

The Effect of Mississippi Writing/Thinking Institute Professional Development on the Writing Achievement of Ninth-Graders

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Executive Summary

The Mississippi Writing/Thinking Institute (MWTI), the state network for the seven National Writing Project (NWP) sites in Mississippi, is housed in the College of Education at Mississippi State University. Through the work of its seven university-based NWP sites, MWTI aims to improve the teaching of writing throughout the state. MWTI and its sites provide intensive, multiyear support for schools and districts; this support includes professional development workshops, classroom demonstrations, study groups, and individual teacher coaching and mentoring. The present study compares teacher practices and student outcomes in two ninth grade program schools with those of teachers and students in two closely matched comparison schools.

Using data collected through interviews and classroom audits, the study compares the teaching practices of five program-school teachers with the teaching practices of five comparison-school teachers. The two groups' implementation levels of individual strategies, as well as a sum of strategies, are described and compared. Holistic assessments of individual teachers' practices are also reported and compared.

To analyze student outcomes, the study employs a pre/post assessment design comparing writing scores of 298 ninth grade students in the two program schools with scores of 157 ninth grade students in schools in which the MWTI had not yet provided professional development. The two groups of students were closely matched demographically. Student writing was scored both analytically (for idea/content development, organization, voice, sentence fluency, word choice, and conventions) and holistically. The writing scores of program and comparison students are compared between pre and post assessments, and within each group for growth from pre to post.

The study found that program teachers implemented the teaching strategies that were presented during the MWTI professional development. Although statistically significant differences in their practices, as compared to the practices of comparison teachers, were seen in only two strategies—student choice and peer response—the program teachers' interviews reflected a tendency to follow most MWTI teaching practices to a higher degree than the comparison teachers, as evidenced by scores on a continuum of implementation.

Program students outperformed the comparison students in all areas. The study reports statistically significant differences in the program students' scores from pre- to posttests on holistic measures as well as on all six analytic measures, when compared with comparison students' scores. Comparison students showed little or no growth between pre and post assessments. Further, the study found that students in the two program schools, which had benefited from multiple years of MWTI professional development, scored higher on the pre assessment than the comparison students, and then demonstrated increased growth between pre and post, while their counterparts showed little or no growth. The strength of the statistically significant gains between pre and post assessment for the program group indicates that the professional development for teachers significantly influenced student growth in writing.

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INTRODUCTION

This study compares the writing assessment scores of ninth grade students in two schools in which the Mississippi Writing/Thinking Institute has conducted professional development (program schools A and B) with scores of ninth grade students in two schools in which MWTI had not yet provided professional development (comparison schools A and B). In schools where MWTI has provided professional development for teachers, previous studies of fourth and seventh grade writing have shown significant improvement of student scores on the statewide writing assessment. That is, when staff development was intensively focused on writing, we have observed a significant improvement in student writing performance from year to year.

While previous studies suggest overall growth in student writing, however, they have had several limitations. First, they have not focused on the growth of a single group of students, using pre/post writing assessments. Second, the rubrics used by the state of Mississippi employ a four-point scale, and therefore do not measure growth as sensitively as would a rubric with a more discriminating scale. In addition, the state rubrics call for qualities of writing that are not widely accepted by experienced writing teachers as indicators of good writing, such as “three clearly delineated paragraphs” and a “thesis statement” for narrative as well as informative writing.

Since the inception of the fourth and seventh grade state writing assessment in 2000, mean state scores have risen from a state average of 2.0 in 2000 to an average of 2.3 in 2004. Yet at the same time, state scores on the National Assessment of Educational Progress writing assessment, which is more aligned with NWP principles of what constitutes good writing, have remained low, with 13 percent of Mississippi students scoring at proficient or above as compared to 30 percent nationally (Mississippi Department of Education 2003). In fact, the state writing rubrics—which have greatly influenced the writing curriculum for many teachers—may be counterproductive. Teachers working solely toward higher scores on the state assessment do not focus on the best that is known about composition and rhetoric, and do their students a disservice by emphasizing short-range, temporary goals as opposed to long-range, lasting improvement in writing.

The present study goes beyond the limitations of the Mississippi statewide writing assessment, providing deeper perspectives on student growth in writing. Because we used a pre/post program assessment design, we are able to describe any changes in the writing performance of groups of students between the beginning and end of their ninth grade year. Because the writing samples were scored at a national scoring conference by a team of professional writing teachers trained by the National Writing Project and using a multifaceted rubric, the scores reflect subtle differences in writing achievement. Because the scoring rubric was carefully selected by a panel of experts on the teaching of writing and further revised for specificity, the scores should be more valid indicators of student ability. Finally, because of the careful training and scoring conducted by the national organization, we obtained more reliable scores for our research purposes.

BACKGROUND AND FOCUS OF THE PROGRAM

MWTI offers numerous programs concerned with the teaching of writing. Some emphasize all modes of writing (e.g., expressive, transactional, poetic), some emphasize reading/writing connections, some emphasize on-demand writing for assessment purposes, and some focus on writing across the curriculum. MWTI partnerships with schools include multiple workshop sessions, classroom demonstrations, and, typically, either a series of study groups or individual coaching and mentoring for teachers.

In program school A the partnership began with professional development for eighth grade teachers in the 2003–2004 school year through a federal GEAR UP grant received by the Office of Institutions of Higher Learning (the governing body for all state universities). The partnership was continued through direct agreement with MWTI. In program school B, where MWTI staff had assisted the district in writing a successful proposal for a Comprehensive School Reform grant, MWTI began offering professional development to middle school teachers in the 2002–2003 school year.

Program Description

Table 1 below includes information on professional development offered in the two program schools during the year of the study, as well as on prior MWTI professional development in the schools. Students in each of the program schools were taught in prior years by teachers participating in MWTI professional development. Because the present study is concerned with the 2004–2005 ninth grade class, only the professional development for those ninth grade teachers is described.

Professional development for program school A teachers

In the fall workshops, the four ninth grade teachers from program school A set goals and discussed issues of literacy. Professional reading material included Frank Smith's "Myths of Writing" (1983), Ruby Payne's *A Framework for Understanding Poverty* (1996), and Grant Wiggins and Jay McTighe's *Understanding by Design* (2000). An MWTI teacher-consultant worked with the teachers in the areas of using teaching resources, giving students a reason to read and write, and using student writing to teach language conventions. The teacher-consultant also met with each teacher individually to discuss "burning issues," which included gleaning or text reduction, conducting reading workshops, and analyzing student writing for diagnostic purposes.

In the spring of 2005, MWTI provided a session focused on helping students with on-demand writing. The teachers also participated in a classroom demonstration about using the cumulative sentence as a tool for elaborating details, organizing, and achieving sentence variety. In a follow-up meeting, teachers shared student work resulting from applying the cumulative-sentence lesson in their classrooms. In addition, one teacher accepted the MWTI teacher-consultant's offer of mentoring, and another invited the teacher-consultant into her classroom to conduct four demonstration lessons focused on topic development.

Professional development for program school B teachers

The workshop program for two ninth grade teachers from program school B included two full days and two two-hour sessions focused on analysis of the Mississippi Curriculum Test (MCT)

scores from the previous year. This analysis was used in the workshops to prioritize instruction, develop an implementation plan, and align curriculum, with a particular focus on the cumulative sentence, verb clusters, and writing on demand.

