Local Sites Research Initiative V
Missouri Writing Projects Network
Study of Missouri Literacy Academies

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ABSTRACT

This study analyzes the effects of the Literacy Academy, a statewide professional development program facilitated by the Missouri Writing Projects Network (MWPN). This professional development model is based on the principles of the National Writing Project and developed by teacher-consultants at the Gateway Writing Project. The Missouri Department of Elementary and Secondary Education supported this statewide writing initiative, which was designed for "priority" schools (those that had not met adequate yearly progress as defined by the No Child Left Behind Act).

Implementation began with a one-year (2007–2008) professional development partnership between the Missouri Department of Elementary and Secondary Education (DESE) and the Missouri Writing Projects Network. This first year of statewide Literacy Academies involved twenty-three program teachers in nine sites across Missouri. In summer 2007, MWPN presented a five-day intensive professional development series focused on the teaching of writing; three to six additional follow-up days were then provided during the 2007–2008 school year. At the end of their first year of the study, participating teachers were invited to attend Year 2 of the Literacy Academy, combining online and face-to-face meetings during the 2008–2009 school year. In Year 2 of the program (2008–2009), fifteen program teachers participated the professional development and research study.

To determine the effectiveness of the Literacy Academy program, a quasi-experimental design was used to compare data from teachers who participated in the MWPN professional development with data from comparable teachers of the same grades who did not participate in

the program. Data collected over the two years included students' pre/post writing samples (159 program and 177 comparison samples of student writing), semistructured teacher interviews, classroom observations, and teacher surveys. Student writing was scored at a national scoring conference, independent of the local sites involved in the research.

Results of this study suggest the effectiveness of the Literacy Academy model of the National Writing Project approach in improving student writing. Overall, program students improved more, and improved in more of the assessed categories, than comparison students. Although the mean score increased from pre to post assessment for all teachers, the magnitude of the increase was greater for program teachers on four of six subscales (Structure, Content, Stance, Sentence Fluency). Although the gains were modest in magnitude, ranging from 0.09 to 0.17 (both program and comparison groups) and 0.03 to 0.18 (program teachers only), the means on all seven measures (a holistic measure and six subscales) increased from pre to post assessment. Qualitative analysis of teacher interviews and survey data provides additional support for the positive effect of the program on writing instruction and on student performance in program teachers' classrooms.

INTRODUCTION

The Missouri Writing Projects Network (MWPN), comprising the five National Writing Project (NWP) sites in Missouri, has been an active network for over ten years. With the support of NWP State Network minigrants, MWPN has accomplished several joint ventures with the state, including state leadership retreats, the state language arts conference, and a professional development partnership with the Missouri Department of Elementary and Secondary Education (DESE).

One of the MWPN sites, Gateway Writing Project in St. Louis, recently designed and implemented schoolwide Literacy Academies and then studied the effectiveness of this model on student writing. Gateway researchers found that student achievement in writing increased through a professional development inservice model that included teacher inquiry (Singer and Scollay 2006). Because this locally conducted inservice resulted in such improvement in student achievement, the state network of NWP sites, in collaboration with DESE, decided to pursue a similar program statewide and to conduct a research study to determine if the success found by Gateway in St. Louis could be replicated across Missouri. This report documents that statewide project, and reports findings from the two-year professional development initiative conducted from 2007–2009.

THEORETICAL FRAMEWORK

The National Writing Project does not endorse a "one size fits all" approach to writing. Teachers involved in NWP professional development, therefore, do not promote one type of writing

instruction. Literacy development, including writing instruction, should be grounded in the context of the student's language experiences.

This means that teachers' goal of improving student writing is compounded by many contextual variables. However, we believe strongly in the ability of all students to write. In the NWP book *Because Writing Matters*, Nagin (2003) makes this point very clearly: "Challenging as it is, educators interviewed for this publication argued that all students can learn to write and that writing is the most visible expression not only of what their students know but also of how well they have learned it" (p. 11).

FOCUS OF THE PROFESSIONAL DEVELOPMENT AND BACKGROUND

The MWPN promotes and provides intensive professional development focused on the literacy needs of particular school districts. The core of our professional development is based on National Writing Project assumptions, including the ideas that teachers themselves need to write in order to develop as writing instructors and that the best teachers of teachers are teachers themselves. Through intensive four- to five-week invitational summer institutes, each MWPN site has long provided on-site professional development to schools and districts. With this project, we wanted to see if the Literacy Academy could provide another model, in addition to summer institutes, to reach teachers across the state. The Literacy Academy model is not meant to take the place of a summer institute. A primary difference between it and the summer institute is that Literacy Academy participants are involved for only one week in the summer (rather than four or five) and then have more follow-up meetings than what a summer institute participant may experience.

In 2005, Missouri was considering implementing a long-term professional development series focused on writing. In January 2006, Diane Scollay, director of the Gateway Writing Project (GWP) met with Michael Muenks, DESE director of assessment, and the St. Louis Communication Arts regional facilitator. At this meeting, Scollay presented a MWPN concept paper introducing the idea of a "Literacy Academy" focused on writing. The Literacy Academy model was based on National Writing Project principles: the importance of teachers themselves writing, of teacher inquiry, and of long-term professional development.

DESE has traditionally offered professional development through its nine Missouri Regional Professional Development Centers (RPDC). Most of the nine regions are geographically close to areas where the state's National Writing Project sites are found. As a network, we decided which MWPN sites would partner with each of the RPDCs. In March, the director of assessment shared the concept paper with regional facilitators (RFs) for feedback. The facilitators then coordinated with each writing project site to host the Literacy Academies. RFs also contacted administrators of selected "priority" schools (those that had not met adequate yearly progress as defined by No Child Left Behind) and invited the administrators and teams of middle school teachers to attend a Literacy Academy. DESE's director of assessment requested funding from DESE for the Literacy Academy, and the funding for the two-year project was approved in May 2006.

Literacy Academy Facilitators for Year 1

Each NWP site in Missouri recommended two teacher-consultants to act as facilitators. In preparation for the first summer's Literacy Academies in 2007, the MWPN held a facilitators'

planning meeting in Columbia, Missouri. These facilitators—all MWPN teacher-consultants—were introduced to the Literacy Academy binder of research-based writing strategies, many of which these teacher-consultants had used and experienced while participating in the NWP summer institutes. MWPN directors provided background on the Literacy Academy resources, goals, and products, which created a common focus for the nine Literacy Academy locations.

Purposes and Goals for Year 1

The Literacy Academy professional development series, Year 1, focused on the teaching of writing. The following objectives guided each site during 2007–2008:

- Link best practices for reading/teaching reading with best practices for writing/teaching writing (i.e. emphasize the reading/writing connection).
- Acquire a common language to engage in professional conversations about literacy learning.
- Align individual classroom instruction and assessment practices in writing and reading with Missouri's "Communication Arts Grade-Level Expectations" and the school's curriculum.
- Examine one's own literacy teaching practices for areas of strengths and for areas of improvement.
- Develop lessons that demonstrate that writing can be used as a tool for learning and critical inquiry.
- Explore the use of computer technology to enhance literacy instruction.
- Experience the writing and reading processes as learners, including developing a professional portfolio.
- Apply protocols for assessing student work to determine strengths and implications for instruction.

An overarching goal was to provide participants with the experience of being immersed in writing; that is, to make the Literacy Academy as similar to an NWP summer institute as possible given two significant differences: a shorter time period, and the inclusion of participants who may not have attended voluntarily. Tables 1 and 2 list the goals and products from the summer weeklong academies and the school-year regroup meetings.

