT strategies. These 5-20 minute tasks are most appropriate for any teacher to use ACROSS THE CURRICULUM if the teacher wants students to access CCT strategies. Students should be asked to reflect first, then write, then share with other students and/or teacher.

WRITING TASKS can and SHOULD VARY in length, subject matter, purpose, and intended audience. Outstanding thinkers, more often than not, put down onto paper many of their thoughts, reflections, observations, and puzzlements. The act of
writing down onto paper reinforces their mental thoughts or images, allowing them to "piggy back" and refer back to a thought sometime in the future.

In brief, to become outstanding writers and thinkers, students need to write DAILY in every class and share their thoughts with members of their class. Writing should take place ACROSS THE CURRICULUM whenever a teacher asks his/her students TO THINK and MAKE DECISIONS. By asking students to first write down even ONE SENTENCE, teachers are providing EVERY STUDENT with the opportunity to contribute, to be "heard," and to use CCT skills as they all decide which words they will use to share their thoughts with an audience other than the teacher for a grade. Teachers may want to collect, review, and assess such written student thoughts; they may ask for class volunteers who wish to share their written thoughts aloud. By frequently providing opportunities for every student to be "heard," all students learn to improve their thinking, so that they can write for REAL audiences that can understand their message(s).

Students also can share their writings briefly in small groups, summarize group perceptions, and share later with the whole class.

Bottom line: if a student cannot put onto paper sentences which communicate his/her understanding of a question(s) or issue posed, then the student really does not KNOW or understand the concept(s) being taught.
By asking students to write often, teachers are ensuring that students are using critical and creative skills often. The WRITING PROCESS as described below should be seen as a LONGER writing experience which expects that a well-researched, well-constructed piece of writing will be the end-product.

C. THE WRITING PROCESS.

Since many language arts/English teachers regrettably remember an earlier time as young students when they agonized over the writing of a major assignment, it is now imperative that we, who promote CCT skills, teach our students the strategies inherent in the RECURSIVE (CCT) WRITING PROCESS as studied by such educators as Donald Graves, James Moffett, Peter Elbow, and many others since the late 1960’s. This WRITING PROCESS emulates that process most often used by EXPERIENCED PUBLISHED WRITERS who write for AUTHENTIC (real) AUDIENCES.

To begin: there is no "Quick-Fix-Mix" to ensure great writing. However, when students are GIVEN THE TIME and the ENVIRONMENT in which to practice certain CCT strategies that access their multiple intelligences, we teachers CAN promise students that with effort they CAN become better writers who will continue to improve if they continue to practice the CCT strategies mirrored in the writing process itself. They also will learn to understand HOW successful writing is achieved, and they will gain the confidence -- through practice and metacognitive evaluation -- to repeat the writing process.
again in a much more efficient and proficient manner. The writing process also increases student motivation to write multiple drafts and to revise, resulting in better quality writing and increased practice time in accessing ALL of the SEVEN INTELLIGENCES or pathways.

In brief, the more often a student writer engages in the CCT WRITING PROCESS, the more proficient and efficient s/he is at producing quality writing the "next" time around.

HOW SHOULD WE DEFINE THE WRITING PROCESS?

Like the definition of CRITICAL and CREATIVE THINKING, the WRITING PROCESS is a RECURSIVE series of "steps" or stages, modeled after the way REAL WRITERS write for the purpose of publication and evaluation by a REAL or AUTHENTIC, GENERAL AUDIENCE. Although the "steps" listed below appear to be LINEAR and LOGICALLY completed in sequential order, the writing process realistically is RECURSIVE in that published authors can and will go back and repeat, edit, revise, or delete, any process "steps" completed at an earlier time.

VISUALLY, a recursive process appears as a piece of ribbon which is twisted once and looped back on top of itself, ends "taped" together so that no true beginning or end can be detected.

NO BEGINNING? NO END? HOW CAN THAT BE?
To begin, let us VISUALIZE a student writer keeping every scrap of paper s/he uses while participating in the writing process. When "teaching" students how to write a significant piece of writing, this author has students do just that within thin, 3-ring binders or portfolios. These portfolios serve as a VISUAL RECORDING of how that individual student participated in the writing experience or process. Every piece of paper with writing on it is dated and labeled at the top as to what "step" this paper refers. At any later time, a student is invited to "go back" to any part of the process portfolio and to repeat and/or revise any stage of the writing process, so that they may improve the quality of their end-products.

At the same time, this writing portfolio also serves as a WRITTEN RECORD of the DEGREE to which the student's MIND practiced higher order (CCT) thinking skills. For INEXPERIENCED WRITERS, it can be inferred that the THICKER the portfolio, the greater the amount of time was spent PRACTICING or DOING higher order thinking and writing.

D. THE RECURSIVE "STEPS" or STAGES OF THE WRITING PROCESS.
Now let us look at each of the RECURSIVE STEPS or STAGES in the WRITING PROCESS -- (Remember, the writer may backtrack or leap forward at any time to any point in the process in his/her quest for successful written communication with a REAL audience):
1) PREWRITING and RESEARCHING STAGES.
The writer may use the CCT strategies of BRAINSTORMING, RESEARCHING, and/or METACOGNITIVE THINKING in order to create an extensive PALETTE of WRITTEN IDEAS, OBSERVATIONS, CONCLUSIONS, and REFLECTIONS. During this stage, the writer captures on paper, the spontaneously flow of ideas and researches a topic(s), saving anything that might be of use. CENSORSHIP is discouraged because it inhibits the creative process. Like a painter's palette with its collection of paints and mixed hues, the writer needs to PREWRITE and gather all the materials (paint colors) that s/he might need during the DRAFTING stage. S/He should have "extra" material (paint), because the more extensive the palette, the more likely s/he will be able to elaborate on key ideas and communicate more effectively with his/her reading audience.

LENGTH OF TIME INVOLVED:
For published authors, time spent on prewriting activities may take weeks, months, or years to complete. In contrast -- given the realities of a student's interest level and length of a school day and year -- the PREWRITING stage of a single, major piece of writing usually is completed over a series of days and/or weeks before going on to the DRAFTING stage. Infrequently, it may take months, depending on the grade level of the students involved.
PREWRITING is a time of multiple, distinctly separate sessions where the goals of the writer are many. At first, the writer might be trying to generate the largest list possible of idea topics and subtopics. Later, after selecting the topic of most interest to him/her, the writer might again brainstorm to generate as much "raw material" as possible on a SINGLE idea or topic.

With respect to the accessing of "bundles" of CCT SKILLS or pathways of MULTIPLE INTELLIGENCIES, let us now look at those MI/CCT "bundles of strategies" which could come into play at this stage:

During the PREWRITING STAGE, writers might be --
- observing and visualizing objects, persons, places ideas, and/or actions (VISUAL; LOGICAL, SPATIAL)
- reading and physically touching as they research and generate ideas (LINGUISTIC; KINESTHETIC; SPATIAL).
- listening to music or natural rhythms/sounds which reflect the mood or experience on which they want to write (RHYTHMIC; INTRAPERSONAL).

Their teachers, as important facilitators of this stage, also might have them --
- DRAW realistic or symbolic sketches (SPATIAL; KINESTHETIC; INTRAPERSONAL) of their impressions, feelings, or visualizations to help them increase their understanding of the topic in question.
- MOVE BODILY with voices and/or bodily gestures in CREATIVE DRAMATICS to help them recreate a mood, point of view, appropriate dialogue and possible relationships between a character's words, actions, and their effect on others. (INTERPERSONAL; INTRAPERSONAL; VISUAL; KINESTHETIC; LOGICAL; RHYTHMIC).

Interestingly, using CREATIVE DRAMATICS in some form in the classroom increases significantly the number of MI pathways that a student is compelled to access in order to complete the task assigned.

2) PLANNING STAGE:
At this point the writer already has a more specific idea of WHAT s/he wants to WRITE, WHY s/he wants to write (PURPOSE), and FOR WHOM s/he want to write (AUDIENCE). This stage helps better determine HOW the writer will EXECUTE a PLAN that will best help him/her meet his/her goals.

The planning and writing of a SKETCHY, OVERVIEW is strongly suggested at this stage, so that it can serve as a guide or "prompt" for keeping the author "on task" and completing his/her PURPOSE in writing. The PURPOSE (GOAL) one uses when writing usually fall into the following categories or reasons:
- to inform
- to entertain (including to scare or horrify)
- to persuade
- to explain
- to complain
- to share
- to instruct

BEFORE writing (DRAFTING) complex thoughts and sentences, as well as paragraphs, however, the writer must first DECIDE on a PURPOSE or his/her written thoughts will ramble, confusing the reader.

NOTE: CONTRARY TO TRADITIONAL PRACTICE, it is UNREALISTIC and IMPRACTICAL for a teacher to require at this stage that a student submit for review a DETAILED OUTLINE of what actually will be written in the final writing endeavor. Such an outline, including intricate subcategories, more often than not, can be written with any accuracy ONLY after a second or third draft is completed. Unless, a published writer is writing according to a well-practiced "formula," or unless the teacher "tells" students the exact structure and content of the assigned paper, then it is unrealistic to expect student writers to write WELL if they have to "stick" to an outline that was written and completed BEFORE the DRAFTING stage has begun.

If we educators want our students to be proficient writers like published authors, then we have to MODEL the
actual process that such writers use. PUBLISHED AUTHORS write MULTIPLE DRAFTS and give themselves ENOUGH TIME so that they can DRAFT, share, and revise for as many times as they feel motivated to improve the quality of their drafts.

Like the PREWRITING stage, the DRAFTING stage is time well-spent. In REAL classrooms, we do need to set deadlines when preliminary drafts should be completed, BUT teachers still need to provide ENOUGH TIME for his/her students to write WELL, depending on their previous experiences with the writing process.

IF teachers truly want to MODEL the process for their students -- and PROVE HOW MUCH THEY VALUE THE PROCESS -- then the TEACHER ALSO SHOULD ENGAGE IN THE SAME PROCESS STEPS as his/her students. In other words, the teacher should "DO" the writing task as well, experiencing and sharing the similar puzzlements, strategies, and concerns as his/her students.