Classroom demonstration topics included vivid verbs, teaching grammar in context, multiple prewriting strategies, the cumulative sentence, verb clusters, writing on demand, and revision for leads, voice, and avoidance of redundancy. In addition, the teachers received ongoing coaching and mentoring. For example, the consultant recalled, “Ms. C. and I spent the entire day looking at young adult literature and planning how to use it instead of the textbook. She was really in need of some fundamental knowledge about literacy in young adolescents” (C. Foster, written communication, May 2005). Each teacher also received one classroom observation with debriefing by an MWTI consultant.

Table 1
Primary Focus of MWTI Professional Development in the Program Schools

School	2002–2003	2003–2004	2004–2005
Program School A		4 Eighth Grade Teachers	4 Ninth Grade Teachers
Programs Offered	NA	Writing Across the Curriculum	Writing Improvement
Workshops	NA	0	5
Classroom Demonstrations	NA	6	4
Study Groups	NA	6	2
Coaching / Mentoring	No	No	Yes
Program School B	2 Seventh Grade Teachers	2 Eighth Grade Teachers	2 Ninth Grade Teachers
Programs Offered	Reading/Writing Improvement and Writing and Assessment	Writing Across the Curriculum	Improving Writing and Reading
Workshops	12	3	6
Classroom Demonstrations	3	3	4
Study Groups	0	0	0
Coaching / Mentoring	No	Yes	Yes

Notes: Workshop = 3 hours
Classroom Demonstration = One class period plus one hour of debriefing
Study Group = One class period

How the Program Is Intended to Influence Teacher and Student Outcomes

MWTI professional development presents a palate of teaching strategies that teachers may select, follow, and adapt; however, success in the use of these strategies depends largely on teachers’ beliefs and philosophies about the learning process itself. Further, the personal experience of countless NWP teacher-consultants suggests that effective practice can precede knowledge of theory, rather than, as often assumed, knowledge of theory necessarily preceding its practical application. In professional development sessions, MWTI consultants help teachers understand how to implement various teaching strategies and then, using reflective processes, provide opportunities for teachers to develop and understand the theories underlying the practices. Thus MWTI professional development features teaching and learning strategies, but it also demands

that teachers articulate their discoveries about student learning as they implement and adapt strategies related to student choice, reading/writing connections, prewriting, revision, minilessons, peer response, teacher conferences, and teaching conventions in the context of student writing. In this sense, fidelity to MWTI teaching strategies occurs when teachers understand the strategies well enough to adapt them to the unique context in which each one is teaching. This level of teacher understanding is reflected in the continuum of implementation used to evaluate a teacher's implementation of MWTI teaching strategies. (See appendix 1: Continuum of Implementation: Descriptions of Practice at Each Score Point.)

As results of the 2004 research studies became clear, MWTI professional staff observed that in order to affect the quality of student writing, the professional development must be focused on writing, as opposed to writing across the curriculum, and must be intensive (National Writing Project 2005). Each of the programs described above also includes teaching strategies aimed at helping English teachers specifically address writing on demand. MWTI consultants focused on helping teachers understand rubrics, scoring practices, and prompt development; then consultants worked with them to develop teaching strategies on topic development and stylistics.

Workshop activities aimed at helping teachers understand writing assessment included

- Analyzing scored student papers, returned from the state writing assessment; observing characteristics of papers from each score point (0–4); charting commonalities; drawing conclusions related to effective writing strategies employed by students
- Reviewing the state rubric
- Creating good prompts, specifically in content areas.

Strategies aimed at helping students with topic development included

- Decoding the prompt
- Brainstorming the topic
- Narrowing the topic.

Topics for minilessons focused on tools for students included

- Using vivid verbs
- Vocabulary-building
- “Show” writing
- Writing beginnings and endings
- Using metaphors and other figurative language
- Using the cumulative-sentence strategy to improve sentence variety.

Minilessons on activities for teaching writing conventions included

- Subject/verb agreement hands-on activities
- Punctuation partner activities.

(See appendix 2 for an outline of the workshops.)

Context of Program

Program school A is the only public high school in a small city of approximately 25,944 residents. The median household income is \$27,393. The 2004–2005 ninth grade class in program school A comprised 459 students, of whom 64% were eligible for free or reduced-price lunch. The student population was 81% African American and 18% Caucasian. Student expenditures per pupil were \$6,828.

Program school B is located in a small town of 3,056 residents. The 2004–2005 ninth grade class in program school B comprised 67 students, of whom 95% were eligible for free or reduced-price lunch. The student population was 99% African American and 1% Caucasian. Student expenditures per pupil were \$6,689.

Both program schools are situated in districts that had invested in MWTI programming for multiple years.

RESEARCH QUESTIONS

This study addresses two major research questions:

1. To what extent do teachers who participate in Mississippi Writing/Thinking Institute professional development apply the teaching strategies in their classrooms?
2. Does any change in writing ability of ninth grade students whose teachers participate in MWTI professional development programs differ from that of students whose teachers do not participate in those programs?

The first question addresses the issue of implementation. In order to draw conclusions about whether or not MWTI professional development for teachers leads to improved student growth in writing achievement, we first needed to measure the extent to which teaching strategies offered in the professional development are actually implemented in classrooms.

The second question attempts to determine whether teacher participation in MWTI programs influences student writing. To address this question we chose to use on-demand writing samples as a measure of student writing that would reflect strategies and techniques that students had internalized.

RESEARCH DESIGN AND METHODS

The study focused on the entire ninth grade class in four high schools in Mississippi, two that were served by MWTI professional development, and two with closely matched demographics that received no MWTI intervention. The two program schools were selected for their long-term contractual agreements with MWTI. The program and comparison groups were matched by economic situation, demographics, pupil expenditures, and academic achievement.

The research design included pre/post assessments of student writing using a counterbalanced administration of two prompts administered in the fall and spring to the entire ninth grade classes in the four research schools. Quantitative data in the form of six analytic scores (idea/content development, organization, voice, sentence fluency, word choice, and conventions) and one

holistic score on each pre and post writing sample were used to compare the writing growth of students. The research team also collected quantitative data on the teacher population in each of the schools, including number of teachers, level of certification, years of experience, years of experience teaching ninth grade English, and years of experience in the school. Qualitative data on teaching practices included interviews and classroom audits conducted by a team of specially trained MWTI teacher-consultants. Qualitative data from teacher interviews were analyzed using a process developed by the 2004 MWTI research team (National Writing Project 2005) and scored along a continuum of implementation (see appendix 1).

Research Setting and Subjects

Student populations

Ninth grade was chosen as the target of the research because the state of Mississippi does not test this grade level, and therefore participation in the study would not conflict with state testing.

The two comparison schools were selected from among the 152 school districts in the 82 counties in Mississippi. The data for selecting the comparison schools were drawn from the Mississippi Public School Fall Enrollment, 2004–2005, prepared by the Statistics Division of the Department of Management Information Systems, Mississippi Department of Education. The criteria for selecting each comparison school included the stipulation that the school had not been served by MWTI professional development programs, yet was as similar as possible in terms of 1) proportion of students who receive free or reduced-price lunch, 2) racial diversity, 3) size of student population, and 4) expenditure per pupil. Table 2 illustrates the similarity of program and comparison schools.

Table 2
Student Characteristics of Program and Comparison Schools

School Criteria	Program School A	Comparison School A	Program School B	Comparison School B
Baseline Year	Spring 2003*		Spring 2003*	
Served by NWP Staff Development	Yes	No	Yes	No
Percentage of Students on Free/Reduced-price Lunch	64%	64%	95%	96%
Racial Diversity (% African American / % Caucasian)	81%/18%	60%/39%	99%/1%	98%/2%
Ninth Grade Student Population	459	209	67	91
Expenditures Per Pupil	\$6,828	\$5,313.00	\$6,689.00	\$7,065.00

Source: Mississippi Public Schools Fall Enrollment, 2001–2003, Statistics Division, Office of Management Information Systems, Mississippi State Department of Education; Mississippi State Department of Education website.