Table 1. Goals and products for Literacy Academy—Year 1 summer 2007

Goals	Products
Focus on teacher writing	Journals; reflective writing; mini-lessons; teaching narrative
Revise writing	Teaching narrative
Address standards every day and weekly; explore mini-lessons	Standards-based lessons; scoring guide; open constructed response
Build community	Action Plan

Table 2. Goals and products for Year 1 Regroup Meetings 2007–2008

Goals	Product
Develop curriculum; revise lessons and develop up to three new lessons using Backward Design	Look at the lessons written in the summer and revise—share how the lessons worked in the classroom
Explore the teaching of writing	Continue to write and/or revise the teacher narrative begun in the summer
Continue to revise writing	Submit writing for a statewide or site anthology; M.A.T.E., NEA, MSTA publishing opportunities
Reflect on student work	Reflections on plan; protocol training—looking at student work
Introduce technology and the teaching of writing	Teacher-generated multimedia presentation or other example, if applicable
Create an action plan	Revised action plan (written in the summer); address the action plan in some way at each meeting

Academy Structure and Program Plans for Year 1

The Literacy Academy cohort of teachers who participated in this study began in summer 2007 with an intensive five-day program (thirty hours) that stressed the teaching of writing, the reading-writing connection, the importance of teachers themselves writing, and the development of a curriculum that incorporates writing throughout. Four to six follow-up days (twenty-four to thirty-six hours total) were scheduled at each location for the 2007–2008 school year. Most Literacy Academy follow-up dates were completed by mid-spring 2008. These follow-up meetings allowed Literacy Academy participants opportunities to reflect on their implementation

of new strategies, experience new research-based best practices, share and reflect on student work, and receive feedback from facilitators and fellow participants.

DESE provided an MWPN Literacy Academy binder for each participant, which served as the common text for each site. In addition, each participant received two or three books depending on the funding available through each RPDC. Three books commonly used were Nancie Atwell's *In the Middle*, Harry Noden's *Image Grammar*, and Jim Burke's *Writing Reminders*.

Academy Structure and Program Plans for Year 2

Year 2 (2008–2009) of professional development for program teachers included face-to-face and online meetings to continue the work of the Literacy Academy, using resources in the Literacy Academy binders, analyzing student writing, planning for instruction, and sharing teacher writing. To honor teachers' expertise and follow NWP's "teachers teaching teachers" approach, participants shared lessons and writing, both face-to-face and online. Based on Year 1 results, the MWPN research group decided to include in the Year 2 program the modeling of lessons based on particular writing traits, as determined by the writing assessments. Two other new components for Year 2 included the incorporation of online meetings in addition to the in-person sessions, and the analysis of student writing scores from Year 1. Teachers analyzed student scores—their own students' scores if they had participated in the previous year's study or, if not, anonymous scores from the National Writing Project Scoring Conference (see below). After analysis and discussion, teachers considered specific instructional approaches in relation to their analysis of student writing.

Literacy Academy Facilitators for Year 2

A Missouri Writing Project teacher-consultant, Juanita Willingham, coordinated all of the program meetings for Year 2. A long-time teacher-consultant, Juanita understood that teachers are usually eager to implement new ideas once they have tried the activities themselves and discussed the pros and cons of the strategies. Thus, she planned sessions that built on Year 1 writing experiences, and she involved other Literacy Academy facilitators from Year 1 as needed. The face-to-face meetings and classroom visits included opportunities for the teachers to share what they were doing in their classrooms.

Table 3. Goals and products for Year 2 program

Goals	Products
Establish an online presence to continue the Literacy Academy work.	Writing activity and participant writing shared through email list to all participants. Demonstration lessons and student writing samples presented online through video/chat software. Online community created on social network Ning.
Support writing instructional decisions based on Year 1 writing assessments.	Demonstrations (online and face-to-face) that support writing development in areas of diction/word choice, content, and fluency. Sharing (by email) of articles that support writing instructional decisions.
Support online learning and use of technology for writing instruction.	Demonstration lessons provided through online meetings, email, and social network/Ning (including participants' use of computers to support the learning process).
Create a supportive, collaborative, sharing community of teachers.	Demonstrations by participants, sharing of participant writing, sharing of personal and professional information on social network/Ning.
Support elements of effective writing instruction.	Demonstration of modeling a student-teacher writing conference; connect writing and reading instruction; support multiple modalities; practice sentence-combining.

Based on the previous year's student writing scores, the program coordinator focused lessons on voice, word choice, and fluency. Participants shared lessons they had tried or wanted to try in their classrooms. Specific lessons and activities included:

- A writing lesson, "Seven Things About Me" was used as a midyear to develop community and incorporate low-stakes writing opportunities.
- A "Music and Writing" lesson was presented by MWPN teacher-consultant Barri Bumgarner. This lesson used video and music as student warm-ups and cool-downs for writing. Teachers wrote about an object using four rhetorical modes: descriptive, informative, expository, and persuasive.
- "Word chunks" lessons from the Literacy Academy binder were presented by two teachers.
- Sentence-combining lessons were demonstrated for participants by the program coordinator.
- Two study participants shared "drawing" to a poem by Langston Hughes and discussed how words led to images as a lesson on word choice/diction and helping readers visualize.

Because participants were spread out over Missouri, and we did not have funding for them to travel to meeting sites, we experimented with the use of technology to stay connected. Teachers learned a new computer program (Adobe Connect Pro ™, provided at no cost from Missouri State University), which they used for three online meetings during the year. The program's online chat feature allowed teachers to talk through their computers in real time.

A facilitator conducted visits to nine program participants. Due to limited funds, it was not possible to visit all program teachers. Juanita, and the research team determined which teachers to visit based on the amount of data from current program teachers: teachers with more complete sets of data were selected for site visits. These visits had three purposes: professional development (lesson demonstrations and debriefings provided by a MWPN Literacy Academy facilitator), interviews, and classroom observations. Two-person teams traveled to school

districts around the state to visit the nine selected teachers between February and May 2009. These personalized meetings at the school sites were very successful for modeling lessons, observing, and providing participants with the opportunity to talk one-on-one with facilitators and research team members.

Research has shown that effective professional development in writing instruction can have a substantial impact on students' writing performance. Leif Fearn and Nancy Farnan (2007) summarized some of these research findings:

> *Researchers studied over a dozen essays from 500 secondary students and found (1) that students of NWP-trained teachers wrote better than did students working with non-trained teachers and (2) that students working with non-trained teachers in schools where there were trained teachers wrote better than did their age mates under the direction of non-trained teachers in schools where there were no NWP-trained teachers* (p. 18).

We therefore expected that the result of our professional development efforts would be the improvement of student writing and students' development as writers. As described above, an assumption that guides our writing projects, our teaching, and our professional development is that writers develop through the act of writing in authentic, supportive, and ongoing situations. The MWPN facilitators understood that teachers were eager for lessons and strategies they could easily implement in their classrooms. However, the goal of the Literacy Academy was not just to see "good" lessons implemented but also to see teachers reflect on their beliefs and practices about the teaching of writing, a habit that we view as an important part of good writing instruction. The on-demand nature of writing in response to a prompt is only one type of writing that a student does, and we expected that teachers who experienced MWPN professional development would approach their teaching of writing with the same commitment to varied, ongoing writing events in their classrooms.

LOGIC MODEL

Our revised logic model shows a two-year program for the Literacy Academies (see Appendix A for the model revised in 2009). Changes made to this model since the initial proposal include the addition of the 2008–2009 program plans, and the use of classroom observations for the data collection plan only for 2008–2009. A significant reason for changes from the original program and research plans was that DESE was unable to continue funding the academies due to internal restructuring and changes in leadership that determined the funding of such projects. Despite this lack of funding, however, MWPN maintained contact with the regional facilitators and DESE Communication Arts consultants for the duration of the project.

In planning Year 2 of the program, we reconsidered how the work flowed from our resources to our program and how we used data about teachers' instruction (gathered from emails, online meetings, and in-person conversations), as well as the Year 1 student-writing scores. We also looked more closely at our arrows indicating when the process is one-directional and when it is more recursive (e.g., professional development that may impact student writing, which then provides feedback for more of our program work). For example, in the Literacy Academies we modeled the language of the traits described in the NWP Analytic Writing Continuum. As we considered the impact of this descriptive language about word choice, fluency, and idea-development on students' writing, we planned lessons to support such writing.

METHODS

Research Questions

We designed this study to better understand how NWP professional development, specifically that of the MWPN Literacy Academy model, influences teachers' practice and, in turn, their students' writing. A unique feature of this study is the geographic representation: we sought to examine how the Literacy Academy model worked statewide, rather than in a single location.

The key research questions for this study are:

1. To what extent and in what ways has the professional development model embedded in Literacy Academies built program teachers' capacity to teach writing and literacy skills?

2. How, specifically, have teachers applied skills learned in the project to their current classroom practice?

3. How has this change in practice influenced student writing development and growth?

Table 4 indicates the data sources appropriate to each question and summarizes the way the data were analyzed.