However, even the most conscientious teachers of CCT find excuses not to join in the writing process because of personal and professional time constraints. If we cannot complete ALL the stages alongside our students, then we should participate more fully in the ones that are initiated and practiced within our classrooms during the school day.
3) DRAFTING AND SHARING STAGES.

At first the writer begins by writing down quickly in sentences and paragraphs. S/He focuses on putting his/her ideas onto paper in a somewhat logical manner, remembering the purpose chosen early in the planning stage and trying to communicate the PURPOSE to the intended AUDIENCE. The use of polished language skills and mechanics is NOT expected nor emphasized at THIS stage, especially in the inexperienced writer.

During this DRAFTING STAGE, students should be given the opportunity to SHARE each draft with others, preferably with 2-3 other students in a small READER RESPONSE GROUP (MSX LANGUAGE ARTS TEACHER'S RESOURCE BOOK, SECTIONS II AND III; "Guidelines from the Boston Writing Project").

The PURPOSE of each RESPONSE GROUP session should include
- the identification of the STRENGTHS of each draft;
- the readers' suggesting of some problem areas which might be revised, including the reasons why they feel revision(s) are needed. Such suggestions should be very SPECIFIC and refer to actual words, phrases, and/or sections of the draft.

Emphasis in RESPONSE GROUPS is on each writer in the group listening to his peers (immediate audience) and his/her checking to see if these peers understand and find the words and style used APPROPRIATE for the author's intended purpose and audience.
During the SHARING STAGE, TEACHERS need to be active FACILITATORS of RESPONSE GROUP PROCEDURES. It is recommended that BEFORE having students break into groups, that the teacher MODEL and WRITE DOWN on the board, 1-3 specific areas of concern to which the group might respond and the ORDER in which they might best do so. It is most appropriate to teach such "mini-lessons" directly before and/or after response group sessions. Students can best understand and implement advanced thinking and writing skills when taught in SMALLER contexts where these skills can be seen, discussed, and practiced.

PUBLIC SPEAKING: SHARING, using a MICROPHONE. Another effective and "fun" way to SHARE can occur if there is a microphone, a stand, and a 20-foot microphone extension cord set up in the classroom. Two to three times a week invite EVERY student to read aloud ONE PARAGRAPH (or about 45 seconds of writing) -- be it a specific paragraph found in the introduction, body, or conclusion of the paper and identified by the teacher -- or a paragraph selected by the student.

This author has found that the QUALITY of WRITING COMPLETED AT HOME IMPROVES considerably IF students realize that they will get to share with the real audience of their peers using the microphone which AMPLIFIES every word. No mumbling allowed here.
Consequently, throughout the school year, students should be taught and given frequent opportunities to practice the basic skills of PUBLIC SPEAKING.

PUBLIC SPEAKING, or the standing up and speaking in front of groups, is one of the most intimidating experiences of one's life. Ask experts. The NUMBER ONE FEAR of ADULTS is NOT DEATH NOR FLYING, but having to SPEAK IN FRONT OF AN AUDIENCE! People have been known to REJECT the idea of training for CERTAIN CAREERS because the latter involve public speaking! IF ONLY these adults had had the opportunity to PRACTICE and learn CCT strategies to overcome such fears EARLY IN LIFE in a non-threatening atmosphere!

IF we language arts TEACHERS want to FACILITATE our students acquiring the OUTSTANDING COMMUNICATION SKILLS needed to "PROSPER" in the REAL WORLD, then we must provide frequent opportunities for them to SPEAK ALOUD in front of an AUTHENTIC audience, be it their peers and/or larger "public" venues. What better opportunity exists than for students to share their THINKING PROCESSES, which they have put into WRITING, by SPEAKING them ALOUD to a real, AUTHENTIC AUDIENCE?

By providing a congenial, emotionally-safe classroom atmosphere, EVERYONE -- including the teacher -- should be able to improve his/her "public" voice, including
the BODY LANGUAGE used when standing and speaking in front of a REAL audience.

Teachers should "train" students to TACTFULLY identify MISTAKES in public speaking, including the teacher's own. Verbal PRAISE should be given OFTEN to those who show IMPROVEMENT IN PERFORMANCE as exhibited within class, school, and at other interscholastic activities.

Each student should be EVALUATED on the EFFORT and IMPROVEMENT exhibited in COMPARISON with his/her INITIAL ability to perform at the beginning of the school year.

If teachers VALUE the role of PUBLIC SPEAKING in the REAL WORLD, then they should insist that students stand up with pride each time they PUBLICLY SHARE their WRITTEN thoughts with an audience such as the entire class. Teachers, students, and classroom visitors ENJOY hearing written (composed) thoughts that are expressed with appropriate emotion, volume, speed, and clear diction. ALL are MOTIVATED to IMPROVE their THINKING, WRITING, and SPEAKING when the teacher and class CARES and VALUES DAILY these activities.

OF ALL THE TECHNIQUES TO IMPROVE STUDENT MOTIVATION in ALL areas of learning that this author has used over the past twenty-five years, having a microphone (karaoke machine) set up and "on" every day RESULTS in ANIMATED, ENTHUSIASTIC STUDENTS WHO "LINE-UP" TO SHARE with the
REAL AUDIENCE of their PEERS. It is "fun" to be in control of the spotlight; for once, everyone looks at and listens to YOU!

THE QUALITY OF WRITTEN HOMEWORK, in particular, IMPROVES when each student expects that some short, random part of it (usually selected by the teacher) will be shared with the entire class. Such PUBLIC SHARING provides REINFORCEMENT of learning PRIORITIES and OPPORTUNITIES for the teacher to MODEL CCT/MI SKILLS and STRATEGIES.

Meanwhile, PUBLISHED AUTHORS also SHARE during their DRAFTING stage and often rely on small groups of colleagues and editors to give them honest feedback from points of view different from and distant from each author's own.

In brief, the DRAFTING and SHARING stages COMPEL student writers to access the following MULTIPLE INTELLIGENCES:
- VISUAL/SPATIAL (Reading drafts, seeing the effect of one's written/spoken thoughts on the audience. The author also has to visualize in his/her mind the subject matter of his writing and the FORMAT s/he will use. Is the writing a narrative, editorial, speech, scientific study? Is there a better STRUCTURE of ORGANIZATION and SEQUENCING to follow when presenting ideas?);
- LOGICAL (Determining purpose of author; deciding on whether the writing draft logically and effectively meets its purpose; SEE comments under VISUAL/SPATIAL as well);

- INTRAPERSONAL (Reflecting on the writing of others; listening and reflecting on what other's say about your drafts, and what you say about theirs);

- INTERPERSONAL (Selecting the most appropriate words possible when evaluating another's draft in order to "help" yet still being honest; equally sharing "air" time; being an empathetic listener);

- KINESTHETIC (The act of writing itself is a physical or hands-on, bodily activity);

- LINGUISTIC (The author/evaluator carefully chooses the words to convey his/her intended meaning);

IN SUMMARY, if we educators want our students to be proficient writers like published authors, then we have to MODEL the actual processes that such writers use. PUBLISHED AUTHORS write MULTIPLE DRAFTS and give themselves ENOUGH TIME so that they can DRAFT, SHARE, and REVISE for as many times as they feel motivated to improve the quality of their drafts.

Like the PREWRITING stage, the DRAFTING stage is time-consuming. In classrooms, we usually need to set
"deadlines" when preliminary drafts should be completed, but teachers need to provide enough time for his/her students to write, depending on their previous experiences with the writing process.

4) THE REVISION STAGE.

Obviously, if multiple drafting and sharing is encouraged and validated, then revision (deletions, additions, reordering) should occur each time after the writer receives feedback from his reader response group, his classmates in general, his teacher (verbally only), or from himself or herself!

What do you mean by receiving feedback from him- or herself?

Most writers "revise" often while they are writing a draft. They read back silently to themselves what they already have written. This rereading is a valid, much-practiced strategy of reflection or metacognitive/intrapersonal thinking that helps the writer make revisions "on the spot," just as this author has been doing repeatedly throughout the writing of this thesis!

To improve this proficiency of metacognitive scrutiny, however, it is suggested that when alone the writer read aloud his draft, using a "performance" persona. Surprisingly, the writer will be able to "hear" errors
words and meanings that do not sound "right" or lack the appropriate pacing or rhythm desired. In particular, the lack of needed "transition" words and phrases might become evident.

By "talking aloud" the authors is more apt to revise the VOICE or STYLE of his/her writing to fit the intended TONE or MOOD of the piece. Often, student writers will compose awkward, stilted sentences on a first draft, difficult to understand and to read aloud. However, when trying to read such writing aloud, the student will read INSTEAD the word(s) that SOUND BETTER, ones that usually are more conversational or user-friendly in TONE and more easily understood by the intended audience.

If a teacher "lectures" about tone, mood, style, and voice, students rightfully are bewildered. IN CONTRAST, when students read their writings aloud, they can HEAR weaknesses and want to learn how to FIX them. Students better understand because they are DOING and have a hands-on experience with these stylistic facets of the writing process.

Weaknesses in WORD CHOICE, MOOD, and PACING (dependent upon the way the author varies the written structure of sentences (simple, compound, complex) can be detected more easily when the student writer READS ALOUD and "HEARS" the draft. Granted they may NOT be able to put a NAME to the error or weakness, but they probably CAN
REVISE for the better through reflection, peer response, and the teacher's modeling of solutions to a specific writing problem.

Yes, the REVISION STAGE is an INTEGRAL part of the DRAFTING and SHARING STAGES. Can the reader now better understand WHY the WRITING PROCESS is called a RECURSIVE PROCESS? The writing improves and moves "ahead," but usually only if the writer "goes back" and repeats previous stages in the process.

THE IMPACT OF THE WORD PROCESSOR ON THE REVISION STAGE: Although all of the recursive writing "stages" explained above have mirrored those of published authors even BEFORE the days of word processors, electric typewriters, and even the old manual ROYALS, it is unreasonable for any teacher to expect that students would revise and rewrite often several drafts in great depth, if it necessitates their rewriting the ENTIRE draft each time they completed a major revision.

