CHAPTER 3

The Effects of Writing Workshop Instruction on the Performance and Motivation of Good and Poor Writers

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Nearly 25 years ago, a paradigm shift occurred in writing instruction in America's schools. Prior to that time, traditional approaches to teaching writing were characterized by teacher-directed lessons on discrete skills using contrived writing assignments, infrequent requests to compose texts longer than a few paragraphs, and a focus on the attributes (especially the conventions) of a finished product over the processes used to generate texts (e.g., Pollington, Wilcox, & Morrison, 2001; Tidwell & Steele, 1995). The seminal work of such individuals as Donald Graves (1983), Lucy Calkins (1986), and Nancy Atwell (1987), coupled with the cognitive model of writing developed by Hayes and Flower (1980), paved the way for the widespread adoption of process-oriented writing instruction and, in particular, writing workshop in elementary classrooms in the mid-1980s. Writing workshop varies in how it is instantiated, but the key elements include (1) minilessons on workshop procedures, writing skills (e.g., spelling patterns, punctuation rules), composition strategies (e.g., timelines for planning biographies, editing checklists), and craft elements

(e.g., writing quality traits, effective leads for exposition); (2) sustained time (about 20–30 minutes) for personally meaningful writing nearly every day to help students become comfortable with the writing process (i.e., planning, drafting, revising, editing, and publishing) and with varied writing tasks with different purposes; (3) teacher- and student-led conferences about writing plans and written products to help students appropriate habits of mind associated with good writers and make the most of their writing; and (4) frequent opportunities for sharing with others, sometimes through formal publishing activities, to enhance the authenticity of writing activities and cultivate a sense of community. Contemporary approaches to writing instruction that emphasize the writing process generally appear to be associated with better writing outcomes, at least in terms of written products, than traditional approaches (e.g., Bruno, 1983; Graham & Perin, 2007; Hamilton, 1992; Hillocks, 1984; Honeycutt & Pritchard, 2005; Monteith, 1991; Scannella, 1982; Varble, 1990), though the number and quality of studies that have examined this issue are limited. However, a process-oriented approach does not necessarily yield a more positive motivational stance toward writing (cf. Bottomley, Truscott, Marinak, Henk, & Melnick, 1999; Honeycutt & Pritchard, 2005; Monteith, 1991; Pollington et al., 2001; Scannella, 1982).

Teachers today typically employ some form of process writing instruction such as writing workshop in their classrooms (e.g., Bridge, Compton-Hall, & Cantrell, 1997; Patthey-Chavez, Matsumura, & Valdes, 2004; Wray, Medwell, Fox, & Poulson, 2000). According to data collected through the National Assessment of Educational Progress (NAEP), nearly 7 out of 10 teachers reported using process-oriented instruction to teach written composition. Yet no more than a third of those same teachers said they spend 90 minutes or more per week teaching writing. Additionally, many of the teachers surveyed reported that they infrequently ask their students to produce multiple drafts or revise and edit their work (National Center for Education Statistics, 1999). Clare, Valdez, and Patthey-Chavez (2000) found that nearly 60% of teachers' comments on narrative and expository papers written by students in third- and seventh-grade classes in which process instruction was used were directed at microstructural concerns about correct usage of writing conventions rather than macrostructural elements such as content, organization, and style. Thus there is some question about just how teachers define and implement process writing instruction in their classrooms.