Table 4. Research questions and data sources

Research Question	Data Sources	Specific Measures/Analysis
To what extent and in what ways has the professional development model embedded in Literacy Academies built the teachers' capacity to teach writing and literacy skills?	Administered an online survey asking Literacy Academy participants to respond to questions about classroom practices and professional development background. Interviews and observations with program teachers at their schools	Administered in pre and post fashion. Surveys were compared for differences in responses. Interviews and observations coded for teacher's decisions regarding writing/literacy instruction Program—n=12
How, specifically, have teachers applied skills learned in the project to their current classroom practice?	Teacher interviews and observations with study teachers. Surveys	Designed to elicit specific instances of practice change that can be linked to the inservice project. Program—n=12

		Research team coded for evidence of implementation of writing project and/or research-based pedagogy.
Has this change in practice positively affected student writing development and is growth demonstrated in improved writing scores.	Writing prompts. Interviews.	Administered two times per year; scored by NWP using the established continuum. Data also analyzed in a matched comparison. Year 1 Program—n=145 Year 1 Comparison—n=177 Year 2 Program—n=186 Year 2 Comparison—n=50

Research Design and Methods

The study used a quasi-experimental design, including program teachers (twenty-three in Year 1, and fifteen in Year 2) and comparison teachers (thirteen in Year 1, and four in Year 2) . Program teachers had participated in the Literacy Academy; the comparison teachers had no involvement in MWPN professional development. Qualitative methods were used to analyze classroom observations and teacher comments from interviews, observations, and surveys. Quantitative methods were used to analyze student performance on scored writing assessments.

Participants. Although elementary through high school teachers attended the Literacy Academy, this study focuses solely on the middle school teachers. Program teachers were recruited by a regional facilitator at each of the nine DESE professional-development regions. The regional facilitator contacted principals in the region who, in turn, selected a team of approximately two to four teachers to attend. The principals were highly encouraged to attend as well.

Initially, fifty-three teachers who participated in Literacy Academies agreed to participate in the study; twenty-seven teachers were then chosen using a randomized sampling method. Over the

course of Year 1, three teachers withdrew from the study due to scheduling conflicts and illness. To compensate, additional teachers were added to our program group from the original list of fifty-three teachers. When a selected teacher dropped, we randomly added a teacher who had signed a consent form but had not been chosen in the first round of random selection. For Year 2, fifteen program teachers were able to continue in the program and in the study. Some teachers from Year 1 had moved, changed teaching positions, or retired.

Twenty comparison teachers, recommended by DESE, were selected from schools across Missouri. Comparison teachers were chosen by demographics of the school, including school population and free- and reduced-lunch status, as well as geographic region that was comparable to the program schools. (While a few were from suburban and urban areas, most served high-needs students in rural settings.) Three comparison teachers withdrew during Year 1 due to scheduling conflicts and illness. Thus, seventeen comparison teachers participated in Year 1 data collection.

Consent to participate was received from program and comparison teachers, as well as from administrators at each district. Institutional Review Board authorization was granted by both the University of Missouri and the University of Missouri–St. Louis. Table 5 provides information about the program and comparison teachers involved in the study.

Table 5. Characteristics of program and comparison teachers for Years 1 and 2

	Program Teachers	Comparison Teachers
Number	12	13
Grade levels taught	5th grade = 1 teacher 6th grade = 3 teachers 7th grade = 3 teachers 7th–8th grade = 2 teachers	5th grade = 2 teachers 6th grade = 1 teacher 7th grade = 2 teachers 6th–8th grade = 3 teachers

	6th–8th grades = 2 teachers 8th grade = 1 teacher	9th grade = 1 teacher
Mean years teaching	4.82	10.8
Level of education	Bachelors = 9 teachers Masters = 3 teachers (12 reporting)	Bachelors = 2 teachers Masters = 9 teachers (11 reporting)

In Year 1 (2007–2008), each DESE professional-development region paid for food and provided space for the meetings. In addition, DESE provided teachers $1,000 stipends for the five-day summer session, and, in most cases, provided substitute-teacher pay for the follow-up days during the school year. In addition to the funding provided by the state and individual school districts, the program teachers received the Literacy Academy binder.

At the end of Year 2, all participating teachers (program and comparison) received a survey to complete. On this survey, teachers self-ranked their level of participation in the Literacy Academy. In Year 1, most teachers participated for approximately fifty hours; Year 2 showed greater variance of participation. The maximum of potential participation hours would be close to thirty-six hours in addition to online participation (Ning and email). Appendix E provides more detail regarding contact hours and the types of programs that were implemented.

Data Collection. Student writing samples, interviews, classroom observations, and surveys were used to understand the development of teacher practices and the effects on student performance. Data collection began in summer 2007 and continued throughout the 2007–2008 and 2008–2009 school years. Of the program teachers, three were in a school district that adopted a scripted program during Year 2. In February 2009, this high-poverty, high-minority urban district laid off 25 percent of its teachers and reassigned students to different teachers. As a result, all of the post

writings for two teachers came from students who had not completed a pre writing sample. Complicating things, three program teachers in this district were not allowed to participate in any ongoing professional development, including the Literacy Academy follow-up sessions. We included the data gathered from these teachers, but their participation was very low.

Writing samples. Timed pre and post writing prompts were administered to students and submitted for scoring from approximately 159 middle school students of program teachers and 177 middle school students of comparison teachers in Year 1, and 186 program and 50 comparison classrooms in Year 2. The students wrote responses to assigned writing prompts in their communication arts classes. Program teachers administered initial writing prompts in November and December of Year 1; comparison groups completed initial samples in December–January. Post essays were completed from late April to May for both program and comparison teachers. Several unexpected factors hindered the timing of the writing assessments in Year 1: information from DESE for determining comparison schools took much longer than expected; receiving permission from the superintendents, and then making principal and teacher contacts to determine and receive teacher consent was a time-consuming process; and finally, the teachers were not able to administer writing assessments when planned due to closure of many schools in Missouri from snow and ice during the late fall of 2007.

Administration of writing assessments in Year 2 faced similar challenges. Pre essays were completed in October and November, and post essays were completed in late April to May. Delays were again due to challenges receiving consent, lateness in teacher replies, and mailing difficulties from the university fiscal/postal process.

In each year of the study, two prompts from the National Writing Project bank of prompts were modified for parallelism and consistency and were administered randomly to one of each program and comparison teachers' classes. The process of determining prompts each year took place through a series of emails between MWPN site directors and NWP team members who shared comments and then voted on the final two prompts (see Appendix B).

Assignment of writing prompts was partially counterbalanced; each year program and comparison teachers' students responded to the same prompts, though not necessarily in the same administration (pre or post). Timing of the assessments was carefully planned to coincide with the spring Missouri Assessment Program—the state's standardized test—in April 2008 and 2009. Before submitting student writing to be evaluated, a research assistant at the University of Missouri removed all identifying information and coded the writing to help researchers track the prompt and the teacher for pre/post essays. Table 6 provides the counterbalanced design used for both years.

The testing situation was not ideal, as our research team did not administer tests and was not able to control the variables of the classroom or schedule. Teachers determined when to administer the writing prompts (we asked them to do so within a two-week window). Prompts were mailed out in packages that were then mailed back to the university upon completion. Due to delays explained above, the pre tests for both years were administered much later than our desired August/September date. The later fall administration date meant that students would have already experienced two or three months of instruction that would likely result in higher scores.

It is likely that gains in scores between pre and post would be affected by this. Likewise, one of the teachers was on a semester schedule, so her pre writing was administered in January, when she first started teaching a new group of students. We did not collect writing samples from self-contained classrooms, and we focused the collection of writing samples on seventh grade classrooms.

Table 6. Counterbalanced design for the administration of writing assessments

Time of Administration	**Group 1** (One half of program and comparison teachers)	**Group 2** (One half of program and comparison teachers)
October–January	Prompt A	Prompt B
April–May	Prompt B	Prompt A

Writing Performance Evaluation

Evaluative framework. To ensure technical rigor and credibility, scoring and data processing were conducted at a national scoring conference, independent of the local sites involved in the research. The scoring applied the NWP Analytic Writing Continuum, a writing assessment system based upon the framework of the Six+1 Trait Writing Model (Bellamy 2005). The Analytic Writing Continuum, which includes refined and clarified definitions of the constructs measured as well as anchors, scoring commentaries, training and calibration processes, assesses the following attributes of writing:

- Content (including quality and clarity of ideas and meaning): The content category describes how effectively the writing establishes and maintains a focus; selects and integrates ideas related to content (i.e., information, events, emotions, opinions, and perspectives) ;and includes evidence, details, reasons, anecdotes, examples, descriptions, and characteristics to support, develop, and/or illustrate ideas.
- Structure: The structure category describes how effectively the writing establishes logical arrangement, coherence, and unity within the elements of the work and throughout the work as a whole.