Although all program and comparison schools/districts had a small percentage of either Asian, Hispanic, or Native American students, the majority of the students were African American or Caucasian.

Data on language arts and reading scores confirmed the similarity of program and comparison schools. Since ninth grade students are not tested by the state, we examined the eighth grade language arts and reading scores on the spring 2004 Mississippi Curriculum Test, which revealed scores for the four populations of students at the end of their eighth grade year. These data are presented in table 3.

Table 3
Percentages of Eighth Grade Students Scoring Basic and Above / Proficient and Above in Language Arts and Reading, Mississippi Curriculum Test (MCT)

School Criteria	Program School A	Comparison School A	Program School B	Comparison School B
Baseline Year	Spring 2004		Spring 2004	
MCT Basic and Above in Language Arts	95.5%	90.9%	82%	85.2%
MCT Proficient and Above in Language Arts	53.9%	51.1%	22%	35.2%
MCT Basic and Above in Reading	81.5%	76.2%	66%	59.2%
MCT Proficient and Above in Reading	52.2%	42.1%	28%	27.7%

Source: Mississippi State Department of Education Website

At the outset of the study, percentages of program and comparison students scoring “basic and above” and “proficient and above” fell within a range of 10%, with two exceptions. Comparison school B held a 13% advantage in the category of “proficient and above” in language arts. Program school B held a 13% advantage in the category of “basic and above” in reading.

Teacher populations

The program school teachers were six ninth grade English teachers, five of whom were interviewed for this research. Comparison school teachers were five ninth grade English teachers. As shown in table 4, the ninth grade language arts teachers were similar in terms of certification and years of experience. During the year of the study (2004–2005), all ninth grade teachers in both program schools were participating in their first year of MWTI professional development—with the exception of one teacher in program school B, who had participated previously.

Table 4
Teachers' Educational Level and Level of Experience for Program Schools and Comparison Schools

Certification Level					Years of Experience					
Program Schools	B.S.	M.Ed.	National Board Certification	Missing Data	1	2-5	6-10	11-15	16+	Missing Data
<i>N</i> = 5	80%	20%			20%	0%	40%	0%	40%	
Comparison Schools										
<i>N</i> = 5	60%	20%	20%		0%	60%	0%	0%	20%	20%

Source: Teacher interviews

Data Collection

Variables

Independent variables related to the results of measures of teacher practices included 1) participation or nonparticipation in MWTI professional development, and 2) levels of education, certification, and experience. The independent variable most closely related to student performance and growth from the pre to post assessment was the school where students were enrolled (either an MWTI program school where teachers were receiving professional development on the teaching of writing, or a comparison school where teachers were not receiving such professional development).

Dependent teacher variables included the degree of implementation of the strategies offered in MWTI professional development. Dependent student variables included the seven scores on the pre and post writing assessments.

Data sources

Data sources and their relationships to the research questions are illustrated in table 5.

Table 5
Summary of Data Collection.

Research Questions	Data Source	Time of Administration	Number of Respondents
To what extent do teachers who participate in Mississippi Writing/Thinking Institute (MWTI) professional development apply the teaching strategies in their classrooms?	Teacher interviews Classroom audits	April, May 2005	Program = 5 Comparison = 5
Does any change in writing ability of ninth grade students whose teachers participate in MWTI professional development programs differ from that of students whose teachers do not participate in those programs?	Prompted student writing samples	September May	Matched Cases Program = 298 Matched Cases Comparison = 157

Data collection

The MWTI, as part of its service to the four schools in the study, contracted to provide pre/post assessments for ninth grade students. Members of the research team scheduled and conducted teacher interviews and classroom audits in April and May of the school year. The interview guideline featured open-ended questions designed to encourage teachers to discuss their writing instruction; suggestive words such as *revision* or *prewriting* were not used in the guidelines. Instead, the open questions asked for discussion, for example, *Tell me how you went about leading your students through a particular assignment, from beginning to end.* (A sample interview form appears in appendix 8.)

Student writing performance was assessed through repeated measurement, with on-demand writing exercises scheduled at the beginning and end of the school year. Pretests were taken in September and posttests in May. One writing prompt was selected from the NWP's national archive of writing assessment tasks, which contains over 350 writing tasks classified according to genre, modality, information source, degree of scaffolding, timing, and so forth. The second task (posttest) was locally designed to be parallel to the first in mode of writing, amount of scaffolding, and kinds of thinking required to respond. The two prompts were administered by the research team. (See appendix 3 for the ninth grade writing prompts [A and B] and appendix 4 for the guidelines for test administration.)

Analysis

Analysis of implementation of MWTI strategies. Following training by the principal investigator, the research team scored and double scored each of the interviews for evidence of nine MWTI teaching strategies: student choice, reading/writing connections, prewriting, peer response, teacher conferences, minilessons, revision, editing, and publishing. Three codes were used to indicate whether or not a teaching strategy was being implemented in the classroom: zero (0) for no mention of a strategy, one (1) for mention but no evidence of the strategy being used in the classroom, and two (2) for strong evidence of that strategy at play in the classroom. Discrepancies among these scores were resolved by the principal investigator. In addition, researchers coded the percentage of time each teacher reported spending on the teaching of writing, and whether or not the teacher considered him- or herself to be a writer. (A sample coding sheet appears in appendix 6. Definitions of the nine strategies appear in appendix 7.)

Analysis of teachers' degree of implementation. To describe variations in the degree to which teachers implemented strategies presented in MWTI professional development, the research team constructed a degree of implementation continuum (see appendix 1)—a four-point scale reflecting a continuum of classroom practice. This continuum takes into account data from the interview and the classroom audit or observation. A score of 1 indicates little or no implementation, and a score of 4 indicates a high level of implementation.

Each interview was scored two times independently by members of the team. Because the scores represent a continuum of practice, adjacent scores were considered to be in agreement and were averaged to obtain a final score. Interviews that received scores that differed by two points were rescored by the principal investigator. The 10 interviews for the present study were analyzed in concert with 80 interviews from two additional MWTI studies. A total of 90 interviews were

analyzed with 3 papers differing by two points. Interrater reliability for the degree of implementation was 0.97 for the entire set. There were no discrepancies within the set of 10 interviews for the present study; thus interrater reliability for degree of implementation was 1.0.

Analysis of student writing. To ensure technical rigor and credibility, scoring of student writing samples, as well as data processing, were conducted nationally and independently of the local site. The scoring used a modified version of the Six+1 Trait Writing Model (Bellamy 2005). This evaluative framework included a rubric attending to six attributes of the student's writing:

- Ideas / Content Development—establishing purpose, selecting and integrating ideas, including details to support, develop, or illustrate ideas
- Organization—creating an opening and closing, maintaining focus, ordering and relating events, ideas, details to provide coherence and unity in the writing
- Voice—communicating in an engaging and expressive manner, revealing the writer's stance toward the subject
- Sentence Fluency—constructing sentences to convey meaning, controlling syntax, creating variety in sentence length and type
- Word Choice—choosing words and expressions for appropriateness, precision, and variety
- Conventions—controlling grammar, punctuation, spelling, capitalization, and paragraphing.

The researchers determined that the Six+1 Trait Model, while sufficiently comprehensive, required certain modifications to make it more appropriate to research use. The following modifications were made in the rubric prior to the scoring conference:

- The scale of the rubric was extended from four to six points in order to ensure sufficient discrimination and therefore to allow increased sensitivity to any changes in student performance.
- The language defining the traits was clarified to enhance the reliability of evaluative judgments.
- The evaluative judgments were modified to focus exclusively upon the student writing (where, on occasion, the original rubric included references to the reader's reactions or to the writer's personality as the basis for judgment).