Recent evidence suggests that teachers do indeed display quite a bit of variability in how they enact process-oriented instruction and that this variability is influenced by their epistemologies, their experiences as teachers and writers, and their teaching context (Graham, Harris, Fink, & MacArthur, 2001; Graham, Harris, MacArthur, & Fink, 2002; Lipson,

Mosenthal, Daniels, & Woodside-Jiron, 2000; Pritchard & Honeycutt, 2006; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). For example, Lipson et al. (2000) observed that 11 fifth-grade teachers who reported using process writing instruction differed in how much control they exerted over students' writing, in their treatment of the writing process as a flexible tool versus an object of study, and in how central peer- and teacher-led conferences were to explicit writing instruction. Moreover, these differences in teaching practices were linked to one of four different theoretical orientations regarding writing instruction. Agate and Graham (in press) found that about three-quarters of a national sample of primary grade teachers reported using a combination of process-oriented instruction and skill-based instruction, whereas the rest used one or the other, and that 65% of teachers reported that they did not use a commercial program (which potentially could help standardize writing instruction) to teach writing. They also found that teachers varied considerably in their use of specific instructional practices and in how much instructional time they allotted for composing texts of a paragraph or longer in length (median of about 20 minutes per day). Such variability helps explain the lackluster performance of America's children and youths on the NAEP writing assessment (Persky, Daane, & Jin, 2003). The NAEP for writing is administered approximately every 4 years to a representative sample of students in grades 4, 8, and 12. Each student responds to two 25-minute narrative, informative, or persuasive prompts accompanied by a brochure with guidelines for planning and revising the compositions. Each paper is rated on a 6-point rubric, and this score is converted to a scale score (ranging from 0–300). The scale score corresponds to one of four levels of performance—below basic, basic (partial mastery of fundamental knowledge and skills), proficient (solid mastery needed to perform challenging academic tasks), or advanced (superior mastery). According to published NAEP data, only 28% of 4th graders, 31% of 8th graders, and 24% of 12th graders achieved at or above a proficient level of writing performance in 2002. Furthermore, the writing performance of students from culturally diverse households is substantially inferior to that of middle-class Caucasian students.

Struggling writers, who may come from marginalized families or live in impoverished neighborhoods, typically write papers that are shorter, more poorly organized, and weaker in overall quality than those written by their peers (e.g., Graham & Harris, 1991; Thomas, Englert, & Gregg, 1987). In addition, these students' compositions typically contain more irrelevant information and more mechanical and grammatical errors that render their texts less readable (Fulk & Stormont-Spurgin, 1995; Graham & Harris, 1991; Thomas et al., 1987). The problems experienced by struggling writers are attributable, in part, to their difficulties with

executing and regulating the processes underlying proficient composing, especially planning and revising (e.g., Englert, Raphael, Fear, & Anderson, 1988; Graham & Harris, 1997; Graham, Harris, & Troia, 1998). Motivational factors such as negative self-efficacy beliefs also are causally related to struggling writers' diminished performance (e.g., Pajares, 2003; Troia, Shankland, & Wolbers, in press). Although NAEP data suggest that writing instruction in today's classrooms is not adequate to meet the needs of these students, it is not clear exactly how weak writers respond to writing workshop instruction in comparison with their more accomplished peers and how variability in enacting process-oriented instruction might influence student writing performance and motivation. The study we report here was designed to answer these questions, particularly how writing workshop affects growth in writing for good and poor writers. This study was part of a larger investigation that examined school, teacher, and student characteristics that influence teachers' capacity for adopting innovative writing instruction practices and how the interplay of these characteristics and practices affects student performance.

INVESTIGATIVE METHODS

We conducted our investigation during the 2002–2003 school year in an urban school, Cascadia Elementary (a pseudonym), located in the Seattle metropolitan area. Cascadia Elementary in many ways represents a typical urban school (see Table 3.1). Three-quarters of the students receive free or reduced-price meals, and thus the school qualifies for Title I funding. The student population is racially, ethnically, and linguistically diverse—only about 7% are Caucasian, and almost 20% are classified as English language learners. Yet this school appears to be "bucking the odds," because nearly 6 out of every 10 students in the fourth grade, even those from low-income families, have met or exceeded standards on the Washington Assessment of Student Learning (WASL; see Table 3.1), the state's key accountability measure, in reading (WASL-R) and writing (WASL-W).