- Stance: The stance category describes how effectively the writing communicates a perspective through an appropriate level of formality, elements of style, and tone appropriate for the audience and purpose.
- Sentence Fluency: The sentence fluency category describes how effectively the sentences are crafted to serve the intent of the writing, in terms of rhetorical purpose, rhythm, and flow.
- Diction (Language): The diction category describes the precision and appropriateness of the words and expressions for the writing task and how effectively they create imagery, provide mental pictures, or convey feelings and ideas.
- Conventions: The conventions category describes how effectively the writing demonstrates age-appropriate control of usage, punctuation, spelling, capitalization, and paragraphing.

A national panel of experts on student writing, along with senior NWP researchers, determined that the Six +1 Trait model, while sufficiently comprehensive, required extensive modifications to make it more appropriate for use in research studies. The following modifications were implemented in the NWP Analytic Writing Continuum 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 that might be observed.
- The language defining the attributes 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 rubric previously included references to the reader's reactions or to the writer's personality as the basis for judgment).
- Particular traits—notably Content (including quality and clarity of ideas and meaning), Structure, and Stance)—underwent considerable revision in order to bring conceptual coherence to the constructs and thereby to enhance the reliability and validity of the scores relevant to those constructs.
- National anchor papers, detailed scoring commentaries, and extensive training and calibration procedures were developed to ensure not only the technical rigor of the system but also that the performance standards implicit in the system were sufficiently and appropriately high.

Scoring. The writing samples from MWPN were among those from seven LSRI sites in 2008 and eight LSRI sites in 2009 scored at national conferences held in June 2008 and 2009. 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, group [program or comparison], or time of administration [pre test or post test]). In 2008, of the 4,571 papers from students in the middle and high school grades—which included the student samples reported in this research project, 855 (19 percent) were scored twice by different scorers so that reliability could be calculated. In 2009, of the 7,821 papers—which included the student samples reported in this research project, 1,023 (13 percent) were scored twice by different scorers so that reliability could be calculated.

The scorers participated in six hours of training at the beginning of the conference. Their 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). Reliabilities examined by attribute across grade levels (measured as interrater agreement, defining agreement as two scores being identical or within one single score point of each other) ranged from 83 to 93 percent with an aggregate across all scores of 87 percent in 2008 (Table 7); 86 to 92 percent with an aggregate across all scores of 89 percent in 2009 (Table 8). All data were entered via optical scanning with built in checks for acceptable score ranges and the like. The resolution of all discrepancies and adjudication of disagreements within the double-scored set of papers produced a highly accurate data file for use in our analysis.

Table 7. Reliability rates for writing scores by analytic attribute for 2008

Number Scored	All Elements	Holistic	Content	Structure	Stance	Sentence Fluency	Diction	Conventions
4,571	87%	91%	88%	87%	84%	84%	88%	85%

Table 8. Reliability rates for writing scores by analytic attribute for 2009

Number Scored	All Elements	Holistic	Content	Structure	Stance	Sentence Fluency	Diction	Conventions
7,821	89%	92%	91%	90%	86%	88%	89%	89%

Interviews

In May 2007, interviewers were trained by Astra Cherry, a Gateway Writing Project teacher-consultant with a strong NWP background in interviewing and in training interviewers. Interviews for program teachers were completed in late fall 2007, spring 2008, and 2009. A teacher-consultant interviewer who had not worked with the Literacy Academy traveled to the teachers' schools, conducted interviews, and transcribed the notes.

As Year 1 interview transcripts were read and coded, follow-up questions were collected. Year 2 interviews included a protocol similar to Year 1, with these additional follow-up questions. Year 2 interviewers were retrained by reviewing materials developed by Astra Cherry, reading Year 1 transcripts, and engaging in discussions with the program coordinator who had worked with participating teachers for the face-to-face and online meetings.

Heather Statz, Missouri Writing Project (MWP) teacher-consultant, completed most of the Year 2 interviews with assistance from a second interviewer. Their preparation included rereading chapters from Irving Seidman's *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*. In preparing for interviews, we worked toward objectivity by adhering to the interview protocol questions (Appendix C).

Observations and Surveys

Year 2 included observations of nine classrooms. Using sample protocols from other NWP LSRI projects, the MWPN project team revised and developed the protocol to guide our observations (Appendix D). Each Literacy Academy participant completed an online survey. Program teachers completed surveys during the Literacy Academy and during the spring semester 2008, near the end of Year 1. Comparison teachers completed surveys in the fall of 2007. In 2008–2009, all participating teachers were asked to complete a slightly modified, hard-copy version of the survey to see if they had changed any of their practices from the previous year.

RESULTS OF STUDENT WRITING PERFORMANCE

Year 1 Results

Initial analysis of interviews, surveys, and student-writing samples demonstrates the Literacy Academy's positive results on teachers' attitudes and perceptions of their instruction, and on student-writing achievement.

Student Performance. Our first step in analyzing student data was to organize the scores we received from the NWP National Scoring Conference. All entries that did not contain both pre and post scores for the writing assessment were deleted before statistical analysis began.

Two comparison teachers out of twenty were found to have participated in a writing project summer institute in Missouri, and so were dropped from the study. Having filtered the data, descriptive statistics were run. Working with a statistician at the University of Missouri, we initially looked at the holistic scores and found the mean and variance for program and comparison groups in the pre and post test scores.

Holistic scores. Table 9 provides the mean for pre and post holistic scores for program and comparison groups. The comparison students scored higher holistically on the pre test, although the groups ended with similar holistic scores.

Table 9. Mean of pre and post holistic scores

	Pre test	Post test
Program (n=159)	3.33	3.46
Comparison (n=177)	3.45	3.50

A one-way repeated measures Analysis of Variance (ANOVA) was used to examine holistic scores across treatment groups (program and comparison) at multiple time points (pre and post). In this regard, holistic scores on the pre test served as a covariate in the analysis of variance. Although student scores of both program and comparison teachers increased from pre to post assessment, the within-subjects contrasts were not significant ($F = 0.399$, $p = .528$). That is, there was no differential treatment effect on students' holistic scores across time.

Subscales. Consistent with trends in holistic scores across time, student scores on the subscales increased over time. More specifically, for both the program and comparison groups, mean scores increased from pre to post assessment across all six subscale measures (see Table 10). The mean change in subscale scores ranged +0.03 for Diction (program) to +0.21 for Conventions (comparison). Although the mean score increased from pre to post assessment for all teachers, the magnitude of the increase was greater for program teachers on four of six

subscales (Structure, Content, Stance, Sentence Fluency) but was greater for comparison teachers on the remaining two subscales (Diction, Conventions).

Table 10. Means of holistic and subscores, pre and post assessment, and mean gain scores

Category	Group	Mean Pre	Mean Post	Mean Change (Pre to Post)
Holistic	Program	3.33	3.46	+0.13
	Comparison	3.45	3.50	+0.05
Structure	Program	3.15	3.28	+0.13
	Comparison	3.15	3.26	+0.11
Content	Program	3.36	3.49	+0.13
	Comparison	3.49	3.59	+0.10
Stance	Program	3.47	3.65	+0.18
	Comparison	3.65	3.82	+0.17
Sentence Fluency	Program	3.35	3.50	+0.15
	Comparison	3.40	3.50	+0.10
Conventions	Program	3.40	3.53	.13
	Comparison	3.39	3.60	.21
Diction	Program	3.28	3.31	.03
	Comparison	3.34	3.53	.19

Note: n=159 (program); n=177 (comparison)

As in the case of holistic scores, a one-way repeated measures Analysis of Variance (ANOVA) was used to examine scores on each of the six subscales, across treatment groups and time. Pre assessment scores were used as a covariate in the analysis of variance. As depicted in Table 11, no differential treatment effects were determined for any of the six subscales, with p values exceeding .560 for five of six subscales.