Understandably, over the past twenty-five years, I have witnessed a marked increase in EVERY STUDENT'S MOTIVATION to engage in MULTIPLE REVISIONS of merit IF he/she HAD READY ACCESS to a WORD PROCESSOR that could save and store their drafts on disc.

Independent schools similar to the one in which I teach, do have word-processors (MAC LCII'S and PC's) available
for general student use. Many families have their own word processors; most can afford to buy an inexpensive one with memory capabilities. It is money well spent as they see their children using a tool that will foster thinking, drafting, revision, and "publication" of VISIBLE PROOF (WRITING) that their child is accessing higher order thinking skills when they are engaged in the recursive stages of the writing process.

For those teachers whose students do not have access to word processors, you will need to spend more personal energy motivating your students to spend the extra time needed to write out and/or "cut and paste" multiple drafts. At the very least, do NOT expect "neat" copy until the "last" draft. Instead, insist on "legibility."

WHEN SHOULD STUDENTS STOP DRAFTING and REVISING?
In an IDEAL classroom, drafting and revising does not stop for a long time; in a PRACTICAL one, it will end in a shorter, reasonable framework of time. Bottom line: Give your students enough time to revise according to their capabilities and interest level. The more often they SHARE their drafts, especially parts of them OUT LOUD using the microphone, the more motivated they will be to REVISE.

5) THE EDITING STAGE.
When students really are not able to make any more improvements in the CONTENT and STYLE of their writing
drafts, using response groups and other forms of public sharing, then it is time to end drafting and focus more intently on editing -- the stage in which students will use whatever resources available (such as a dictionary, thesaurus, grammar book, glossary, peer mentors, etc.) to help ensure that their writing reflects the proper usage of English language skills and mechanics.

Beginning in September of the school year, and continuing throughout the year, specific "rules of language usage" should be taught in mini-lessons to students as they are writing and revising writing tasks. As the year progresses, however, they also should be learning how to better communicate by using more complex thoughts that require the use of more complex, higher order writing skills. In addition, it should be expected that students will retain and use properly the skills taught and reinforced earlier in the year.

Yet in reality, some students will not have mastered skills taught earlier. Consequently, during the editing stage, they should be encouraged to work with other students, older siblings, and perhaps parents to ensure that the quality of their writing is competent enough to be shared with a general audience.

At the middle school level, the last or final draft of an assignment should be devoid of all spelling errors. Why? Because the students have been given enough time for such
errors to have been identified and corrected by the student or by those asked to PROOFREAD the student's draft. PROPER SENTENCE STRUCTURE (void of fragments and run-on's) is a priority, but it should be understood that the MORE COMPLEX the thoughts of a student, the more likely that they will be trying to write compound and complex sentences which will increase their chances for making "complex" errors.

Bottom line: Students will more likely master those language skills which the teacher has prioritized and provided BOTH enough time in which to practice and AUTHENTIC tasks and audiences in which and for which the skills are needed to communicate effectively.

6) THE ASSESSMENT STAGE.
Because students LEARN BY DOING, the teacher should NOT be "marking up" preliminary drafts. If teachers do, then the students will ONLY make the changes suggested and NO MORE. STUDENT LEARNING WILL HAVE STOPPED!

Instead, the teacher should ASSESS and/or EVALUATE (in writing and/or in person) the LAST BEST EFFORTS of the student who has had much oral teacher direction during mini-lessons and introduction of readers' response groups. The teacher more efficiently models in front of the whole class, directing individual student inquiries "out" to the whole class for discussion and response. If
the "class" cannot help solve the problem, then the teacher needs to review or introduce the problem in a "mini" lesson.

EVALUATION: There are many ways to evaluate writing. This author prefers a holistic scoring grid of (1-5) which she photocopies and has students put in their language arts binder at the beginning of the year. This RUBRIC or set of standards details a specific set of standards which DO NEED to be adapted for each major writing task undertaken. The original description serves as the class MODEL of standards.

During the introductory stages of any major learning task, the students and teacher BRAINSTORM on the board WHAT content and language skills should be identified as important to the writing task. We try to include 1-3 new skills which we previously have not practiced or which were ones on which we worked before, but found them very difficult.

By the time the RUBRIC is agreed upon, the students should feel that the expectations for them are HIGH but doable if they work diligently each night on drafting and revising, bringing their best efforts to class to share and to respond to others' work.

Remember, a RUBRIC should have been discussed, agreed upon, and displayed BEFORE the writing process began. It
is only fair that the teacher assess the students last draft BASED ON THE CRITERIA AGREED UPON at the BEGINNING of the writing process.

By LIMITING the number of skills a student should prove proficiency in, the teacher appears to create a "fair" playing field. Every student feels that he can achieve basic competency in a limited number of areas. Anticipating "success" through hard work, students do work harder, practicing the process with greater intensity and sense of purpose.

7) THE PERFORMANCE/DISPLAY/PUBLISH STAGE (ASSESSMENT BY AN AUTHENTIC AUDIENCE(S)).

If we are going to increase the use of CCT Skills and validate the impact usage of MULTIPLE INTELLIGENCE strategies can have on learning, then we should add as many MI "bundles of CCT strategies" as possible. It is recommended that students include an artistic component with every writing process experience. By artistic, it is meant any metaphorical representation of the underlying themes, messages, or mood implicit in the writing/CCT tasks. Students can DO anything they are inspired to do. At the very least, the teacher could model the creation of a small, symbolic graphic which can be attached to the final DISPLAY copy. Yes, FINAL DISPLAY COPY!
On the day FINAL DRAFTS are due, students are asked to print off TWO COPIES from their printers. One copy is given to the teacher for assessment. The other should be stapled attractively onto colored construction paper, along with an artistic component. Most papers will be hung on large display boards around the room. Others students will affix their draft to a 3-dimension, free-standing object. Still others might arrange their framed draft near a small tape recorder and their cassette, inviting the audience to push a button and listen to an audio recording of some interpretation or dramatic reading of the writing task.

Sometimes, both during and at the end of the writing process, students will be asked to post their shorter pieces of work (without names) on the walls around the classroom. Everyone strolls around the room as if in an ART GALLERY. Students are given a GUIDE SHEET to help them identify specific features found in their classmates' writings. They will identify and share their comments on their favorite selections. They also will identify writings that are not "on task."

By adding the VISUAL and KINESTHETIC "GALLERY" component to the REVISION and PERFORMANCE stages, the teacher is increasing a student's level of participation, interest, and motivation to improve one's own drafts.
ULTIMATELY, HOWEVER, the TWO BEST FORMS OF PERFORMANCE are PUBLICATION of student writings with samples from EVERY student and the dramatic reading and/or memorization of one's writing to a LARGER GENERAL AUDIENCE than that of one's class.

Teachers can organize SPEECH FESTIVALS, interscholastic speech teams, and PUBLISH CLASS BOOKS. In preparation for the latter activity, each student works throughout the year on a PORTFOLIO of writing process tasks, saving all FINAL, REVISED drafts on disc. At the end of the school year, each student is allotted 4-6 pages of publishing space in a class book. By that time of the year, most students are practiced in adding attractive and appropriate computer-generated borders, graphics, and fonts to their drafts. They also can choose to publish other WRITINGS completed in classes FROM ACROSS THE CURRICULUM!

By including a PERFORMANCE stage to the writing process, the teacher is VALIDATING the importance of THINKING, WRITING, and SPEAKING for an AUTHENTIC GENERAL AUDIENCE. Knowing that PERFORMANCE or PUBLIC DISPLAY and PUBLIC EVALUATION is an integral part of a CCT LANGUAGE ARTS CURRICULUM, students are motivated early on in the school year to increase and monitor their level of participation in learning tasks of substance which ultimately will require that they READ OFTEN, THINK and WRITE about their
puzzlements and ideas, so that they might practice and use daily CRITICAL and CREATIVE THINKING STRATEGIES needed to solve and produce outstanding end-products (authentic tasks) for authentic audiences.
Chris' story is a surprising one from my point of view. Throughout the school year, his classroom behaviors teetered and tottered from being congenial and cooperative to that of being nasty, spiteful, and intimidating to those around him. He usually was eager to speak aloud and share his work with his peers, especially when invited to use the microphone. However, during the winter months his moods darkened, and he became more belligerent and disruptive and often was not able to share with his classmates written thoughts and/or drafts from his nightly entries in his learning log journal because he chose NOT to complete homework tasks.

Since progress in critical thinking skills is advanced by the students' sharing in small and full-class venues their nightly, reflective writings, Chris became more alienated from the class and his peers because he brought nothing to class to share with others. Often he would shrug off his peer's censure or my disappointment -- and eventual anger-- that he "chose" to shut doors on his opportunity to think and learn.
After the class was settled into the day's process activity, I would take Chris aside and talk with him, trying to find out WHY he was not participating in the process. Each day that he had not done his part to think and write at home prevented him from sharing, modeling, and learning from others how to extend, revise, or apply his shorter writings into longer ones.

Eventually, I learned through mumblings from Chris, discussions with other teachers, conversations with his parents, and his limited writings that Chris was an angry adolescent who resented his biological father's absence and his mother's remarrying after being divorced for six years.

The class' MEMOIR assignment served as a turning point for me as Chris's teacher. Rather than engage in the writing process as it had been modeled in class by me and his peers, Chris entered the process at its END. In other words, there was no record of brainstorming, of selecting a specific "distant" relative or friend, of interviewing, of multiple drafting, response group sharing, nor revision or editing.

Instead, Chris only passed in a single, typed copy of his "finished" memoir, a vituperative rambling piece of prose full of anger at his mother, confusion and ambiguity over a father who never shows up when he says he will, and scorn for a step-father who seemingly is appreciated only for the money he spends on Bruins and Red Sox tickets.
As a teacher of writing and CCT, assessing Chris's participation in the CCT/writing process was easy to do. He had FAILED to participate in it. Not having done any homework for the previous week, he understandably did not have anything to share and revise with his classmates. There was no evidence or proof that he had spent much TIME and EFFORT identifying, accessing, rethinking, and revising the THINKING and writing strategies that were being modeled in the classroom.

If Chris had participated in the process then he, too, would have been able to produce a quality end-product that met the standards of the rubric set up at the beginning of the writing process.