The student writing samples were among those from five NWP sites scored at a national conference in June 2005. Student writing was coded with identifying information removed, so that scorers could not know any specifics of the writing sample being evaluated (e.g., site of origin, program or comparison group, or time of administration [pretest or posttest]). Of the papers from students in high school—which included all of the student samples reported in this research project—10% were scored twice so that reliability could be calculated.

The scorers participated in six hours of training at the beginning of the conference. The scoring was calibrated to a criterion level of performance at that time, and was then recalibrated following every major break in the scoring (meals and overnight). Overall, reliabilities (measured as interrater agreement, defining agreement as two scores being identical or within one single score point of each other) ranged from 90% to 95%, with an aggregate across all scores of 92%. At the high school level, where MWTI papers were scored, reliabilities ranged

from 86% to 94%, with an aggregate across all scores of 89%. (See appendix 5 for complete analysis of the reliability of the scoring of student writing.) All scores were double-entered independently and the files compared. The resolution of all discrepancies produced a highly accurate data file, which we used in our analysis.

RESULTS

Outcomes Related to Teaching Practices

Classroom strategies

We analyzed the teacher interviews to answer the question, *To what extent do teachers who participate in Mississippi Writing/Thinking Institute professional development apply the teaching strategies in their classrooms?* Because we recognized that comparison teachers might also have been utilizing some of the strategies (given that they are based on recognized best practices and available in published form to all teachers), our analysis of teacher interviews focused specifically on strategies that had been offered in MWTI professional development, and evidence of implementation of those strategies. Nine categories of teaching strategies were identified:

1. Student choice: The teacher gives students choices of writing topics, reading materials, prewriting strategies, and so forth.
2. Reading/writing connections: The teacher helps students connect what they are reading to what they are writing in terms of author's purpose, stylistics, use of language, and so forth.
3. Prewriting: The teacher teaches a variety of prewriting strategies.
4. Peer response: The teacher relies on peer response as one way to help students improve their writing.
5. Teacher conferences with students: The teacher conferences with students to meet individual needs of all students.
6. Minilessons: The teacher designs brief lessons on style, sentence structure, language usage, grammar, word choice, or revision strategies based on student needs.
7. Revision: The teacher incorporates time and strategies aimed at substantive revision of the content of student writing.
8. Editing: The teacher addresses the grammar and mechanics of writing.
9. Publishing: The teacher provides opportunities for students to publish outside the classroom.

Table 6 illustrates teachers' implementation levels for each of the strategies.

Table 6
Percentage of Program and Comparison Teacher's Implementation Levels

Strategy	Implementation Level	Percentage of Program Teachers N = 5	Percentage of Comparison Teachers N = 5
Student Choice	0	60%	100%
	1	0%	0%
	2	40%	0%
	Missing Data	0%	0%
Reading/ Writing Connections	0	60%	0%
	1	0%	40%
	2	40%	60%
	Missing Data	0%	0%
Prewriting	0	40%	20%
	1	20%	20%
	2	40%	60%
	Missing Data	0%	0%
Peer Response	0	20%	80%
	1	40%	20%
	2	40%	0%
	Missing Data	0%	0%
Teacher Conferences	0	80%	60%
	1	20%	40%
	2	0%	0%
	Missing Data	0%	0%
Mini Lessons	0	40%	60%
	1	60%	20%
	2	0%	20%
	Missing Data	0%	0%
Revision	0	60%	100%
	1	40%	0%
	2	0%	0%
	Missing Data	0%	0%
Editing	0	0%	20%
	1	40%	20%
	2	60%	60%
	Missing Data	0%	0%
Publishing Outside the Classroom	0	80%	80%
	1	0%	0%
	2	20%	20%
	Missing Data	0%	0%

Source: Teacher Interviews

Table 6 shows that program teachers implemented two strategies at a higher rate than their counterparts. Student choice was a significant component of program teachers' instruction (40% said they use it), whereas none of the comparison teacher interviews yielded evidence of student choice. Teachers in program schools commented, "I've tried assigning topics—it doesn't work, so I give them three choices of topics," and "Students choose from two prompts and write to generate their own ideas." Likewise, 80% of the program teachers mentioned or elaborated on the use of peer response for writing, editing, and critiquing, while 80 percent of comparison teachers made no mention of peer interaction.

The two groups of teachers were less different in their use of the other strategies. Prewriting implementation in both groups ranged from no mention of the strategy to strong evidence of implementation. Both groups described using brainstorming and “webbing” activities; the program teachers emphasized the use of sample essays and the comparison teachers emphasized fun or engaging activities. There was also little difference in the percentage of teachers using teacher conferences (one-on-one tutoring with students during the drafting and prewriting phases of writing). Program teachers reported using minilessons to teach conventions, sometimes naming grammar exercises as the content. Comparison teachers reported using grammar drill exercises to teach conventions. Editing played a role in most classrooms; teachers in both groups described editing techniques including grammar drills, students editing their own writing, and, occasionally, peer editing. Eighty percent of teachers in both program and comparison schools did not publish student work outside the classroom, although one teacher in each group reported helping students publish for outside audiences by sharing with younger classes and entering writing contests. Finally, while program teachers seemed to have a somewhat clearer idea of the concept of revision, no program or comparison teachers provided strong evidence of the use of revision strategies.

With the exception of peer response, with a statistically significant difference at the .05 level in favor of the program teachers, there were no statistically significant differences between groups in the implementation of the strategies described above.

Sum of Strategies analysis from teacher interviews. The strategy score points were totaled for each teacher interviewed to create a Sum of Strategies score. The possible range of these scores was 0–18, encompassing the nine strategies. As shown in table 7, the highest score for the program group was 14, while the highest score for the comparison group was 8. The lowest program group score was 3, while the lowest comparison group score was 2. Forty percent of program teachers scored at or above the medial score of 9, while none of the comparison teachers achieved a score of 9 or above. Although there is an observed difference in the Sum of Strategies scores between the two groups, a statistically significant difference was not detected, perhaps owing to the small sample of teachers.

TABLE 7
Sum of Strategy Scores for Program and Comparison Teachers

Sum of Strategy Score Range = 1 to 18	Percentage of Program Teachers <i>N</i> = 5	Percentage of Comparison Teachers <i>N</i> = 5
2	0	20
3	40	0
6	20	40
8	0	40
9	20	0
14	20	0
Total	100	100

Degree of implementation. To further probe the question, of implementation of MWTI strategies, we considered the implementation levels of individual teachers through analysis of each individual interview. We compared each teacher interview to a continuum of implementation that included descriptors for four scores (1, 2, 3, and 4), ranging from little or no implementation for a score of 1 to full implementation for a score of 4.

As shown in table 8, degree of implementation scores of all program teachers ranged from a low of 1.00 to a high of 2.00 out of a possible 4.00. Comparison teachers' scores fell within the two lowest possible scores of 1.00 and 1.50.

Table 8
Percentages of Frequencies in Degree of Implementation Among Program and Comparison Teacher Groups

Degree of Implementation Score	Percentage of Program Teachers at Each Score Point <i>N</i> = 5	Percentage of Comparison Teachers at Each Score Point <i>N</i> = 5
1.00	40	40
1.50	40	60
2.00	20	0
2.50	0	0
3.00	0	0
3.50	0	0
4.00	0	0
Total	100.0	100.0

As shown in table 9, the mean degree of implementation score for all program teachers was 1.4 and for comparison teachers, 1.3, again illustrating the somewhat low overall level of implementation on the part of the program teachers after one year of professional development. Prior research of MWTI professional development suggests that significant implementation takes place after two or three years of professional development.