Table 11. Tests of within-subjects contrasts, by subscale

Subscale	Source	*F*	Significance
Structure	Time*Treatment	0.029	.864
Content	Time*Treatment	0.063	.802
Stance	Time*Treatment	0.008	.930
Sentence fluency	Time*Treatment	0.210	.647
Conventions	Time*Treatment	0.331	.566
Diction	Time*Treatment	1.646	.200

Note: n=159 (program); n=177 (comparison)

Although a comparison of the holistic scores shows little difference, overall, program students improved more and improved in more of the categories than the comparison students. The gain scores, holistically, are a good overall view of the positive effects, albeit slight at this point, on student writing performance.

Year 2 Results

Holistic scores. Table 12 provides the mean for pre and post holistic scores for program and comparison groups. The comparison students scored higher holistically on both the pre and post test.

Table 12. Mean of pre and post holistic scores

	Pre test	Post test
Program (n=186)	3.45	3.51
Comparison (n=50)	3.91	4.06

A one-way repeated measures Analysis of Variance (ANOVA) was used to examine holistic scores across treatment groups (program and comparison) at multiple time points (pre and post). In this regard, holistic scores on the pre test served as a covariate in the analysis of variance. Although both student scores of program and comparison teachers increased from pre to post assessment, the within-subjects contrasts were not significant ($F = 0.263$, $p = .609$). That is, there was no differential treatment effect on students' holistic scores across time.

Subscales. Consistent with trends in holistic scores across time, student scores on the subscales increased over time. More specifically, for both the program and comparison groups, mean scores increased from pre to post assessment, and this was true for four of six subscale measures (see Table 13); mean student scores on the Content and Stance subscales remained essentially stable over time. The mean change in subscale scores ranged -0.01 for Content (program) to +0.33 for Conventions (comparison). Although the mean score increased from pre to post assessment for all teachers, the magnitude of the increase was greater for comparison teachers on four of six subscales (Structure, Stance, Conventions, Diction) but was greater for program teachers on the Sentence Fluency subscale; equivalent (yet negligible) gains were observed on the Content subscale.

Table 13. ***Means of holistic and subscores, pre and post assessment, and mean gain scores***

Category	Group	Mean Pre	Mean Post	Mean Change (Pre

				to Post)
Holistic	Program	3.45	3.51	+0.06
	Comparison	3.91	4.06	+0.15
Structure	Program	3.22	3.31	+0.09
	Comparison	3.69	3.94	+0.25
Content	Program	3.55	3.56	+0.01
	Comparison	3.97	3.98	+0.01
Stance	Program	3.75	3.74	-0.01
	Comparison	4.20	4.22	+0.02
Sentence fluency	Program	3.56	3.71	+0.15
	Comparison	4.02	4.13	+0.11
Conventions	Program	3.41	3.51	+0.10
	Comparison	3.77	4.10	+0.33
Diction	Program	3.54	3.71	+0.17
	Comparison	3.86	4.10	+0.24

Note: n=186 (program); n=50 (comparison)

As in the case of holistic scores, a one-way repeated measures Analysis of Variance (ANOVA) was used to examine scores on each of the six subscales, across treatment groups and time. Pre assessment scores were used as a covariate in the analysis of variance. As depicted in Table 14, no differential treatment effects were determined for any of the six subscales, with p values exceeding .78 for three of six subscales.

Table 14. Tests of within-subjects contrasts, by subscale

Subscale	Source	*F*	Significance
Structure	Time*Treatment	0.838	.361
Content	Time*Treatment	0.000	.985
Stance	Time*Treatment	0.018	.893

Sentence fluency	Time*Treatment	0.076	.783
Conventions	Time*Treatment	1.530	.217
Diction	Time*Treatment	0.850	.358

Note: n=186 (program); n=50 (comparison)

ANALYSIS OF INTERVIEWS, OBSERVATIONS, AND SURVEYS FOR YEARS 1 AND 2

Our research team analyzed interview transcripts and survey data primarily from those teachers who completed all aspects of the study (survey, interview, and pre/post writing samples) for Years 1 and 2. Interpretive data analysis (Hatch 2002) was used as the basis for qualitative analysis. This approach is "about making inferences, developing insights, attaching significance, refining understandings, drawing conclusions, and extrapolating lessons" (Hatch 2002, p. 180). The following steps of interpretative analysis were followed:

1. Read through the data set over and over . . . to be immersed.
2. Review impressions previously recorded in research journals and/or bracketed in protocols, and record these in memos.
3. Read the data, identify impressions, and record impressions in memos. Then study the impressions noted and write memos.
4. Study memos for salient interpretations . . . deciding if the insights within them are worthy of becoming part of final report.
5. Reread data, coding places where interpretations are supported or challenged.
6. Write a draft summary . . .put the interpretations in memos into a "story" that others can understand.
7. Review interpretations with participants.
8. Write a revised summary and identify excerpts that support interpretations. (Hatch 2002, p. 178–189)

During the first reading of the data and at all readings, memos were kept so as not to lose thoughts about the data. In making these initial notes, we tried not to pigeon-hole the data before a "sense of the whole" was obtained (Hatch 2002, p. 181).

Transcripts of the interviews and survey responses were read and coded. Throughout the early analysis of interviews, we kept a list of codes. At various research team meetings, we compared these codes to the goals of the Literacy Academy. From this alignment, we formed and revised a coding dictionary. We based our initial codes on what we found in the data (a "bottom-up" approach). A key in step three in all of the interpretive-analysis steps was to root the findings in the data: "Good data are a record of 'what happens,' and interpretations that are not based in that data are indeed vacant" (Hatch 2002, p. 185). We reread the data in light of new emergent themes, creating a recursive analysis.

Surveys were created using the online tool Survey Monkey, as well as in hard-copy. From the surveys, we derived demographics (e.g., a teacher's years of experience). These surveys were coded similarly to the interviews, and then the codes were aligned with the interviews and observations in order to triangulate the data.

Once all data were collected, we created packets of the data for each program teacher, keeping each teacher's interviews, observations, and surveys together. Then, research team members went through the entire packet, coding again, and finally writing a memo that brought together all of the data, noting especially changes in teacher beliefs and practice, patterns, and salient characteristics related to our research questions.

Results of Literacy Academies on Teachers' Practice

As we analyzed the qualitative data to determine the impact of the professional development on teachers, several categories of classroom practice emerged. The results in this section are

organized around components of the Literacy Academy that were evident in participating teachers' classroom practice: the teacher as writer, a focus on revision and the writing process, a focus on standards, a sense of community, movement toward a writing process pedagogy, and teachers' increased confidence.

The Teacher as Writer. One of the goals of the Literacy Academy series of professional development was to support teachers as writers. Because writing can be time consuming and challenging, and teachers may lack experience as writers, many teachers dislike writing themselves and dread teaching it to others. This view can negatively influence students' opinions about writing and motivations to write. We wanted our professional development to provide teachers many opportunities to write (and experience writing in a positive way), to share writing, and to link their own experiences as writers to their classroom practice.

This goal of supporting teachers as writers was achieved: teachers consistently started seeing themselves as writers or reclaiming identities as writers during the Literacy Academy. Of the eight teachers we interviewed and observed, six stressed changes in themselves as writers because of the Literacy Academy. As Marie observed in Year 2, "I never was [a writer], but now doing this [Literacy Academy] and teaching, I feel like I have blossomed as a writer. And I think that helps me understand the students a little bit better because I hated to write and now I really enjoy it." Teachers were more likely to model writing and to write with their students, as they saw that they could influence their students by trying out their own writing assignments, sharing their writing with students, and experiencing the writing their students were engaged in.

Focus on Revision and Process Writing. On the post surveys, the teachers acknowledged a greater focus on various aspects of the writing process, reflecting an overall shift away from simply *assigning* writing, toward *teaching* writing. One important aspect of the writing process is revision; another goal of the Literacy Academy was to guide teachers in teaching revision as an important part of writing. Most of the program teachers were given Barry Lane's *After the End: Teaching and Learning Creative Revision*, a book of strategies and reasons for careful instruction in the craft of revision. As a result of this focus, teachers reported that students started to revise more. For instance, one teacher noted that previously, her students wrote daily about literature but did little revising. As she started expanding their writing opportunities, they wrote less frequently about literature, but students began spending more time revising their writing, expanding their experiences with process-based writing and their repertoire of genre.