Did Chris "fail?" In several ways, yes. He lost credit for not doing his homework. He was penalized for not having a record of his thinking. However, I do not see my role as a teacher to fail a student. I want them to know how to do whatever skill is deemed important to know. Thus, I insisted that he "redo" on his own and keep a record of his process as he revised his final product.

However, before I could expect that Chris was going to be able to improve upon his performance, I had to deal with his feelings and inability to participate in the process. After several lengthy and emotional phone calls home to talk with Chris' Mom and stepfather, I also talked with Chris about what and why he had written what he had. In particular,
Chris needed to think about the impact his biological father was having on Chris' life and in turn his relationships with others.

Suffice to say, Chris and I understood better the priorities of each other. I empathized with his emotional baggage, but in truth I had more sympathy for Chris' Mom and his stepfather than I did toward Chris.

Was I correct in my handling of the situation? Maybe not, but I did the best I could as a teacher at that particular point in time in my life, realizing that I also empathized with Chris' Mom since I have experienced the brunt of a son's tangled emotional anger.

As the school year progressed, I tried to be more positive in my communications with Chris, be they verbal, written, or body gestures. (I am renown for my grand, dramatic hand gestures!) In turn, his attitude and level of participation turned the corner during the final quarter, and we ended the year on a positive note.

Surprising, however, Chris was the one student that haunted me throughout the year. His "story" is a reminder of the emotional baggage that each student and teacher brings to the classroom. Ideally, we teachers want and often are capable of instructing our students in the learning of strategies that can make them better thinkers and independent learners. BUT, can we really do so, unless we are also sensitive to the
emotional tensions that we each bring into the classrooms? In brief, my sometimes dramatic confrontations with Chris forced me to look at school through the eyes of a REAL adolescent rather than through those of a an ideal student who by implicit definition is a willing learner.

So, what did Chris learn in language arts class last year? I would have said "not too much" if you had asked me on the last day of school, June 13th.

However, on June 17th Chris' classmate and best friend Albert was killed in a tragic accident. I have referred to this tragedy in Chapter 2. Four days later, I learned that Chris was going to be one of three speakers -- the priest, the school principal, and Chris -- who would be sharing their thoughts on Albert at the funeral Mass. An enormous crowd was expected, and in fact the event was a spectacle of unleashed grief and emotion by all present. The anguish of the parents was heartbreaking; we all felt that several "deaths" had occurred. Many of our school's faculty and students attended the Mass as well as hundreds of friends and relatives of Albert. I sat moved and apprehensive as Chris approached the pulpit, dressed by choice in his school uniform, to speak to the crowd; I was worried about Chris and his ability to speak.

In the next three minutes, I heard and saw what Chris had learned from his year in language arts class. He grasped the
microphone, adjusted it to fit his height, and said, "Good morning." He continued with a moving narration of what Albert meant to him, the things they used to do together, how Albert loved and felt about specific people in his life. Chris singled out Albert's Mom and Dad and grandparents and all those people who Chris could see meant so much to Albert. Chris did not "tell" us about Albert -- a boy I knew only from a distance. Instead, Chris "showed" us Albert by drawing pictures with descriptive phrases and vivid verbs, by sharing special happenings, and memorable moments. Chris publicly applauded those family members who were closest to Albert and most heartbroken by his death. Chris told everyone how much Albert loved and appreciated these very special people; we saw Albert's love of others through Chris's eyes and ears.

In the end, Chris said his own public farewell to Albert. He had read his speech with much emotion, clarity of voice, and appropriate pace. There was not one dry eye in the congregation; Chris had made us laugh and cry and love the people who had loved Albert.

At the end I realized that I was shocked at the intensity of Chris' feelings, surprised at his courage and ability to share them with such a large audience, and proud that what skills I valued in my classroom might have helped him on that day. Yes, I was very proud of him. He had turned a ceremony of sadness into a public tribute of Albert and the people he
loved. Albert's relatives must have been proud to be part of
the family lauded so well by Chris. Of course, I assumed
that some adult had helped him write his speech, but I was
still so proud of his delivering it with such sincerity and
with such a professional demeanor.

That evening I called Chris' home to talk to him and to share
my feelings about his speech with him. I know that he
understood that I was proud of him, "... even though I know,
Chris, that you must have gotten some help from an adult!"

I then asked to speak with his Mom whom I have come to know
better. She, too, was so proud of Chris. We talk, and I
gulped and swallowed my tongue. It seems that Chris had
insisted that he write and speak about Albert at the funeral
even when some adults close to the family doubted that a
13-year old could speak competently in front of a crowd as
large as was expected.

It seems that Chris did not get any help from any adult, even
when adult help was offered. Instead, every day beginning on
the night of Albert's death, Chris had sat for hours at his
computer and wrote -- and revised, and wrote -- and revised.

On the day before the funeral, his mother tried to scare
Chris into changing his mind about speaking in front of this
huge crowd. According to his mother, he had said with much
emotion, "Mom, I can do this! I've been trained to use a
microphone and speak in front of an audience. I've been
reading aloud and practicing my speech over and over. I know I can do this!"

Now, I would not say that my 7th graders had been trained to speak in front of LARGE audiences; my 8th graders, yes. In fact, the 7th graders' speaking "audiences" are limited to using the microphone several times a week inside the classroom when sharing parts of their writings, interscholastic speech competitions for those on the speech team (Chris was not), and bi-monthly classroom public speaking events which involved more "pomp" and "ceremony." During the latter, students in the audience use evaluation sheets to assess the speaker's quality of diction, tone, speed, emotion, pitch, and use of dramatic pauses.

However, for Albert's funeral Chris must have felt "trained" and quite capable of creating a QUALITY END PRODUCT which he was willing to share with a general audience. When he was confronted with an AUTHENTIC PURPOSE (to eulogize his best friend) and an AUTHENTIC AUDIENCE (every one who knew Albert and his family), then Chris was motivated to participate fully in the process of writing and delivering the best speech he could produce.

Chris did not need or want any adult to help him. He "owned" and controlled every critical and creative thinking strategy he used to write about Albert. He brainstormed and researched and drafted and revised and edited and, not until
the day of the funeral, shared with others what he had written and how strongly he felt about his friend. Chris learned a lot more from his language arts class than was reflected on his report card. His speaking at the funeral was a significant, authentic, whole language learning experience for him. Ultimately, Chris wrote the best memoir in his class; he just happened to write it two months after his classmates when a more authentic purpose came to his mind.

I, his teacher learned a lot also, especially about ASSuming. Of special note: the funeral director was so impressed with Chris' speech that he took Chris' copy, made several photocopies, had them laminated, and gave copies to Albert's parents, grandparents, and others mentioned in the speech.

And I, his language arts teacher, have included Chris's story in her thesis -- after asking him for permission to do so -- and have included a copy of his "unADULTerated" speech which can be found on the following two pages (86 and 87).
Hello, I am Chris Mastaj. My best friend Albert Todesca has recently passed away, and I wrote this in his name.

Albert Michael Todesca J.R.

What can I say. Al was my friend, in fact he was my best friend, and I loved him with all my heart. Al and I grew up together, we used to do everything together whether it was playing basketball, riding bikes or just hanging out and watching t.v. Every once and a while I would look at Al and say to my self, Albert Mastaj, as if to be saying I loved him like a brother and if we were, we couldn’t be any closer than we already are. When I wasn’t with Al, I always knew where he was, where he loved more than anything else in the world, at work with his father.

Al attended Catholic Memorial, the school that he was so proud to go to every day. Mrs. Todesca was the most involved mother at Catholic Memorial. She was always helping run all of the lower school dances, helped out in the office, and was always there when Al needed her to pick him up after school on a minutes notice. When ever I was over Al’s house jumping on the trampoline or swimming in the pool, Mrs. Todesca always had a lot of food and drinks waiting for us when we finished. She was an ideal mother for a boy that was willing to try his best in a hard school, and she was always there for Al when he needed her.

Mr. Todesca meant the world to Al, he loved working with his father, and just being able to spend quality time with such a
loving man meant a lot to him. Mr. Todesca was always there for Al when ever he needed him. Mr. Todesca has been my coach for many years this year in baseball, he is a great coach. Al was our right fielder, batting seventh in the order. He was the heart of the team, and always had a smile on his face. Since Al and I spent so much time with each other, I always thought as the Todesca's as my second family.

I know as a fact that Al Loved and cherished his mother, his father, his brother, his grandparents, aunts, uncles and especially little cousin Joseph. Michael, Mr. Todesca and Al loved going fishing especially the time when little Al caught the 500 pound marlin in a place where that is unheard of.

Al and Michael are not just brothers they are best friends, even closer than I was with Al. Sure at times they fought, but what great relationships don't have fights. All and all, Michael is a great friend and loving brother, I would be proud to have Michael as my own brother.

Al, I love you with all my heart and I will always keep you in my prayers. I will always love you and, never forget you. MiT would have been proud of you Al, just like everyone is now.

I never got the chance to say goodbye, so

GOODBYE AL !!!!!!!!!!!!!!!

love Christopher Mastaj

Albert Michael Todesca JR. Died June 19th, 1996.
APPENDIX I

CCT IMPLEMENTATION IN TRADITIONAL SCHOOL ENVIRONMENTS: PROBLEMS AND STRATEGIES

CHAPTER 1

HISTORICAL PERSPECTIVE

In 1992, both in theory and practice, MIDDLE SCHOOL X (MSX) was structured, incorporated, and marketed as a separate, educational entity which would provide adolescent boys with a rigorous honors program of interdisciplinary studies taught primarily by a newly hired, energetic, highly motivated, creative, and experienced faculty who believed that learning can be both rigorous and fun.

Previously in 1992, the author was chosen to be a member of MIDDLE SCHOOL X’S PLANNING BOARD. Representing the voice of parents in the Greater-Boston community, the author also brought twenty years of educational and youth service experience to this group dynamic of department heads, college professors, and concerned educators and community leaders.

In the spring of 1993, she was hired as a master teacher to mentor and model instructional strategies for less-experienced faculty members and to help develop new extracurricular programs. In particular, she initiated and
continues to advise the student government organization and an interscholastic speech team, each which generates the active participation of over 40% of the student body.