Table 9
Means of Degree of Implementation Scores for Program and Comparison Teachers

	Program Teachers (N = 5)	Comparison Teachers (N = 5)
Mean Score	1.4	1.3

Student Outcomes

Assessment of student writing performance

Student writing samples were assessed for six discrete attributes of writing (ideas/content development, organization, voice, sentence fluency, word choice, and conventions), as well as holistically.

Program students showed statistically significant improvement in the overall set of scores (and on each score individually) from pretest to posttest in relation to the comparison students' scores, which were essentially unchanged and were statistically indistinguishable across occasions. Table 10 summarizes the results of a repeated measures ANOVA of the pre and post writing assessments for program and comparison groups for each attribute of writing as well as for the holistic assessment.

Table 10
Repeated Measures ANOVA

Score	Variance Component	Sum of Squares	df	Mean Square	F Ratio	Test of Significance <i>P (F)</i>
Holistic	Occasion (pre/post)	11.29	1	11.29	23.52	<.001
	Error (occasion)	217.44	453	0.48	217.44	
	Group Program/Comparison	53.82	1	53.82	40.77	<.001
	Error (group)	597.96	453	1.32	597.96	
	Interaction Group x Occasion	17.08	1	17.08	35.58	<.001
	Error (interaction)	217.44	453	0.48	217.44	
Ideas/Content	Occasion (pre/post)	7.953	1	7.953	14.46	<.001
	Error (occasion)	249.15	453	0.55	249.15	
	Group Program/Comparison	41.656	1	41.656	32.8	<.001
	Error (group)	575.31	453	1.27	575.31	
	Interaction Group x Occasion	13.948	1	13.948	35.58	<.001
	Error (interaction)	249.15	453	0.48	249.15	
Organization	Occasion (pre/post)	18.7002	1	18.7002	34.63	<.001
	Error (occasion)	244.62	453	0.54	244.62	
	Group Program/Comparison	53.5808	1	53.5808	41.86	<.001
	Error (group)	579.84	453	1.28	579.84	
	Interaction Group x Occasion	16.7832	1	16.7832	31.08	<.001
	Error (interaction)	244.62	453	0.54	244.62	
Voice	Occasion (pre/post)	12.1694	1	12.1694	17.14	<.001
	Error (occasion)	321.63	453	0.71	321.63	
	Group Program/Comparison	38.0375	1	38.0375	30.43	<.001
	Error (Group)	566.25	453	1.25	566.25	
	Interaction Group x Occasion	24.4808	1	24.4808	34.48	<.001
	Error (interaction)	321.63	453	0.71	321.63	
Sentence Fluency	Occasion (pre/post)	4.4312	1	4.4312	7.64	<.001
	Error (occasion)	262.74	453	0.58	262.74	
	Group Program/Comparison	18.522	1	18.522	14.7	<.001
	Error (group)	570.78	453	1.26	570.78	
	Interaction Group x Occasion	10.2776	1	10.2776	17.72	<.001
	Error (interaction)	262.74	453	0.58	262.74	
Word Choice	Occasion (pre/post)	3.5378	1	3.5378	7.22	<.001
	Error (occasion)	221.97	453	0.49	221.97	
	Group Program/Comparison	25.8118	1	25.8118	25.06	<.001
	Error (group)	466.59	453	1.03	466.59	
	Interaction Group x Occasion	9.3982	1	9.3982	19.18	<.001
	Error (interaction)	221.97	453	0.49	221.97	
Conventions	Occasion (pre/post)	6.8027	1	6.8027	11.53	<.001
	Error (occasion)	267.27	453	0.59	267.27	
	Group Program/Comparison	21.66	1	21.66	14.44	<.001
	Error (group)	679.5	453	1.5	679.5	
	Interaction Group x Occasion	5.2451	1	5.2451	8.89	<.001
	Error (interaction)	267.27	453	0.59	267.27	

Treatment *N* = 298; comparison *N* = 157.

The between-subjects factor was *group* (program school or comparison school) and the within-subjects factor was *test occasion* (pretest or posttest). For each set of scores, there was a significant difference at the .001 level for occasion, group, and interaction. In other words, there was also a significant difference in program students' own scores between pre and post testing. The significant difference in the interaction between the occasion (pre or post) and the group (program or comparison) indicates that the difference is due to group. Table 10 indicates that the significant differences in all areas of writing that were assessed were due to the program.

In brief, growth in all areas of writing was significantly higher for the program group between the pretest and posttest, *and* significantly higher than that of the comparison group. In idea-development, organization, and voice, as well as on the holistic score, program students' mean scores rose by a half point or more between the pre and post assessments. In contrast, mean scores of the comparison group remained the same between pre and post testing for ideas and organization, and fell by .1 for voice and on the holistic assessment. In the areas of sentence fluency, word choice, and conventions, mean scores for the program group rose by .3 or .4, whereas comparison students' scores in these areas fell by .1. Only in conventions, which showed a slight rise of .1, did the comparison group demonstrate a positive difference between pre and post testing. Table 11 summarizes the pretest and posttest means for each group for each of the scores.

Table 11
Summary of Pre and Post Assessment Means for Each Score for Program and Comparison Groups

Score	Program: Pre Assessment Mean Score	Program: Post Assessment Mean Score	Comparison: Pre Assessment Mean Score	Comparison: Post Assessment Mean Score
Ideas/Content	3.0	3.5	2.8	2.8
Organization	2.8	3.4	2.6	2.6
Voice	3.2	3.8	3.1	3.0
Sentence fluency	3.0	3.3	2.9	2.8
Word choice	3.0	3.4	2.9	2.8
Conventions	3.1	3.5	3.0	3.1
Holistic	2.9	3.4	2.7	2.6

CONCLUSIONS AND DISCUSSION

Influence of the Intervention on Teacher Practices

The specific strategies offered teachers in the MWTI program schools were designed to address the various qualities of good writing as described by the rubric used at the NWP scoring conference. For example, the emphasis on the cumulative sentence could have influenced growth in sentence variety and in conventions, since the conventions for the sentence form are demonstrated in the context of student-generated sentences. Demonstration lessons focused on vivid verbs and nouns were designed to influence growth in word choice, voice, and idea development. Specific techniques for analyzing and writing to prompts were intended to help

students develop ideas and organize their writing. Specific strategies for using peer response groups were designed to augment students' ability to elaborate details and organize ideas. For example, one MWTI consultant demonstrated a technique she calls "high-yield instruction" to help teachers analyze student papers and design instruction that meets each student's readiness level based on strengths and needs in each student's paper. She reported helping teachers to "determine the instruction most likely to yield immediate growth in writing achievement for each individual student."

Even though interviews of teachers in the study did not reveal full implementation of MWTI philosophies and strategies, certain strategies—introduced in demonstration lessons and then implemented by the teachers—made a difference in the teachers' practices. Specifically, program teachers in the study made use of student choice and peer response. They taught lessons on the cumulative sentence and on organizational strategies using various prewriting techniques. They focused on prompt-analysis and on elaboration of details.

Furthermore, the MWTI teachers' Sum of Strategies scores were slightly higher than those of their counterparts in the comparison group, indicating that the MWTI teachers did make use of the strategies presented in professional development, even though these strategies may not have found their way into the daily classroom repertoire. The lack of significant differences in the practices of the teachers, as captured by interviews, could well be due to the small sample size of five program and five comparison teachers.