The year before our investigation, staff at Cascadia had agreed that a focus on high-quality literacy teaching and learning was a priority. This focus was meaningfully aligned with prior professional development activities at the school, including those provided by a local nonprofit agency (see later in the chapter). As a result, all staff participated in sustained literacy instruction training aimed at increasing their use of evidence-based strategies for reading and writing, including word study (e.g., structural analysis, vocabulary in context), varied approaches to reading instruction (sustained silent reading, guided reading, teacher

TABLE 3.1. Cascadia Elementary School Demographics and WASL Performance Data

Student characteristic	Percent enrollment (*n* = (418)	Number of fourth graders tested	% met/ exceeded WASL-R standard	% met/ exceeded WASL-W standard	% met/ exceeded WASL-M standard
Gender					
Male	54.8	33	54.5	51.5	45.5
Female	45.2	33	60.6	63.6	45.5
Race/ethnicity					
Black	46.2	25	64.0	60.0	40.0
Asian	31.6	24	58.3	62.5	54.2
Hispanic	13.4	12	50.0	41.7	33.3
White	7.2	4	N/A	N/A	N/A
Native American	1.7	1	N/A	N/A	N/A
All students		66	56.7	56.7	44.8
Free/reduced meals	74.8		57.6	57.6	45.5
Title I reading	—		56.3	59.4	45.3
ESL	18.5		21.4	35.7	14.3
Special education	11.1		—	—	—

Note. All enrolled fourth graders were tested in all three domains. WASL performance data for white and Native American students were not available from the state because fewer than 10 students in each category were tested.

read-aloud, partner reading), writing-to-learn activities (e.g., academic journals, reading response logs, mini-lessons, collaborative writing), student self-assessment, and leveled books to accommodate diverse reading abilities in the classroom.

Participants

Six teachers volunteered to participate in our larger research project, and each was asked to nominate 6 children from his or her classroom to serve as participants in our examination of the impact of writing workshop instruction on children's writing motivation and writing performance. The teachers were instructed to identify 2 strong writers, 2 average writers, and 2 weak writers based on the students' classroom writing performance. Ten strong writers, 11 average writers, and 10 weak writers were included in the study. Two students moved before the completion of the study, one (a 5th grader) was expelled, and replacements could not be found for another 2 students whose parents did not grant permission for inclusion. Of the 31 participants, 6 were 2nd graders, 14 were 3rd graders, 6 were 4th graders, and 5 were 5th graders. Two students received

special education services for learning disabilities, and both were identified as weak writers by their teachers. Three other students were designated English language learners and were identified as average writers by their teachers. Nearly 50% of the sample were African American, about 25% were European American, about 22% were Asian American, and one student (39%) was of undetermined ethnicity. Approximately 30% of the sample came from homes in which the caregiver(s) held occupations coded as 5 or lower (out of 9) on the Hollingshead Occupational Scale (1975).

Norm-Referenced Measures

In October, we administered a battery of standardized norm-referenced assessment tasks to children to verify the teachers' nominations of strong, average, and weak writers. Specifically, we assessed students' reading abilities and writing skills, which were significantly correlated (*r*s ranged from .61 to .91). All tasks were administered individually (or, in the case of most of the writing tasks, in a small group of 3–4 students) in a quiet room at the school. The writing measures were administered again in May to help determine how much progress students made in their writing.

Reading Abilities

Four tasks from Form A of the Woodcock–Johnson–III Tests of Achievement (WJ-III; Woodcock, McGrew, & Mather, 2001) were administered to evaluate each student's reading abilities: the Letter–Word Identification, Word Attack, Reading Fluency, and Passage Comprehension subtests. The Letter–Word Identification subtest requires students to read aloud upper- and lower-case letters and real words. For the Word Attack subtest, children pronounce phonologically and orthographically regular pseudowords. For the Reading Fluency subtest, students are given 3 minutes to respond to as many printed statements as possible by indicating whether the sentences are true or false. Finally, the Passage Comprehension subtest requires students to read short passages and identify the missing word in each passage that makes sense given the passage context. For all but the Reading Fluency subtest, testing proceeds until a ceiling of six consecutive incorrect responses is reached. The median internal-consistency reliability coefficients for the Letter–Word Identification, Word Attack, Reading Fluency, and Passage Comprehension subtests are .91, .87, .90, and .83, respectively, for students between 5 and 19 years old. The test–retest correlations (1-year interval) for these subtests range from 0.70 (Reading Fluency) to .86 (Passage Comprehension).