At the end of its first year of operation (1993-94), parent, student, and community response to the new middle school was overwhelmingly positive. The administration in 1992-93 had empowered the faculty of MSX in ways unknown previously to the author. They also offered teachers full ownership of the programs developed and scheduled the planning time needed for effective faculty interaction; understandably, the middle school program flourished.

During the following two years (1994-1996), however, changes in administration and philosophy occurred resulting in mixed messages, intermittent power struggles, and miscommunications between faculties and administration at MIDDLE SCHOOL X and its affiliated HIGH SCHOOL X. Insidiously, the faculty at MSX were challenged to defend its commitment to its middle school philosophy and program of studies.

During the past two years, the author felt that too much professional and emotional time was spent "going to the wall" (and to the ever-supportive Board of Directors), staunchly advocating and defending their middle school program.

In a DEFINITIVE and DECISIVE attempt to defend publicly and unequivocally the integrity of the curriculum of MSX, in general, and the language arts curriculum -- which is the
pivotal program of study—in particular, the author spent hundreds of hours during the 1995-96 school year researching, reflecting, networking, writing, and publishing TWO TEACHER GUIDES:

- MIDDLE SCHOOL X LANGUAGE ARTS CURRICULUM OVERVIEW

- MIDDLE SCHOOL X LANGUAGE ARTS TEACHER’S RESOURCE BOOK

Both of these guides are on file at the CCT Department at UMASS Boston.
CHAPTER 2

CCT IMPLEMENTATION:
PROBLEMS ENCOUNTERED AND STRATEGIES USED

Because MSX LANGUAGE ARTS CURRICULUM OVERVIEW (on file at CCT/UMASS Boston) provides a detailed rationale and description of the language arts curriculum taught by the author at MIDDLE SCHOOL X, the author WILL NOT REVIEW the contents of the language arts curriculum. Instead, the following chapter will list problem or issue "clusters" encountered and strategies used by the author while implementing her CCT language arts curriculum at MSX. Just as critical thinkers use "clusters" of strategies to solve problems, in real life the problems themselves are usually clustered or interrelated with other issues.

Hopefully, other educators trying to implement curriculum reform might be helped by the author's experiences.

CODE USED:

(#) CCT CURRICULUM IMPLEMENTATION PROBLEMS that might surface when introducing NEW CURRICULA in a CONSERVATIVE/ TRADITIONAL SCHOOL ENVIRONMENT.

(*) Followed by a listing of CCT STRATEGIES that might help SOLVE these and other related problem-clusters.
A. PROBLEM CLUSTER #1. QUESTIONS THAT NEED TO BE ASKED AND ANSWERED:

What is it mean to KNOW?
What KNOWLEDGE is worth teaching?
What should be taught?
How should students be assessed?
How should a class be conducted?
The role of the teacher? (Lecturer or facilitator/resource?)
What does it mean to think? read? write? speak?
The importance of students' interests.
The importance of the real world on what and how we learn?
The role and importance of content and process.
The role of authority? of the administration?
What is work? Student work? Teacher work?

CCT STRATEGY CLUSTERS USED TO SOLVE #1:

* BECOME AN EXPERT.

When faced with a complex set of philosophical differences of opinion on educational pedagogy, the use of CCT skills is paramount. In particular, the author PREDICTED the kinds and sources of strongest opposition to the new curriculum. First, she had INVESTIGATED and conducted extensive RESEARCH on the merits of her curriculum. She developed a WRITTEN PLAN which she TESTED, MODIFIED, and REVISED over a
period of months. She increased her expertise by entered a second master's program of study to validate her emphasis on the teaching of higher order thinking skills (CCT skills and strategies) in her curriculum. She read/researched/investigated the theories and practices of multiple, experts in the area of cognitive and affective development.

* Outmaneuver the opposition with dialogue and thoughtful communication strategies. Often, an effective defense is a frontal offense or "attack" of the opposition by first quelling any possible roadblocks in the following positive ways:

- Plan early, use metacognition often, revise and modify now, not later.

- Educate and enlist the support of your superiors and the parents of your students.

- Research well, write, and publish detailed, quality plans of action, highlighting the goals, methods, and expected outcomes of your new curriculum.

- Write a "community-building" newsletter sharing summaries of your approved plans with your school community at large, your parents, and your students. A copy of the newsletter could
be posted in the faculty room, placed in all faculty and staff mailboxes, and/or sent home to families of students.

- LISTEN to your PARENTS. They best know their sons' abilities, levels of motivation, interests, weaknesses. ENCOURAGE informal and frequent interaction with the home. FOSTER an OPEN-DOOR and OPEN-EAR relationship between teacher and home. Such a dynamic creates TRUST, HONESTY, and a WILLINGNESS to work as a team, all working in the interests of the students.

* PROVE TO YOUR PARENTS that you will DELIVER RESULTS. Strategies to do this include:
  - Sharing photocopied summaries of lesson plans, homework assignments, and schedules with parents.
  - Absolving parents of the responsibility of the students completing home-study tasks. Prove that you, the teacher, are giving students ENOUGH TIME and instruction on HOW to solve the problem or task assigned.
  - Making sure that EVERY student in the class actively engages in the learning of the PROCESSES NEEDED in the future to SOLVE ON
HIS OWN future problems and tasks. Have students keep a PHYSICAL PORTFOLIO or "recording" of his having completed successfully the RECURSIVE steps needed to solve the problem.

- DESIGN lesson plans and LEARNING TASKS that have an AUDIENCE of greater importance to the students than that of the teacher or a grade, preferably one that is AUTHENTIC -- that is related to the solving of REAL problems of interest and significance to adolescents and the world in which we all live.

- DESIGN LEARNING TASKS wherein students WANT to READ, WRITE, LISTEN, and SPEAK aloud more often and with greater expertise. Refer to SECTION II for specific examples.

* TEST YOUR PROGRAM; have the MOST AUTHENTIC AUDIENCE EVALUATE it.

EXPOSE YOUR PROGRAM TO THE SCRUTINY OF THE GENERAL PUBLIC. Since one of the major goals of the new language arts curriculum was to ensure that ALL students become better thinkers and communicators (through writing, speaking, and producing "integrated" products using multiple intelligences), then students should be able to
share this acquired expertise with the ULTIMATE AUDIENCE -- a GENERAL AUDIENCE of multiple viewpoints and backgrounds.

ASSESSMENT/EVALUATION INSTRUMENTS which encourage student SHARING with a GENERAL AUDIENCE outside the classroom:

- an ORIGINAL ORATORY FESTIVAL during which every 8th grade student wrote a well-researched speech of opinion, reflecting evaluation of multiple points of view.

- the PUBLICATION of a yearly CLASSROOM BOOK of original student writings. Each student is given 4-6 pages of publishing space. Students select, edit, and format on a word processor writings and/or other 2-dimensional creations that they feel represent their best quality endeavors. Various forms of WRITING from ACROSS THE CURRICULUM are encouraged, as well as artwork, musical composition, summaries of plans, election platforms, speeches, etc.

- becoming a member of an interscholastic speech team where it is assumed that one's public speaking skills are poor, but that with instruction, coaching, and CONSTANT PRACTICE that one's skill level will improve. Students are rewarded for their proving the amount of
time they have practiced. Over 40% of the student body participates in this activity. In every language arts class, frequent opportunities are provided for students to stand and read aloud their written ideas with the use of a karaoke microphone.

B. PROBLEM CLUSTER #2. FEAR AND DISTRUST OF THOSE WITH DIFFERENT IDEAS, METHODS, AND VIEWPOINTS (RIGIDITY VS FLEXIBILITY).

CCT STRATEGY CLUSTERS USED TO SOLVE #2:

* ACCESS many of the CCT STRATEGIES explained above.

* INVITE POTENTIAL CRITICS "TO JUDGE", help moderate, or OBSERVE the PUBLIC "TESTING" venues, suggested above. When critics are more knowledgeable about the unfamiliar, more of their fears will be allayed as they see proof of the effectiveness of the curriculum taught.

C. PROBLEM CLUSTER #3. CONFUSION OVER THE ISSUE OF EMPOWERMENT.

Is it "given to" teachers or taken as a form of self-empowerment?

Some feel AUTHORITY or "permission to act" comes from those in authoritative positions above teachers. Others eagerly embraced the opportunity to INITIATE new programming, new traditions, public review of
learning tasks, and student displays and/or performances, proof of skills learned.

CCT STRATEGY CLUSTERS USED TO SOLVE #3:
* Use many of the strategies explained previously, especially those which increased avenues of community-building and closer observation by critics of the programs taught.
* Occasionally, on-the-spur-of-the-moment, invite traditionalists/conservatives into your classroom to share and participate in classroom activities.
* Design a lesson plan where you seek the advice and expertise of the more traditional educator.
* Find ways to prove to the opposition that you value their ideas and priorities and that your programs exhibit more similarities of purpose than not.

D. PROBLEM CLUSTER #4. VARYING PERCEPTION OF THE ROLE OF AUTHORITY.
Some relish cooperative and/or individual-based empowerment. Others expect and approve only of a top-down, hierarchical, micro-management style of authority or empowerment. In other words, the latter group is more familiar with administration
identifying the problems to be solved and telling the teachers what, when, and how to solve the problem.

**CCT STRATEGY CLUSTERS USED TO SOLVE #4:**
* CONTINUE TO INITIATE IMPROVED PROGRAMMING. Do not fall victim to peer pressure "not to rock the boat."

* CONTINUE MOST OF THE STRATEGIES LISTED ABOVE.

* ENCOURAGE the ADMINISTRATION to verbalize in public forum the need for ALL teachers to feel free to be creative and critical thinkers, and that true COMMUNITY exists when every member's contributions are needed and valued.

* IMPLICITLY ENCOURAGE PARENTS to share their views, observations, and satisfactions with members of the administration and other teachers their sons might later have.

**E. PROBLEM CLUSTER #5. VARYING INTERPRETATION OF THE TERMS "WORK ETHIC" AND WORK DAY.**

Some teachers work in their classrooms until 4:00 p.m. Students feel comfortable staying after school to get extra help, play with friends, do homework, wait for parents coming from work, participate in extracurricular activities, or chat with teachers.
extracurricular activities, or chat with teachers. Parents are encouraged to "drop in" after school for updates from these teachers.

