DOCUMENT RESUME

ED 355 529 CS 213 733

AUTHOR Pullen, Arlene
TITLE Improving Critical Thinking Skills of English Students at Marlboro High School through Literature and Composition Instruction.
PUB DATE Dec 92
NOTE 170p.; Ed.D. Applied Research Project, Nova University.
PUB TYPE Dissertations/Theses - Undetermined (040)

EDRS PRICE MF01/PC07 Plus Postage.
DESCRIPTORS Class Activities; Classroom Research; Classroom Techniques; *Critical Thinking; English Curriculum; *English Instruction; High Schools; High School Students; *Literature Appreciation; Teaching Methods; Thinking Skills; *Writing Instruction
IDENTIFIERS English Teachers; Marlboro Township School District NJ

ABSTRACT

This report describes the procedures used by a New Jersey high school English department of 15 teachers to improve the critical thinking skills of their students and thus allow the students to assume greater autonomy in their learning. Emphasis was placed on improving critical thinking skills of the students through literature and writing activities and lessons. Major solution strategies developed involved coaching and conferencing observations by the English supervisor, with questioning patterns and student-centered activities as the focus for those lessons. Through teacher networking and staff development through individual planning as well as school, district, and state workshops, the English department improved test scores, increased student autonomy, and fostered greater critical thinking in the students. In addition, teachers became more student centered in their instruction. Twelve appendixes, covering various data related to and derived from the research study, are attached. (HB)

CS

Improving Critical Thinking Skills of English Students at Marlboro High School Through Literature and Composition Instruction

by

Arlene Pullen
Supervisor
Marlboro High School
Marlboro, New Jersey

A Major Applied Research Project Report
presented in partial fulfillment of the requirements
for the degree of Doctor of Education

Nova University
National Ed. D. Program for Educational Leaders
Wilmington VII Cluster

December 1992

Abstract

Improving Critical Thinking Skills of English Students at Marlboro High School Through Literature and Composition Instruction

This report describes the procedures used by a high school English department of 15 teachers to improve the critical thinking skills of their students and thereby encourage students to assume greater autonomy in learning. Students in the general, write (a remedial writing course), and lower half of the academic tracks consistently scored below 75% on 40% of standardized test items in reading and 29% of the items in writing that measured critical thinking skills.

One possible cause of this problem was the instructional methods used by the teachers. A second possible cause was the students' perception of teacher-learner roles in the classroom.

The major solution strategies were the coaching/conferencing observations by the English supervisor, with questioning patterns and student-centered activities as the focus for those lessons. Emphasis was placed on improving critical thinking skills of the students in literature and writing activities.

Through teacher networking, individual Professional Improvement Plans, and staff development through school, district, and state workshops, the English department realized its goals of improving test scores, increasing student autonomy in learning, and prompting greater critical thinking in the students. Teachers became more student-centered in their instruction. Pertinent data are provided in the appendices.

Table of Contents

List of Tables

Chapter 1

Problem Statement and Community Background

General Statement of Problem

An analysis of teacher-made tests, classroom observations completed by the English supervisor, and students' results on standardized tests during the 1989-1990 school year indicated that Marlboro High School English students enrolled in the academic B, general, and English write programs in grade 9 experienced difficulty with open-ended and multiple-choice questions that required inferential reading or inductive reasoning. These 128 students consistently scored in the 80th and 90th percentiles in questions asking for concrete data and factual recall, but they scored below 75% on 40% of the test items in reading and 29% of the items in writing which measured critical thinking skills (see Appendix A).

Description of Immediate Problem Context

During the 1990-1991 school year, the English department of Marlboro High School consisted of 15 full-time teachers (5 teaching periods of a 7 period day), 1 teacher shared with the social studies department (1/5 English, 4/5 social studies), and 1 supervisor who taught 2 periods per day. All members of the staff held certification in English from the state of New Jersey, with 7 staff members holding dual certification. Areas of secondary certification

included Spanish, Latin, social studies, drama/theater, and administration.

All of the staff graduated from accredited colleges, and 10 teachers earned Masters degrees in English or English education. Five other teachers held B.A.'s, and a sixth had earned 30 credits beyond the bachelor's degree. The supervisor possessed an M.A. in English and certification as a teacher, supervisor, principal, and school administrator in New Jersey and Texas. She had earned 79 credits beyond her M A.

Four staff members had 20 or more years in education, with 6 having between 12 and 20 years of teaching experience. Four had between 9 and 12 years of experience; 3 had between 4 and 8 years in the classroom. All but 3 coached or advised student groups after school hours. All had worked on school or district-wide professional committees, including curriculum revision.

Six of the teachers taught ninth grade classes. This assignment was noted because much of the emphasis of this project concerned ninth grade students. The department had eight males and nine females. Sixteen teachers were white; one was black.

The English supervisor was the writer of this project. My responsibilities included supervising the 15 full-time teachers, a basic skills teacher (not included in the above profile), and a shared teacher. This supervision included completing a minimum of 2 full-period classroom observations

per year for each tenured teacher. As of September 1990, all Marlboro High School English teachers were tenured in the district (tenure does not accrue between districts in New Jersey). In March 1991, I completed an evaluation of the professional strengths and weaknesses of teachers and assisted teachers with writing their Professional Improvement Plan (PIP) for the 1991-1992 school year. The PIP was subsequently used as a guideline for teacher evaluation.

As supervisor I conducted monthly department meetings and other formal or informal networking meetings as were necessary for staff development, articulation, or curriculum problem-solving. I shared materials gathered at national professional meetings and provided time at department meetings for others on the staff to share their workshop experiences.

I budgeted for textbooks, materials, supplies, software, and hardware that supplemented English instruction. I also typed purchase orders needed to order these materials. I completed an inventory (with assistance of department members) of all material owned and used by the department. Periodically, I conducted needs assessments to determine the most economically sound way to spend the allocated funds.

I served as a liaison between the Marlboro High School English department and (a) the central office, (b) the building main office administration, (c) two sending schools

(Marlboro Middle School in Marlboro and Cedar Drive School in Colts Neck), and (d) local business and professional schools in Central Jersey, which provided speakers for the department. I recommended to the high school principal the teaching assignments for the English staff, including proctors for the English department writing center. To the guidance department, I recommended tracking assignments for all incoming ninth graders. These were determined in consultation with the Marlboro Public Schools language arts supervisor and the English and reading teachers at Cedar Drive School. I also recommended honors students (the most advanced students) and general students (the lowest track of students), collaborating with English teachers to form such class rosters.

In October 1990, I completed an item analysis and written assessment of the scores of the New Jersey High School Proficiency Test (NJHSPT) that the class of 1993 took in April 1990 (see Appendix A). These test results reinforced the need for intervention in English teacher pedagogy, which this study addressed.

I also chaired the advanced placement (AP) English curriculum committee, which wrote the initial AP curriculum in this discipline for the Freehold Regional High School District, and the 12th-grade English currriculum committee, which revised the curriculum for implementation in September 1992.

Finally I supervised the director of the English department writing center, which opened in September 1989. The director, an English teacher, organized many of the procedures for the center and helped the department identify the writing needs of the students.

Marlboro High School is a comprehensive high school. Ninety-four percent of its students were white; 4% were Asian or Pacific Islanders, and 2% were black. Annually, between 90% and 94% of the graduating seniors have furthered their educations at two- or four-year colleges. Because of this emphasis upon higher education and students' aspirations for careers in the professions, the English department offered a strong core program in literature and composition for all students in the four grades. Parents remained involved with their children's course selection and academic placement throughout the students' four years. In 1989, the English tracking system was changed. Honors remained honors; college preparatory became academic A; general became academic B; remedial became general; and write remained write. Such titular changes were made to appease the parents who strongly objected to their children's enrollment in a general course, fearing the program would not be recognized by reputable colleges.

There were 3 years of honors English followed by an advanced placement English class in the 12th year. This latter curriculum, although based upon the College Board's Advanced Placement Program, was a local curriculum. Prior

to 1991, eighth grade students were placed in ninth grade honors if they scored 90% or above in language, reading, and study skills on the California Achievement Test (CAT) or the Comprehensive Test of Basic Skills (CTBS). Students received recommendations from their eighth grade English and reading teachers, but no students were placed in honors English I at the request of a parent.

In 1991, for the class of 1995, standardized test percentiles were increased from 90% to 95% in the language and reading categories because the students from the classes of 1991, 1992, 1993, and 1994 had not successfully completed the academic assignments with much creativity or depth of understanding of the principles behind them. Students did not question, but they were content with memorizing data for repetition onto test papers. The department decided to seek a smaller number of students for the honors program, anticipating that only the elite from each grade would accept the challenges of an academically stringent program.

Students were retained in the honors program until they graduated, as long as they were recommended to continue by their teachers. If teachers recommended dropping students, they provided me with sufficient cause for removal. I rarely overruled teachers regarding tne placement of honors students. Students entered the honors program from an academic track upon recommendation of the current English teacher in consultation with the teacher of the honors

course into which the students were to be placed and the English supervisor.

The academic A and academic B programs were generally identical in content but different in pacing and, often, in methodology. Incoming ninth grade students were placed in the academic A track upon recommendation of their eighth grade English teachers and scores between 75% and 89% on the reading, language, and study skills portions of the CAT and the CTBS. In September 1991, these scores were raised to the 80% to 94% range. In September 1990, students scoring 60% to 74% were placed in the academic B track; in September 1991 these scores were increased to the 65% to 79% range. With teacher recommendation, these students remain in these tracks for four years. Parents moved students from one track to another by writing letters to the English supervisor or the guidance counselor. I monitored the academic success of all students with parental waivers and notified parents and counselors of problems.

During the 1989-1990 school year, 472 students were enrolled in the academic B track (grades 9 through 12); during the 1990-1991 school year, there were 423 students in this track. Table 1 on page 8 shows the number of students in lower level tracks, by year, during 1989-1990 and 1990-1991.

Table 1
Number of Students Enrolled in Lower Tracks, Marlboro High School, 1989-1990 and 1990-1991

	Number of Students	
Track	1989-1990	1990-1991
Academic IB	105	106
Academic IIB	81	68
Academic IIIB	146	104
Academic IVB	140	145
Total:	472	423
General I	12	27
General II	33	16
General III	20	39
General IV	30	20
Total:	95	102
Write I	11	7
Write II	5	8
Write III	2	3
Write IV	2	3
Total:	20	21

The general program was designed to assist students whose reading and writing skills were 2 or 3 years below grade level. Classes averaged 15 students in 1989-1990 and 17 students in 1990-1991 (10 fewer students than average class sizes in academic A and B tracks). Students were expected to read some, but not all, of the core literature assigned to students in other tracks. There were 95 students enrolled in the general tracks during the 1989-1990 school year and 102 students enrolled during the 1990-1991 school year. These students had scored below 60% (1989-1990) or 65% (1990-1991) in reading, language, and study skills on the CAT or CTBS. They had been in the

lowest track during their elementary school years. Parents had the option of transferring students from this track into an academic B track.

The English write program was designed to improve students' written communication skills; the sole criterion for placing students in English I write (ninth grade) was the guidance counselors' interpretation of the language portion of the CAT or CTBS. Students who failed the writing section of the New Jersey High School Proficiency Test during April of their 9th grade were placed in English II write for their 10th grade. When students passed the writing section of the NJHSPT, given each October of a school year, they were removed from the write program and placed in a general or academic B course. If students failed the writing portion of the HSPT in their 10th grade, they were placed in English III write for their 11th grade. New enrollees to the school were placed in English write if they had failed the HSPT while attending another New Jersey school. Teachers of write students devoted 100% of their instructional time to tutoring in writing skills needed for students to pass the test; this format included students' applying the principles of writing that had caused their failure on the test. A score of 77% was a passing score.

In addition to these required English courses, the department offered four semester-length courses: (a) creative writing, (b) drama, (c) humanities, and (d) language skills. Students in grades 10 through 12 elected

these courses, often at the recommendation of their English teachers. There were two full-year electives: journalism/yearbook and journalism/newspaper. Though the former was only in its second year in 1990-1991, it was far more popular with students (73 students enrolled) than the latter course (5 students enrolled). Students in these courses were responsible for producing the yearbook and the newspaper because these functions were not extracurricular activities at Marlboro High School.

Description of Surrounding Communities

Marlboro High School, opened in 1968, the 3rd of 5 4-year high schools in the Freehold Regional High School District, served 1647 students in the 1990-1991 school year, receiving 90% of its enrollment from Marlboro Middle School and 10% of its enrollment from Cedar Drive School in Colts Neck. Annually, between 150 and 175 students enrolled from other districts; this number was distributed among the four grades. The immediate community was middle to upper class; residents were skilled laborers, professionals, and executives, with many commuting to positions in New York City, approximately a 90-minute drive to the north.

Largely known throughout Monmouth County as the site of a state mental health institution, Marlboro emerged from its sleepy farm atmosphere to become a residential community in the late 1960s and early 1970s. Most of the influx came from northern New Jersey, Staten Island, and New York City.

The Atlantic Ocean is approximately 20 minutes from Marlboro.

Chapter 2

Problem Definition and Evidence

Problem Background

I assumed the position of English supervisor in December 1987. Although I was impressed by the professional stature of the English staff, I was concerned about the direction in which the curriculum and instruction were going. About 90% of the emphasis was on literature instruction, and teachers totally controlled all class activities. All 12th graders were required to write a term paper, but ideas for topics were limited to a list of 94 books selected by a committee of English teachers and librarians in the district. The format for each paper was identical, permitting no margin of individual difference by the students.

Ninth grade students wrote two narrative paragraphs, which were holistically scored, but there was no evidence that the teachers provided guidelines for writing them. There also was no indication that the teachers assigned more writing beyond these two narratives required by the department supervisor.

Teachers employed lecture, worksheet completion, memorization, and drill/recitation as their principal methods of instruction. Between February 1988 and June 1988, I observed 16 classes; I had requested that classes be

studentcentered. Seven classes included students making oral reports, and 2 included student oral reading of literature. Nine classes consisted of students listening to the teacher or answering a teacher-initiated question. The teachers told the students what was important (translated: what will appear on the next test) and what they should memorize. The teachers selected the literature to be read, and everyone in the class read the same works for the same reasons; there was no student input into selection or assessment.

Mondays and Fridays were devoted to spelling and vocabulary drill because the district had determined that one of its goals for 1987-1988 was improvement of spelling for all students. The words to be learned came from a list generated by the department, but they were not gleaned from any of the literature being read. Tests were rote memorization drills, with multiple choice, fill-in-the-blanks, and word dictation being used as measurement patterns. Students were not required to write paragraphs or sentences employing words in context. They were never required to use the words at any time beyond the test date.

The supervisor who preceded me as English supervisor had conducted a staff development workshop regarding the use of registered holistic scoring. Her goal was to provide teachers with a quick means of assessing student writing and thereby motivate teachers to require six or more major

writings per student each year. Students were to be trained to peer edit, using the rubric of the registered holistic scoring created by the state of New Jersey and used in evaluating the NJHSPT essays of all ninth graders. See Appendix B for the rubric. Students, then, would understand what state readers required and would know how to meet these requirements when they took their tests in April of their ninth year.

Since 1985 (the first year for which I found records), ninth grade classes had improved their percentage of students passing the reading and writing portions of the NJHSPT (see Table 2). Ninth grade teachers used activities and test preparation worksheets found in a state-prepared review book titled Project Rally. Tenth grade teachers were not alerted to their students' weaknesses identified by the preceding test.

Because teachers in the English department had no input into test assessment or item analysis of results, they did not know the weaknesses of individual students on specific items. The social studies department and science department supervisors were not given copies of the test assessment. Because some test items measured students' ability to read charts and graphs, teachers in social studies and science could provide students with the skills essential for accurate interpretation of graphics.

Table 2

Percentage of Marlboro High School Ninth Graders Meeting State Standards, High School Proficiency Test, 1985-1990

	Reading	Writing
Year	Percentage	Percentage
1990	99.4	99.0
1989	99.7	99.2
1988	99.3	98.7
1987	98.2	93.7
1986	95.8	92.2
1985	89.0	90.1

	Reading	
	Literal Comprehension	Inferential Comprehension
Year	Percentage	Percentage
1990	96.0	96.0
1989	96.2	96.5
1988	94.6	94.8
1987	91.8	92.0
1986	90.3	90.8
1985	88.9	86.8

	Writing		
	Sentence Structure	Organization of Ideas	Editing
Year	Percentage	Percentage	Percentage
1990	92.0	94.0	93.0
1989	93.0	93.5	91.8
1988	92.3	92.4	92.7
1987	87.5	88.4	87.1
1986	86.9	87.8	87.5
1985	83.9	85.3	85.7

All scores are mean cluster scores.

Evidence of Problem Discrepancy

Seventy-two of the 133 classroom observations (see Appendix C for data analysis and Appendix D for instrument), which I conducted between February 1988 and June 1990, indicated that English teachers depended upon a textbook for content and method of instruction. The observation reports filed in the English department office, the building principal's office, and the district central office revealed a definite instructional pattern: (a) teacher-led questioning of a literary selection assigned the preceding night as a home reading, (b) a 5 to 10 question factual recall quiz to ascertain which students had completed this homework, and (c) notification of the next day's reading.

An assessment of time on task, as revealed through these classroom observations and the teacher's lesson plans, submitted each Friday morning to the English supervisor, revealed that 49% of class time was spent in reading comprehension of literary selections found in the literature anthology or a supplementary text; 51% was devoted to all other language arts content. Teacher activities dominated 44.5% of the instructional time (giving information through lecture; interpreting the characters, themes, or symbols of a passage; asking questions based upon the reading; or explaining the homework for that evening). Thirty-one percent of each week's instructional time was devoted to vocabulary and spelling (looking up meanings of words in dictionaries, taking quizzes, and reciting memorized

meanings of words found on lists). Writing activities comprised 5.9% of class time, and 8.1% of class time was devoted to student oral reports.

I made the teachers aware of these percentages. All of the teachers indicated that the percentages seemed accurate as indicators of their time distribution.

This pattern of instruction served students well in test-taking that measured factual recall or comprehension based upon close reading, but it did not prepare students for questions measuring inferential reading or requiring open-ended responses. Ninth grade students in the honors track, the academic A track, and most in the academic B track, because of their innate ability, passed the New Jersey High School Proficiency Test. Tenth grade students in these tracks exceeded national norms on the Comprehensive Test of Basic Skills; 11th and 12th graders in these tracks scored above national norms on the Preliminary Scholastic Aptitude Test and the Scholastic Aptitude Tests. However, the weakest of the students in the academic B, general, and write program did not always achieve acceptable scores, as determined by the state or district. Their failure motivated their teachers to seek alternate means of instruction, methods which would focus on skill orientation and process rather than content or product.

Such teacher concern led to a series of six meetings held during the 1989-1990 and 1990-1991 school years to discuss strategies for performance enhancement. These

meetings revealed a need for more student interaction, to be effected through small group discussion and writing activities for 50% of the instructional time each week. Teachers agreed to establish more program articulation among the four grades by sharing strengths and weaknesses of individual students on which succeeding teachers could build. They agreed to encourage student autonomy in learning by individualizing some of the reading assignments and by providing classroom reading time of materials selected by the students.

Those materials designed in district curriculum committees were evaluated, and only those activities deemed appropriate for the level and interest of Marlboro High School students were used. Teachers did not continue "teaching the book" to students. An explanation is required here. The five high schools in the district have different socioeconomic levels and thus different academic needs. The materials were prepared so the poorest readers in the district could understand them, and they presented no challenge to 90% of the poorest readers in Marlboro. The district used one curriculum guide for all five schools, and, in revising it beginning in 1989, the curriculum committees included a differentiated curriculum to accommodate the needs of all students. Such revisions provided the variety of subject matter that the teachers of Marlboro High School sought.