Influence of the Intervention on Student Outcomes

Despite the lack of significant indicators of how MWTI influenced teacher practices, the strength of the statistically significant gains between pre and post assessments for the program group students indicates that the professional development for teachers did influence student growth in writing significantly. The holistic measures show a decidedly significant increase in overall writing skill between pre and post assessments for the program group. The analytic measures attest to the impact of MWTI professional development on student growth in every assessed aspect of writing.

Some caution is necessary in interpreting the results of this study. Even though the program and comparison schools were closely matched demographically and in terms of teacher expertise, the pre assessment mean scores of the program group were higher than those of the comparison group. Further, the growth rate from pre to post for the program group was superior. Given the multiyear commitments of both program schools to MWTI professional development, and the participation of the ninth-graders' (eighth grade) teachers during the previous year, we can speculate that at least some of the growth demonstrated by these students was cumulative, though not traceable (see table 1). What was observed as growth during the span of ninth grade experience may have been at least partially attributable to the students' continuous opportunities to write and to practice composing strategies that were first introduced by teachers in a previous grade. Thus we are hesitant to assert unequivocally that the singular cause of the definitive results lies within the ninth grade experience. However, the strength of the results and the multiyear partnerships between the program schools and MWTI indeed suggest a cause-effect relationship between MWTI professional development and superior growth in program students' writing ability, whether that growth is due to a one-year or a multiyear effect.

Broader Implications of the Research

To a strong degree, the present study answers the question, *Does the growth in writing ability of ninth grade students whose teachers participated in MWTI professional development programs differ from that of students whose teachers did not participate in those programs?* In the present study, students in the MWTI group achieved statistically significantly more growth between pre and post writing assessments than their counterparts in comparison schools on all measures: holistic, ideas/content, organization, voice, sentence fluency, word choice, and conventions.

To a lesser degree, the present study contributed to understanding the question, *To what extent do teachers who participate in Mississippi Writing/Thinking Institute (MWTI) professional development apply the teaching strategies offered in their classrooms?* While the degree-of-implementation data indicated that program teachers practiced most strategies offered through MWTI professional development at about the same rate as comparison teachers, the Sum of Strategies scores indicate that the program teachers implemented individual teaching strategies with their students to a higher degree than their comparison counterparts. That is to say, the program teachers made use of the specific strategies offered to them in MWTI professional development even though evidence does not indicate that they adopted the underlying theoretical basis for those practices.

Students in the program group made significant gains in all areas, holistic and analytic, yet the mean scores of this group never climbed to the upper half of the scoring rubric, to scores of 4, 5, or 6. Considering the possibility of long-term effects of MWTI work, we believe that continued work is needed with teachers both below and above the ninth grade level in schools with demographics similar to those of the program schools. The fact that students in both program schools were taught by teachers involved in MWTI professional development during their middle school years indicates that there may be some long-lasting effect for students who are taught MWTI strategies for writing prior to the targeted study year. Thus, we believe that more MWTI work with more teachers above and below the targeted grade level could result in long-term gains toward higher mean scores on the six-point rubric and increased student competence in writing.

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Appendix 1

Continuum of Implementation: Descriptions of Practice at Each Score Point

4 (Highest Degree of Implementation)

The teacher leads students through a series of recursive phases in writing, usually beginning with prewriting and concluding with publication activities; he or she adapts process to individual student needs.

The teacher engages in reflective practice, which includes analysis of student work, to drive instruction, articulating the goal of enabling students to connect to prior knowledge. Reflective practice informs the teacher of individual student growth. He or she plans individual or collective minilessons to meet student needs.

The teacher routinely writes with students. He or she uses own writing as a model with students, allowing students to respond and revise. He or she writes and reads outside of class.

The teacher encourages thoughtful reading, rereading, and revision by providing a rich variety of group response to student writing, i.e., pairs, small group, large group, drama, tutorial, or other audiences, as well as silent and oral reading of their writing, which results in multiple drafts.

The teacher welcomes an array of student-chosen or student-created types of writing. He or she coaches students through the writing phases with one-on-one and group conferences. He or she shares his or her own writing as well as examples of writing by students. The teacher offers students authentic publishing opportunities that reach multiple audiences.

The teacher routinely uses writing as a way of helping students deepen their understanding of various school subjects: literature, social studies, math, science, physical education, art, and music. The teacher articulates a well-developed and thorough understanding of the dynamics of writing to learn.

The teacher is a habitual reader and a writer. The teacher welcomes quality staff development and is able to articulate its value to his or her classroom. The teacher routinely attempts strategies demonstrated in staff development and makes adaptations for his or her class. He or she collaborates with other teachers and shares ideas and strategies, with or without an administrative structure for doing so.

3

The teacher leads students through a series of phases in writing. He or she partially articulates the reasoning behind the phases. The teacher sometimes engages in reflective practice, which may or may not include analysis of student work. He or she uses minilessons for whole-class instruction.

The teacher sometimes writes and shares his or her own writing with students.

The teacher plans and provides some opportunities for revision, self-revision or teacher-assisted revision, and/or limited group response to student writing.

The audience sometimes extends beyond the school community; some student work is published. The teacher offers a variety of writing types.

The teacher sometimes uses writing as a learning tool, but not in a systematic or planned fashion. The teacher is not yet able to articulate a thorough understanding of writing to learn.

The teacher expresses enjoyment of reading, but may say he or she seldom finds the time to read. The teacher writes sporadically. The teacher comments on the value of staff development, attempts strategies presented, and sometimes, but not routinely, adapts and expands on the strategy to fit the needs of particular students. The teacher attempts to collaborate with other teachers, but is more likely to do so when there is a structure for collaboration in place.

2

The teacher assigns a topic or a group of potential topics for writing, and offers some help before collecting papers, grading, and returning them. The teacher rarely engages in reflective practice; he or she grades rather than analyzes student work. He or she may present minilessons, but they are not tied to specific needs.

The teacher occasionally writes with students.

The teacher provides limited and random opportunities for revision, and does not articulate a plan for teaching revision.

The audience goes beyond the teacher, often to classmates or the principal, but there is no opportunity to publish beyond the school. Students have limited exposure to multiple types of writing.

The teacher randomly uses writing as a learning tool but with little or no understanding of the dynamics of writing to learn.

The teacher may or may not enjoy reading. his or her own writing is limited. The teacher may articulate a dislike for attending staff development and may admit to attending only for the continuing education units. The teacher may attempt strategies demonstrated in staff development but when doing so makes no adaptations to accommodate his or her particular students. The teacher seldom voices a desire to work with other teachers.

1 (Little or No Implementation)

The teacher assigns a topic or a group of topics from which students write; offers little to no help; gives a deadline; collects papers; identifies errors; grades and returns papers to students. The teacher does not engage in reflective practice; he/she grades student work. He/she uses lecture or worksheet format, sometimes using process-oriented labels for text-based instruction.

The teacher does not write.

The teacher provides no opportunities for revision before the final, finished student writing is submitted to the teacher. The teacher controls correction in student writing from a predetermined list (e.g., agreement, spelling, and mechanics).

In most cases, the audience is the teacher, and there is little or no opportunity to publish. There is little exposure to various types of writing.

The teacher does not use writing as a tool for learning.

The teacher is not a reader or writer and may articulate resentment of any time spent in these activities. The teacher may articulate resentment about attending staff development, and may miss several sessions. There is no attempt to implement strategies from staff development. The teacher does not attempt to collaborate with other teachers.