Other teachers "work to contract." They resent those who make them feel guilty or uncomfortable about leaving at the contracted hour.

CCT STRATEGY CLUSTERS USED TO SOLVE #5:

* DON'T PREJUDGE OTHERS BASED ON APPEARANCE OF A BETTER WORK ETHIC.

Neither staying late at school or leaving early guarantees that one is a "good" or a "bad" teacher. Teachers should be judged on the quality of the learning tasks, their ability to create a safe and ethical environment in their classrooms, and their concern and relationship with their students.

However, teachers DO need to make some time for students before or after school hours on a regular basis.

* BE HUMBLE, HAVE A SENSE OF HUMOR. MODEL for more conservative colleagues the behaviors and the subsequent increased sense of community that exists when students have opportunities to interact with faculty members outside of the classroom.
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Other teachers "work to contract." They resent those who make them feel guilty or uncomfortable about leaving at the contracted hour.

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However, teachers DO need to make some time for students before or after school hours on a regular basis.

* BE HUMBLE, HAVE A SENSE OF HUMOR. MODEL for more conservative colleagues the behaviors and the subsequent increased sense of community that exists when students have opportunities to interact with faculty members outside of the classroom.
F. PROBLEM CLUSTER #6. VARYING PERCEPTIONS ON PARENT-TEACHER-STUDENT RELATIONSHIPS.

Some teachers see parents as partners and collaborators, working alongside the teacher to maximize their son's chance for achieving. Frequent, personal contact with the home is desired. Teachers try to increase the amount of communication with the home through phone calls, bi-monthly letters to every student, progress reports with brief, narrative comments.

Other teachers feel that the parent-teacher relationship is an adversarial one at worst and a threatening one at best. They resent parental opinion or "interference."

G. PROBLEM CLUSTER #7. ACCESSING A LIMITED VS MULTIPLE POINT OF VIEWS.

Some teachers encourage the use of the CCT strategy of entertaining multiple points of view before drawing conclusions and making decisions.
Others are content exhibiting a singular, long-standing point of view. They are reluctant to research beyond the walls of their school building different pedagogues or practices different from what they know and use.

CCT STRATEGIES USED WHILE SOLVING PROBLEM CLUSTER #7
MIRROR THOSE ALREADY DISCUSSED ABOVE in #'s 1-5.

H. PROBLEM CLUSTER #8. EXHIBITING VARYING LEVELS OF ENERGY AND INTRINSIC MOTIVATION.

Those teachers who are high-energy, highly motivated learners themselves often make those who are not very uncomfortable; jealousy, resentment, and/or anger could result.

CCT STRATEGIES USED WHILE SOLVING PROBLEM #8 MIRROR THOSE ALREADY DISCUSSED ABOVE in #'S 1-5.

I. PROBLEM CLUSTER #9. EFFORTS TO INTIMIDATE THOSE NOT IN STEP WITH THE MAJORITY OPINION OR PRACTICE.

Rallying larger numbers, one group may try to "test" another by criticizing practices of the other in a large, full-faculty setting. Usually, minimal defense is launch in this venue where personalities and "shouting" matches can result.

CCT STRATEGIES USED WHILE SOLVING PROBLEM #9 MIRROR THOSE ALREADY DISCUSSED ABOVE in #'S 1-5.
IN SUMMARY, believe in yourself. Use CCT problem solving strategies to solve difficult problems in usual, but positive ways. Do not class with others who focus on emotion, baiting others so that they might lose control. Instead, stick with the issue or problem at hand. Be specific in identifying facets of the problem and offer specific strategies which could be used to solve the problem(s). Encourage your colleagues to "piggy back" onto your ideas and/or modify them so that "together" you create solutions which are seen as a collaborative effort, serving the needs of more people and varying view points.

IF you are one who publicly identifies problems, you will be seen as a "problem solver" if you offer possible solutions at the same time that you identify the problem. Also, you should offer to be a viable part of the "solution" team, someone who "walks the talk."
APPENDIX II

A SAMPLING OF GUIDE SHEETS FOR TEACHERS

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## CONTRASTING MODELS OF EDUCATION:

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<th>Traditional Philosophy</th>
<th>Transactional Philosophy</th>
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<tr>
<td><strong>Transmission</strong></td>
<td><strong>Whole Language</strong></td>
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<tr>
<td>Philosophy</td>
<td>Classroom</td>
</tr>
<tr>
<td><strong>Traditional Classroom</strong></td>
<td><strong>Transactional Classroom</strong></td>
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| Basis of Philosophy | Learning | |
|---------------------|----------|
| **2.** Teachers are dispensers of knowledge. Teachers lecture and give the impression that there is one correct answer or interpretation—the teachers. | **Students' View of Learning** | **2.** Teachers are facilitators. Teachers demonstrate what it means to be a reader and a writer by reading and writing in and out of the classroom and by sharing literary experiences with students. |

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<tr>
<th>Student's View of Learning</th>
<th>Literature</th>
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<td><strong>3.</strong> Students strive for &quot;right&quot; answers and see success and learning as high grades and SAT scores.</td>
<td><strong>4.</strong> Literacy is taught in a meaningful context. There is an emphasis on meaning and &quot;making sense&quot; in oral and written communication. Students' schemes help to connect to new experiences.</td>
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<tr>
<th>Reading and Writing</th>
<th>Skills</th>
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<td><strong>5.</strong> Reading and writing take place in the English classroom only. Reading is taught as an analytic activity, and writing is product-centered. Teacher chooses reading selections and writing topics.</td>
<td><strong>5.</strong> Students read and write every day. Students have opportunities to choose what they read and write about and choose from a variety of literature written by adults and student authors.</td>
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<th>Grouping</th>
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<td><strong>6.</strong> Part in whole language learning. Spelling and vocabulary tests are used to gauge progress.</td>
<td><strong>6.</strong> Whole part language learning. Skills are taught in the context of language.</td>
</tr>
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<tr>
<th>Setting</th>
<th>Environment</th>
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<tbody>
<tr>
<td><strong>7.</strong> Students work independently; often classes are grouped haphazardly.</td>
<td><strong>8.</strong> Environment is designed to promote literacy development. Variety of language materials are readily available for students and students work in progress as displayed. Classroom becomes a clustering of literature and writing groups where peer groups of individuals work and teachers confer.</td>
</tr>
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<tr>
<th>Physical Environment</th>
<th>Evaluation</th>
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<tr>
<td><strong>8.</strong> Environments are designed to promote literacy development. Variety of language materials are readily available for students and students work in progress a displayed. Classroom becomes a clustering of literature and writing groups where peer groups of individuals work and teachers confer.</td>
<td><strong>9.</strong> Teachers are &quot;kid watchers,&quot; evaluating and assessing student progress based on observation, focusing on what students can do.</td>
</tr>
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SELECTED MODELS FOR TEACHING THINKING SKILLS IN THE CLASSROOM

I. MODEL ONE: BLOOM'S TAXONOMY OF COGNITIVE DEVELOPMENT

Bloom's Taxonomy is a structure for classifying educational objectives so that teachers and students have a common framework for determining the types of desired changes in student behavior as learning takes place. Bloom suggests that there are at least six distinct levels of behavioral outcomes related to thinking and that each level is arranged in a hierarchy from the simplest to the most complex. These levels, defined in simple operational terms, are:

Knowledge Level: Students learn information through remembering content, either by recall or recognition.

Comprehension Level: Students understand information through translation, interpretation, or extrapolation (doing something extra with the material or event being comprehended).

Application Level: Students use information in a context different from the one in which it was taught.

Analysis Level: Students examine (break down) specific parts of the information in order to accomplish such tasks as reading between the lines, finding subtle implications, or completing a logical dissection of a communication.

Synthesis Level: Students do something new and different with information in a process that is directly opposite to that of analysis. Synthesis requires integrating ideas in new and different ways.

Evaluation Level: Students judge information by considering alternatives in making a judgment, establishing criteria for judging those alternatives, and by defending that final judgment among the established alternatives.

It is suggested that teachers use the Bloom Reference Chart with its collection of "verbs" or "behaviors" when designing their lesson plans, their tests, their classroom discussion questions, and their units of study so that students continue "to stretch their minds and tease their imaginations" in the teaching and learning process.

**GOOD STARTER BEHAVIORS FOR TEACHING THINKING SKILLS IN THE CLASSROOM**

**KNOWLEDGE LEVEL VERBS OR BEHAVIORS**
1. List
2. Match
3. Identify
4. Record
5. Who, What, When, or Where
6. Name
7. Find

**COMPREHENSION LEVEL VERBS OR BEHAVIORS**
1. Summarize
2. Describe
3. Tell in your own words
4. Explain
5. Give examples of
6. Show
7. Conclude
8. Generalize

**APPLICATION LEVEL VERBS OR BEHAVIORS**
1. Apply
2. Collect information
3. Construct
4. Demonstrate
5. Experiment
6. Perform
7. Practice
8. Model

**ANALYSIS LEVEL VERBS OR BEHAVIORS**
1. Compare and Contrast
2. Deduce
3. Draw conclusions
4. Form generalizations
5. Discover
6. Examine
7. Infer
8. Uncover

**SYNTHESIS LEVEL VERBS OR BEHAVIORS**
1. Create
2. Combine
3. Design
4. Devise
5. Organize
6. Produce or Present
7. Invent
8. Build

**EVALUATION LEVEL VERBS OR BEHAVIORS**
1. Argue
2. Criticize or Critique
3. Defend
4. Evaluate
5. Grade
6. Judge or Justify
7. Rank
8. Recommend
9. Put to use
10. Solve