Each April, ninth grade students in New Jersey took the High School Proficiency Test, which measured reading, writing, and mathematical proficiency. Students needed to achieve 75% accuracy in reading, 77% accuracy in writing, and 61% accuracy in mathematics to pass the test and qualify for a diploma issued by the state of New Jersey. The reading portion of the test measured comprehension and inference, and study skills (including library reference materials and graphics); the writing part measured identifying sentence errors and editing. It required students to write an essay in 20 minutes.

On the April 1990 test, 20 ninth grade students in the academic B, general, and English write tracks scored below 75% on questions in these reading comprehension categories:

1. differentiate between relevant and irrelevant information
2. identify the main idea of a passage
3. identify comparisons and contrasts
4. identify events in sequence
5. identify meaning of unfamiliar words from context.

Sixteen students scored below 75% on items in these inferential reading categories:

1. infer the main idea
2. draw a conclusion
3. infer a character's motives
4. infer a writer's purpose/viewpoint
5. infer comparisons/contrasts

6. make judgments.

Ten students scored below 75% in this study skills category: Use Reader's Guide to Periodical Literature.

Sixteen students in the academic B, general, and English write tracks scored below 77% in these writing categories:

1. selecting words that complete a partially constructed sentence
2. organizing ideas
3. selecting the main idea for a paragraph
4. editing
5. identifying the error within a sentence containing a usage error
6. selecting transition words to complete a paragraph
7. combining ideas into a well-constructed sentence

These problem areas indicated the separation of teaching and learning skills. They supported my contention that classroom integration of reading and writing skills with extensive application by students should supplant the teacher-talking-student-listening format.

Possible Causes of the Problem

During the 1989-1990 school year, I conducted 54 classroom observations, each lasting a full period of 45 minutes (see Appendix C). Of this number, 19 were devoted to the academic B, general, and English write classes; 31% of instruction in these English classes focused on content

more than the process of learning. Of the 35 classroom observations conducted in honors and academic A classes, 20% of instructional time was process oriented. Teachers lectured on historical background for the literature being studied and asked factual recall questions to determine whether students had completed homework. Students delivered oral reports; content was assessed, but student delivery was not evaluated. Seventy minutes of 225 minutes of weekly instructional time, or 31%, were devoted to spelling and vocabulary memorization or test. This disproportionate distribution of instructional time contributed to the learning problem.

A second cause was class load. According to the teachers, having 5 classes and a total of 110 to 130 students precluded their assigning student essay writing, using class time for peer editing, and returning essays promptly after students had written them. Thirteen of the 16 teachers said that assigning writing or using class time for peer editing took time needed for literature. They also assigned essays to 5 classes simultaneously, having over 100 essays coming due on the same day. Then, being inundated with student papers, they packaged them and set them aside for later marking. Thus, all students were required to wait until all 100 papers were graded before any papers were returned.

I felt that 5 of the 16 teachers were too involved in extracurricular activities (coaching, sponsoring clubs,

etc.) and did not allow themselves time to assess students' essays. Those teachers who assigned grammar worksheets were disappointed when students did not transfer these practiced skills to editing their own essays. This attitude illustrated the separation of teaching and learning skills, which needed to be addressed through staff development workshops.

Classroom observations revealed a third cause of the learning problem. Of the three lessons devoted to instruction in writing, one lesson used material containing errors, and two lessons were based on material that was out of date and thus gave students inaccurate information. Eleven teachers assigned students to write journal entries, but only 4 of the 11 teachers read and commented on these journals. Two teachers said they did not have time to correct the grammar and usage, and two teachers said they read only for content.

Even though standardized tests measured reading skills, English teachers stressed literature, not reading. For the students in academic B, general, and English write tracks, reading skills needed reinforcement, but none of the teachers used oral reading in class as a means of assessing reading competence or providing pronunciation help.

Each year there were more limited English proficient students entering Marlboro High School. Although the number remained small, all the students seemed to be placed in the same class. The English teachers, just as they were not

trained to teach reading, were not trained to teach English as a second language.

Teachers sought workshops for staff development in teaching writing as process, but they did not suggest critical thinking skills as a workshop topic. Three of the 16 teachers attended professional writing workshops out of the district; 4 requested information about other writing workshops and addressed their needs in the Professional Improvement Plans for 1990-1991. No one asked for professional literature or workshops regarding improving thinking skills within the English classroom.

Chapter 3

Influences in the Problem Context Bearing on Solutions and Outcomes

Influences in the Immediate Problem Setting

In September 1989 and September 1990, I provided each English teacher with a written assesment of the New Jersey High School Proficiency Test (NJHSPT) results from the test of the preceding April. Included within this assessment was a list of recommendations for program improvement. Because 33% of the ninth grade test and 100% of the test to be implemented in December 1993 required mastery of higher level thinking skills, students needed instruction and practice with thinking skills' strategies if they were to achieve 75% on reading and 77% on writing, passing scores as determined by state norms. During conferences with English teachers following classroom observations, I indicated the types of lessons I had seen. Teachers requested process-oriented methods to replace the traditional text-recitation-test pattern, which had dominated their instructional year. There were four suggestions to implement such a change. The first suggestion was staff development through department meetings and took the form of video presentations and peer sharing of successful teaching methods. The second suggestion was staff development through district workshops in the form of guest lecturers and hands-on applications. The third suggestion was preparation

of new curriculum guides that were process-oriented and written by English teachers within the district. The fourth suggestion was professional reading that I or department members recommended.

During consultation with me, five teachers decided to include improving the teaching of thinking skills as part of their Professional Improvement Plan for 1990-1991. I monitored their professional growth in this area by observing lessons in which teachers stressed writing instruction.

The teachers of honors courses selected course articulation as their 1990-1991 PIPs. Other teachers networked informally; two department meetings provided time for teachers to meet according to the tracks they taught.

Back-to-school night, held in September 1990, afforded parents an opportunity to meet the teachers and learn the procedure students followed throughout the school year. Teachers discussed course proficiencies (mandated by the Board of Education) and their specific goals for students.

In November 1990 and March 1991, parents met individually with teachers during evening hours. The purpose of these meetings was for teachers to notify parents of weaknesses in student performance, which could conceivably result in failure for the marking period grade, or for parents to initiate dialogues based upon their perc ption of activities within the classroom as gained from conversation with their children.

When personal conferences could not be arranged for these designated evenings, teachers or parents suggested daytime meetings, or they conferenced via telephone. Teachers also communicated with parents through progress reports and report cards. The school year was divided into 4 quarters, each containing 45 school days. Halfway through each report period, the principal's office mailed a progress report from all teachers to notify parents of pending academic problems or of dissatisfaction with students' classroom behavior.

Students received report cards four times: in November, January, April, and June. Report cards reflected academic progress through letter grades and attitude and work habits through predetermined comments.

The administration at Marlboro High School consisted of one principal and two assistant principals, each of whom supported the supervisors and their staffs in the academic program given to the students. The principal remained informed of changes in curriculum and instruction through informal discussions with supervisors, monthly supervisors' meetings, and monthly reports written by the supervisors. No major curriculum changes occurred without his approval.

Influences in the Broader Community

The parents of Marlboro High School students held exceedingly high expectations for their children; they expected students to pass all standardized tests with scores

above the state and national norms. They expected students to receive honor grades (As and Bs) in all courses; they required academically talented students to enroll in as many advanced placement courses per year as their schedules permitted.

The students who graduated from Marlboro High School in 1990 also began ninth grade in that school. Marlboro was a stable community. According to the director of guidance at Marlboro High School, there were between 150 and 175 incoming transfers per year, 90% of whom were from New York City.

The New Jersey High School Proficiency Test was removed from the ninth grade after the April 1991 test was administered. Beginning in December 1993, the NJHSPT will be administered to 11th graders and will test inferential skills instead of comprehension skills. The 1993 test is process-oriented as are the state proficiencies being prepared for all disciplines.

These changes began under the guidance of State Commissioner of Education Saul Cooperman, and they were supported by his successor, John Ellis, who assumed office in the spring of 1990. There were also changes in central office personnel that affected the program at Marlboro High School. A new superintendent assumed his position in July 1987. The deputy superintendent in charge of curriculum and instruction retired in January 1991, and his replacement, hired in June 1991, had, by September 1991, begun to

implement his own programs. My immediate central office supervisor retired in June 1990 and was succeeded by someone familiar with district policies but unfamiliar with the direction of the English program and the uniqueness of each high school's English staff. There were other realignments of central office personnel, which affected building administrators and department supervisors through changes in philosophy, methodology, and school district responsibilities toward curriculum, instruction and staff development. Working through and around these organizational changes created new challenges in completing this project.

Chapter 4

Problem Conceptualization, Solution, Strategy, and Project Outcomes

Review of the Literature and Consultation with Others

When I decided upon critical thinking as the basis of this project, I considered five questions: (a) Should the teaching of critical thinking skills be incorporated into a specific study skills course (with library orientation and career guidance) or be integrated within content disciplines? (b) If critical thinking skills should be part of the content teachers' domain, what does that teacher need to implement instruction of these skills? (c) What kind of classroom activities can a teacher employ to improve the critical thinking skills of students? What kind of questions should be asked? (d) How would the teachers and the department supervisor evaluate the effectiveness of instruction in critical thinking skills? and (e) How will the students' improvement in critical thinking abet their autonomous learning?

Norris (1985) said that critical thinking "is best taught within the traditional subject areas rather than as a separate subject" (p. 44). He said that critical thinking ability was not widespread but was very sensitive to context. Students' ability to make inferences depended upon their background, understanding of the task, and their level

of sophistication. But critical thinking was also indispensable to the students' education because, to be considered educated, they must be able to think critically.

Joyce (1985) asserted that thinking skills cannot be a content addition to the curriculum but must be taught in context with a specific content because of its importance to all the activities of a school. Teaching the basic subjects without teaching thinking processes was an inefficient method of instruction.

Chambers (1988) contended that children learned a specific skill for a specific task leading to a specific conclusion. They learned to think as the need arose; they did not attach general thinking rules to specific disciplines. Therefore, each teacher needed to assist students in understanding the thought processes essential to a given discipline.

Barell (1985) advanced the theory that because thinking was often perceived as the province of the gifted student, teachers often underchallenged their students. This contention led me to focus on the critical thinking scope and sequence in the English curriculum for the academic B, general, and English write classes at Marlboro High School. These students needed more challenges than factual recall, memorization, fill-in-the blanks of context-clued sentences, and direct teacher questioning with little chance of student interaction and discussion.

Good thinking combined discipline and flexibility. "Thinking strategies are most effectively taught in conjunction with appropriate content" and different teaching methods from these traditionally employed by most teachers (Joyce, 1985). Ennis (1985) said that schools offered more than reading, writing, arithmetic, and volumes of memorized data that were forgotten immediately after the feedback test.

In The School and Society (1956), Dewey stated that memorized information was soon forgotten if it were not applied. This tenet illustrated Dewey's process orientation and the building block theory that students built upon what they knew (Presseisen, 1988). With critical thinking a requisiste for problem solving, students increased their understanding because they learned to verbalize how they knew as well as what they knew. Advocates of teaching thinking skills believed relationships between content and context were the keys to understanding (Presseisen, 1988).

When Paul (1985) discussed the relevance of Bloom's taxonomy and critical thinking instruction, he concluded that most advocates of critical thinking did not provide a list of rules for teaching it.

No authorities supported a study skills course with critical thinking skills as a chief component. It was unanimous that critical thinking skills instruction be an integral part of the content disciplines. Because many of the teachers in the English department at Marlboro High

School had a lecture-based pattern for teaching, the second question of this literature study became vitally significant. What changes would the teachers need to make in their method if they were to subscribe to incorporating critical thinking in their discussion of literature passages?

As Joyce (1985) indicated, changing teachers' established procedures was the biggest problem supervisors had. Changing the teachers' classroom methodology was exactly what I wanted to do.

Barell (1985) said that teachers must provide the proper environment, one in which students felt free to take risks and in which there was open communication between students and teacher. With such an atmosphere, students assumed more responsibility for their learning. Achieving student autonomy was one of the goals for the Marlboro High School English department.

McTighe and Lyman (1988) offered six tools for creating a classroom environment conducive to critical thinking:

1. think-pair share: This tool allowed wait time; longer wait time encouraged longer, more thoughtful answers. After the question was asked by the teacher, two students shared their responses with each other before they shared them with the class.

2. questioning/discussion strategies bookmark: On her bookmark, the teacher wrote cues for questioning; it was a memory aid which allowed for planned questions.

3. thinking matrix: Teacher and students worked together toward a goal.

4. ready reading reference: Poor readers saw reading as decoding words, irrespective of meaning for word clusters.

5. problem-solving strategies wheel: Students graphed or charted a problem and, through visualization, saw the problem clearly enough to focus as much on the process of solving the problem as on the ultimate solution.

6. cognitive mapping: The ability to organize was essential to effective thinking. Mapping a concept helped students to: (a) represent abstract ideas in concrete form, (b) show relationships between facts and concepts, (c) generate and elaborate on ideas, (d) relate new information to prior knowledge, and (e) store and retrieve prior knowledge.

Mapping was especially helpful for visual learners and was a tool I frequently suggested to my teachers of English who taught students who did not verbalize well.

Brandt (1988) said teachers needed to change their attitude toward students and cognitive skills. They must select content that will motivate students to think. He said that teacher training should include these areas: how to teach concept attainment, how to teach thinking skills, and how to organize for cooperative learning. Teachers needed to make decisions for the classroom, curriculum, and school district. They needed to be able to choose

materials, share them with their peers, and observe and coach their peers. Marlboro High School's English teachers chose materials with their peers, but they had not observed and coached others in the department. They saw the latter as a supervisory responsibility and, even though they networked informally, they had not tendered any comments that might be perceived as judgmental or evaluative of another's competence. They were unwilling to take this kind of risk, and, probably, that hesitancy helped to explain why they experienced difficulty encouraging students to take academic risks. Such risk-taking was translated as losing control, and that was something the staff at Marlboro High School did not want to happen.

Brandt (1988) further suggested that supervisors focus on student behaviors rather than teacher behaviors in order to be less threatening to teachers. Teachers needed support when change occurred.

Beyer (1988) suggested these support strategies: (a) sample lesson plans, (b) thorough training, (c) a full description of skills to be taught, and (d) model skill tests. Joyce (1985) added concept formation through inductive learning and analysis of strategies, role playing to analyze social issues, group study and scientific investigation, and role playing for assertiveness training.

These strategies suggested a need for a strong staff development program. Joyce (1985) agreed with the need for staff development as a vehicle to teach teachers to teach

students to think. Thinking critically was not an innate talent or skill. Thinking skills involved metacognitive skills--planning, monitoring, and revising (Norris, 1985). If teachers were to expand their teaching scope and change methodology, they needed to be convinced that the changes were valuable. Brandt (1988) said, "When teachers do teach for thinking, their standardized test scores usually go up" (p. 12).

Part of staff development must be devoted to assisting teachers in assessing their own thinking skills (Paul, 1985). Successful critical thinking instruction, said Paul (1985), demanded (a) that teachers have a full range of insights into cognitive processes and their interrelationships, (b) that teachers understand that rational learning was process-oriented, and (c) that the product was not the most important aspect of a lesson. The process focused on comprehension, analysis, synthesis, and evaluation.

This led to the third question for the literature to answer: What kind of classroom strategies and activities could teachers use?

Quellmalz (1985) listed mastery of these skills as goals of higher order thinking: (a) identify and analyze a problem, (b) relate information to a task, and (c) evaluate adequacy of conclusions or solutions. These are achieved through learning inductive and deductive reasoning skills.

Sternberg and Baron (1985) listed these skills: (a) define, (b) clarify, (c) judge and infer information, (d) solve problems, and (e) reach conclusions. These skills dominated the literature.

Strong (1985) discussed the means of integrating teaching strategies and thinking styles with effective instruction. He outlined three strategies. The first was Ausubel's Lecture Strategy, based upon lecture, questioning, student responses to questions, and teacher responses to student responses to questions. This strategy really is a thinking pattern regarding memorization. A second strategy is Bruner's Concept Attainment Strategy. The teacher presented examples of an idea for student understanding. Students were to observe while the teacher modeled; then they analyzed and verified the hypotheses that were raised (Strong, 1985). Strong's third strategy was Taba's Concept Formation Strategy, which required students to organize data around relationships. By using one of these strategies instead of the others, teachers stressed a specific style of thinking.

Fifteen of the 16 English teachers at Marlboro High School subscribed to the Ausubel Lecture Strategy at least 50% of the time because that provided them with the most control of the classroom. Because students had passed teacher-made tests and had scored above state, county, and district norms on standardized tests, the teachers concluded that their teaching was successful. Of the 16 teachers, 9

sometimes used the Bruner Concept Attainment Strategy, especially when they assigned oral work (individual reports, dramatic projects, oral literature memorization, and panel discussions). One teacher subscribed to Taba's Concept Formation Strategy approximately 95% of the time. In fact, he so rarely provided students with any definite responses that I reminded him that students needed to know how he felt toward a point or what the critics believed about a controversial interpretation.

The key to teaching critical thinking lay in teacher questions. Socrates had the earliest success. He formed questions in a way that elicited responses from his students when they had seemingly little preknowledge on which to base their conclusions. He used "Why?" as his core word and prompted students to reason in a logical process. Paul (1985) concluded that knowledge cannot be memorized from a book or given from one person to another. Based on his understanding of the Socratic method, he concluded that students must reason through a problem, and reasoning came from critical thinking before it led to knowledge. Right and wrong answers must be excluded from students' expectations if they were to begin thinking critically.

Barell (1985) said that teachers must ask the right questions if they are to prompt student interaction. One question was "How did you get that answer?" (p. 21). This question forced students to think critically about the process used to reach a judgment or conclusion. Challenging

students to explain their process initiated thinking.

Every hypothesis needs to show a relationship. In an attempt to establish a relationship between concrete things (data, specific items--usually a student's secure domain) and concepts (abstracts, generalizations, judgments--the realm that teachers want for their students), students must search their minds for symbols, metaphors, and analogies. Arriving at these conceptualizations indicates that students have thought critically (Barell, 1985).

Paul (1985) said that higher order questions presupposed the use of the concepts of critical thinking: "assumption, fact, concept, value, conclusion, premise, evidence, relevant/irrelevant, consistent/inconsistent, implication, fallacy, argument, inference, point of view, prejudice, authority, hypothesis" (p. 37). These areas, he said, provided decision-making skills and the ability to detect (a) fact from opinion, (b) the relevant from the irrelevant, (c) conclusions from evidence, and (d) unwanted assumptions. These were the areas measured by the New Jersey High School Proficiency Test with which the students in the academic B, general, and English write tracks experienced their greatest difficulty in the 1989 and 1990 tests. Norris (1985) said that students "must be able to make sound inferences and offer reasonable hypotheses" (p. 40); students in the general and write tracks could not satisfactorily do that by April of their first year in high school, or ninth grade.

Strong (1985) and Beyer (1988) stressed the teaching of these skills: (a) analyzing, (b) synthesizing, (c) comparing, (d) contrasting, (e) evaluating, (f) hypothesizing, and (g) classifying. Beyer (1988) established a scope and sequence for these skills, beginning with the skills of one-facet and relative simplicity (comparing/contrasting) and moving toward those with mulltiple facets (analysis/synthesis). Because these skills areas were essential for clear writing, Bland and Koppel (1988) employed them in a classroom research project in which they studied the relationship between writing and thinking. They stressed mapping for visualization and talking for conceptualization of ideas. These strategies (mapping and talking) required critical thinking because students were required to make judgments and draw conclusions about data. Inductive and deductive reasoning were essential to clear expression. Students kept journals to ask questions, clarify concepts, and elaborate on thinking. Thinking skills included prioritizing, classifying, elaborating, and connecting.