A Focus on Standards. An additional goal of the professional development was to make a clear connection between effective writing instruction and state standards in communication arts. Rather than see the teaching of standards as an add-on to what teachers do, we wanted a clear alignment between what is expected of students across the state, and what teachers are doing (or could be doing) to develop and support writers. We therefore used the workshop approach of writing instruction as a framework to model and support the use of mini-lessons. Program teachers determined topics for mini-lessons based on their assessment of student writing in light of state standards.

The flip side of focusing on standards was the risk that fear would motivate teachers, rather than inquiry and learning. Cathy (who taught at the school that ended up not collecting data for the

latter part of the study due to their change in language arts curriculum) explained in her interview in Year 1, "[The state test] overshadows everything we do." Likewise, Heather reported that her school administration asked that the teachers "cut everything that is not in the Grade Level Expectations." Such directives can be important and helpful but may also cause teachers to not trust themselves and their own professional decision making.

A Sense of Community. As educators, we know that a supportive classroom community fosters learning. We tried to establish the same feeling of community for the teachers who participated in the Literacy Academy. This sense of community in turn allowed school-based teams of teachers to strengthen their language arts faculty, and also built a stronger sense of community among teachers from different schools. Several teachers commented on the powerful network that formed as a result of the Literacy Academy professional development. Although teachers felt that the face-to-face meetings had the greatest impact on their sense of community, they also used email and online meetings to sustain these professional relationships and exchange ideas. The accessibility of the program facilitators was another important dimension of community. The teachers asked the facilitators questions and made requests for specific information to meet their classroom needs. On her final survey, Janet explained that the online sharing was helpful, "but most helpful and encouraging was the visit by Juanita [the facilitator] who modeled a lesson!"

Teacher Leadership. One of the results of this program, as numerous interviews attest, was the dissemination of ideas as teachers spread their newly acquired approaches to the teaching of writing, establishing themselves as leaders in their school communities. Because teachers

attended Literacy Academies in teams, they found that implementing change was easier due to the collaboration and shared understanding. They reported taking on more leadership, such as giving presentations at faculty meetings to share what they were doing in their classrooms. One teacher reported that when a new teacher was hired at his school, he and fellow Literacy Academy teachers shared what they were doing in their classrooms for the teaching of writing. Finally, several program teachers became leaders not just at their schools but also at local writing project sites: at least six teachers were recruited into summer institutes at Writing Project sites around the state.

Toward Writing Process Pedagogy. The Literacy Academy is designed to support teachers as writers and to help them implement elements of the writing workshop model: time to write, choice in writing topics, authentic assessment (including the use of portfolios), and writing conferences. Teachers implemented many of the practices supported in the Literacy Academy; most of them had not previously used these methods for teaching writing before participating in the professional development. As teachers moved toward a writing-process pedagogy, they increasingly modeled various aspects of writing processes for their students. Although grammatical conventions were still important, teachers reported changing from textbook- or worksheet-based lessons, and instead implementing grammar lessons based on student writing. This shift toward writing process pedagogy among program teachers is exemplified by Ryan's description of the dramatic changes in his teaching:

> *My first six to seven years, I taught the traditional way—you know, read a story, answer the questions, do grammar, spelling. You do all of these things and hardly any writing until the [state test] comes around and then you have to, you know, shuffle in writing so they can get it right. Once we started taking these workshops I was just like, "No, there's no way that can work." And I started trying little*

> *things that [the facilitators] did, and my kids got it, and I thought, "I can't believe this works."*

The teacher who worked with Ryan's students the next year was astonished by the quantity and quality of these students' writing.

More writing and time to write. Many teachers began using daily writing (e.g., freewriting/quickwrites) in their classes. They consistently reported that their students were writing more than before as a result of their involvement in the Literacy Academy and their own understanding and experience of the value of daily writing. Marie's explanation in Year 2 illustrates one approach to using daily writing:

> *We set aside ten or fifteen minutes a day, and I'll either give them a writing prompt for the day, or they can write thoughts and feelings about what they read . . . and then I try to have them take, choose one piece and take that into the final copy stage for grading. I try to do that once, maybe twice, a quarter.*

More genres of writing. Teachers who had not previously used a wide variety of genres in their teaching (in some classes, students wrote only in response to literature) came to understand that students need practice and experience in different modes and genres of writing. Program teachers began providing students opportunities to write in multiple genres, including fiction, nonfiction, and poetry. After the Literacy Academy, more teachers were equipped to engage students in writing poetry, memoir, fiction, exploratory, research, and multi-genre projects.

Barb's case illustrates how dramatic this change in teaching could be. In Barb's initial survey, she indicated that students wrote in only about three genres, including note taking. By the end of

Year 1, she reported that her students were regularly writing in all of the fifteen genres addressed by the Literacy Academy, many of them weekly or monthly.

Elements of Writing Workshops. Several program teachers began or strengthened their uses of workshop-based approaches to writing instruction, such as holding writing conferences with students, determining individual students' needs to plan instruction, teaching grammatical conventions in the context of writing, and implementing mini-lessons. Some teachers began using portfolios of student work to assess student writing. Teachers explained that their use of writing workshop techniques came from the Literacy Academy. While some teachers continued to use stand-alone grammar lessons, as part of the shift toward a writing-process pedagogy many teachers increased their use of lessons that tied grammatical concepts to students' own writing.

Assessment to Guide Instruction. The Literacy Academy drew on the Six Traits language in modeling instruction focused on revision. Teachers carried this language into the classroom; Laura reported developing a workshop approach that included an explicit focus on the six traits in both revising and grading. For teachers like Laura, assessment increasingly guided instruction, as evidenced in the use of rubrics, portfolios, and sample papers that students analyzed.

For example, one of the approaches from the Literacy Academy was the use of daily dictation for language study. Ryan reported using daily dictation in his classes, illustrating how assessment can guide instruction. Rather than take all of his students through the same spelling and grammar lessons, Ryan realized that his students needed different lessons. Based on his experience in the Literacy Academy in Year 1, he implemented Friday dictation tests: "You give students a

dictation test and then you come back after the test and you teach them something that a majority of the class missed. And it could be different from class to class."

Confidence as Writers and Teachers. One of the most important results of the Literacy Academies is program teachers' increased confidence in their ability to teach writing, as measured by pre and post survey responses. Teachers demonstrated their understanding of the theories and research informing the Literacy Academies in various ways. Many demonstrated their increased confidence as they began to rely less on textbooks, and more on the use of students' own writing to guide instruction. Janet exemplifies this increase in confidence, as shown in her survey response from Year 2:

> *I was a very "unsure" writing teacher. I felt as though a lot of my lessons were "hit or miss." Now I feel that I have more of a blueprint or a game plan for my writing instruction throughout the year. I also have a network of people and resources to call on when needed.*

Results of Literacy Academy on Student Outcomes

Our combined analysis of student writing scores, interviews, and observations suggests that as teachers aligned their classroom practices with the goals of the Literacy Academies, student writing improved. While the test scores provide detailed snapshots from two moments in the school year of specific types of on-demand writing, we complemented that data with teachers' ongoing formative and summative assessments carried out in the classroom. Teachers' evaluative comments about student writing provide further evidence of the correlation between their professional development and their students' writing achievement. Because teachers observe

their students as writers on a daily basis, we value these self-reported assessments of student work as important sources of data regarding student achievement.

Teacher Perceptions of Student Outcomes

Student Writing Frequency Increases. Whether in daily freewrites, journals, or writer's notebooks, teachers reported that their students wrote more after their teachers participated in the Literacy Academies. Ryan, who had previously followed a fairly "traditional" approach to teaching in which he reserved writing instruction for later in the year (just before the state test), in Year 2 described how he changed his teaching to allow for more writing:

> *You give them ten minutes [mini-lessons] and then you get them working on it. Mondays just give them the entire day. They know when they come in they are going to write from beginning to end. They're writing pages in their writer's notebook. Whether they are going to take it to final draft or not, they are still writing, writing, they are practicing. Then Tuesdays we kind of do some things and I allow them to conference if they need to. Then Wednesdays and Thursdays I conference formally.*

Increased engagement in writing led to growth. Teachers described an increase in students' interest in writing, as a result of the change they made in writing instruction (including increased time to write). Marie observed that her students felt more comfortable writing, enjoyed writing, possessed more confidence in their writing, and (most surprising to her) chose to write. As Literacy Academy lessons were implemented and students wrote more often, teachers noted that students had more positive attitudes toward writing and greater confidence as writers. Researchers visiting classrooms noted students' excitement to write and to respond to classmates' writing.