<table>
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<tr>
<th>IF YOU ARE ASKED TO:</th>
<th>YOU SHOULD DO THE FOLLOWING:</th>
<th>EXAMPLES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze</td>
<td>Break down or separate a problem or situation into separate factors and/or relationships. Draw a conclusion, make a judgment, or make clear the relationship you see based on your breakdown.</td>
<td>Analyze the main story line in Chapter 2 and how it sets the stage for Chapter 3.</td>
</tr>
<tr>
<td>Categorize</td>
<td>Place items under headings already labeled by your teacher.</td>
<td>Categorize the items on the left under the proper headings on the right.</td>
</tr>
<tr>
<td>Classify</td>
<td>Place items in related groups; then name or title each group.</td>
<td>Listed below are 20 items Classify them in 4 main groups; then name each group.</td>
</tr>
<tr>
<td>Compare</td>
<td>Tell how things are alike; use concrete examples.</td>
<td>Compare the American government system with that of the German government.</td>
</tr>
<tr>
<td>Contrast</td>
<td>Tell how things are different; use supporting concrete examples.</td>
<td>Contrast the writing styles of Shakespeare and Bacon.</td>
</tr>
<tr>
<td>Criticize</td>
<td>Make a judgment of the work of art or literature and support your judgment.</td>
<td>Criticize the use of cigarette advertising in magazines.</td>
</tr>
<tr>
<td>Deduce</td>
<td>Trace the course; derive a conclusion by reasoning.</td>
<td>Deduce the following logic problem to arrive at one of the conclusions listed below:</td>
</tr>
<tr>
<td>Defend</td>
<td>Give enough details to prove the statement.</td>
<td>Defend the statement &quot;innocent until proven guilty.&quot;</td>
</tr>
<tr>
<td>Define</td>
<td>Give the meaning.</td>
<td>Define plankton.</td>
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<tr>
<td>Diagram</td>
<td>Use pictures, graphs, charts, mind maps &amp; flow charts to show relationships of details to main ideas.</td>
<td>Diagram the offices of the federal government.</td>
</tr>
<tr>
<td>Discuss</td>
<td>Consider the various points of view by presenting all sides of the issue.</td>
<td>Discuss the use of chemotherapy in the treatment of cancer.</td>
</tr>
<tr>
<td>Distinguish</td>
<td>Tell how this is different from others similar to it.</td>
<td>Distinguish the three types of mold we have studied in class.</td>
</tr>
<tr>
<td>Enumerate</td>
<td>List all possible items.</td>
<td>Enumerate the presidents of the United States since Lincoln.</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Make a judgment based on the evidence and support it; give the good and bad points.</td>
<td>Evaluate the use of pesticides.</td>
</tr>
<tr>
<td>Explain</td>
<td>Make clear and plain; give the reason or cause.</td>
<td>Explain how a natural disaster can help man.</td>
</tr>
<tr>
<td>Illustrate</td>
<td>Give examples, pictures, charts, diagrams or concrete examples to clarify your answer.</td>
<td>Illustrate the use of a drawbridge.</td>
</tr>
<tr>
<td>Interpret</td>
<td>Express your thinking by giving the meaning as you see it.</td>
<td>Interpret the line &quot;Water, water everywhere and not a drop to drink.&quot;</td>
</tr>
<tr>
<td>Justify</td>
<td>Give some evidence by supporting your statement with facts.</td>
<td>Justify the decision to bomb Nagasaki, Japan.</td>
</tr>
<tr>
<td>List</td>
<td>Write in a numbered fashion.</td>
<td>List 5 reasons to support your statement.</td>
</tr>
<tr>
<td>Outline</td>
<td>Use a specific and shortened form to organize main ideas, supporting details and examples.</td>
<td>Outline the leading cause of World War II.</td>
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<tr>
<td>Paraphrase</td>
<td>Put in your own words.</td>
<td>Paraphrase the first paragraph of the Gettysburg Address.</td>
</tr>
<tr>
<td>Predict</td>
<td>Present solutions that could happen if certain variables were present.</td>
<td>Predict the ending of the short story written below.</td>
</tr>
<tr>
<td>Prove</td>
<td>Provide factual evidence to back up the truth of the statement.</td>
<td>Prove that the whaling industry has led to almost extinction of certain varieties.</td>
</tr>
<tr>
<td>Relate</td>
<td>Show the relationship among concepts.</td>
<td>Relate man’s survival instincts to those of animals.</td>
</tr>
<tr>
<td>Review</td>
<td>Examine the information critically. Analyze and comment on the important statements.</td>
<td>Review the effects of television advertisements on the public.</td>
</tr>
<tr>
<td>State</td>
<td>Establish by specifying. Write what you believe and back it up with evidence.</td>
<td>State your beliefs in the democratic system of government.</td>
</tr>
<tr>
<td>Summarize</td>
<td>Condense the main points in the fewest words possible.</td>
<td>Summarize early man’s methods of self-defense.</td>
</tr>
<tr>
<td>Synthesize</td>
<td>Combine parts or pieces of an idea, situation or event.</td>
<td>Synthesize the events leading up to the Civil War.</td>
</tr>
<tr>
<td>Trace</td>
<td>Describe in steps the progression of something.</td>
<td>Trace the importance of the prairie schooner in the opening of the West.</td>
</tr>
<tr>
<td>Verify</td>
<td>Confirm or establish the truth of accuracy of point of view with supporting examples, evidence and facts.</td>
<td>Verify the Declaration of Independence.</td>
</tr>
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Many of the problem-solving models in the literature on thinking skills follow a general pattern requiring the following (or highly comparable) steps in the problem-solving process.

1. **PERCEPTION OF PROBLEM:** Objectively define the problem to be solved from the perspective of all members of the problem-solving group.

2. **DEFINITION OF PROBLEM:** Mutually agree upon a neutral definition of the problem so that group members understand the problem as given.

3. **ANALYSIS OF PROBLEM:** Break down the problem into its component parts so that the group can determine the problem's worst, best, and current states.

4. **GENERATION OF ALTERNATIVE SOLUTIONS:** Brainstorm optional solutions to the problem, looking for both the obvious and the not-so-obvious (novel) solutions without the use of individual criticism, judgment, or evaluation of those ideas generated.

5. **EVALUATION OF ALTERNATIVE SOLUTIONS:** Group members should establish a set of criteria for judging the worth of each alternative solution (or combination of alternative solutions) using a rating scale or ranking system.

6. **DECISION ON ALTERNATIVE SOLUTIONS:** Group members should determine the decision-making process for deciding on the best solution to the problem by looking at a variety of decision-making models such as consensus building, majority vote, delay of decision, or process of elimination.

7. **IMPLEMENTATION OF BEST SOLUTION:** An action plan should be developed by the group to determine who is responsible for what and the milestones or benchmarks to be used in documenting the implementation process. An inventory of resources and support networks should be identified at this time.

8. **EVALUATION OF RESULTS:** An evaluation plan should be established by the group to measure the success or lack of success in the problem-solving project. Celebrations of little successes should be part of this overall evaluation program.

Forté and Schurr. THE DEFINITIVE MIDDLE SCHOOL GUIDE. 1993, 221.
MULTIPLE INTELLIGENCES

Verbal/Linguistic
- Reading
- Vocabulary
- Formal speech
- Journal or diary keeping
- Creative writing
- Poetry
- Oral debate
- Impromptu speaking
- Humor or telling jokes
- Storytelling

Visual/Spatial
- Guided imagery
- Active imagination
- Color schemes
- Patterns and designs
- Painting
- Drawing
- Mind mapping
- Pretending
- Sculpture
- Pictures

Musical/Rhythmic
- Rhythmic patterns
- Vocal sounds and tones
- Music composition and creation
- Percussion vibrations
- Humming
- Environmental sounds
- Instrumental sounds
- Singing
- Tonal patterns
- Music performance

Logical/Mathematical
- Abstract symbols and formulas
- Outlining
- Graphic organizers
- Number sequences
- Calculation
- Deciphering codes
- Forcing relationships
- Syllogisms
- Problem solving
- Pattern solving

Bodily/Kinesthetic
- Folk or creative dance
- Role-playing
- Physical gestures
- Drama
- Martial arts
- Body language
- Physical exercise
- Mime
- Inventing
- Sports

Logical/Mathematical
- Abstract symbols and formulas
- Outlining
- Graphic organizers
- Number sequences
- Calculation
- Deciphering codes
- Forcing relationships
- Syllogisms
- Problem solving
- Pattern solving

Interpersonal
- Giving feedback
- Intuiting others' feelings
- Cooperative learning strategies
- Person-to-person communication
- Empathy practices
- Division of labor
- Collaboration skills
- Receiving feedback
- Sensing others' motives
- Group projects

Intrapersonal
- Silent reflection methods
- Metacognition techniques
- Thinking strategies
- Emotional processing
- "Know thyself" practices
- Mindfulness practices
- Focusing and concentration skills
- Higher-order reasoning
- Complex guided imagery
- "Centering" practices

David Lazear. SEVEN PATHWAYS OF LEARNING. 1994, 81.
APPENDIX III

MIDDLE SCHOOL X LANGUAGE ARTS CURRICULUM OVERVIEW
(ABRIDGED: CHAPTER 1, ONLY, OF THE ORIGINAL)

CHAPTER 1

PROGRAM DESCRIPTION

WHO AM I? WHAT CAN I BE? WHAT SHOULD I BE? WHAT SHOULD I DO? These questions are the ones middle school students ask themselves daily. Since we need to value the concerns of our students when developing curricula for them, it is appropriate to use these same questions as a framework for presenting the MIDDLE SCHOOL X (MSX) 7th & 8th Grade Language Arts Curriculum.

WHAT IS THE MSX LANGUAGE ARTS PROGRAM? WHAT CAN IT BE? WHAT SHOULD IT BE? WHAT SHOULD IT DO? Over the past three years since its inception, LANGUAGE ARTS at the 7th and 8th grade levels at MIDDLE SCHOOL X has been evolving more into a THEMATIC, INTEGRATED curriculum program which uses THEMES of social, personal, and ethical concern as frameworks for teaching high order thinking processes.

The WRITING PROCESS -- and all that it encompasses such as brainstorming, drafting, revision, and editing devices -- is one of the most frequent AUTHENTIC vehicles for practicing
and exhibiting the recursive stages found both in the processes of thinking and writing proficiently, while the study of literature serves as the major resource from which themes, appropriate to middle school students' needs, are extracted, analyzed, and applied to these students' daily lives and the greater world around them.