This project had value for the English staff of Marlboro High School because of its impact on thinking, writing, and talking as related skills. Showing the staff some feasible methods for interrelating skills encouraged more student activities applying skills instead of listening to theory or explanation about skills. Application of principles led to fulfillment of the goals of this project.

Golub (1986) edited a book of activities to encourage critical thinking in the classroom. The essays were divided into five categories, each with anecdotal evidence of the practicability of the activities promoted: (a) composition activities, (b) speaking/listening activities, (c) activities to accompany literature study, (d) additional creative and critical thinking activities, and (e) speaking and writing across the curriculum. What was key in this source was the emphasis on student activities; the material encouraged active learning in classrooms and the contention of this project was that the more active students were and the more responsibility they assumed for their own learning, the more they learned.

The fourth question under study was how classroom-content-oriented teachers and their supervisor will evaluate the effectiveness of instruction in critical thinking skills.

Costa, in an interview with Brandt (1988), maintained that assessment must replace testing because conventional tests were not adequate measurement instruments for intelligent behavior, composed of critical thinking. Educators needed a paradigm shift to show the method and the assessment of student learning. A test did not reveal how or why a student arrived at an answer; it merely indicated what the accepted answer was. Hence, the student's thinking process was not evaluated.

Ennis (1985) defined critical thinking as "reflective and reasonable thinking that is focused on deciding what to believe or do" (p. 45). It was practical and more significant than higher order thinking skills, the designation used by Bloom in his taxonomy (Paul, 1985). Ennis said Bloom's taxonomy did not suffice because the terms were ambiguous and required different skills according to the discipline that utilized them. There also were no criteria for judging the effectiveness of these skills. Therefore, Ennis divided curriculum into dispositions and activities and advocated a multiple choice assessment of analysis with four components: (a) basis, (b) inference, (c) clarity, and (d) problem solving. To this end, he established 25 goals for a critical thinking-reasoning curriculum: 13 were cited under dispositions, the remaining 12 (divided into multiple subsections) were cited under abilities. Abilities were classified under these categories: (a) elementary clarification, (b) basic support, (c) inference, (d) advanced clarification, and (e) strategy and tactics. What seemed most noteworthy was the effort to assess a program through student-oriented activities.

Haney (1985) agreed with Ennis that the multiple choice format can be an assessment tool of what students learned about thinking, but he added the short essay as an additional assessment tool. He contended that tests helped place students in tracks, but, when emphasis was on test

results, learning did not always dominate activities and attitudes within the classroom. He said that the aims of education must reach beyond what tests can measure, that no externally developed test will completely fit the goals of individual teachers. Haney's premise was that tests must be more educational. This phenemenon of testing, an entire dilemma unto itself, was not the focus of this project. It was included only to indicate the need for some evaluative criteria and tools to assess critical thinking within the classroom. At present, the best tools educators have devised is the paper and pencil test, the student portfolio, and oral discussion.

Norris (1985) and Quellmalz (1985) discussed four tests designed to measure thinking skills. The first of these was Robert Ennis' Cornell Critical Thinking Tests, Levels X and Z, which measure general principles of thinking. The highest median score for Level X, as of 1985, was 48 of a possible 71; the lowest was 29. For Level Z, the highest reported mean was 30 of a possible 52. Because the groups taking these tests differed, the conclusions drawn were that general critical thinking skills were weak regardless of the academic level of schooling attained.

A second test was the Watson-Glaser Critical Thinking Appraisal, Forms A and B. It was designed to measure students' ability to recognize assumptions and to evaluate arguments and evaluate inferences. High school students who took this test attained median scores between 41 and 47 of a

possible 80, indicating that nearly 50% of the students cannot think critically. Scores increased as grade levels increased, and college students scored between 52 and 60. Medical students and those seeking an MBA scored 68 and 66 respectively, the highest scores reported as of 1985 (Norris, 1985). These progressions indicated that critical thinking skills can be taught and that, perhaps, the students in grade 11 in 1993 will be better prepared to answer inference-based questions of the New Jersey High School Proficiency Test than the 9th graders were prior to 1993, provided the students receive strategies for responding to such questions.

A third test was the Ennis-Weir Critical Thinking Essay Test, which, although harder to grade, provided evaluators with more insight into the thinking processes of the students arriving at their written responses to the questions asked (Norris, 1985). Because one of the purposes of evaluating a critical thinking strategy or curriculum component was to assess the reasoning processes of the learners, this test seemed a valid instrument to use.

The fourth test, the New Jersey Test of Reasoning, was cited but not discussed by the literature.

Quellmalz (1985) said that any assessment of students' thinking should be based on multiple skills and include different types of testing items; underlying each must be reasonable reasoning or the assessment is invalid. An evaluation can measure thinking skills on specialized tests

or written subject-matter tests. Assessment of writing skills will include the following: (a) identifying cause/effect relationships, (b) evaluating strengths and weaknesses of a position, and (c) inferring character traits, atmosphere, and themes to assess higher order thinking skills. For assessment of critical thinking skills to be relevant to the subject matter instruction, there must be a clear rationale to relate the skills and the assessment. Among the skills must be problem solving, critical thinking, and intellectual performance. Teaching and assessing these skills must be developed through a staff development program.

Sternberg and Baron (1985) and Quellmalz (1985) believed that assessment was most useful when it measured relatively novel situations rather than familiar ones because the unfamiliar will measure the process of reasoning rather than recall of a familiar circumstance. Sternberg and Baron (1985) indicated that Connecticut was striving toward preparing materials to implement instruction for students who must pass the state's Mastery Test, part of which is a thinking component.

The final question taken to the literature was this: How will the students' improvement in critical thinking help them become autonomous learners?

Beyer (1988) said that critical thinking should lead to autonomous learning. Joyce (1985) said that when students learned to think independently, they improved their

abilities to study autonomously. Norris (1985) said students must be able to make choices, and Presseisen (1988) maintained that learners must be able to experiment; otherwise, they will never understand information and its context. This premise was based upon "Piaget's major goal of constructive education...autonomy," (p. 7) or allowing students an opportunity to make mistakes and try again. Sternberg and Baron (1985) stated the answer to the lead question most emphatically: The ultimate goal of education was to teach students to think critically and independently. This is autonomy, and student autonomy is the goal toward which I want my teachers to strive.

Planned Solution Components

Norris (1985), Joyce (1985), Chambers (1988), and Presseisen (1988) stressed that teaching critical thinking skills as the need arose for the students was preferable to teaching them in isolation. Thus, incorporating critical thinking within content areas was more effective than establishing a study skills course with critical thinking as a component. This incorporation was desirable for the situation at Marlboro High School because, although I had no authority to initiate a new course within the school or district, I could offer critical thinking skills strategies to the members of my department and convince them of the benefit of utilizing such strategies as a means of improving student learning. Because these teachers were amenable to

changes that they found beneficial, they tried to employ these strategies. All teachers received assistance with teaching critical thinking in conjunction with the study of literature and writing.

The 16 teachers in the Marlboro High School English department indicated they chose to teach English because they wished to share their own love of literature with others, not because they wanted to teach skill development. This prevailing attitude was the major reason staff development programs were so essential when needs for instructional change arose. Joyce (1985) said that strong staff development programs were necessary to train teachers to teach students to think. Beyer (1988) and Paul (1985) also indicated the need for training teachers and then supporting them as they implemented these changes in their classrooms. Marlboro High School and the Freehold Regional High School District did not have strong staff development programs. They scheduled two afternoons per school year for staff development, and these times were devoted to programs in compliance with state mandates. This meant that, unless the Freehold Regional High School District changed its staff development policy, all teacher retraining and reeducating would be done through department meetings. The teachers' union contract permitted one hour per month for departments to meet after the instructional day ended. That avenue did not provide much opportunity for any extensive program.

I encouraged the teachers in my department to network as a means of solving problems and sharing methods of instruction. It would be helpful if teachers' schedules were arranged to allow those teachers with common assignments to share a teacher preparation period, but, with the size of the school staff and the number of students and courses to be scheduled, this wish was impossible to fulfill.

Another possible means of staff development was the Professional Improvement Plan (PIP) mandated by the state of New Jersey for all teachers. This plan required teachers to identify a growth or improvement target and then plan activities to satisfy that goal. A supervisor would assist and evaluate the procedures followed to achieve the goal within a school year. Teachers and supervisors collaborated on the PIP for each succeeding school year. Improving critical thinking skills instruction, improving questioning techniques, articulating a specific academic track, and improving instructional methodology were PIPs for English teachers in 1989-1990 and 1990-1991. Thus, the teachers' commitment to improvement assisted the students' learning and movement toward autonomy. The PIPs accomplished some of what a stronger staff development program would do.

During monthly English department meetings, I shared materials regarding curriculum and instruction with my staff and provided opportunities for staff members to share information gathered at professional meetings they had

attended. Included for professional reading were such articles as Barell (1985) and Brandt (1988) dealing with student interaction through questioning, and Joyce (1985), Sternberg and Baron (1985), and Strong (1985) dealing with student autonomy in learning or cooperative learning. The department also maintained a professional library in the writing center; there, professional journals and books such as those by Golub (1986) and Costa and Lowry (1989) were shelved.

Because New Jersey required students to pass a proficiency test in order to graduate from high school, teachers must learn the components of standardized testing and the means of preparing students for those tests. Paul (1985) talked about Bloom's taxonomy of skills; McTighe and Lyman (1988) provided tools for classroom use. These skills can be applied to test taking. Paul (1985) and Norris (1985) listed many of the areas of critical thinking skills that both the 9th grade and the 11th grade NJHSPT measure.

I observed all members of the department at least once each semester. New Jersey School Law required one full-period observation per tenured teacher per year and two full-period observations per nontenured teacher.

All English teachers were tenured as of September 1989. During the 1989-1990 school year, I observed 16 teachers and 54 classes. In 1990-1991, I observed 16 teachers and conducted 21 classroom observations by the end of January 1991. In addition, I completed the yearly evaluations of

the members of the department. The principal and the 2 assistant principals conducted observations upon request of supervisors or when their schedules permitted. In January 1990, an assistant principal observed me in a classroom instructional period. A copy of the observation and evaluation instruments can be found in Appendices D and E. Both instruments were local.

The five English supervisors of the Freehold Regional High School District expressed grave concerns about methodology; it was anticipated that the superintendent of schools would hear the recommendations of these supervisors and provide some positive assistance toward effecting change.

Beyer (1988), Joyce (1985), Presseisen (1988), and Norris (1985) said that students need to become autonomous learners. I believe such autonomy will occur with changes in the staff's instructional methods. I have encouraged teachers to experiment with student group projects, peer editing of writing, small group discussion, and split classes with each part involved in separate activities; in this way students become more independent in their learning and learn because of interest rather than because of the need to pass a test. It was hoped that the English teachers will become facilitators of student learning, not dispensers of data.

Project Outcomes

An ad hoc committee consisting of the English supervisor (the project originator), the director of the English department writing center, 3 teachers of 9th grade English classes, and the teacher of English write III-IV met in January 1991 to evaluate the objectives developed for this project. The committee agreed that the teacher use of classroom time was reasonable and that the percentage for improvement in test scores, 5%, was consistent with the Freehold Regional High School District objective that the vocabulary component score on the Comprehensive Test of Basic Skills for the April 1991 test would be 5% higher than the vocabulary component score on the April 1990 test.

When I began this project, I established four terminal objectives to guide my research and my activities.

Terminal Objective #1

All students enrolled in the English I academic B, English I general, and English write I tracks in Marlboro High School during the 1990-1991 school year will realize a 5% average improvement on New Jersey High School Proficiency Test items measuring inferential skills over students in these tracks during the 1989-1990 school year.

Process Objectives

1. Teachers of ninth grade students enrolled in English I academic B, English I general, and English write I classes will devote 50% of their instructional time each

week between February 1991 and June 1991 toward improving students' cognitive skills of analysis, classification, synthesis, inference, and evaluation, as these skills pertain to reading of literature. The English supervisor will monitor this time on task by assessing lesson plans submitted weekly.

The New Jersey Department of Education produced a book of guidelines and activities for teachers to use in preparing 11th grade students to pass the New Jersey High School Proficiency Test. In that book Anderson (1990) said, "The time devoted to English composition during the four years should occupy about half the total time devoted to the study of English" (p. 12). Teachers of English I, meeting on January 26, 1991, decided to devote 50% of their instructional time in literature to higher level thinking skills and 40% of all instructional time per week to these writing skills: analysis, classification, synthesis, inference, and evaluation.

2. Teachers of ~~nin~~th grade students enrolled in English I academic B, English I general, and English I write classes will devote 40% of their instructional time each week between February 1991 and June 1991 toward improving students' cognitive skills of analysis, classification, synthesis, inference, and evaluation, as these skills pertain to writing and editing. The English supervisor will monitor students' activities in the English department

writing center and monitor teacher time on task by assessing lesson plans submitted weekly.

3. Teachers of ~~ninth~~ grade will meet monthly between January 1991 and June 1992 to assess their methods and realization of success in teaching and measuring critical learning skills.

4. The English supervisor will conduct four staff development workshops to assist ~~ninth~~ grade teachers in formulating questions and activities that focus on higher level thinking skills.

Terminal Objective #2

All ~~9th~~ grade students who scored below 75% in the reading components of the New Jersey High School Proficiency Test in April 1990 and April 1991 will be monitored during the 1990-1991 and 1991-1992 school years by their English classroom teachers to determine growth in inferencing skills; such growth will be measured by student success on teacher-made tests and the Comprehensive Test of Basic Skills, which they will take in their ~~10th~~ grade.

Process Objectives

1. The 11 teachers of ~~9th~~ and 10th grade English classes will construct tests that measure critical thinking skills as part of subject matter assessment.

2. The English supervisor will observe literature-based lessons that are process oriented in instruction to determine the extent to which teachers focused on critical thinking skills.

Terminal Objective #3

All 12th grade students who scored below 77% in the writing components of the April 1990 and April 1991 New Jersey High School Proficiency Test will be assigned to the English write II class for further instruction in drafting, revising, and editing essays. The classroom teacher will establish evaluative criteria to measure growth in these writing skills: (a) determining main ideas, (b) determining details appropriate to the main idea, (c) reorganizing sets of sentences into logical order, and (d) editing. One evaluative criterion will be the students' scores on the retests of the NJHSPT taken in December 1990 and December 1991.

Process Objectives

1. English II write teachers will instruct students in procedures for peer editing.

2. Students will compose essays of analysis, comparison, synthesis, evaluation, and cause and effect. The number of such essays will be determined by the teacher as he/she assesses student need.

3. The English supervisor will observe the teacher's introduction of writing skills requiring student utilization of cognitive skills.

4. The teacher and the English supervisor will meet to review students' Individual Educational Plans (IEP).

5. The teacher will conference independently with students regarding writing proficiency, including editing, which measures critical thinking skills.

6. The teacher will supplement the students' classroom instruction and activities with individual writing assistance in the English department writing center.

Terminal Objective #4

The English teachers will improve their student assessment tools to focus on measuring critical thinking skills in their evaluation of student comprehension of literature. The English supervisor will assess teacher success as measured by improved midterm and final examinations.

Process Objectives

1. The 16 English teachers will create criterion-referenced tests that relate to the district proficiency statements for the courses that they teach.

2. The 16 English teachers will compose mid-term and final examinations for English students to measure skills of comparing, analyzing, defining, synthesizing, and showing cause and effect relationships.

3. The 16 English teachers will assess student growth in critical thinking through implementing more cooperative learning groups within their classrooms, with such groups assigned problem-solving tasks relating to study of literature as measured by teacher-assessment tools: tests, essays, and class discussions.

4. The 16 English teachers will assess student growth in critical thinking through the assigning of essay construction and reader-response journals in which students analyze, synthesize, and evaluate elements of literature. Growth will be measured by individual teachers reading these journal responses.

5. The 16 English teachers will assess student growth in critical thinking through student independent study projects that terminate in oral presentations to the class. Success in these thinking skills will be measured by individual teachers.

Chapter 5

Implementation History

Action Plan for Operationalizing the Strategy Elements

This project easily subdivided into three discrete time frames: (a) January 1991 through June 1991, (b) September 1991 through January 1992, and (c) February 1992 through June 1992. These times reflected three different semesters and incorporated two different academic school years.

Stage 1: January 1991-June 1991

Between January 1991 and March 31, 1991, the five teachers of ninth grade English focused instruction on the skills measured by the New Jersey High School Proficiency Test, which the students took in April 1991. I met with teachers of ninth grade English on January 28, 1991 to review areas from preceding tests on which students had scored poorly and to discuss strategies for improving critical areas.

In September 1989, the Freehold Regional High School District implemented, as part of its 5-year plan, the revised 9th grade curriculum guide. Teachers used the new literature texts--Prentice Hall Gold--for the first time. The curriculum guide crossreferenced the NJHSPT skills arrays with activities in the text. At the January 28, 1991 meeting, I reacquainted the teachers with interpreting the skills arrays charts and suggested strategies for

implementing the program relevant to the text and curriculum guide. Three of the teachers, while using the text during the 16-month span, had resisted following the curriculum guide as written.

In February 1991, March 1991, April 1991, and May 1991, the English teachers of Marlboro High School met for one hour per week to discuss methodology and cognitive skills. Two of the English teachers, whose Professional Improvement Plans for 1990-1991 were to coordinate activities among their peers, led these meetings, thereby satisfying this professional responsibility.

Between January 1991 and June 1991, I conducted classroom observations of 11 English teachers in the department. I focused on the level of questioning used in discussions and the activities in which students were engaged (see Appendix F). These data illustrated an increased amount of teacher-student interaction above what I had seen when I observed the same teachers in 1990. The postobservation conferences focused on the teachers' strategies regarding students' active participation.

In January 1991 and June 1991, I assessed each English teacher's midterm and final examinations for measurement of critical thinking skills. Between these two examination periods, I met with three English teachers who expressed concern about developing a more acceptable examination to measure the course proficiencies as outlined in the

curriculum guides approved by the Board of Education. Such meetings were initiated by the teachers.

In March 1991, I met independently with each of the 15 full-time English teachers to prepare a Professional Improvement Plan (PIP) for the 1991-1992 school year. I encouraged staff members to increase activities and questioning that fostered student autonomous learning and critical thinking skills. At this time the teacher and I discussed the staff member's final evaluation for the 1990-1991 school year.

Stage 2: September 1991-January 1992

In September 1991 the English department met to discuss strategies for improving the critical thinking skills of the students. The October, November, and December 1991 meetings were to be department staff development workshops at which selected English teachers shared successful instructional strategies with their colleagues, but these meetings were replaced by a self-study for the Middle States evaluation, which the school experienced in October 1992.

During this semester, however, teachers increased their assessment tools from testing, both essay and multiple choice format, and essay writing as measured by students' completion of the steps in the writing process (prewriting for stimulation of ideas, drafting of ideas, revising,

editing and proofreading, and sharing) to critiquing small group discussions, both in planning stages and in formal presentations.

I assisted teachers for whom these assessment tools were unfamiliar. I observed lessons in which the teachers explained small group and independent projects and facilitated the learning processes of their students through questioning that stressed critical thinking skills: (a) classification, (b) analysis and synthesis, (c) comparison and contrast, (d) inference, (e) predicting, and (f) drawing conclusions.

I encouraged networking among teachers having common teaching assignments; I met with small groups of teachers to discuss specific problems unique to those groups. I held conferences with individual teachers following classroom observations in an attempt to bolster teacher confidence with new methods of instruction, and I offered further assistance to help implement new strategies within the classroom. I encouraged teachers to read professional literature.