Several teachers noted overall and specific growth in student writing, including improved fluency and voice. For example, Heather works in a smaller district in which she teaches some of

the same students for multiple years. Comparing previous student writing to the student writing she observed after her first year in the Literacy Academy, she explained this change in her students' attitudes: "They take their writing more seriously. Instead of just turning in a paper and being done with it, they're concerned with what makes a paper good."

DISCUSSION: THE ROLE OF PROFESSIONAL DEVELOPMENT

Teachers consistently called the Literacy Academies "the best PD" they had ever experienced: 100 percent of the interviews, as well as numerous emails, phone conversations, and surveys, included such statements. Factors that teachers highlighted included:

- affirmation of teacher as writer and as professional
- intense face-to-face time
- classroom visits to provide specific guidance
- ongoing access to facilitators (email questions and get an answer; use of online resources)
- relationship established between facilitator and teacher
- increase in state test scores for communication arts
- connection to other content areas
- enhanced teacher and student ability to reflect

Echoing many teachers' enthusiastic comments, Heather summarized her experience in the Literacy Academies this way: "I'm a million times over a better teacher!"

As the results described above show, overall the program teachers experienced the Literacy Academies positively, implemented what they learned in the professional development, and reported corresponding changes in their students' writing. However, this study faced numerous challenges due to constraints imposed on teachers at their school sites during the two years. These constraints included adoption of prescribed curricula, directives from administration, and the implementation of new assessment programs. One school adopted a new literacy curriculum midway through the school year; because the teachers from this school were not permitted to deviate from the prescribed curriculum, they were unable to continue in the Literacy Academy or to have students complete the post writing assessment. Because of constraints like these, our data is less rich and robust than we would have liked it to be.

On the other hand, because of the two-year, longitudinal nature of the study, we were sometimes able to use the professional development to help teachers effectively navigate the constraints they faced. In one case, the adoption of a new, highly prescriptive reading assessment program concerned one of the teachers because it hindered her writing instruction. The rigidly timed blocks of the reading assessments allowed less time for student writing; as Marie explained, "writing last year [before the reading assessments] was better because just trying to get everything into the day is hard." In response, a Literacy Academy facilitator visited Marie's classroom for a day during Year 2 and helped her improve the use of time so that she was able to manage the reading-assessment requirements *and* teach writing more effectively. What could have been a challenge to this teacher's implementation of Literacy Academy professional development, instead turned into a positive opportunity to work within the constraints of a

school's context. Experiences like these point to the importance of long-term professional development that can respond to individual teachers' unique circumstances.

This study also points to the important role of professional development that supports teachers' trust in their own decision-making abilities, especially in a teaching climate that stresses the need to value the state standards and follow administrative directives. Like other teachers, Ryan described administrative directives requesting that teachers use only the state standards in determining what to teach and to "cut everything else." Similarly, teachers sometimes dismissed their own evaluations of student work, deferring to the state standardized test scores. While using the state standards as a guide can be beneficial to teachers, it can also undermine teachers' confidence in their own decision-making abilities. Professional development like the Literacy Academies can strengthen teachers' confidence in their decision-making abilities, because teachers are given a chance to experience approaches that they will implement in their classrooms and then given support as they implement those approaches in the context of the requirements of their school and district.

Another challenge to this study that proved instructive was the use of technology. Brinkeroff (2006) notes four categories of barriers to teachers integrating computer technology into their curriculum: resources; institutional and administrative support; training and experience; and attitudinal or personality factors. Although the use of technology was a program goal, teachers encountered many of these obstacles in implementing technology for their own professional development or for their classroom use.

Resource barriers included insufficient numbers of computers; out-of-date hardware and software; and limited, slow, and intermittent Internet connections. Institutional and administrative issues included the ban or restriction of certain websites and of teachers loading their own instructional hardware. Teachers were sometimes blocked from accessing online meetings. (One teacher wanted to implement blogs for her reading and writing instruction, but the blog site was blocked by the school. Instead, she posted chart paper around the room to imitate the public sharing of responses that a blog offers, and the students experienced a wall blog in their classroom.) Workloads and scheduling also presented barriers, as substantial time is often needed to prepare lessons integrating technology (or to learn the technology). Attitudinal and personality factors included fears of trying to stay one step ahead of tech-savvy students. A lack of basic computer knowledge can be very disconcerting for a teacher who is used to being organized, hands-on, and goal oriented (Capelle 2010). Novice teachers, those of a generation of "digital natives" who are fluent in the use of technology (Prensky 2006) may be vulnerable to the opinions of veteran teachers who may not value the integration of technology. If annual yearly progress (AYP) has been met with the lessons and strategies they have used, veteran teachers may resist incorporating technology (Capelle 2010). Our experience points to the importance of anticipating these challenges, and allocating time and resources to address them as part of successful professional development

FUTURE RESEARCH

This study is promising because it suggests links between Literacy Academy professional development, changing classroom practices, and student writing achievement. Although many aspects of these links are worth exploring further in future research, questions that arose during our analysis seems especially compelling: *As teachers change their practice through their*

involvement in the Literacy Academy, how do their theoretical frameworks or beliefs about writing instruction change? Are some teachers changing their practice without changing their theoretical framework about writing instruction? We hope to continue to get a clearer view of the effectiveness of our MWPN professional development to improve middle school writing experiences and performance. This question therefore matters in designing professional development that includes the optimum amount of attention to its theoretical underpinnings. So we envision future research focused on the role of teachers' evolving theoretical understandings, in their ability to support the growth and achievement of their students as writers.

CONCLUSION

This study demonstrates the positive impact of the Literacy Academy professional development on writing instruction and on teachers' understanding and confidence as teachers of writing. Although the program teachers' student writing gains were not statistically significant, the overall improvement in program student scores suggests links between the professional development, changing classroom practices, and student writing scores. However, it is important to remember that the scores are only one view of the students' achievement. Other data, such as interviews and surveys, show that teachers overwhelmingly saw their students improving as writers due to the increased time spent writing, the supports the teachers were able to provide the writing processes, and the opportunity to model and be writers themselves.

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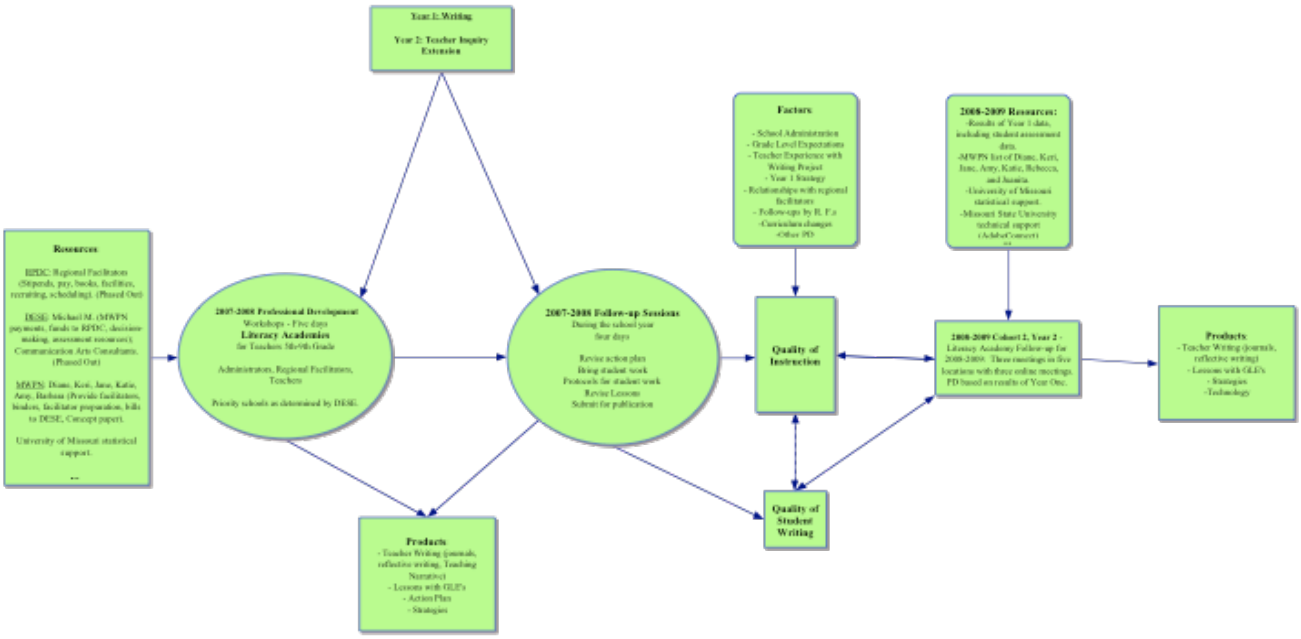
Appendix A

Logic Model



Appendix B

Prompts

Directions for Teachers

Enclosed with these directions, you will find the following documents:

- Instructions for how to administer the writing prompt
- A packet for each student, which includes:
    - The prompt being administered
    - Ample lined paper for students to write to this prompt
- Instruction for what to do with the samples after completing the writing session

1. Please conduct this writing sample during the April 28–May 9 window. It is very important that all schools participating in this study administer the sample within a short window of time so that this study is equitable to all participants.