Appendix 2

Basic Outline of the Workshops in Writing

Writing on Demand

- Analyzed returned scored student papers from the state writing assessment
- Reviewed the scoring protocol
- Analyzed Level 4 papers, then Level 3 papers, then Level 2 papers, then Level 1 papers
- Picked out characteristics that each score level had and charted the commonalities
- Recalled writing process strategies they had been implemented from professional development the year before
- Observed to see which strategies were effective and apparent in the student papers

Revision strategies such as

- Vivid verbs
- Vocabulary building
- Show writing
- Beginnings and endings
- Metaphors and other figurative language

Convention strategies such as

- Subject verb agreement match-up cards
- Punctuation

Reading/Writing Connections

- Studied the success analysis protocol to determine which strategies implemented in the classroom were evident in the student papers
- Participated in a process lesson using the text *Sweet Clara and the Freedom Quilt*
 - Observed strategies in content-based lessons
 - Used literature or reading strategies such as text rendering
 - Used AIR, or prediction strategy with pictures to determine which questions could be Actually answered using the pictures, which questions could be answered by Inference from the pictures, and which questions required Research outside of looking at the pictures.
 - Used minilessons for addressing specific state framework objectives, such as using the text to look for spelling patterns.
 - Used math strategies such as studying the quilt pieces for geometry concepts and symmetry; used writing to explain the math process and took the writing through process
 - Modeled the process for whole class, small group, and individual instruction

Research as Process

Teachers wrote reflections on “thrills and agonies” of implementing the lessons in their classroom since the last meeting. Teachers then:

- Examined student samples brought back
- Learned how to use an anticipation guide

- Learned to use a KWL chart to determine prior knowledge
- Observed grouping strategies
- Participated in a science content reading workshop
- Selected a topic based on their questions about their reading to write a science piece and take it through process

Test-taking protocol and preparing for the state writing assessment.

- Decoding the prompt
- Brainstorming the topic
- Narrowing the topic
- Creating good prompts, specifically in content areas
- Cumulative sentence strategy to improve sentence variety

The professional development also included strategies for classroom community building.

Appendix 3
Ninth Grade Writing Prompts (A and B)

Prompt A

The classroom is not the only place where there are rules. Write a multi paragraph essay to inform your teacher about a rule or a set of rules you have been asked to follow outside of the classroom. Be sure to tell the rules, where they are found, and why they are important.

Prompt B

School is not the only place we learn. Write a multi paragraph essay to inform your teacher about something you learned outside of school. Be sure to tell what you learned and the ways that what you learned have helped you or have been important to you.

Appendix 4

Guidelines for Test Administration:

"Good morning and thank you for sharing your time and writing talent with us! I'm _____, and we are in your school today working with Mississippi State University and the National Writing Project on national research in the teaching of writing. You are a special group, as we told you when we were here in the fall. Only three other groups in our state have been invited to take part in this project, but there are a number of student groups across the nation who will be writing to prompts similar to yours.

As our way of saying thank you, these pens are yours to keep. (Hold up a pen) Today you may use this pen or your own pen or pencil.

Now, when I call your name, raise your hand, and I will give you your prompt and your pen. As soon as you get your paper, turn it over and try out the pen to make sure it works. If it doesn't, raise your hand and I'll give you another pen. (Hand out prompts and pens).

Let's look at your prompt for today. (Read prompt aloud, slowly)

Notice that you have two colored sheets of paper that you may want to use to plan your writing, This is not a timed writing assignment, so you have plenty of time to do some planning.

When you are ready to write, turn to the lined white paper. (Demonstrate) Do not write on the back of this paper. You have five sheets of lined paper to write on. If you need more paper, raise your hand, and I'll bring you some more paper. It is important for you to do your best writing today. If you want to make changes to your paper, just draw a line through what you don't want and then write the changes.

The people who score your papers will be writing teachers from across the United States. They will be looking for papers that are focused on the topic, include relevant details, are organized well and use mature words. You will receive comments that will help you to improve your future writing.

Please take your time. When you are sure you are finished, raise your hand and I will take your paper."

NOTE TO TEST ADMINISTRATORS: DO NOT ENCOURAGE OR HELP THE STUDENTS IN ANY WAY. IF THERE ARE QUESTIONS, YOU MAY REPEAT THE PERTINENT PART OF THE INSTRUCTIONS ONE ADDITIONAL TIME. ON THE BACK OF THIS PAPER, MAKE A NOTE OF ANY PROBLEMS OR ISSUES THAT ARISE WITHIN YOUR OWN GROUP.

Appendix 5
Interrater Reliability by Trait and by Grade Level

Table 10: Interrater Reliabilities by Trait and by Grade Level

Level	Total N of Papers	Number of Papers Double Scored (Rate)	Overall (Across All Scores) % agree	Holistic % agree	Ideas % agree	Organization % agree	Voice % agree	Sentence Fluency % agree	Word Choice % agree	Conventions % agree
Elementary	1188	136 (11%)	89%	95%	90%	90%	88%	87%	88%	88%
Middle School	2379	1231 (52%)	93%	96%	92%	92%	91%	92%	94%	92%
High School	3938	381 (10%)	89%	94%	90%	89%	86%	87%	92%	86%
Total - all levels	7505	1748 (23%)	92%	95%	92%	91%	90%	91%	93%	91%

**Appendix 6
Coding Sheet**

School #		Mississippi Writing/Thinking Institute
Teacher #		
Grade Level		Degree of Implementation
Reader #		
Strategy		Comments
Evidence of Student Choice		
Evidence of Reading/Writing Connections		
Pre-Writing		
Peer Response		
Teacher Conference		
Minilessons		
Revision		
Editing		
Publishing		

Appendix 7: Definitions of Strategies

- Evidence of student choice: The teacher deliberately plans for students to have choices of writing topics, reading materials, prewriting strategies, etc.
- Evidence of reading/writing connections: The teacher routinely helps students to connect what they are reading to what they are writing in terms of author's purpose, stylistics, use of language, etc.
- Prewriting: The teacher teaches a variety of prewriting strategies.
- Peer response: The teacher routinely relies on peer response to help students improve their writing.
- Teacher conference with student: The teacher routinely conferences with students to meet individual needs of all students.
- Minilessons: The teacher designs brief lessons on style, sentence structure, language usage, grammar, word choice, or revision strategies based on student needs.
- Revision: The teacher incorporates time and strategies aimed at substantive revision of the content of student writing.
- Editing: The teacher addresses the grammar and mechanics of writing.
- Publishing: The teacher deliberately provides opportunities for students to publish outside the classroom.

Appendix 8
Mississippi Writing/Thinking Institute Research Interview Form

MWTI Teacher Interview Guide

Interview

Evaluation Instrument for Implementation of Writing Project Professional Development

Teacher's Name _____ Cert. Level _____
 Name of School _____ N'tl Board Cert? _____
 School District _____ Years of Exp. _____
 Grade _____ Years in this school _____
 First yr. in this school: _____ Years in this grade _____
 Date _____

1. Use the student samples you brought with you to describe how you taught this piece of writing from beginning to end.

What decisions do you make along the way? How do you make those decisions?

Are there other ways you are helping your students learn to move through writing as process?

Initially, (at the beginning of the school year) how much time do you spend taking a piece of writing through a process to final draft?

What are the different reasons your students write?

Who are the audiences for their writing?

What are the different kinds of writing that your students do?

2. What strategies do you use to help students improve their papers?
3. How do you help students master grammar, mechanics, and usage?
4. Overall, what portion of your weekly teaching time with a single group of students is given to writing process activities or writing to learn in the content areas?