At the October 1991 department meeting, I shared the summary report of the April 1991 New Jersey High School Proficiency test results. I gave recommendations for improvement to the 10th grade teachers of academic B, general, and English write because those tracks were the assigned areas in which students scoring below 75% in reading inference and 77% in writing inference skills were

placed. Passing scores on the NJHSPT were determined by the state of New Jersey Department of Educational Testing. These teachers devoted 20% of their instructional time in November and December 1991 to preparation of the December 1991 retest of the New Jersey High School Proficiency Test.

In January 1992 I assessed each teacher's midterm examination for measurement of critical thinking skills areas.

Stage 3: February 1992-June 1992

Networking and small group articulation meetings among English teachers continued. Each month, the department meeting focused on a theme: (a) cooperative learning, (b) independent study projects, and (c) teaching-learning strategies posed by members of the department. I organized these meetings and assisted department members in presenting their ideas and materials.

In March 1992, I aided English teachers in writing their Professional Improvement Plans for the 1992-1993 school year, urging them to emphasize strategies they had neglected or feared. I advocated their taking risks.

In May 1992 and June 1992 the ad hoc committee met to assess the success of this project. Criteria for examination were (a) teacher lesson plans, (b) student portfolios, (c) interviews with staff and students, and (d) classroom observations conducted by this committee.

Chronology of Implementation Activities

Stage 1: January 1991 - June 1991

I met with the five teachers of English I academic B, general, and write for one hour in January 1991, to review the areas of the New Jersey High School Proficiency Test on which students in the class of 1994 had scored below 75% and to discuss strategies for improving critical areas.

There were two goals for this hour-long meeting: (a) teachers would exhibit greater competence in using literature as a vehicle for teaching inference, and (b) teachers would understand principles of editing and revising written composition. It was hoped that satisfaction of these goals would enable teachers to prepare the class of 1995 to pass all cluster areas of the April 1991 High School Proficiency Test.

The average length of the teaching career of participating teachers was 11 years, with the range being 6 years to 15 years. The teachers wanted some activities to involve students in their own learning and reduce the dependence upon rote learning of facts and details. Having observed these teachers in their classrooms, I emphasized questioning as a means of encouraging students to think beyond what was written.

I, therefore, established the following agenda: (a) goals for a critical thinking curriculum based upon the Association of Supervision and Curriculum Development

material found in Marzano (1988), (b) structuring the classroom for thinking, using material from Costa and Lowery (1989), and (c) activities to promote critical thinking: questioning techniques from Costa and Lowery and literature and composition activities from the essays in Golub (1986).

I issued a packet of material, including exercises, theory, and mapping to show relationships of positive learning methods. I discussed group work, problem solving, and decision making as student responsibilities.

As leader of the meeting, I modeled the strategies for creating workable groups within an academic classroom, for structuring questions that required directed thinking, and for leading students to imaginative thinking that resulted in deductive and inductive learning. Following each modeling activity, I issued an exercise for teachers to practice what they had just seen. Then groups discussed their successes and weaknesses, gathering suggestions for improving the latter. At the end of the session, each teacher indicated ways in which he/she could implement the strategies in his/her own classroom during a current unit of study.

I observed two teachers of ninth graders on February 20, 1991. I saw students engaged in decision making (see Appendix F, lesson 8) and problem-solving (see Appendix F, lesson 9).

The English department meeting held on February 7, 1991, involved 3 groups for staff development. One group

was led by 2 members of the department, who had established as their 1990-1991 Professional Improvement Plans a desire to strengthen the honors program and connect it more closely with the advanced placement course offered to 12th grade students. The 5 teachers involved in this program articulation met for 1 hour to discuss objectives and strategies.

The goal was to determine the most efficacious placement of literature and skills. The teacher at each grade level offered his/her expectations for incoming students and outlined the exit skills he/she anticipated students would possess. Using advanced placement tests, this group evaluated course materials to determine whether students were fully prepared for the May 1991 advanced placement examination.

The second component of their goal dealt with writing skills, especially the development of students' individual styles. In years preceding this study, Marlboro High School students had learned to write a five-paragraph essay, but they never expanded beyond this formulaic piece. This teacher group decided to restrict formulaic writing to 9th and 10th grade students, stress analytical essays of varying lengths during the 11th year, and encourage more creative analysis and research during the 12th year.

In May 1991, 21 students took the English Literature and Composition advanced placement examination. Seventeen of them scored 3, 4, or 5; these were passing scores.

The second group meeting, on February 7, 1991, concerned articulation among the general students in the four grades. Five teachers were involved. Their goal was to create some activities that would challenge the general students to write and read more perceptively. This group used the newly revised (in 1989 and 1990) curriculum guides for 9th and 10th grades and the department-created syllabus for the 11th grade. The curriculum guide for the 11th grade was revised during the summer of 1991 and implemented in September 1991. Teachers examined exit skills for each grade level and discussed methods individual teachers used to achieve student competency with those skills. They discussed the chapter on thinking processes of Marzano (1988) as a basis for improving instruction.

The third group, consisting of six teachers, was led by the teacher director of the English department writing center. The goal of this group was to become more familiar with the resources in the writing center as a means of improving student writing. Teachers learned the basics of the Appleworks word processing program and learned about the kind of assignments students could complete under the supervision of the writing center proctors.

The general consensus of the department following this meeting was a better understanding of the English curriculum. Through the networking, teachers learned some new teaching techniques.

On March 4, 1991, the English department met as a complete unit to discuss strategies for improving writing skills of all students. I used student writing folders to illustrate the kinds of writing assignments teachers had made during the seven months of school and led a discussion of modifications to these assignments, which would challenge students and provide greater motivation to improved writing. Suggestions included (a) adding writer response to reports, (b) relating content to Marlboro, (c) using primary source material to expand the thesis or topic, and (d) peer editing in content as well as mechanics.

The Freehold Regional High School District Supervisors' Professional Development Institute was held on March 20, 1991. Led by Dr. John Barell of Montclair (NJ) State College, the conference reinforced some of the contentions of this project. The topic was "Teaching for Thoughtfulness: Classroom Strategies to enhance Students' Intellectual Development."

All supervisors and principals from the five district high schools and the administrators from central office attended this full-day conference. The goal was to convince administrators and supervisors of the importance of critical thinking in the high school curriculum. Objectives included:

1. to assess the domains affected by decision-making within a thoughtful curriculum;

2. to establish an environment that invites thoughtfulness;

3. to model thinking activities;

4. to provide guidelines for a classroom observation evaluating a lesson in thinking processes;

5. to provide the principles of lesson design to foster thoughtfulness regarding concepts and skills.

In the morning session, Dr. Barell engaged participants in activities from his agenda: (a) modeling, (b) problem posing, (c) assessment of thinking, and (d) goal setting. During the afternoon session, he completed his agenda: (a) instructional practices, (b) the nature of environment needed for thoughtfulness, (c) pedagogical processes, (d) nature of lesson design, and (e) self-direction in learning.

Throughout the day participants solved problems, either singly or in groups, and reported on the thinking processes that led to the solutions. Specific individuals were selected to respond to the effectiveness of the activities, especially as they were applicable to the high school setting.

At the end of the day, the reviews were mixed; some participants found the activities too time consuming to attempt in their classrooms, and others realized the lifelong skill of thinking should supersede any factual subject content to which students were exposed. Barell's book Teaching for Thoughtfulness, given to each participant, proved valuable in later meetings with the English staff

because it included strategies for developing the thinking capacities of high school students. Two chapters, "Designing a Classroom That Invites Thoughtfulness" and "Problem Solving and the Search for Meaning," were beginning points for teachers initiating themselves and their students into the merits of active learning.

Between March 11 and March 15, 1991, I had attended a workshop at the Regional Curriculum Services Unit headquarters. There I learned strategies teachers can use with their students in preparing for the writing portion of the High School Proficiency Test. At the April 9, 1991 department meeting, I identified the differences between the HSPT that was being phased out and the HSPT that would replace it beginning in December 1993. Reading and writing passages were longer, audience was a focus for original writing, and questions emphasized higher level thinking skills. The Freehold Regional High School District volunteered to pilot the new test. A sample of the original writing assignment for the 9th grade HSPT and pilot writing assignments for the 11th grade HSPT are included in Appendix G.

I provided each of the English teachers with a copy of the rubric for the registered holistic scoring, strategies for teaching persuasive writing, suggested writing topics, and professional readings regarding students' writing. This staff had undergone training in the registered holistic scoring system six years earlier, but they preferred an

analytical assessment of student writing over holistically scored essays. They also voiced concern about the amount of responsibility placed with English teachers, questioning whether writing should be an across-the-curriculum skill and responsibility.

In May 1991, I presented strategies regarding writing to all the supervisors in the district. The content of the 30-minute presentation was the same as the agenda for the April 9, 1991 department meeting and will not be repeated here. English and social studies teachers created writing assignments to motivate critical thinking.

The final staff development department meeting was held on May 6, 1991. The agenda for the meeting included the following items: (a) the use of reader response for notetaking, (b) metaphor in literature, and (c) inferential reading. The objective was to provide strategies for studying the novel as an instrument for critical thinking.

Teachers were divided into four groups: teachers of honors students, teachers of academic A students, teachers of academic B students, and teachers of general and write students. Individual teachers shared their methods of discussing a novel, first within their groups and then with the total department. Techniques included (a) group discussion of concepts; (b) panel discussions of issues; (c) writing chapters, analyses, sequels, responses; (d) oral interpretation of passages; and (e) explication of passages by assuming the persona of the characters in the novels.

Because teaching literature, especially short stories and novels, was the strength of this staff, teachers interacted with some challenging assignments, most of which enhanced the thinking skills of students.

Between January 1991 and June 1991, I conducted 11 classroom observations in which I focused on questioning techniques of teachers. Four of the classes were academic B classes, 3 of the classes were general English classes, and 4 were academic A classes. There were 145 questions asked to measure recall and analysis. Table 3 shows the distribution of questions according to purpose. Recall questions accounted for 63, or 43% of the questions; the analytical questions accounted for 82, or 57% of the questions. In these lessons, then, teachers were concerned with students understanding what they read, not with mere recall of data. See Appendix H for the specific questions asked.

Teachers dominated 7 of the 11 lessons; in 4 lessons, they used the entire period (45 minutes) to question students about a piece of literature. Four lessons were student-centered, involving students in individual writing activities or in group work. Table 4 provides the specific time distribution.

Table 3

Types of Questions Asked by Teachers in Classes Observed by English Supervisor, January 1991-June 1991

Type of Question	Academic A Num.	%	Academic B Num.	%	General Num.	%	Total Num.	%
Inference	26	36.1	8	21.1	4	11.4	38	26.2
Judgment	18	25.0	11	28.9	8	22.9	37	25.5
Prediction	1	.1	3	7.9	3	8.6	7	4.8
Recall	27	37.5	16	42.1	20	57.1	63	43.5
Total	72	98.7	38	100.0	35	100.0	145	100.0

During postobservation conversations, I shared the data gathered during class observations. In some instances teachers were aware of their dominance; in others they were not. The type of lesson and activities were measured against the teachers' objectives. In all but one instance, teachers reported satisfactory fulfillment of their objectives. I suggested more student-centeredness, especially in literature discussions, and offered strategies to implement this change (e.g., group questions, student panel discussions, student-led questioning).

The midterm and final examination policy of the Freehold Regional High School District board of education lacked consistency in direction. Therefore, teachers created their exams according to their teaching-evaluating philosophies. Because questions ranged from recall of minute detail to extensive open-endedness, I provided the book by Noris and Ennis (1989) for teachers to peruse. The

Table 4

Time on Task in Minutes in Lessons Observed by the English Supervisor between January 1991 and June 1991

Task	1/29	2/5	2/7	2/12	2/12	
Eval.			20		5	
Group						
Oral: S.					25	
Teacher	10					
T. Quest.	25	45	25	30		
Write	10			15	15	
Total:	45	45	45	45	45	

Task	2/13	2/14	2/20	2/20	2/21	5/1
Eval.						
Group			30			
Oral: S			15	35	45	
Teacher						
T. Quest.	45	45				45
Write				10		
Total:	45	45	45	45	45	45

Total Time Per Activity		Percentage of Time/Activity
Evaluation	25	5.10
Group work	30	6.10
Oral: stud.	120	24.20
Teacher	10	2.00
T. Quest.	260	52.50
Write	50	10.10
Total	495	100.00

chapters that discused multiple choice questions and open-ended techniques for questioning guided some of the June 1991 testmakers. Because teachers had sometimes less than a day to read exam responses, compute final averages, and mark report cards, they frequently prepared

multiple-choice exams, which could be corrected on the scan-tron machine. The building principal allowed teachers to administer essay examinations prior to the regularly scheduled examination period; this provided teachers with time to read the students' work.

I met with three teachers regarding the composition of their tests. I identified questions that measured recall of insignificant detail and asked teachers to determine their objectives for testing. For example, one examination contained this question: "Here are six events Odysseus encountered on his return to Ithaca following the Trojan War. Arrange them in chronological order."

The revised question asked: "What effect did his journey from Troy to Ithaca after the Trojan War have on Odysseus?" The form was multiple choice, and the response reflected but did not reiterate the teacher's and students' class discussion of The Odyssey so, while there was an element of recall, the question required processing of several pieces of information.

Five teachers prepared essay examinations in which students answered two or three questions from among five choices. Although the content measured students' understanding of the literature read during the semester, their written responses illustrated their growth in writing skills. The most-used direction words were analyze, compare/contrast, discuss, and explain. These questions were asked:

1. Analyze the issues Herman Hesse presented in Demian. How do these compare with the issues in a second piece of literature we read this semester? You select the piece.

2. Compare and contrast the concepts of love found in Shakespeare's and Petrarch's sonnets. Use specific lines to support your ideas.

3. Discuss the alienation concept found in Joseph Conrad's "The Secret Sharer" as it developed the plot and the character of Leggatt.

4. Explain the significance of Lear's dividing his kingdom. Look at immediate and far-reaching results.

In both January 1991 and June 1991, 8 teachers (or 50% of the department) wrote examinations based upon recall of correct spelling of words or meaning of vocabulary, selection of the proper word to complete a grammatical sentence, and matching columns of literary characters and their dominant features. Individual meetings between the supervisor and the teachers and the profusion of written guidelines on improving the writing of test items did not yield any significant differences in the final examinations.

In March 1991, I met independently with each of the 15 full-time English teachers to prepare a professional improvement plan (PIP) for the 1991-1992 school year. The assistant superintendent overseeing English instruction suggested a heavy emphasis on preparation for the 11th grade

HSPT. The central office administrator in charge of staff development indicated that the only professional days he would approve for professional growth were those directly related to the teacher's PIP. I encouraged teachers to continue analysis of their teaching methods.

Stage 2: September 1991-January 1992

The Freehold Regional High School District underwent three major personnel changes in 1990 and 1991, all of them directly affecting the English supervisors in each of the five district high schools and this project. Fortunately, the curriculum specialists who were appointed to replace retirees advocated problem solving and critical thinking as essential components of a strong curriculum. The negative aspect of the appointments was less autonomy for each high school. The superintendent and his administrative superintendents redirected the goals of the district to meet their expectations rather than those of students and teachers within individual schools.

For example, a goal of the Marlboro High School English department was to encourage more autonomous learners through movement from teacher-directed to student-directed classrooms. The teachers wished to create their time frame and pattern for effecting this goal. However, the superintendent of schools wanted a more unified district, with one curriculum guide for all five high schools and with teachers teaching the same units simultaneously.

This restriction on classroom teachers necessitated some compromise and, with the support of the building principal, some rebellion so the department could continue to meet the academic needs of the students. Critical thinking skills, problem solving through group discussion, and movement toward student autonomous learning continued as major concerns and goals.

At the first department meeting for the 1991-1992 school year, held on September 3, 1991, I reiterated the focus for the year: (a) critical thinking, (b) writing as a process, and (c) student learning under a teacher-facilitator. It was anticipated that five meetings would be devoted to teaching strategies to satisfy these goals, but, because Marlboro High School was to be evaluated by the Middle States Accrediting Association in October 1992, the 1991-1992 school year was spent preparing a self-study. Meetings in October, November, and December of 1991, therefore, were devoted to completing the assessment of the English program. Thus, the September 3, 1991 meeting increased in importance.

The agenda for the meeting included these items: (a) a review of writing as process, (b) persuasive writing district goal, (c) writing folders and portfolios, (d) writing center orientation for freshmen, (e) the senior paper, (f) integration of skills, (g) America 2000 goals, and (h) a thinking skills conference.

I led a discussion of writing as a process. Teachers who effectively taught writing explained their procedures, and I encouraged teachers to read the essays in the cumulative writing folders of their students. By September 1992, the department planned to modify the use of writing folders and encourage teachers to use portfolios; students would evaluate their own work and select the pieces to be included. The department goal was to assign different genres to provide a broader base for evaluating students' writing competence.

All ninth grade students annually received orientation in the department's writing center and in the library, as measured by their completing problem-solving assignments in these sites. Teachers discussed the kinds of assignments that began in the library and ended in the writing center and were in agreement with the curriculum guides.

Teachers of 12th graders agreed to maintain the existing formats for the 12th grade paper: (a) analysis of a literary theme based upon primary and secondary sources, (b) analysis of a critical issue in one major work supported by secondary materials, and (c) analysis of a social issue. Teachers submitted their time frames for completing these papers with specific classes.

I referred teachers to the curriculum guides for unit materials the district felt should be taught. I recommended teachers read from the department's professional library for new ways of integrating skill work with concept development.

This was especially noted about spelling and vocabulary lists, which were totally unrelated to the literature students were reading and which required only rote memorization.

I distributed a copy of the President's America 2000 goals and isolated the one which required closest attention by the English staff: "Goal 3 - By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter including English...; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy." A copy of the six major goals is in Appendix I.

Because the Freehold Regional High School District has always taken pride in the success of its students, as measured by standardized test results, the superintendent of schools and his assistants during the summer of 1991 decided to assess the persuasive writing abilities of all 10th grade students. The rationale was that the instruction during the 10th year was crucial to students' success in an imminent (1993) statewide proficiency test administered in December of their 11th year. Therefore, the district's educational objective for 1991-1992 was "As a result of staff development activities and the implementation of a new 10th grade English curriculum, which emphasizes process writing, 10th grade students will show an average score of nine on a

holistically scored persuasive writing sample in April 1992."

I issued copies of the action plan to realize this goal, as devised by the district's Curriculum and Instruction Department. This goal is discussed later in this chapter.

The final agenda item of the September meeting was a report on the ASCD Thinking Skills conference which I attended in Atlantic City, New Jersey, on July 17, 1991. I issued an abstract of the key points made at the full-day workshop and referred teachers to the total document housed in the English department office. The workshop was titled "Infusing Critical Thinking Skills into Language Arts and Social Studies Curriculum." The objective was to define the kinds of thinking skills and to differentiate between analytical and critical thinking.

During the morning session, Sandra Parks, the leader, employed demonstration lessons dealing with these three aspects of analytical thinking: (a) manipulatives and inductive techniques, (b) direct instructional lessons, and (c) concept development. She then discussed graphic organizers as a method of analyzing a story, assuring the participants that visual and auditory learners profit from graphic presentation of written material. The final activity was a comparison-contrast reading that demonstrated how inductive learning affects students' thinking.

In the afternoon, Parks defined critical thinking as predicting and evaluating the consequences of specific actions and details. The key factor was deciding about options and evaluating the viability of option solutions for a given problem.