2. Teachers within this study will receive one of multiple prompts. Do not be concerned if a fellow teacher has a different prompt from the one your students received.

3. It is important that you administer this prompt to the same students who completed the previous writing sample for this study. Remember: <u>in cases of block scheduling where the block may be 90 minutes, please restrict the student writing to 45 minutes so that the study may be administered equitably to all students</u>.

4. Please make sure students write their name, your name, and the date on the paper. However, student and teacher anonymity will be ensured as the information will be blacked out by researchers at MU and replaced with a code.

5. As soon as possible after administering the prompt, return the completed samples using the enclosed mailing label. Please return these by May 15. You may discard prompts not used.

6. If you have any questions or concerns about administering this prompt, please email me (rebeccadierking@yahoo.com) or, if it's an emergency, call me on my mobile (573.881.5130).

7. Again, thank you for participating in this study. Your participation made this work possible. ☺

Instructions: You have 45 minutes to complete the writing assignment printed below. You should write your final paper in the lined pages. There is extra lined paper if you need it for additional pages of your final paper. You may use the blank space on this page and inside for planning if you wish.

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 sentences and words effectively.

Writing Prompt A—2007–2008

Assignment:

Some people believe that video games, television, and other electronic media have decreased our ability as humans to concentrate and learn new things. What is your opinion? Write a paper, based on your experiences and observations, to convince your audience of your point of view.

Creating Writers Through 6-Trait Writing Assessment and Instruction. Vicki Spandel

Prompt "A"— 2008–2009
Think about a place that is so important and special to you that you would like to return to it many times. Your place can be a part of your everyday life or a place you have been to only once or a few times. Describe it so clearly that a reader can see, hear, and feel just what it is like to be there.

Prompt "B"—
Think of a friend, family member, or teacher you will never forget. Tell one story that comes to mind when you think about what makes this person so special. Describe this person so clearly that a reader can see, hear, and feel what it so unforgettable about this person.

Appendix C

Observation Protocol

MWPN Literacy Academy Interview Protocol
Based on Mississippi Writing/Thinking Institute Research Interview Form

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 year in this school_____Years in this grade _____
Date _____ Interviewer _____

1. (Following observation) From your perspective, how did things go today? What decisions did you make along the way? How do you make those decisions?

2. 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?

3. What percent of your successful classroom practices do you think are the result of the Literacy Academy?

- What percent come from other professional development?

- What percent from curriculum or other sources?
- How has your instruction changed since the literacy academy?
- What literacy academy strategies and experiences stand out to you now?

4. What strategies do you use to help students improve their papers?

5. How do you help students learn and develop writing conventions (grammar, mechanics, and usage)?

6. 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

7. 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		

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

- How do you use student writing to guide instruction?
- Give examples of purposes for which you use writing assessment results.
- In the two or three weeks prior to a writing assessment, are there specific ways you address writing on demand? If YES: Can you describe them?

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

If YES: In what subject areas?

How do you make connections between reading and writing?

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

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

11. How have your administrators supported you in implementing strategies from the Literacy Academy?

- 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 Literacy Academy?
- What sort of curriculum requirements do you have and how have these changed over the last two years? How scripted and time-constricted is your curriculum?

12. What additional comments do you have related to your participation in the MWPN Literacy Academy?

Appendix D

Missouri Writing Projects Observation Protocol based on MWTI Classroom Audit Guide

Teacher _____Time/Period:_____Grade:_____

Class/Subject: _____School _____

# of Students (race, gender, etc.):

Physical Properties (Please include a sketch of the classroom):

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?

What is the school context (physical location, administrative involvement, atmosphere):

Teaching/Tasks/Strategies (may chart this—see next page):
Who is talking?

Who is listening?

What is the teacher doing?

What are the students doing?
What sort of peer interaction do you notice? How many students are sharing? How many are actively listening?

What are the literacy resources present/noticeable in the room?

What are evidences of writing process?

What are the instructional objectives and techniques?

How is technology used/not used?

Community of Classroom:

How is work celebrated?

What sort of teacher feedback do students receive?

What are expectations, instructions, interactions, interruptions?

Observation Flow Chart:

Time	Task/Event	Talk and Actions of Teacher	Talk and Actions of Students	General Observations

Post interview/observation—Analytic Thoughts—to note immediately after:

Evidence of Writing Project/Literacy Academy (to complete following the data gathering):

Following the observation, what questions do you want to ask the teacher?

Consider context, dynamics of participation and interaction, quality of discussion, cognitive complexity, relevance, climate, etc.

Appendix E

Year 2 Professional Development Table of Activities

Date	Focus/Mode	Time	Persons involved	Results
Fall 2008	Face-to-Face in four locations	4 hours	One face-to-face facilitator; one online facilitator; 12 participants	review scores; discuss needs / lessons for coming months; practice online meeting format
Fall 2008	Ning social network established and invitations to join		4 facilitators 10 participants 3 researchers 1 teacher guest	forum discussion topics included narrative or "Where I'm From" poem from previous year's academy and best revision lessons at a participant's request
Fall 2008	Online meeting	1½ hrs	6 participants 1 facilitator	One teacher shared fairy tale writing activity; another teacher shared student writing sample; a third teacher commented on the Romano voice article emailed to the group a week earlier; a fourth was unable to present her word tournament activity due to technical problems.
Winter 2009	writing invitation emailed: "7 Things About Me"		5 participants 1 facilitator	teachers accepted the invite and emailed responses to the group
Winter 2009	Face-to-Face in two locations	4 hours	4 participants 2 facilitators	Map of Home drawing/writing activity, scoring practice using 6+1 trait rubric and student writing samples; teachers shared lessons
Winter/ Spring 2009	Classroom visit	4 hours	1 participant 1 researcher 1 facilitator	observed teacher teach; facilitator modeled text-rendering activity from Literacy Academy binder, using active verbs, photo-write, cloze poetry followed by graphic organizer of words from poem
Winter/ Spring 2009	Online meeting	1¼ hrs	1 participant 1 guest presenter 1 facilitator	Teacher talked about the need for more cross-curricular writing and vocabulary development activities, and about her use of freewriting, readers' theater, writing territories; guest presenter uploaded documents regarding word choice (Power of Words), warm-ups, 6-word memoirs; facilitator and presenter encouraged participating

				teacher to submit proposals to present at conferences
February 2009	State Language Arts Conference	2 days	3 participants, 1 facilitator attended	
Spring 2009	Classroom visits	3 hrs	1 teacher 1 researcher 1 facilitator	observed teacher two class periods; toured school grounds; interviewed teacher
Spring 2009	Classroom visit	6 hrs	1 teacher 1 facilitator	facilitator modeled lessons in three class periods (tea party using "Annabel Lee," silent conversation on Anne Frank play, four modes of discourse); worked one-on-one with students in computer lab; observed teacher
Spring 2009	Online meeting	1½ hrs	5 participants 1facilitator	Some teachers had difficult with the technology; one teacher shared a lesson on "show-not-tell" sentences; another shared lesson on "choose your own adventure" stories for organization practice and took group to practice the interactive tool on writingfix.org website; facilitator shared Jing video, shared lessons on word chunks, sentence combining exercise, tea party and primary source of "Annabel Lee" in Poe's handwriting
Spring 2009	Classroom visits in five locations	4 hours	9 teacher participants 1 facilitator 1 researcher	observed the teachers in classroom with two different classes of students; interviewed teacher; facilitator modeled lessons