- _____ 0–24 percent
- _____ 25–49 percent
- _____ 50–74 percent
- _____ 75–100 percent

5. How often do you make use of large group, small group and individual instruction? What kind of instruction do you provide in each setting?

	Frequency	Kind of Instruction
Large group		
Small group		
Individual		

6. How do you know your students are improving as writers?

How do you use student writing to drive instruction? (Do you analyze student work?)

Give examples of purposes for which you use writing assessment results?

In the two or three weeks prior to the writing assessment, are there specific ways you address writing on demand?

If YES: Can you describe them?

7. Do you have students use writing as a tool for learning in content areas?

If YES: In what subject areas?

Do you formally collaborate with other content teachers to plan student writing?

If YES: Describe the collaboration and how you find the time to work with other teachers.

Do you make connections between reading and writing?

If YES: What strategies do you use? Can you describe one or two examples of making reading/writing connections?

8. A. How do you sustain your own professional growth as a writing teacher?

B. Are you a writer?

How do you sustain your own personal growth as a writer?

9. How have your administrators supported you in implementing strategies from the MWTI staff development?

What is your planning time like? Is there a common planning time?

How would you describe your school climate?

How have your peers supported you in implementing strategies from the MWTI staff development?

10. What additional comments do you have related to your participation in the MWTI staff development? (For comparison teachers: What additional comments do you have about your development as a writing teacher?)

MWTI Classroom Audit Guide
(Do not talk with the teacher.)

Teacher _____

School _____

Seating arrangement on the day you are there:

What's on the walls?

STUDENT WORK; GRADED? PROJECTS, ART, PURCHASED MATERIALS

How much student work is posted? Describe the kinds of works that are posted.

What are the students doing while you are there?

Who is talking?

Who is listening?

What is the teacher doing?

What are the students doing?

IS THERE PEER INTERACTION?

Appendix 9:
Pretest-Posttest Score Differences Summaries
 Prepared by David Morse, Ph.D.

The following set of seven tables summarizes the differences in pretest and posttest scores obtained by individual students in the two program schools and the two comparison schools. Differences were computed as posttest score minus the corresponding pretest score for a student. Hence, positive differences imply improvement on that writing characteristic, negative differences imply a decline in the judges' rating of that writing characteristic from pretest to posttest and a zero difference indicates no change in score across occasions. In general, the students in the program schools were far more likely to show improvement from pretest to posttest than were students in the comparison schools. This may be seen by looking at table 23 (for the holistic score); program students at the 50th percentile (representing a median gain of about 0.5 points on the holistic rating) would have placed at the 69th percentile of the comparison students. Group differences of roughly this magnitude may be observed in each of the tables.

Table A.1
Pretest-Posttest Difference Frequencies for Ideas Score by Group

Difference (Post – Pre)	Treatment: Frequency	Treatment: Percentile	Comparison: Frequency	Comparison: Percentile
-3.0			3	1
-2.5			0	2
-2.0	7	1	9	5
-1.5	2	3	3	9
-1.0	33	9	31	19
-0.5	3	15	7	32
0.0	113	34	59	53
0.5	12	55	4	73
1.0	80	70	29	83
1.5	3	84	2	93
2.0	38	91	8	96
2.5	2	98	0	99
3.0	4	99	2	99
3.5	0	99		
4.0	1	99		

Notes. Difference is posttest score minus pretest score.
N = 298 for treatment group, 157 for comparison group.

Table A.2
Pretest-Posttest Difference Frequencies for Organization Score by Group

Difference (Post – pre)	Treatment: Frequency	Treatment: Percentile	Comparison: Frequency	Comparison: Percentile
-3.0			2	1
-2.5			0	1
-2.0	5	1	10	4
-1.5	1	2	4	9
-1.0	29	7	29	19
-0.5	5	13	5	30
0.0	94	29	54	49
0.5	15	47	5	68
1.0	90	65	31	79
1.5	6	81	5	91
2.0	47	90	11	96
2.5	0	98	0	99
3.0	6	99	1	99

Notes. Difference is posttest score minus pretest score.
N = 298 for treatment group, 157 for comparison group.

Table A.3
Pretest-Posttest Difference Frequencies for Voice Score by Group

Difference (Post – pre)	Treatment: Frequency	Treatment: Percentile	Comparison: Frequency	Comparison: Percentile
-4.0			1	1
-3.5			0	1
-3.0	2	1	1	1
-2.5	0	1	0	1
-2.0	9	2	16	6
-1.5	0	4	1	12
-1.0	38	10	32	22
-0.5	10	18	7	35
0.0	70	32	46	52
0.5	14	46	8	69
1.0	91	63	36	83
1.5	3	79	0	94
2.0	48	88	7	96
2.5	2	96	0	99
3.0	4	97	2	99
3.5	2	98		
4.0	5	99		

Notes. Difference is posttest score minus pretest score.
N = 298 for treatment group, 157 for comparison group.

Table A.4
Pretest-Posttest Difference Frequencies for Sentence Fluency Score by Group

Difference (Post – pre)	Treatment: Frequency	Treatment: Percentile	Comparison: Frequency	Comparison: Percentile
-3.0	1	1	1	1
-2.5	0	1	0	1
-2.0	10	2	12	4
-1.5	2	4	3	9
-1.0	44	12	29	19
-0.5	11	21	7	31
0.0	91	38	61	53
0.5	10	55	5	74
1.0	80	70	29	84
1.5	5	84	2	94
2.0	39	92	6	97
2.5	0	98	1	99
3.0	5	99	1	99

Notes. Difference is posttest score minus pretest score.
N = 298 for treatment group, 157 for comparison group.

Table A.5
Pretest-Posttest Difference Frequencies for Word Choice Score by Group

Difference (Post – pre)	Treatment: Frequency	Treatment: Percentile	Comparison: Frequency	Comparison: Percentile
-2.0	11	2	9	3
-1.5	2	4	4	7
-1.0	33	10	40	21
-0.5	8	17	4	35
0.0	112	37	50	52
0.5	12	58	7	70
1.0	84	74	36	84
1.5	4	89	1	96
2.0	27	94	6	98
2.5	0	98		
3.0	5	99		

Notes. Difference is posttest score minus pretest score.
N = 298 for treatment group, 157 for comparison group.

Table A.6
Pretest-Posttest Difference Frequencies for Conventions Score by Group

Difference (Post – pre)	Treatment: Frequency	Treatment: Percentile	Comparison: Frequency	Comparison: Percentile
-3.0	1	1	3	1
-2.5	0	1	0	2
-2.0	11	2	7	4
-1.5	2	4	1	7
-1.0	44	12	33	18
-0.5	11	21	7	30
0.0	92	39	51	49
0.5	10	56	6	67
1.0	85	72	35	80
1.5	5	87	3	92
2.0	29	92	11	96
2.5	2	98		
3.0	5	99		
3.5	0	99		
4.0	1	99		

Notes. Difference is posttest score minus pretest score.
N = 298 for treatment group, 157 for comparison group.

Table A.7
Pretest-Posttest Difference Frequencies for Holistic Score by Group

Difference (Post – pre)	Treatment: Frequency	Treatment: Percentile	Comparison: Frequency	Comparison: Percentile
-3.0			2	1
-2.5			0	1
-2.0	4	1	12	5
-1.5	1	2	2	10
-1.0	27	6	28	19
-0.5	7	12	9	31
0.0	106	31	54	51
0.5	7	50	4	69
1.0	103	68	37	82
1.5	3	86	2	95
2.0	34	92	6	97
2.5	1	98	0	99
3.0	5	99	1	99

Notes. Difference is posttest score minus pretest score.
N = 298 for treatment group, 157 for comparison group.