Many of the workshop participants admitted that they viewed analytical and critical thinking in the same way, as if the terms were synonymous. What they learned through this workshop was that critical thinking required more than breaking a problem into its components; it needed synthesis. Critical thinking offered that element--prediction of outcome and drawing conclusions.

The second meeting of the English department for the 1991-1992 school year was held on October 10, 1991 and was used to begin the Middle States self-study. I discussed the results of the April 1991 New Jersey High School Proficiency Test. Four hundred eighteen ninth graders took the test. Two special education students scored below 75% on the reading portion; their scores were 60% and 72%. Fifteen special education students scored below the passing score of 77% on the writing portion, with a range of 59% to 76% and an average of 72%. Four general English I students scored below 77%, 2 with scores of 76% and 2 with scores of 75%. These 4 students were scheduled into English write for their 10th grade and retook the exam in December 1991. All 4 passed the test at that time. Specific items on the test that proved difficult for at least 10% of the adacemic B,

general, and write students required higher levels of thinking than rote learning provided (see Table 5).

Table 5

Items Requiring Critical Thinking Skills, High School Proficiency Test, April 1991

	Student Program		
Items in Reading	B	G	W
Infer main idea	X	X	
Predict outcome	X	X	X
Infer character motivation	X	X	X
Infer writer's purpose/view	X	X	X
Infer comparisons			X
Items in Writing	B	G	W
Combine ideas into well-constructed sentences			X
Editing	X	X	X

Note: Deficiency determined by 10% of students scoring below 75% on reading and 77% on writing.*
B = Academic B students (122 total number)
G = General students (24 total number)
W = English Write students (5 total number)
*Percentage determined by ad hoc committee.

Students wrote a 30-minute essay as part of their test. The average score for the 122 English I academic B students was 8.3, with a range of 6 to 10 and a maximum score of 12. The average score for the 24 general students was 8.1, with a range of 6 to 11. The average score for the 5 English write students was 7.7, with a range of 7 to 10.

For the 1991-1992 school year, 37 of the 54 students enrolled in the English write program (designed for remedial instruction of writing skills) were special education students; 45 students were 9th graders assigned because they had scored below 77% on the writing portion of the early warning test administered in March 1991; 7 students were

10th graders (4 were from the Marlboro High School general English I program, and 3 had transferred from schools outside the district); 1 was an 11th grader, and 1 was a 12th grader. Students from these latter 3 grades had scored below 77% in writing on the April 1991 High School Proficiency Test. Of these 9 upperclassmen, 5 passed the December 1991 test.

On October 29, 1991, 412 10th grade students wrote a persuasive essay based upon their knowledge of colonial America. Writing this essay was the first activity for the district goal. Students were given 2 writing tasks from which to choose. The first writing task stated:

Writing Situation

The year is 1625. You have been in the New World for three years. You believe that the New World offers a fuller life than the one you left behind in Europe. You wish your friends could experience the same future you envision for yourself.

You decide to write a letter to one of your best friends in Europe and suggest he/she come to the New World.

Directions for Writing

Write a letter to one of your friends in Europe. Give him/her specific reasons to join you in the New World. Tell him/her what he/she can expect on the journey to the New World, but convince him/her that the trip is worth the effort.

The second writing task stated:

Writing Situation

As the American Revolution neared, Virginian Patrick Henry made the following statement to show how he felt about the colonial effort to achieve freedom: "I know not what course others may take; but as for me, give me liberty, or give me death!"

Consider the issue of death as being the price of freedom.

Directions for Writing

In an essay, persuade another person that (a) one's liberty should be more important than one's life; or (b) one's own life is more important than his/her freedom.

Tenth grade English teachers, special education teachers, and teachers of United States History I scored the essays according to the registered holistic scoring rubric used by the assessors of the New Jersey High School Proficiency Test (see Appendix B). The average score was 7.2, or 1.8 points below the district goal anticipated for April 1992. The distribution of the scores is in Appendix J.

Teachers then determined teaching strategies to raise the scores: (a) journal writings on topics requiring persuading an audience to agree with a viewpoint or to act in a specific manner, (b) completing a focused unit of argumentative writing leading to a persuasive conclusion, (c) presenting persuasive speeches modeled after Jonathan

Edwards' "Sinners in the Hands of an Angry God" or Thomas Paine's writings from Common Sense or Mark Antony's funeral oration from Julius Caesar, (d) writing editorials for literary and historical newspapers, (e) role playing to persuade a board of directors to cast a play, (f) writing a persuasive essay as part of a mid-term and final examination.

The objective for the English department in attempting to meet this district goal was to improve critical thinking skills of 10th grade students. All activities required students to draw conclusions based upon logical and reasonable arguments.

On January 23, 1992, I introduced to the entire English staff a humanities-based English course for those 12th grade students whose academic bent was literature and the arts. The purposes of the course were (a) to enhance the thinking skills of talented students who did not want to enroll in the advanced placement English course; (b) to encourage autonomous learning through self-directed projects, reader-response, and critical writing; (c) to improve oral communication skills through small group discussion; and (d) to increase problem-solving capabilities through interdisciplinary studies.

The course was scheduled in a 90-minute block of time, 5 days each week, and students received 10 credits toward their graduation requirements. The program, implemented in September 1992, was an outgrowth of the study completed for

this project. It was discussed with English teachers on the ad hoc committee and those whose Professional Improvement Plans defined critical thinking strategies; the course outline was prepared by the teacher of the course.

During the period between September 1991 and January 1992, I observed 30 classes. Ten of these were academic B, general, and write classes; 14 observations were of academic A classes; 5 observations were of honors or advanced placement classes, and 1 observation was of a journalism class (see Appendix K).

During the 16 classes in which I focused on questioning strategies, teachers asked 87 questions to assess students' recall and analysis of literature. Twenty-three, or 26%, of all questions measured recall; 64, or 74%, of the questions measured the students' ability to make judgments or draw inferences (see Table 6). One interesting feature was that teachers asked fewer questions, on average, in the fall semester classes than they did in the spring semester classes: 13 questions per class in classes observed between January 1991 and June 1991, and 4 questions per class in classes observed between September 1991 and January 1992.

Table 6

Types of Questions Asked by English Teachers in Classes Observed by English Supervisor between September 1991 and January 1992

		Number of Questions				
Date	Grade	Inf.	Judg.	Pred.	Rec.	Total
/16/91	12		2			2
9/16/91	11		3		2	5
9/17/91	9	1	2		2	5
9/19/91	9		4		1	5
9/19/91	12		2		1	3
9/20/91	9		2		2	4
9/26/91	11		2			2
9/26/91	11		4			4
9/30/91	12	1			1	2
10/1/91	9	1	2			3
12/3/91	10	1	3		3	7
12/9/91	11	1	2			3
12/18/91	10		3			3
1/7/92	10	4	12		8	24
1/8/92	9	1	5		1	7
1/9/92	12	1	5		2	8
Total		11	53	0	23	87

Observations of September 16, 1991, September 26, 1991, December 3, 1991, December 9, 1991, December 18, 1991, and January 7, 1992, and January 9, 1992 revealed the teachers' concern with levels of questions. See Appendix L for specific questions asked during observed lessons. Of the 30 class observations, 3 were teacher lectures lasting the entire 45-minute period, while 5 were full-period student workshops.

During postobservation conferences the teacher and I focused on classroom strategies. We dissected questions, stressing form (direct and inverted order) and purpose (recall, inference, judgment, predicting).

Midterm examinations to measure student competence of material presented during the September 1991 to January 1992 semester indicated that all 16 teachers were concerned with critical thinking skills and student problem solving. The following questions were representative of the essay questions:

1. Many literary characters experience internal conflicts that are more complex than the external conflicts within the plot. Select one such character from one of your assigned readings and analyze the way he identified and treated his internal conflict. (12th grade examination)

2. Compare and contrast two major characters created by different authors who appear to have a common quality or goal. (11th grade examination)

3. Explain how the setting of The Red Badge of Courage affects the plot and character development. (10th grade examination)

4. Read Emily Dickinson's poem "Because I Could Not Stop for Death." In your essay, interpret the symbols. (9th grade examination)

Critical thinking skills were measured in multiple choice format through such questions as these:

1. French literature is closer to the Classical philosophy than to the Romantic philosophy because (a) the French had no romance in their souls, (b) the French relied upon order and disliked extremes, (c) the French had vivid imaginations, (d) the French copied all their arts from the

Egyptians, (e) Romanticism as a philosophy avoided France. (12th grade examination)

2. In Conrad's "The Secret Sharer," the white hat--a symbol of good--points the way to the captain's success in bringing his ship around, thus insuring his acceptance and the salvation not only of himself but also of his vessel and the lives of all who sailed with him. This suggests that (a) we should reject our dark selves and strive only for goodness, (b) we should have pity on our dark souls, forgive ourselves, and accept ourselves in duality, (c) only those people who reject their dark selves can continue to live within society, (d) the captain must deliver his secret sharer to safety. (11th grade examination)

3. One of the issues in Melville's "Billy Budd" is that man's evil nature overcomes his goodness. Melville develops this issue by (a) tracing the development of Billy Budd from innocence to evil; (b) establishing a conflict between Billy Budd and Claggart; (c) having Billy Budd strike Claggart in a moment of frustration, (d) having Captain Vere declare Billy Budd's guilt and sentence him to hang, (e) all of the above. (10th grade examination)

4. At the end of Eugenia Collier's short story "Marigolds," the author says, "I too have planted marigolds." This may mean that (a) the author had a flower garden, (b) the author was also an artist who painted pictures of flowers, (c) the author learned ways of filling

her time when her life seemed empty, (d) the character and the author are the same person. (9th grade examination)

These examinations represented a change in these 16 teachers' perception of writing as a tool for assessment. I encouraged the teachers to continue their progress in assessment instruments other than paper and pencil, multiple choice content detail examinations.

Stage 3: February 1992-June 1992

The 16 English teachers continued their networking according to need. For example, the 4 teachers of honors English met with the teacher of advanced placement English each month to review content and skills required of students who took the AP English Literature and Composition examination on May 8, 1992. They realigned the literature for the different grade levels, moving J. D. Salinger's The Catcher in the Rye from grade 9 to grade 12 and charging the teacher of grade 11 with the responsibility for teaching poetic analysis. The success of these maneuvers cannot be assessed until 1993 after the class of 1993 takes the AP examination.

There were two English department meetings that focused on critical issues in the teaching of English. On February 27, 1992 an English teacher who had attended the New Jersey Academy for the Advancement of Teaching between January 7-9, 1992, presented information about students' learning styles. She led teachers through activities to identify their individual learning styles. The conclusion was that

teachers taught the way they learned, that the activities they prepared for students required the skills that teachers-as-learners needed when they originally learned the skills and concepts they later (as teachers) taught. Student needs were not always considered in teacher preparation of lessons. The leader of this meeting left the teachers with three critical judgments: (a) each student can complete one class activity with success; (b) there is more long term retention when students participate in meaningful activities; and (c) the more involved students are in classroom activities, the fewer discipline problems teachers will encounter. These judgments supported the importance of problem solving and critical thinking as essential components of every English lesson. This teacher meeting illustrated my desire to encourage teacher autonomy and to empower teachers to rely upon their peers for academic and methodological support.

A second meeting led by teachers was held on April 1, 1992. Three teachers had participated during January 14-16 and March 10-12, 1992 in the Cooperative Learning Seminar at the Academy for the Advancement of Teaching. Cooperative learning is based on three premises: team rewards, individual accountability, and equal opportunity. To illustrate these premises, the three leaders issued group challenges to the participating teachers; one problem-solving activity was to construct a free standing tower with tape, scissors, and construction paper being the

sole materials available for group use. The reward for the winning group was a poster citing their success placed on the classroom wall, but all 16 teachers (leaders and participants) learned some lessons about interaction and group dynamics. As observer, I saw a group of teachers working together, enjoying a challenge and one another's presence, and gaining respect for the specific talents of their coworkers. This venture was one more step toward enhancing the self-esteem of individual teachers and instilling pride in the department.

Between March 2 and 6, 1992, the English teachers and I developed Professional Improvement Plans (PIPs) for 1992-1993. The PIPs reflected teacher goals to improve their teaching. I recommended that teachers take risks by focusing on areas in which they perceived weaknesses or in which strategies had changed since the teachers had taken their undergraduate methods courses. In July 1992 the superintendent of schools decided that supervisory evaluations and classroom observations will record progress toward realizing the improvement plans. Because all 16 PIPs are measurable through classroom observation, we should be able to satisfy this district requirement.

There were 5 categories into which these PIPs for 1992-1993 fell: (a) study skills, (b) writing, (c) cooperative learning, (d) teaching techniques, and (e) critical thinking. The two teachers who wrote "improve oral communication skills and activities for students" were

teacher-centered instructors, who provided one opportunity per year for students to give oral reports. One teacher wanted to focus on diversity of assignments for the academic B students (these are the students who usually earn C's on their report cards). In the early years of his career, this teacher was content with assigning readings and assessing reading through essay examinations. Three teachers wanted to improve students' writing skills by increasing writing center time and diversifying writing activities. These teachers were the last members of the department to relinquish the five-paragraph essay as the panacea for all writing woes. Seeking alternate means of improving student writing was a tremendous risk for them to take.

Four teachers elected to improve teaching methods. One had been a basic skills teacher (all instruction in basic skills classes was individualized, and the number of students placed in basic skills classes never exceeded 8 students per class); she wanted to learn techniques to use with classes of 20 to 30 students. Two teachers wanted to improve the teaching of poetry to conform with the current research that indicates poetry cannot be taught; it must be read for response. These teachers had always been skills-oriented and had relied upon worksheets to identify the components of poetry; their acknowledging their desire to change their philosophies required a great personal and professional risk. One teacher was faced with mainstreamed special education students in his remedial classes. Because

these students had special needs usually not addressed in English methods courses, he was unable to satisfy their learning needs. He opted to pursue alternative teaching methods; he had always been a classroom lecturer. He decided to risk disappointment and loss of teaching comfort in order to improve his facility with special needs students.

Three teachers chose cooperative learning as their focus. One of these three teachers taught remedial students and wanted them to increase their interaction and assume some responsibility for helping their peers learn; he had always been a lecturer and questioner. The other two teachers have employed cooperative learning in their classes for the five years I have been their supervisor, and they continually seek ways to enhance their methods.

Three teachers wanted their PIPs to reflect some aspect of critical thinking. Two of them decided to improve their questioning techniques and to include more analytical questions. The final teacher wanted to explore syllogistic reasoning and techniques for improving students' thinking skills. Two of the three had always relied upon telling students how and what to respond rather than guiding students' thoughts through a series of questions. For them, their PIPs represented risks to their established teaching patterns. The final teacher, having returned to teaching after a two-year absence, wanted to become current learning trends.

All 16 teachers willingly undertook risks. I shall continue to monitor their success when I conduct classroom observations in the 1992-1993 school year. My concern will remain the effect of student activities requiring critical thinking on student learning in literature and writing.

Finally, on May 19, 1992 and June 11, 1992, an ad hoc committee, consisting of two English teachers, two students (both seniors), and one assistant principal, who had served as an observer throughout this project, met to assess the success of this project.

First, the committee reviewed the data provided in the appendices as they related to the terminal objectives. Second, the committee reviewed the lesson plans of the 16 English teachers for the following dates: February 11 and 18, March 4 and 11, April 1 and 8, May 6 and 13 in 1991 to correspond with stage one of this project; September 24, October 1 and 29, November 3 and 10 in 1991 to correspond with stage two of this project; and February 18 and 25, March 17 and 24, April 28, and May 5 in 1992 to correspond with stage three of this project.

Third, the committee perused the writing folders of a sample of students from the five levels of grades 9 through 12: honors, academic A, academic B, general, and write, looking at the type of writing assignments students were asked to complete, the types of skills those assignments demanded, and the manner of evaluating or assessing writing proficiency that teachers used.

Fourth, the committee talked with other English teachers and students about their attitudes toward the quality of instruction occurring in their English classroom. Questions concerned activities and goals as they related to problem solving and critical thinking.

Finally, the two English teachers on the ad hoc committee observed classes of the other 14 members of the English department. In all cases, the observers indicated that teachers had challenged their students through analytical questioning, group activities requiring some problem solving, or a writing exercise. It must be noted, however, that the observers had asked permission to visit the classrooms and indicated what they were seeking. Thus, the teachers prepared lessons that would demonstrate those behaviors the observers wanted to see.

The committee did not share its hard data, if, in fact, it produced any, but it did verbalize to me that it felt this project successfully fulfilled its objectives. My charge to the committee had been to determine whether the project objectives had been realized.

Summary of Accomplishments

Throughout the implementation of the activities of this project, I used my leadership skills extensively to ensure staff, student, and personal realization of the goals and objectives as outlined. With fulfillment of these objectives, the self-esteem of individual teachers would increase, and department morale would be positive. These

personal feelings would translate to a more productive classroom for the students.

To effect such morale boosting, I used time expeditiously and reorganized activities around interruptions to the initial plan of implementation. By restructuring department meeting time, I fulfilled my goals for this project and satisfied the responsibilities of the Middle States self-study,
which Marlboro High School was completing. My organization kept English teachers on task with their performance, which was studied for this project. My planning assisted teachers with their preparation of lessons, including specific activities whose results were assessed throughout this project.

I reported department and project progress to the building administrators and observers. Being proficient in writing enabled me to write materials, ideas, strategies, and guidelines for the English teachers who were most responsible for implementing changes in method of instruction within their classrooms.

I used my skills in oral communication to assist English teachers' efforts with networking. I became part of this networking system because I listened to ideas and communicated them to others. This facility with oral communication was also essential for conducting staff development workshops during monthly department meeting time

and to convince more taciturn teachers to lead professional workshops.

It was important that the 16 English teachers retain their motivation for teaching literature and their pride in the success they had while doing so. I encouraged them to broaden their teaching perspectives without sacrificing any of the content they enjoyed teaching. One area of expansion was critical thinking; a second was student autonomy in learning. Because I had earned the confidence of my staff, I advanced the need for these two areas in the English classrooms.

In an effort toward greater teacher autonomy, I worked individually with the teachers who needed personal attention or were closest to such autonomy. In this latter instance those teachers then coached some of their colleagues, and extensive networking resulted in student autonomy. This was a progressive, yet integrated, process of coaching and independent learning.

Because the long-range and somewhat implicit goal of this project was teacher and student autonomy, I, in my role as English supervisor, provided more opportunities for these individuals to assume control of their learning. The teachers received more authority over their methods of instruction, because, even though the curriculum guides suggested activities, the teachers modified them to their personal strengths and interests. As teachers became confident in their questioning techniques and assessment

skills, they required less supervision and learned to coach others in instructional methods. I used this opportunity to delegate more responsibility to other teachers in the English department. This was further accomplished by the networking, group articulation, and peer coaching suggested thoughout this project.

When egos were fragile and teachers were content with their classroom behavior, I cautiously attempted changes in method. I was so subtle that the teachers did not recognize they were changing their procedures. I was concerned about the implications of this project for the school district. The tenor of this school district appeared unwelcome to changes in any dimension of the educational program emanating from individuals; changes were being levied from the superintendent and his assistants to the five high schools, and I learned to accept changes, regulations, and policies that I did not always find educationally sound for the students in my high school. I learned when and how to challenge the prescribed mandates, especially as they related to the subjects of this project.

Increasing the scope of questioning within the English classes required some risk taking on my part as the 16 English teachers were experienced teachers who had grown content with their methods of instruction. Their students' standardized state and national test scores were above the average; their graduating 12th graders were accepted into accredited colleges. When I suggested that the good

teachers could become even more effective, when I challenged the technophobics to become coaches of their space-age students, I risked the rejection of my program.