Since student needs vary somewhat year to year, the themes and resources of this program may vary, as well; yet all are chosen in order to provide AUTHENTIC communication, problem-centered tasks which primarily have the following objectives:

- to meet the specific physical, emotional, intellectual, and social needs of its middle school-aged student population.

- to reflect an understanding of the priorities and characteristics of middle school students learning for living independently in the 21st Century.

- to afford opportunities to INTEGRATE, rather than separate, learning in both the COGNITIVE and AFFECTIVE domains, a TRANSACTIONAL philosophy in a Whole Language classroom (SEE APPENDIX II, p.105).

- to promote the use of critical and creative thinking skills, especially the higher order
skills of application, analysis, synthesis, evaluation, and metacognition/self-evaluation.

to motivate its students to become more effective communicators who think, read, write, listen, and speak well enough to participate with confidence in secondary and collegiate programs of study and in the real world around them.

Whenever possible, MSX language arts learning tasks incorporate THEMES "drawn from the intersecting concerns of early adolescents and issues in the larger world." (Beane, p.68) These themes should not be frivolous but instead create learning opportunities which "offer a functional context in which an array of [critical and creative thinking] skills may be developed and applied, themes like democracy, human dignity, and cultural diversity" (Beane, 1993).

In light of the expansive research and attention to the middle school student over the past thirty years, it is no longer pedagogically justifiable to offer a curriculum patterned ONLY after the traditional junior high or 7-12 model, wherein the curricula for grades 7 and 8 were designed CHIEFLY as a mini-model of the 9-12 grade CONTENT curriculum. Nor is it acceptable to agree with the provincial view that "if that old way was good enough for me, then it is good enough for today's students!"
We educators must acknowledge that the segregated, subject approach can give a distorted view of real life to emerging, young adults. As middle school authority James Beane states, "In real life, the problem itself is the center and the information and skills are defined around the problem" (Beane, 45).

We should not separate language art skills and the study of literature away from other areas of INQUIRY. We need to help students identify communication problems of significance and then guide students in the answering or solution to such questions or problems. We need to ask questions, such as "How do real published authors write?" and "How do effective public speakers speak?" In other words, we need to know WHAT PROCESSES THESE PEOPLE USE to produce quality writings and spoken thoughts and then share these processes with our students.

The LANGUAGE ARTS PROGRAM AT THE 7TH AND 8TH GRADE LEVEL DOES NOT ABANDON TRADITIONAL CONTENT OR LEARNING OBJECTIVES, but rather has come to realize that HOW we teachers teach and WHAT we teachers must take into consideration the age group for which the curriculum is designed. Our greatest successes in terms of student motivation and pride, quality of work produced, and parent satisfaction have stemmed from our acknowledging and structuring curriculum so that students are ACTIVE participants in the program, where units of study incorporate "whole" language skills of thinking, reading,
writing, listening, and speaking, skills needed to address a specific theme and/or "problem to solve. In other words, we experience success when language arts "skills" are seen as communication skills needed to address and solve problems in an INTEGRATED framework.

The program is expansive and academically rigorous, trying to provide as often as possible learning tasks which students deem AUTHENTIC and applicable to the REAL world around them. Such tasks involve students WRITING and SPEAKING to GENERAL AUDIENCES after engaging in recursive learning processes which identify and research MULTIPLE VIEWPOINTS and/or alternative solutions BEFORE sharing conclusions in a reasonable, reflective manner. In other words, integrated curricula inherently asks students to be proactive learners who are required to utilize critical and creative skills as they participate in a program of "inquiry" rather than of prepackaged facts and teacher-lectured interpretation of literature read.

When students ask WHY and ideally understand WHY, they need to utilize specific thinking skills to solve REAL problems or issues that they face daily. Because they are part of the inquiry process, the motivation to participate more fully in the learning process naturally follows. Newly acquired strategies and skills can be "applied" to new tasks or problems encountered in their future.
Since readers of the MSX Language Arts Curriculum Overview, however, may not be familiar with integrated curricula development, a MORE TRADITIONAL REPRESENTATION of the MSX program is found in the original text's Appendix B and is entitled "COMPOSITION, LITERATURE, AND SPEAKING SKILLS; SCOPE and SEQUENCE, Grades 7 & 8." There also is a listing of grammar, spelling, and mechanics taught in MSX TEACHER'S RESOURCE BOOK, Section II. Please note, however, that these skills are taught most often IN the CONTEXT in which they are NEEDED to be addressed, rather than as a "list" of skills which are taught in the order of their position in a table of contents.

However, it is hoped that the reader and/or teacher of our Curriculum Overview will realize that INTEGRATED CURRICULUM means that the WHO, the HOW, the WHY, and the WHAT all need to be considered when designing, teaching, and participating in the language tasks reviewed in this packet.

Teachers who want to help create quality middle school programs also MUST UNDERSTAND the complex needs of this age group, WANT TO TEACH this age group, and be WILLING to VALIDATE the issues and themes which these students find as authentic in their daily lives. By offering students FUNCTIONAL contexts -- where the applications of skills learned and valued are IMMEDIATE and COMPELLING -- these students more easily will acquire the critical and creative thinking heuristics or strategies needed to solve
the problems of communication in their immediate and wider worlds. Whenever possible, students at MSX are asked to WRITE, SHARE, DISPLAY, PUBLISH, and SPEAK ALOUD to AUDIENCES of increasingly larger sizes, so that they more readily can understand that the nature of communication skills varies depending on the AUDIENCE and the PURPOSE of the AUTHOR, be it themselves, a politician, or a literary great.

The scope of activities and objectives in the MSX Language Arts Program are expansive, perhaps too much so, but the teachers who have developed and are continually modifying its components have the highest expectations for their students and the enviable, full-support of these students' parents.
CHAPTER 2

WHO ARE OUR STUDENTS? OUR PARENTS? OUR TEACHERS OF LANGUAGE ARTS at MSX?

Over the past three years since the MSX 7th & 8th grade department has been in existence, the profile of each entering class has altered slightly. If our middle school curriculum is to continue to be successful and valid -- as deemed by present and past parents and the academic community -- then EACH YEAR its teachers MUST assess each student's and a class' specific interests, and academic and intellectual strengths and weaknesses, modifying curriculum to reflect such assessment. Because there will be unexpected changes, it is also understood that the integrated THEMATIC units within which language skills are taught and acquired also will change. For this reason, SOME of the themes explored in a given year are the same; some are abandoned; while some new themes are addressed.

ONE DYNAMIC OF THE MIDDLE SCHOOL X 7th & 8th grade program, however, HAS REMAINED CONSTANT over three years and that is the EXPECTATIONS of our PARENT GROUP which chooses to send their sons to us.
MSX PARENTS and their EXPECTATIONS: They want their sons-
- to be held to a higher standard academically, morally, and personally than they were in their prior school environments.
- to participate in learning experiences that usually were offered to only the "gifted" or "most advanced" at their former schools. In other words, parents want their sons in an "honors" program structured so that their sons may acquire the same knowledge and skills as those placed in advanced, public school programs or those fortunate enough to experience the small class size of expensive, independent schools.
- to become independent learners with study skills and habits which will gain them access to honors programs at the high school level and eventually entrance into challenging collegiate programs.
- to write often, preferably daily in class and/or for homework. Regardless of what schools "say" they teach, parents instinctively know that one learns to write by writing OFTEN and with a purpose and audience in mind. Parents rely on teachers to best know HOW to accomplish the production of multiple-drafted and revised, quality writing.
- to engage in higher order thinking tasks which continually go beyond the acquiring and regurgitation
of content to those that require application, synthesis, and self-evaluation or metacognitive thinking. Such thinking processes are easily practiced within the writing process and literature analysis.

- to have teachers willing to create and maintain assessment opportunities which will find ways for students to SUCCEED at significant, AUTHENTIC tasks. Recent pedagogical literature shows that such AUTHENTIC ASSESSMENT usually takes the form of the PRODUCTION or PERFORMANCE of a skill mastered in a FUNCTIONAL venue; for example, a student's revised writing is displayed for public review or published in a newspaper, journal, or class booklet; whereas another student may speak to an audience beyond the classroom walls, sharing his well-researched and multi-perspective opinion.

- to be required to READ more OUTSIDE OF CLASS, acquiring a vocabulary in context -- a vocabulary and increased comprehension of a pluristic world view which differs from that available on TV or evident in SEGA GENESIS video games.

- to acquire public speaking skills that the adult parents understand are so valuable in the world of work, but which they were unable to acquire when they were in school, either out of fear of joining in such
- activities and/or lack of EQUAL educational opportunity.

THE TEAM DYNAMIC OF STUDENTS, PARENTS, AND TEACHERS:

- Each year the DRIVING FORCE behind the MSX Language Arts Program is the dynamic that students and their parents come to us WANTING a better, more challenging, educational experience than that which they have previously encountered. While meeting both the complex needs of our middle school students and the high expectations of their parents is a rather daunting task, we TEACHERS bask is the knowledge that we work as a TEAM with our students and their parents. It is this team dynamic which helps sets our middle-school language arts program apart from a traditional junior high model. We teachers actively promote an open-door policy for both students and their parents in order to encourage and nurture an ongoing dialogue focusing on presenting a curriculum that challenges each student to discover and develop his communication talents which inherently access critical and creative thinking skills. Within this dialogue, which may take the form of formal and informal meetings, letters, notes, and/or telephone calls, the TEAM APPROACH creates an AUTHENTIC and safe environment for the student to metacognitively acquire an understanding of his own learning proficiencies within the "seven intelligences," his emotional and
social behaviors and needs, and the strategies needed to improve his proficiencies in AUTHENTIC (real world) communication tasks.

CAN WE TEACHERS PROMISE that each student will experience EQUAL SUCCESS in solving problems or tasks requiring advanced critical and creative language arts thinking skills? NO. We teachers ONLY CAN TRY to service both parents and students through our sense of commitment and validation of their priorities. We can promise, however, to provide an emotionally-safe learning environment where creative and intellectual risks are encouraged, multiple intelligences are acknowledged and validated, a student's best effort is expected at all times, and a credo of fair play prevails.


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