New ideas disrupted the contentment; teachers who subscribed to the current trends and theories of learning experienced the subtle ridicule of the doubters. Before a rift occurred within the department, I interceded by modeling the new techniques within my own classroom. Students carried to their friends word of different learning techniques, and, through this conduit, teachers became aware of additional learning tools and sought to implement them within their own classrooms.

I also took risks whenever I attempted change within the English department because I was the last person in the department to gain tenure. The fact that my staff recognized my knowledge of subject and research assisted me in gaining quiet acceptance, thereby reducing some of the risks that accompany changes of personnel.

This experienced staff believed it was a knowledgeable staff, and, because English education runs in cycles with new catch-words for each phase, the staff believed there was nothing new, only reprocessed methods and information. The individual teachers often refused to read professional journals to keep pace with what was happening in their field. I provided journal articles reinforcing existent curriculum and instruction; I encouraged reading of innovation or "re-innovation," and the teachers had some

basis for comparing the content of the research. At department meetings the teachers and I discussed the journal articles and related the content to the situation at Marlboro High School.

One area of weakness in the English department was that, between 1987 and 1990, only 4 of 16 English teachers had attended professional workshops with some enthusiasm for using the material gained; 2 other teachers had attended workshops under duress. The teachers of 10th graders and 11th graders participated in a learning styles staff development meeting in September 1991. In January, February, and March, 1992, 4 of the 16 teachers attended the Academy for the Advancement of Teaching located in New Jersey to study learning styles and cooperative learning. In June 1992 the teachers of 12th grade students participated in a staff development workshop to learn how to implement the revised senior English curriculum. I conducted this workshop because I chaired the district committee that wrote the curriculum guide. These professional activities were enthusiastically received by the teachers. Clearly, the attitude toward educational perspective had changed.

I orally commended the English teachers who attempted new methods of instruction in their commitment to provide a challenging education for their students. I encouraged the staff to consider the needs of the students and recognize changes as vehicles to assist student learning. I

encouraged teachers to try something before they rejected it. Consideration was viewed as an element of personal compassion and understanding as well as a vehicle of intellectual thought.

Through challenging the English teachers to improve their classroom manner, I effected some positive changes in my own behavior as supervisor. The teachers volunteered positive comments about strategies for change in their classrooms. The ad hoc committee, which evaluated this project, concluded that the goals of the project were met. The staff replaced their passive contentment with enthusiasm.

In summary, this project motivated 6 productive outcomes. First, it drew attention to new methods of instruction for the 16 teachers in the English department. Of special note was the need for challenging students of all academic levels through more analytical and critical questions. Second, it placed classroom focus on learning instead of teaching. This switch was accomplished through re-education of the English staff. Teachers learned to use cooperative learning techniques, registered holistic scoring, portfolio assessment, and computers--all facilitators of learning with students as active performers rather than as passive listeners.

Third, the project encouraged teacher networking for sharing ideas, materials, and success stories about what worked in the classroom rather than what went wrong.

Fourth, an outcome of networking was class and track articulation. Teachers of problem students or students with special needs met to seek solutions to problems rather than overlook them. This articulation improved the writing program and the honors program.

Fifth, the emphasis on critical thinking stressed through this project illuminated the need for maintaining the interest of the student in grade 12 after he had been accepted by a college. In September 1992 Marlboro High School introduced an interdisciplinary English course, meeting for 90 minutes each day of the school week. The program combined English with 2 current electives (humanities and creative writing); it encouraged students to make connections among artistic, philosophical, and literary issues through cooperative, problem-solving projects.

Sixth, the newly revised English curriculum guide for 12th grade, implemented in September 1992, used critical thinking as its major component. This curriculum guide was used throughout the Freehold Regional High School District so, inadvertently, this project had an impact on the school district.

Chapter 6

Evaluation of Results and Process

Analysis and Interpretation of Results

There were four terminal objectives for this project, three of which were intended to measure student growth and one of which was intended to measure teacher growth. To assess these objectives, the participants followed an organized plan and conducted periodic evaluations of progress. The following pages will re-examine those four objectives and review the results revealed by this project.

Terminal Objective 1: All students enrolled in the English I academic B, English I general, and English I write tracks in Marlboro High School during the 1990-1991 school year will realize a 5% average improvement on the New Jersey High School Proficiency Test items measuring inferential skills over students in these tracks during the 1989-1990 school year.

Table 7 indicates that students in the English I academic B and English I general tracks did not realize a 5% improvement of scores measuring inferential skills on the 1991 New Jersey High School Proficiency Test (HSPT) over the 1990 New Jersey High School Proficiency Test. Students in the English I write program showed an improvement of 12%. Although the numerical percentage of the objective was not realized, the individual item results indicated (a) that the

students in English I academic B classes displayed sufficient mastery of the tested concepts, and (b) that students in English I general and English I write tracks displayed room for improvement in the measured skills areas.

A score of 75% indicated mastery of individual test items, according to the state-established norms. The academic B students displayed mastery of all item concepts except infer comparisons (in 1990) and infer contrasts (in 1991), but, because each test contained just one question for each of these items, a reliable judgment about students' competence in these areas cannot be made.

Table 7

Scores by Academic Track and Year for Items Measuring Inferential Skills, New Jersey High School Proficiency Test, 1990 and 1991

	Academic B		General		Write	
Test Item	1990	1991	1990	1991	1990	1991
Infer main idea	81.0	73.5	73.3	71.0	93 3	73 0
Infer character motivation	86.7	78.3	73.3	66.0	60.0	75.3
Infer writer's purpose/view	77.7	83.5	63.3.	73.8.	60.0.	86.5
Infer sequence/time	81.0	82.5	70.0	72.5	65.0	73.0
Infer cause/effect*	90.0	73.0	100.0	56.0	60.0	45.0
Infer comparisons	80.5	82.0	70.0	72.5	70.0	68.5
Infer contrasts	64.0	89.0	40.0	67.0	20.0	91.0
Average score:	80.1	80.3	69.9	68.5	61.2	73.2
Percent of improvement:		.16		-.19		11.99
Number of students:	95	99	15	29	16	11

Terminal Objective 2: All 9th grade students who scored below 75% in the reading components of the New Jersey High School Proficiency Test in April 1990 and April 1991

will be monitored during the 1990-1991 and 1991-1992 school years by the English classroom teachers to determine growth in inferencing skills; such growth will be measured by student success on teacher-made tests and the Comprehensive Test of Basic Skills, which they will take in their 10th year.

This objective was modified during the study of student standardized test scores. Between 1985 and 1990, 97% of the 9th grade students at Marlboro High School had scored 75% or higher on the New Jersey High School Proficiency Test. For the class of 1994, however, 91% scored 75% or higher. Thirty-seven of the 418 students who took the test in April 1991 scored below 75%: 22 students were enrolled in the English I academic B track, 11 students were enrolled in the English I general track, and 4 students were enrolled in the English I write track.

The average score for the 37 students was 66. On test items measuring inferential comprehension, the average score for the academic B students was 66; for the 11 students in the general track, the average score was 64; and for the 4 English write students, the average score was 67.

The question posed by these scores was whether the HSPT scores were an improvement over earlier standardized test scores. To answer that question, I looked at earlier standardized test results, using test items that measured critical thinking. The goal was to determine whether teaching methods employed by the six teachers of ninth

graders had any appreciable effect on standardized test results.

The test examined was the Comprehensive Test of Basic Skills (CTBS) used in the Marlboro Middle School and administered in April 1990. Five test areas required critical thinking for students to realize accurate responses to individual test items: (a) passage analysis (11 questions), (b) critical assesssment (nine questions), (c) interpreting graphics (five questions), (d) organizing information (10 questions), and (e) analyzing information (seven questions). Test results were available for 30 of the 37 students: 3 students were classified as special education students and did not take the test, and 4 students were not tested for some other reason (absent, invalid scores).

Table 8 contains the average scores per test area for each group.

Table 8

Average Scores on Items Requiring Critical Thinking, CTBS, April 1990

	Academic B	General	Write	Total
Passage Analysis	42.09	24.36	44 75	45.77
Critical Assessment	40.82	22.36	50.00	44.80
Interpret Graphics	48.73	25.73	61.00	53.30
Organize Information	48.59	19.91	53.75	50.10
Analyze Information	48.77	24.09	55.00	51.93

In April 1992, these same 30 students took the CTBS again. Table 9 contains the average scores per test areas for each group of students.

Table 9

Average Scores on Items Requiring Critical Thinking, CTBS, April 1992

	Academic B	General	Write	Total
Passage Analysis	63.51	35.63	66.50	55.22
Critical Assessment	60.91	36.22	72.30	56.48
Interpret Graphics	81.33	57.23	82.00	73.52
Organize Information	80.62	50.10	65.75	65.49
Analyze Information	81.05	70.17	85.00	78.74

The results of the April 1992 testing suggested that students had gained sufficiently through the instruction offered in the 9th and 10th grades. There was improvement in all areas measured by the test.

Teacher grades were based upon multiple measures and did not reveal any significant changes in students' learning patterns. In the 9th grade, 1 student of 37 received a final report card grade of A; 6 students received grades of B; 21 students received grades of C; 7 students received grades of D; and 2 students received grades of E. In the 10th grade, 5 students improved a letter grade or more, and 15 of the 37 students dropped a letter grade or more; 17 students received the same letter grade for both years.

This study, then, focused on 37 students from 1 class, not the 2 classes suggested by terminal objective 2. It used test data for 30 of the 37 students.

Terminal Objective 3: All 9th grade students who scored below 77% in the writing components of the April 1990 and April 1991 New Jersey High School Proficiency Test will be assigned to the English II write class for further instruction in drafting, revising, and editing essays. The classroom teacher will establish evaluative criteria to measure growth in these writing skills: (a) determining main ideas, (b) determining details appropriate to the main idea, (c) reorganizing sets of sentences into logical order, and (d) editing. One evaluative criterion will be the students' scores on the retests of the New Jersey High School Proficiency Test taken in December 1990 and December 1991.

Six of the 11 students enrolled in English I write in the 1990-1991 school year scored 77% or above on the writing section of the NJHSPT. The 5 students who scored below 77% were scheduled into English II write for the 1991-1992 school year. By June 1992, 4 of the 5 students had scored 77% or above on the test. That fifth student, a native of Korea, had scored 68% and was scheduled into English III write for the 1992-1993 school year.

Nine of the 12 students enrolled in English I write during the 1989-1990 school year scored 77% or above on the writing portion of the NJHSPT. The 3 students who scored below 77% were scheduled into English II write for the 1990-1991 school year. Three students were scheduled into English III write for the 1991-1992 school year; they scored

77% or better in the December 1991 retest and were removed from the English III write class in January 1992.

Table 10 presents the scores of the English write students for 1990 and 1991.

Table 10

Inferential Writing Scores of English Write I Students Measured by the New Jersey High School Proficiency Test, 1990 and 1991

	1990	1991
Determine main idea	66.7	82.0
Determine use of detail	91.7	88.0
Reorganize sets of sentences	76.7	78.8
Editing	68.3	60.8
Average score:	75.85	77.4
Number of students:	12	11

The terminal objective indicated test results as a criterion for measuring student success. A second criterion was a persuasive essay written on May 5, 1992. The essay was holistically scored by a team of English and social studies teachers; the assistant superintendent of the district designated 7 as a passing score in a range of 2 to 12. Of the 33 students enrolled in the English write classes for 1991-1992, 27 scored 7 or above.

Terminal Objective 4: The English teachers will improve their student assessment tools to focus on measuring critical thinking skills in their evaluation of student comprehension of literature. The English supervisor will assess teacher success as measured by improved midterm and final examinations.

During the 18 months of this study, I observed 16 English teachers in a total of 68 classes. Appendices C and K summarize the classroom activities of those class observations pertaining to this study. The times devoted to specific activities reflected the teaching strengths, objectives, and philosophies of the individual teachers. As the English department participated in staff development experiences, teachers varied their teaching activities. The questions cited in Appendices H and L showed the focus on inferential and critical reasoning that teachers required of their students. Midterm and final examinations measured interpretation of literature instead of factual recall. Questions, samples of which were cited in Chapter 5, illustrated a change of emphasis for the classroom teachers from memorization of material to interpretation of that material.

Three of the 16 teachers used writing portfolios (16 teachers required writing folders of all students because keeping such folders was a department mandate) to assess student progress in writing. The portfolios supplemented paper-and-pencil examinations and timed essays written in class.

Changes in instructional methods and time distribution for classroom activities were major objectives for this project. Through strategies presented as a result of this project, teachers used alternative methods of instruction

and assessment of student learning. Thus, the objectives for the project were achieved.

Reflections on the Solution Strategy

This section reviews the procedures used to address the five questions germane to this study, cited initially in Chapter 3. The discussion is divided into three areas: (a) community expectations, (b) the role of the state of New Jersey, and (c) the role of school personnel.

Community expectations

The parents of Marlboro High School students were actively involved in their children's education; they established high academic goals for their children, especially the academically talented students, and expected the students to persevere until they attained these goals. Because of their commitment to quality education for the children within the community, parents supported the educational program by (a) annually voting passage of the school budget; (b) maintaining contact with school administrators and teachers regarding the progress of their children; and (c) showing their support through financial contributions to school publications, cultural events, and other cocurricular activities. Parents participated in back-to-school sessions and conferences with teachers during district-wide assigned dates. They responded to interim/progress reports and report card comments and marks.

With this type of support for education, parents encouraged competition. They enrolled their children in the

district's centers for excellence (a form of school choice with competitive examinations as entrance requirements), they enrolled their children in extra schooling (SAT review courses, tutors), and they wanted academic challenges within the school curriculum. They endorsed the emphasis on problem-solving and critical thinking as long as they saw tangible assignments and devices for completing those assignments.

Data gathered for state reports

Following the receipt of the results of the New Jersey High School Proficiency Test (NJHSPT), I was required to write a report for the superintendent of the Freehold Regional High School District, of which Marlboro High School is a part, from which he or an assistant superintendent gleaned data for a report of results to be delivered to the Monmouth County superintendent of schools and the New Jersey Department of Testing in the State Department of Education; a second copy was filed with the building principal, and a third copy was kept in the English office.

The content of the report included strengths, weaknesses, and recommendations for student improvement of scores. These included an examination of the methodology of the teachers. It was these reports that influenced the strategies for this project because students displayed weakness in answering questions requiring thoughtful responses or drawing inferences from reading a text.

One purpose of this project was to determine whether teacher method affected standardized test results. If it did, was the effect minimal or substantial? A second purpose was to discover whether teacher emphasis on higher order thinking skills, integrated within a literature and composition program for average and below average students, affected their grades and their transfer of learning from class discussion to written responses of open-ended questions. The final purpose was to provide teachers and students with classroom autonomy. Even with a written curriculum guide, teachers can plan a flexible program and provide choices for students to effect an academically sound program.

Role of school personnel

The school personnel most affected by this project were the 16 English teachers of Marlboro High School, especially the 9 who taught 9th grade students. It was their students whose tests received the greatest scrutiny, and it was those teachers whose methods were most criticized.

In September 1989 the school district introduced a revised ninth grade English curriculum, arranged around themes and based on skills measured on the New Jersey High School Proficiency Test given in April to all ninth graders and the Early Warning Test administered to eighth grade students in March of their final year of elementary school. Three of the nine teachers rejected the revised structure and taught a genre-based literature program. The remaining

six teachers modified the written curriculum by including some favorite projects and pieces of literature, which they had used in prior years. One challenge, then, was to determine the effect the different methods had on student learning and standardized test scores. The result was none; though the content varied from one class to another, the skills remained the same. Teachers focused on reading comprehension, inferential reading, vocabulary development, organizing ideas in writing, and editing (including grammar and mechanics). The test results did not reveal significant weaknesses in any classs because of teaching method or course content.

During department meetings I attempted to illustrate teaching strategies. The videos purchased or rented for department staff development were poorly received by the teachers. Teachers openly criticized the statements made by the modeling teachers and the artificiality of the settings of the taped situations. In short, the scripts were rehearsed, not spontaneous, and the impact was negative. In contrast, the staff development meetings, during which one of the department members led a workshop based upon out-of-district training, proved beneficial. While not everyone was enthusiastic, teachers were attentive and participated in the activities. I observed teachers using the workshop techniques in their classes, or teachers questioned me about implementing some of the strategies.

For this English department, a live performance netted more positive results than did a videoed one.

Another method of gathering data about the impact of critical thinking in the English classroom was the teacher-supervisor writing of Professional Improvement Plans (PIPs) for a school year. Based upon their students' test results and their own needs, teachers sought assistance in challenging students to think. Their PIPs reflected this interest as, during the 1990-1991 and 1991-1992 school years, 8 teachers, or 50%, wrote PIPs dealing with critical thinking strategies.

For the October 1992 Middle States Association evaluation of Marlboro High School, the English department revised its department philosophy. One part stated that "students must achieve a degree of proficiency in the communication areas of reading, writing, and thinking that will be commensurate with their lifelong career and social goals." This inclusion reinforced the department's belief in the necessity of students who can think through problems and realize valid solutions.

In September 1992, a new 12th grade English curriculum was implemented, the bases for which were critical thinking, problem solving, and student autonomy for learning. Much of the motivation for the design of the curriculum guide was found in the reading completed for this project and reviewed in Chapter 4. Additionally, the New Jersey proficiency statements for English guided the writing of the curriculum.

These proficiency statements measured expectations for graduating 12th graders. Finally, the NJHSPT, to be administered in December 1993 to members of the class of 1995, affected both the 12th grade curriculum and this project. The NJHSPT was revised to include challenging material and questions requiring higher order thinking skills. The test will be a prerequisite for receiving a high school diploma in New Jersey. Thus, the state has recognized the need of citizens preparing for the 21st century to think critically.

The procedure for gathering data for this project, then, was based upon the instruments New Jersey educators needed for their schools: (a) the New Jersey High School Proficiency Test, (b) the state's proficiency statements for English courses, and (c) state mandates affecting English instruction (values clarification and career education components). I observed the students and teachers in classroom settings and in the writing center for interaction, autonomy, and critical thinking strategies (questions and problems). I read the literature dealing with critical thinking as an integral part of an academic program, paying close attention to the place of critical thinking for the academically weak students. I spoke with teachers about their perceived needs and successes regarding the role of critical thinking in their classroom. Finally, I conferred with school administrators, both within my building and outside my district, for their insight into the

need for critical thinking to become a more vital component of the English curriculum.

I concluded that my research was profitable because I had secured answers to the questions posed at the beginning of Chapter 4. Critical thinking skills must be incorporated within each English class, regardless of its academic track. Teachers must improve their questions for students, emphasizing "why?" and "what if?" over "who?" and "when?". Teachers can evaluate their students' thinking skills through written responses to open-ended questions, persuasive and problem-solving essays, and group activities.

Implications of Outcomes and Processes

This section considers the position of this research study within Marlboro High School and the Freehold Regional High School District. I am optimistic that the English teachers at Marlboro High School will benefit from the implications of my research. I do not see as much direct impact on teachers in the other four high schools in the Freehold Regional High School District.

During the 1990-1991 school year, critical thinking was a major educational emphasis for the school district. The department supervisors of the five district high schools perceived critical thinking as a significant component of all their content disciplines. They discussed its inclusion in new courses when they held district supervisors' meetings. They networked about activities that teachers could use as stimulators for thinking. In May 1991 the

theme for the district-wide staff development day was critical thinking and learning. Participants received materials and hands-on practice with teaching some thinking strategies. In July 1991 four discipline supervisors and three central office administrative superintendents for instruction attended an Association for Supervision and Curriculum Development conference on critical thinking across all the academic disciplines. I attended this three-day conference with instructions to glean a sufficient body of material to teach other staff members the rudiments of critical thinking in the language arts area.

In September 1991 the deputy superintendent and the administrative superintendent for staff development announced that the professional growth thrust for the 1991-1992 school year was classroom supervision. There were no references to critical thinking, either as expansion to or revision of what was proposed the preceding year. There was no correlation between strategies for teaching critical thinking and the revised classroom observation procedure, which was piloted in one of the five high schools. Implementation of this new staff observation-evaluation procedure occurred during the 1992-1993 school year. Building supervisors concluded that (a) the focus on critical thinking within the content disciplines was replaced by a newer district concern, (b) the responsibility for continuing the suggested emphasis on critical thinking belonged to individual schools and departments, or (c) the

deputy superintendent had yet to unveil his curricular program for the district, and, within his program, were the connections between classroom supervision and critical thinking teaching strategies.

One district instrument that stressed critical thinking was the 12th grade curriculum implemented in September 1992. The curriculum guide was written as a series of teaching units that correlated literature, writing, speaking, and thinking. Study questions designed to measure the unit proficiencies required varying degrees of thought for satisfactory response. Classroom activities stressed cooperative learning for problem solving and reaching conclusions.

The support of the English supervisors and English departments throughout the district encouraged the curriculum committee to develop thinking strategies for teachers and students. What I read about critical thinking in literature and writing programs for this project helped form the approaches and techniques for the curriculum committee, which wrote this curriculum guide for 12th graders. The 17 teachers of the Marlboro High School English department and the 15 teachers of 12th grade English in the other 4 high schools of the Freehold Regional High School District benefitted the most from this study on the correlation of critical thinking and language arts because I had direct contact with them. I conducted their in-service workshop introducing the curriculum guide, and I observed my

department members as they utilized the strategies for teaching students to reason and draw conclusions.

This report was read by administrators in two schools within the district and by school administrators of other school districts in New Jersey. A copy of this report is stored in the English department office at Marlboro High School, available to members of the high school staff.

Chapter 7

Decisions on Future of Intervention

According to practitioners, most notably teachers, research studies should lead to application. Teachers seek methods of instruction to improve their students' performance in the classroom and on competitive examinations. This study, completed by an English department supervisor in a comprehensive high school in a suburban area of New Jersey, prompted some teaching strategies useful in the teaching of English. Research answered the five questions of Chapter 4, and networking with teachers in the English department implemented those answers.

Should the Study be Maintained, Modified, or Abandoned?

Since critical thinking is vital to a student's success, the emphasis on enhancing thinking skills within a classroom should be maintained. The thrust of this study was the impact of critical thinking skills on performance of below average students. It could also focus on more activities than test scores, observable performance, and essay writing.

Were I to continue this study, I should seek to see how my sampling of students fared on a testing instrument specifically designed to measure critical thinking capacities, not general standardized tests used throughout the school district. Further data about thinking skills can

be gathered through testing or observing the same students' performances in disciplines other than English: social studies, science, or mathematics, for example. This was beyond the scope of my study.

Additional Applications

Improving the critical thinking skills of students in the Freehold Regional High School District remains a focus for the teaching staffs of the individual high schools. I shall continue to encourage the department of curriculum and instruction to adopt a policy regarding the inclusion of critical thinking skills in all curriculum guides. I should hope that staff development workshops or conferences will address the importance of motivating students of all ages and academic abilities to think in all areas of their scholastic lives. Perhaps the district will create a committee to study the implications of infusing critical thinking skills within each content discipline as it did with career education. Perhaps critical thinking will be emphasized only when the state department of education or superintendent of schools mandates its inclusion within the curriculum.

One hundred percent of the teachers in my department recognize the importance of critical thinking as a component of the English curriculum. During their teaching careers, they have sought literature or strategies from colleagues to guide them through persuasive writing, word processing, and cooperative learning; they will invest the same energy in

learning to teach students to think rather than memorize without any thought to application of data. They will continue to use the strategies outlined throughout this project.

Dissemination of Information

In December 1992 I instructed the English staffs of the 5 high schools in the Freehold Regional High School District regarding the inclusion of critical thinking skills in the curriculum guide for 12th grade English. I shared professional literature and ideas acquired by attending professional conferences. I explained to my English staff the strategies for improving critical thinking skills of their students. There will be future networking with teachers to encourage members of my department to pursue the field of study, and to assist them with staff development during monthly department meetings.

Throughout the 1992-1993 school year, the district will focus on articulation across disciplines. Critical thinking strategies should be either a device for, or a component of, this articulation. I shall continue to recomend their inclusion in curriculum guides.

Recommendations

If I were to restudy the relationship of critical thinking and the language arts, I would focus on one group of students for a longer period of time. Both thinking and literature are affective areas of learning whose results are difficult to measure with hard data. I doubt that I would

pursue such a venture again unless I could justify my conclusions through both narrative comments and numerical measurements.

Gaining the cooperation of the involved personnel is key to acquiring information. The researcher must communicate to the study participants what he/she is doing and why he/she is doing it. A classroom observer, for example, needs a receptive atmosphere, and the performers need to understand the task that the observer is watching. Otherwise, the data are invalid. I was fortunate to have the cooperation and support of the English department in which I worked and of the building administration.

I enjoyed the reading I completed for this study. It was a solitary activity and time for reflection of my teaching and my supervising skills. I recognized many strategies I had used for years in my classroom. I discovered others to utilize in future endeavors. The reading also afforded me the opportunity to share ideas with my staff and my colleagues in other disciplines. I have watched teachers and students exude excitement and enthusiasm in many classrooms during my career. I intend to observe even more of these before I retire. Writing this report satisfied me professionally and personally, for the observations of classes that I conducted to secure data verified my contention that students and teachers do think critically about literary components. Their writing likewise reflects their thinking.

References

Anderson, R. (1990). Don't teach rules. teach writing. Guidelines for the HSPT, Trenton: Department of Education.

Barell, J. (1991). Teaching for thoughtfulness. New York: Longman Publishing Group.

Barell, J. (1985). You ask the wrong questions! Educational Leadership, 42(8), 18-23.

Barell, J., Lieberman, R., Sigel, I. (1988). Fostering thoughtful self-direction in students. Educational Leadership, 47(7), 14-17.

Beyer, B. (1988). Developing a scope and sequence for thinking skills instruction. Educational Leadership, 45(7), 26-30.

Bland, C. & Koppel, I. (1988). Writing as a thinking tool. Educational Leadership, 45(7), 58-60.

Brandt, R. (1988). On teaching thinking: A conversation with Art Costa. Educational Leadership, 45(7), 10-13.

Chambers, J. (1988). Teaching thinking throughout the curriculum--where else? Educational Leadership, 45(7), 4-6.

Costa, A. & Lowry, L. (1989). Technologies for teaching thinking. Pacific Grove, CA: Midwest Publications.

Dewey, J. (1956). The school and society. New York: Random House.

Ennis, R. (1985). A logical basis for measuring critical thinking skills. Educational Leadership, 43(2), 44-48.

Golub, J. (1986). Activities to promote critical thinking. Urbana, IL: National Council of Teachers of English.

Haney, W. (1985). Models for teaching thinking. Educational Leadership, 43(2), 4-13.

Joyce, B. (1985). Models for teaching thinking. Educational Leadership, 42(8), 4-7.

Marzano, R. (1988). Dimensions of thinking: A framework for curriculum and instruction. Alexandria, VA: Association for Supervision and Curriculum Development.

McTighe, J., & Lyman, F. (1988). Cueing thinking in the classroom: The promise of theory-embedded tools. Educational Leadership, 45(7), 18-24.

Norris, S. (1985). Synthesis of research on critical thinking. Educational Leadership, 42(8), 40-46.

Norris, S. & Ennis, R. (1989). Evaluating critical thinking. Pacific Grove, CA: Midwest Publications.

Paul, R. (1985). Bloom's taxonomy and critical thinking instruction. Educational Leadership, 42(8), 36-39.

Presseissen, B. (1988). Avoiding battle at curriculum gulch: Teaching thinking and content. Educational Leadership, 45(7), 7-8.

Quellmalz, E. (1985). Needed: Better methods for testing higher-order thinking skills. Educational Leadership, 43(2), 29-35.

Sternberg, R. & Baron, J. (1985). A statewide approach to measuring critical thinking skills. Educational Leadership, 43(2), 41-43.

Strong, R. (1985). Integrating teaching strategies and thinking styles with the elements of effective instruction. Educational Leadership, 42(8), 9-15.

Appendices

Appendix A

Table 11

Items Requiring Critical Thinking Skills on Which Students Scored Below 75%, High School Proficiency Test, 1990

Student Program Items in Reading	Academic B	General	Write
Infer main idea	X	X	
Predict outcome		X	X
Draw conclusion	X		X
Infer character motivation	X	X	X
Infer writer's purpose/view	X		X
Distinguish fact from opinion		X	
Interpret figurative language		X	
Infer sequence/time		X	
Infer cause/effect		X	
Infer comparisons	X	X	
Infer contrasts			X
Make judgments	X	X	X
Items in Writing	**Academic B**	**General**	**Write**
Combine ideas into a well-constructed sentence		X	X
Select transition words		X	
Select main idea for a paragraph	X	X	X
Select detail of support		X	X
Identify detail inappropriate to main idea	X	X	X
Reorganize sets of sentences into logical order	X	X	X

Appendix B

Rubric for Registered Holistic Scoring

Score of 6

Organization/content: has an opening and closing; relates to the topic and has a single focus; well-developed; organized; transitions work; highly effective

Usage: very few, if any, errors

Sentence construction: variety of sentence structures, rhetorical model that is appropriate and effective; very few, if any, errors

Mechanics: very few, if any, errors

Score of 5

Organization/content: has an opening and closing; relates to the topic and has a single focus; progresses logically; key ideas developed; organized; clusters of ideas are strongly connected; some risks are taken; flawed, but has sense of completeness and unity

Usage: few errors

Sentence construction: variety of sentence structures that are appropriate and effective; very

	few, if any, errors
Mechanics:	few errors

Score of 4

Organization/content:	generally has an opening and a closing; relates to the topic and has a single focus; little difficulty, if any, with progression, organized; ideas may ramble somewhat; clusters of ideas loosely connected; some ideas fully elaborated; others bare, unelaborated; overall progression apparent
Usage:	some errors, no consistent pattern
Sentence construction:	demonstrates general sentence sense and some variety; may display a few errors
Mechanics:	some errors, no consistent pattern

Score of 3

Organization/content:	may not have an opening and/or closing; relates to topic and usually has a single focus; focus may drift or abruptly shift; has some details; little elaboration;

	organized and controlled; rambles, repeating ideas, resulting in sparse, lengthy response; has elaborated details but is poorly organized or lacks transition
Usage:	may display a pattern of errors
Sentence construction:	may demonstrate excessive monotony, little sentence variety; may display errors in structure
Mechanics:	may display a pattern of errors

Score of 2

Organization/content:	may not have an opening and/or closing; relates to topic but drifts or displays abrupt shifts; attempts organization but shifts focus; details presented without elaboration; highlight paper
Usage:	severe problems, but not totally out of control
Sentence construction:	excessive monotony in structure; may be numerous errors
Mechanics:	numerous serious errors

Score of 1

Organization/content:	may not have an opening/closing;

	minimal response to the topic; states subject or list of subjects; may be long and disorganized and hard to follow; may have focus, which must be inferred; details may be random, inappropriate, or barely apparent; displays lack of control, with no sense of planning
Usage:	numerous errors
Sentence construction:	assortment of incomplete and incorrect sentences; may be incoherent or intelligible
Mechanics:	errors so severe they detract from meaning

Source: Bloom, D. S. (1985). The Registered Holistic Scoring Method for Scoring Student Essays. Trenton, NJ: New Jersey State Department of Education.

Appendix C

Table 12

Analysis of Classroom Observations Conducted by the English Supervisor between February 1988 and June 1990

Date	Teacher	Level/Grade	Activities	Minutes
2/18/88	1	133 11	quiz	11
			teacher talk	34
2/18/88	2	Journalism	teacher talk	30
			A-V use	15
2/18/88	3	133 11	teacher talk	45
2/18/88	4	102 9	teacher talk	20
			student report	25
3/17/88	5	142 12	student report	35
			teacher talk	10
3/18/88	4	131 11	teacher talk	5
			student report	40
3/21/88	6	122 10	quiz	10
			teacher talk	22
			student report	13
3/21/88	7	132 11	spell. quiz	5
			student read.	16
			teacher talk	24
3/21/88	3	133 11	spell. quiz	19
			teacher talk	12
			writing time	14
3/22/88	8	133 11	spell. quiz	15
			teacher talk	10
			ind. reading	20
3/23/88	9	132 11	teacher talk	27
			student report	18
4/20/88	10	103 9	student report	25
			teacher talk	20
4/27/88	11	132 11	vocab. quiz	10
			teacher talk	35

4/28/88	12	122	10	student report	15
				teacher talk	30
5/11/88	7	142	12	student report	15
				teacher talk	30
5/12/88	1	103	9	vocab. quiz	12
				student report	30
				teacher talk	3
9/16/88	6	122	10	teacher talk	45
9/19/88	1	133	11	spell. quiz	7
				teacher talk	29
				writing time	9
9/18/88	12	122	10	teacher talk	25
				write. inst.	20
9/19/88	10	142	12	writing time	11
				student read.	20
				quiz	14
9/20/88	13	142	12	writing time	20
				student read.	20
				teacher talk	5
9/22/88	14	102	9	writing time	10
				teacher talk	35
9/23/88	15	103	9	writing time	10
				teacher talk	35
9/26/88	7	101	9	spell. quiz	5
				write. inst.	40
9/26/88	8	122	10	vocabulary	20
				teacher talk	25
9/27/88	16	142	12	teacher talk	45
9/28/88	11	132	11	teacher talk	45
9/29/88	5	103	9	teacher talk	30
				writing time	15
9/30/88	17	141	12	teacher talk	45
10/3/88	4	131	11	A-V use	20
				student act.	25

10/4/88	9	103	9	writing time	15
				vocabulary	14
				student report	16
10/6/88	14	102	9	writing time	8
				oral reading	15
				teacher talk	22
10/6/88	2	144	12	vocabulary	10
				teacher talk	30
				writing time	5
10/13/88	1	142	12	teacher talk	30
				writing time	15
10/19/88	12	102	9	writing time	10
				teacher talk	35
11/8/88	8	133	11	vocab. quiz	20
				student act.	25
11/8/88	13	106	9	writing time	15
				student act.	30
11/14/88	17	123	10	spell. quiz	25
				student act.	20
11/14/88	11	132	11	write inst.	45
11/15/88	7	132	11	student act.	35
				teacher talk	10
11/15/88	8	122	10	write inst.	45
11/16/88	10	123	10	writing time	8
				oral reading	8
				teacher talk	29
12/1/88	14	103	9	teacher talk	30
				student act.	15
12/5/88	15	103	9	student act.	40
				teacher talk	5
12/5/88	8	132	11	teacher talk	29
				student act.	16
12/6/88	1	133	11	teacher talk	30
				student act.	15

12/6/88	6	143	12	teacher talk	45
12/7/88	5	142	12	teacher talk	15
				student act.	30
12/12/88	4	122	10	teacher talk	20
				student act.	25
12/14/88	2	Journalism		student act.	45
12/19/88	12	143	12	teacher talk	5
				student act.	40
1/5/89	6	Drama		student act.	40
				teacher talk	5
1/11/89	12	123	10	writing time	15
				teacher talk	30
1/11/39	1	133	11	teacher talk	40
				vocabulary	5
1/17/89	5	103	9	student act.	45
1/23/89	13	142	12	writing time	15
				student act.	30
1/25/89	14	102	9	student report	40
				teacher talk	5
1/26/89	12	143	12	student act.	25
				write inst.	20
1/30/89	15	103	9	student report	35
				teacher talk	10
2/1/89	11	123	10	teacher talk	25
				student report	20
2/2/89	10	133	11	write inst.	10
				teacher conf.	35
				writing time	
2/7/89	1	142	12	teacher talk	15
				oral reading	30
2/7/89	12	102	9	teacher talk	10
				student act.	35
2/8/89	7	132	11	quiz - lit.	5
				student read.	35
				teacher talk	5

2/9/89	8	122	10	grammar drill	30
				quiz	15
2/15/89	4	132	11	teacher talk	35
				oral reading	10
2/22/89	1	133	11	spell. quiz	8
				student report	37
2/23/89	9	103	9	student report	30
				teacher talk	10
				writing time	5
2/23/89	2	144	12	student act.	45
3/20/89	12	123	10	teacher talk	45
4/18/89	15	103	9	write inst.	5
				teacher talk	20
				oral reading	20
4/25/89	13	142	12	write inst.	45
4/25/89	1	133	11	quiz - lit.	10
				student report	25
				writing time	10
4/27/89	6	122	10	spell. quiz	10
				teacher talk	35
4/28/89	5	142	12	teacher talk	45
5/1/89	4	122	10	grammar/usage	20
				teacher talk	25
5/2/89	9	103	9	quiz - lit.	5
				teacher talk	25
				student act.	15
5/4/89	7	142	12	oral reading	40
				teacher talk	5
5/11/89	12	123	10	vocabulary	10
				teacher talk	5
				oral reading	30
9/12/89	12	102	9	teacher talk	20
				student act.	25
9/12/89	1	101	9	teacher talk	35
				student act.	10
9/13/89	5	142	12	writing time	10

				student act.	30
				teacher	5
9/13/89	9	122	10	writing time	10
				teacher talk	35
9/15/89	6	143	12	teacher talk	45
9/18/89	15	101	9	writing time	15
				teacher talk	20
				student act.	10
9/19/89	2	143	12	writing time	10
				teacher talk	35
9/19/89	4	122	10	A-V use	25
				teacher talk	10
				student act.	10
9/19/89	14	103	9	writing time	7
				student act.	28
				teacher talk	10
9/20/89	10	124	10	writing time	10
				teacher talk	20
				student act.	15
9/20/89	16	142	12	spell. quiz	20
				vocabulary	20
				teacher talk	5
9/21/89	11	132	11	teacher talk	45
9/26/89	7	133	11	writing time	5
				student report	20
				teacher talk	20
9/26/89	17	122	10	writing time	11
				vocabulary	6
				teacher talk	14
				student act.	14
9/26/89	8	134	11	vocab. quiz	12
				teacher talk	25
				student act.	8
9/28/89	13	142	12	writing time	10
				student act.	20
				teacher talk	15
10/4/89	14	103	9	writing time	10
				student act.	35

10/13/89	9	143	12	writing center	45
10/17/89	12	102	9	writing time	11
				student act.	20
				teacher talk	14
10/18/89	7	133	11	vocab. quiz	5
				student act.	40
10/31/89	1	133	11	teacher talk	10
				student act.	35
11/3/89	13	142	12	writing time	10
				student act.	35
11/14/89	8	101	9	teacher talk	10
				student act.	35
11/21/89	11	132	11	teacher talk	35
				student act.	10
11/21/89	12	102	9	writing time	8
				teacher talk	37
11/27/89	13	132	11	writing time	10
				teacher talk	20
				student act.	15
11/29/89	14	102	9	student report	25
				teacher talk	20
11/29/89	6	143	12	student act.	45
12/4/89	15	101	9	writing center	45
12/5/89	10	143	12	student act.	25
				teacher talk	20
12/5/89	1	141	12	student act.	40
				teacher talk	5
12/11/89	5	104	9	spell. quiz	20
				student act.	25
1/4/90	17	122	10	teacher talk	45
1/8/90	7	133	11	spell. quiz	5
				teacher talk	5
				student report	35
1/8/90	2	143	12	writing time	9
				teacher talk	13
				student report	23

1/9/90	16	142	12	write inst.	45
1/10/90	8	101	9	teacher talk	45
1/10/90	6	122	10	teacher talk	35
				student act.	10
1/11/90	9	122	10	writing time	10
				teacher talk	35
1/11/90	4	132	11	teacher talk	45
2/1/90	8	122	10	student act.	45
2/5/90	12	102	9	A-V use	20
				teacher talk	25
2/6/90	2	144	12	write inst.	22
				student act.	23
2/6/90	1	132	11	writing time	5
				teacher talk	40
2/8/90	9	121	10	writing time	24
				teacher talk	21
2/14/90	15	103	9	student act.	10
				student report	30
				teacher talk	5
2/14/90	16	123	10	teacher talk	45
2/14/90	10	102	9	writing time	19
				oral reading	6
				teacher talk	20
2/15/90	17	143	12	teacher talk	20
				write inst.	25
3/16/90	11	132	11	student report	40
				teacher talk	5
5/9/90	12	102	9	teacher talk	25
				A-V use	20
5/10/90	16	142	12	teacher talk	45
5/11/90	17	122	10	writing time	5
				teacher talk	40
5/16/90	13	132	11	teacher talk	10
				student act.	35

Code

101 - Honors English I
102 - Academic English I A
103 - Academic English I B
104 - General English I
106 - English Write I

121 - Honors English II
122 - Academic English II A
123 - Academic English II B
124 - General English II
126 - English Write II

131 - Honors English III
132 - Academic English III A
133 - Academic English III B
134 - General English III

141 - Advanced Placement English
142 - Academic English IV A
143 - Academic English IV B
144 - General English IV

Note. The Roman numerals denote a grade level: I is grade 9, II is grade 10, III is grade 11, and IV is grade 12. The letters A and B denote ability tracks, with A representing more advanced students than B.

Appendix D

Classroom Observation Form

Supervisory Report: Classroom Visit _____Other_____

Teacher: School: Department:

By: Date: Period:

Subject: Grade: Level:

INSTRUCTIONAL PLANNING AND ORGANIZATION (analysis of students' needs, development of strategies, utilization of instructional materials and resources, types of assignments, and evaluation)

INSTRUCTIONAL METHODS AND MANAGEMENT (instructional style, learning interaction, motivation, questioning technique, individualizing needs, student management, and evaluation techniques)

TEACHER STRENGTHS (instructional or noninstructional)

AREAS REQUIRING IMPROVEMENT (instructional or noninstructional)

SUGGESTIONS FOR IMPROVEMENT

TEACHER CONFERENCE HELD ON : TIME:

TEACHER'S WRITTEN COMMENTS:

_____ _____

Evaluator's Signature Teacher's Signature

Appendix E

Final Teacher Evaluation Form

Freehold Regional High School District

Name: Date:

School:

Criteria Rating

I. Personal Attributes

A. Impression, speech, poise
B. Enthusiasm
C. Dependability
D. Inter-personal relationships with co-workers

II. Professional Attainments

A. Command of subject matter
B. Understanding the nature of learning
C. Knowledge of the status and sources of research in subject areas
D. Alertness to departmental needs, present and future
E. Observance of school policies and procedures
F. Attention to records and reports
G. Punctuality/Attendance
H. Contribution to total school operation
I. Acceptance of professional criticism

III. Instructional Qualities

A. Preparation and planning
B. Teaching technique
C. Use of curricular guides and materials
D. Classroom organization and control
E. Motivation, stimulation, creativity
F. Provision for individual differences and potential
G. Classroom learning environment
H. Provision for pupil evaluation/growth

IV. Additional Information (strengths, weaknesses)

V. Recommendation

For re-employment: Yes__No__ For full increment: Yes___No__

Signature of Supervisor	Signature of Principal

VI. Teacher Comments

Signature of Teacher	Date of Conference

Appendix F

Table 13

Analysis of Classroom Observations Conducted by the English Supervisor between January 1991 and June 1991

Date	Lesson	Grade	Activities	Time
1/29/91	1	10	writing	10
			teacher question. of literature	25
			teacher explanation of homework	10
2/05/91	2	12	teacher-led lit. discussion	45
2/07/91	3	10	vocabulary analysis	20
			lit. discussion	25
2/12/91	4	11	quiz: spelling	5
			oral read./disc.of literature	25
			writing	15
2/12/91	5	10	writing	15
			lit. discussion	30
2/13/91	6	12	lit. discussion	45
2/14/91	7	12	teacher-led lit. discussion	45
2/20/91	8	9	group work	30
			student response	15
2/20/91	9	9	oral reading	35
			writing	10
2/21/91	10	9	oral reading	45
5/01/91	11	11	lit. discussion	45

Appendix G

Essay Topics, High School Proficiency Test

Grade 9 questions: April 1991

Topic 1

Think about an accomplishment that made you feel good about yourself. It could be something you did for your family or friends, a sporting event you entered, a difficult school subject you mastered, or any other achievement that was important to you. Write an essay describing your accomplishment and how it made you feel.

Topic 2

Think about something that happened to you that you did not expect. Write an essay about that unexpected experience. Describe what happened and how you reacted.

Grade 11 questions: December 1990

Writing Task 1

Writing Situation

Your friend Bob saw another friend pocket two tapes from the record store. Bob is concerned about what he should do so he asks your opinion.

Directions for Writing

Write a letter showing Bob how to solve his problem. Propose specific solutions to his problem, and give reasons to show they will work. Then convince Bob to try the one solution you believe is best.

Writing Task 2

Writing Situation

Surveys indicate that more high school students are currently employed than at any other time. In your social studies class you have discussed possible causes for the increased number of students working full-time.

Directions for Writing

Write an essay speculating about the causes of the growing number of high school students who work full-time.

Writing Task 3

Writing Situation

Your English class has discussed a local citizens group's contention that parents and civic leaders should review all books before they are read in high school.

Directions for Writing

Write an essay supporting or opposing the censoring of books in your school. State your position. Then support it with facts, examples, reasons, and other evidence.

Appendix H

Questions Asked by Teachers in Lessons Observed
by the English Supervisor between January 1991 and June 1991

Date	Teacher	Grade		Category
1/29/91	1	10	Red Badge of Courage	
How would you describe Henry's emotions?				inference
Why did he run away from battle?				judgment
Is this a reasonable response?				judgment
What might the other soldiers do to Henry?				prediction
Where does Henry hide while he makes his decision to return to the camp?				recall
What is the horrible symbol of reality?				inference
Is ghostly an appropriate title for a dying man?				judgment
Why would you call a dying man ghostly?				inference
Do you remember who the ghostly soldier is?				recall
Who was the tattered soldier?				recall
What role does he have?				inference
What is Henry's psychological wound?				inference
Do you think Henry's feelings are much different from those of the soldiers in Saudi Arabia today?				judgment
What did Crane mean when he called war a machine?				inference
What does mighty indicate?				inference
How did the soldiers fight most of their				

battles?			recall
What is the red badge of courage?			judgment
2/12/91	2	11	Macbeth
What happened at the banquet?			recall
Why does Macbeth see the ghost?			judgment
How does he behave when he sees it?			recall
What is different about his behavior?			judgment
What did he require before?			recall
Why is he going to visit the witches?			judgment
What does that visit mean might happen to him?			judgment
Who was absent from the feast?			recall
Why did Macbeth not like this absence?			judgment
If Macbeth suspects someone, what will he do?			predict
Why will Macbeth kill Macduff's family?			judgment
2/14/91	3	12	"The Musgrave Ritual"
Who is A. Conan Doyle?			recall
What else beside Sherlock Holmes is Doyle famous for?			recall
Where is Scotland in relation to England?			recall
Who is Holmes' archenemy?			recall
In what form did Doyle's work first appear?			recall
What does methodical mean as used here?			inference
If there were a sidebar here, what would it say?			predict
Who is the narrator?			recall

What is Doyle's purpose in the first ten paragraphs?	inference
What is in the wooden box?	recall
What would a sidebar say here?	predict
How did Holmes first make money?	inference
How did he get his first case?	inference
What does this difference suggest?	inference
2/15/91 4 12	Oedipus
What is a possible theme for this work?	recall
In which context have you heard Oedipus?	recall
What is a changeling?	recall
What did Oedipus do?	recall
Did the parents not do anything?	recall
What do you do when you accept something grievously?	inference
What was the response to Oedipus' question?	recall
What did the oracle reveal to Oedipus?	recall
How did Oedipus strive to keep the prophecy from becoming true?	recall
What else did he give up besides home and family?	recall
What might we know about him because of his action?	inference
What do we infer?	inference
Why is it necessary that we know this about Oedipus?	inference

How is his anger a part of his hubris?		inference
What does Oedipus finally realize?		judgment
Why was it necessary to kill or exile the murderer of Laius?		judgment
Why do you suppose the herdsman would have reported that robbers killed Laius?		judgment
2/7/91	5 10	The Crucible
What does the word mean?		recall
What does that meaning suggest?		inference
When was the word used in the play?		recall
If you take part in trafficking, what are you doing?		recall
What do these words suggest?		inference
What events have occurred?		recall
Who are the people who have grudges against other characters?		recall
What is Proctor trying to do?		recall
Who is he trying to get to listen to him?		recall
What is Hale's role?		recall
Has he picked a side?		inference
Why would the people take Elizabeth's word about her pregnancy?		inference
Why is Parris nervous?		inference
What did the people sign?		recall
What does that suggest about the people?		inference
2/12/91	6 10	The Great Gatsby

Did you take any notes on the introduction?	recall
Why should we read the introduction?	inference
What was the original cover?	recall
Who is the narrator?	recall
What are the pros and cons of a first person narrator?	judgment
What does Fitzgerald suggest about Nick?	inference
Can you trust Nick?	judgment
Will he be unbiased?	judgment
What does this passage tell you about Nick?	inference
Is this good for a narrator?	judgment
What does West Egg suggest?	inference
Does Tom Buchanan like the name his wife calls him?	recall
Is Tom intelligent?	judgment
What can you tell us about Daisy?	inference
What color imagery does she suggest?	inference
What can you tell about her personality?	judgment
Do you like her?	judgment
How does Nick feel when he leaves the Buchanans?	judgment
What do we know about Gatsby?	inference
Why is Gatsby looking across the bay?	inference
How does the scenery of chapter 2 compare with other scenery?	judgment
Is Mrs. Wilson a woman of money?	judgment

2/13/91	7	12	King Lear
What was Lear's plan after he divided his kingdom?			recall
What did Goneril say about Lear?			recall
Should she treat Lear better?			judgment
How could Lear take land away?			recall
What other aspects besides "king" should you consider about Lear?			inference
Why is Kent disguised?			judgment
How does this plan work in a monarchy?			Judgment
How has Lear changed his nature?			recall
Do you think the daughters will remain friends?			judgment
What does Lear expect when he visits his daughters?			inference
What does Lear tell Kent to do when he delivers the letter to Lear's daughters?			recall
What is the function of a letter in this play?			inference
2/20/91	8	9	mythology
What are other forms of geology?			recall
Why would you name a theater the Apollo?			judgment
What made Pandora open her box?			recall
Explain the derivation of the Mars candy bar.			inference
Where is psychedelic from?			inference

What kind of leader is a hero if his men do not listen to him?		judgment
2/20/91	9 9	Romeo and Juliet
What does the friar tell the prince?		recall
What is the scheme?		recall
Where will they go?		recall
What went wrong with the plan?		recall
What does the letter suggest?		inference
What does Baltazar do after he learns of Juliet's death?		recall
Who dies at the tomb?		recall
Why was Paris at the tomb?		judgment
What is Montague going to do next?		predict
2/21/91	10 9	Romeo and Juliet
What happened in Act I?		recall
Who tells Romeo who Juliet is?		recall
What is his reaction?		recall
What is a prologue?		recall
How is it similar to the prologue of Act I?		judgment
What examples of rhyme occur in a sonnet?		recall
Where does scene 1 occur?		recall
Does Mercutio know anything about Juliet?		recall
What did they decide has happened to Romeo?		recall
What is Romeo saying in this speech?		inference
What arrangements will Romeo make regarding this meeting?		predict

What does Friar Laurence's speech suggest?	predict
5/1/91 11 11	Frankenstein
What does isolation mean?	recall
Why was the monster alienated?	recall
What happened to the father?	recall
Don't we ask the same questions?	judgment
Would it be better to let the merchant hang?	judgment
What is the point of specific chapters?	judgment
What is naturalism?	recall
How is Frankenstein representative of naturalism?	judgment

Appendix I

Major Goals from America 2000

Goal 1 - By the year 2000, all children in America will start school ready to learn.

Goal 2 - By the year 2000, the high school graduation rate will increase to at least 90 percent.

Goal 3 - By the year 2000, American students will leave grades four, eight, and twelve, having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography; and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

Goal 4 - By the year 2000, United States students will be first in the world in science and mathematics achievement.

Goal 5 - By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

Goal 6 - By the year 2000, every school in America will be free of drugs and will offer a disciplined environment to learning.

Appendix J

Table 13

Results of the Persuasive Essay Writing for Tenth Graders, October 1991

Scores	Student Tracks							
	Honors		Academic		Nonacad.		Total	
	No.	%	No.	%	No.	%	No.	%
12	0	0.0	0	0.0	0	0.0	0	0.0
11	2	5.0	6	2.0	0	0.0	8	2.0
10	12	29.0	20	6.4	1	1.0	33	8.0
9	12	29.0	33	10.5	0	0.0	45	11.0
8	10	24.0	94	30.0	4	7.0	108	26.0
7	6	14.0	69	22.0	8	14.0	83	20.0
6	0	0.0	52	16.6	17	30.4	69	17.0
5	0	0.0	29	9.0	15	26.8	44	11.0
4	0	0.0	11	3.5	8	14.3	19	5.0
3	0	0.0	0	0.0	2	3.8	2	0.5
2	0	0.0	0	0.0	0	0.0	0	0.0
1	0	0.0	0	0.0	0	0.0	0	0.0
0	0	0.0	0	0.0	1	1.8	1	0.3
Total	42	101.0	314	98.0	56	100.2	412	100.8

Appendix K

Analysis of Classroom Observations Conducted by the English Supervisor between September 1991 and January 1992

Date	Teacher	Activities	Time
9/16/91	1	teacher talk	35
		writing	10
9/16/91	2	writing	10
		oral-student	10
		student activity	15
		teacher-led discussion	10
9/17/91	3	teacher talk	20
		writing	5
		oral-student	20
9/17/91	4	writing	10
		A-V	30
		teacher talk	5
9/19/91	5	writing	5
		oral-student	5
		teacher talk	25
		student activity	10
9/19/91	6	teacher lecture	45
9/20/91	7	writing	10
		vocabulary	10
		notetaking	25
9/20/91	8	group work	45
9/25/91	9	quiz	5
		writing	15

		teacher talk	25
9/26/91	10	writing	5
		oral-student	40
9/26/91	11	writing	10
		teacher talk	15
		group work	20
9/27/91	12	student-led discussion	45
9/30/91	13	writing	10
		teacher-led activity	35

Appendix L

Questions Asked by Teachers in Lessons Observed by the English Supervisor, September 1991 - January 1992

Date	Lesson	Grade	Category
9/16/91	1	12	Writing
What makes research worthwhile?			judgment
What is the difference between research and I-search?			judgment
9/16/91	2	11	Macbeth
What is a soliloquy?			recall
What is the difference between soliloquy and aside?			recall
How does Macbeth feel about killing the king?			judgment
How are Macbeth and Lady Macbeth different?			judgment
What points should be included in a summary of this scene?			judgment
9/17/91	3	9	The Chosen
Why would this passage show a flaw in Danny?			judgment
How is this attitude demonstrated in the novel?			inference
What does going to Danny's house show?			judgment
What are the parts of a paragraph?			recall
What are the specifics for this assigned paragraph?			recall
9/19/91	4	9	Writing
What is a good action word to help you see?			recall
How does something taste?			judgment
How does a flower smell?			judgment

What does the fragrance remind you of?				judgment
Why do we need sensory words?				judgment
9/19/91	5	12	Literary Concept	
Which characters have we met who had relative freedom?				recall
Why has the character chosen that path?				judgment
How does that link up with Julian?				judgment
9/20/91	6	9	"The Secret Life..."	
What are the elements of a short story?				recall
What is the theme of the story?				judgment
Do you think Walter Mitty wants to be all those things?				judgment
What is the point of view of "Secret Life"?				recall
9/26/91	7	11	Beowulf	
How would you connect that with what we said about heroes?				judgment
Who is heroic in Beowulf?				judgment
9/26/91	8	11	Lord of the Flies	
If you could change your name, what would you select?				judgment
What is a name if it doesn't represent you?				judgment
Did Golding deliberately name his characters or did names just happen?				judgment
What does not having a name do to Piggy's character in the book?				judgment

9/30/91	9	12	"The Musgrave Ritual"
What do you need to have a mystery story?			recall
What is a "locked room" mystery?			inference
10/1/91	10	9	"Beware of the Dog"
How did we tie in being a detective when we read?			inference
Why do we have to put clues together?			judgment
What evidence did you use?			judgment
12/3/91	11	10	The Crucible
What is theme in a literary work?			recall
What is the difference among theme, moral, and lesson?			recall
How is crucible-as-vessel evident in the play?			judgment
How does Mary set Elizabeth up as a witch?			recall
What do these characters have in common?			judgment
What do you think of them?			inference
What happens when we place Abigail on this list?			judgment
12/9/91	12	11	Lord of the Flies
What act on Jack's part shows the reader that Jack will be a problem?			judgment
Why does he stab the knife into the tree?			judgment
Create an analogy between the characters.			inference
12/18/91	13	10	The Crucible
Why would a 20th century playwright write about the 17th century?			judgment
Why did people think differently about the USSR in years past than they do now?			judgment
How can a man's military career affect his			

political career?			judgment
1/7/92	14	10	The Crucible
What were the four things the girls were doing in the forest?			recall
Why did they think Betty was bewitched?			judgment
How do we know Parris is concerned about himself?			inference
What does that line mean?			inference
What is the significance of her saying it?			judgment
Why is she pretending?			judgment
Does that lead you to reach any conclusions about the other girls?			judgment
Why did Mary drink the blood?			judgment
What is your reaction to Abigail's speech?			judgment
How do we see that the Indians and Pilgrims did not have a good relationship?			inference
Who fought the Indians?			recall
Has Abigail appeared to be strange?			judgment
How might a modern psychiatrist explain her actions?			judgment
Why is the description of John Proctor important?			judgment
How will the Puritans look upon Proctor's being an inventor?			judgment
Were the women supposed to be attracted to Proctor's virility?			recall
What does that say about his character?			judgment
How did the Puritans seek confession of sins?			recall
What was the livelihood of the Puritans?			recall

Does Miller know Proctor had an affair with Abigail?				recall
Why did Betty scream?				recall
What is Mrs. Putnam's problem?				recall
What does that mean?				inference
Why did some women -- over others -- become midwives?				judgment
1/8/92	15	9	The Catcher in the Rye	
What does duality mean?				recall
What evidence of duality appears in Catcher?				judgment
Did Holden think of himself in terms of success and failure?				judgment
How can he take a more realistic view of the world?				judgment
What does he want the children to maintain?				inference
Does Holden know he is in charge?				judgment
What does Holden need to do to alter his value system?				judgment
1/9/92	16	12	One Flew Over...	
What is a dissenter?				recall
What was Mc Murphy's motivation for helping the clients?				judgment
Was Mc Murphy a great guy?				judgment
What was his responsibility to himself?				judgment
What was his responsibility to others?				judgment
What did he mean when he said...?				inference
What was his goal when he arrived?				recall