Writing Skills

Five tasks from Form A of the WJ-III Tests of Achievement (Woodcock et al., 2001) were administered to evaluate each student's writing skills: the Writing Fluency, Writing Samples, Spelling, Punctuation/Capitalization, and Editing subtests. The Writing Fluency subtest is a timed measure in which students are provided with a picture stimulus and three related words for each test item and asked to write a complete sentence using the words. Students finish as many items as possible in 7 minutes. Errors in writing mechanics are not penalized. For the Writing Samples subtest, children are asked to write relevant sentences in response to pictures, topic prompts, and incomplete paragraphs, sometimes using specified vocabulary. Errors in writing mechanics are generally not penalized. The Spelling subtest uses a common dictated spelling word format—the word is read by the examiner, read in sentence context, and then read again in isolation and the student is expected to write the target word. The Punctuation/Capitalization subtest also uses a dictation format—children are read words and phrases to write that require the application of various rules for punctuation and capitalization. For the Editing subtest, students must verbally identify and correct errors in capitalization, punctuation, spelling, and grammar in written sentences and paragraphs. For all but the Writing Fluency and Writing Samples subtests, testing proceeds until a ceiling of six consecutive incorrect responses is obtained. The median internal-consistency reliability coefficients for the Writing Fluency, Writing Samples, Spelling, Punctuation/Capitalization, and Editing subtests are .86, .84, .89, .77, and .91, respectively, for students between 5 and 19 years old. The test–retest correlations (1-year interval) for these subtests range from .63 (Editing) to .88 (Spelling).

Experimental Measures

Writing Skills

We administered in October and again in May experimental writing tasks to evaluate students' growth in narrative and persuasive writing. Students were provided with a choice of two prompts and asked to write either a creative, novel story or a persuasive opinion essay in response to one of the prompts. The prompt choices for stories were from a set of four pictures (a boy riding a bike jumps off a ramp while other children watch in amazement, a giant toddler walks across the landscape of a town, a group of men in a sailboat try to avoid being capsized by a storm at sea, and an astronaut working on the surface of a colonized planet watches several spaceships leave orbit). The prompt choices for opinion essays were from a set of four topics ("Do you think children should be allowed

to choose the TV shows they watch?" "Should children be allowed to choose their own bedtimes?" "Do you think your parents should decide who your friends are?" and "Do you think children should have to go to school during the summer?"). The prompt choices were counterbalanced across participants and testing time to avoid order effects. Prompts for the stories and essays were administered on separate days within 1 week and were not timed. Spelling assistance was provided if necessary; otherwise, students were not given help or feedback.

Two multidimensional product measures were used to evaluate students' stories and opinion essays: *quality traits* and *structural elements*. *Quality traits* included content (i.e., the degree to which the ideas presented in text are clear, focused, and interesting), organization (i.e., the degree to which the order and structure of the text enhances its meaning), sentence fluency (i.e., the degree to which the sentences are well crafted and varied to increase the flow and rhythm of the piece), word choice (i.e., the degree to which the vocabulary is clear, precise, and vivid), and conventions (i.e., the degree of control over the mechanics of writing, including spelling, capitalization, and punctuation). These traits were derived from the six-traits assessment and feedback framework developed by Spandel (2001). Each trait was scored separately and sequentially (in the order listed) on a 6-point scale (see Appendix 3.1). A trained undergraduate student who did not administer the experimental writing tasks scored the writing samples (these were typed before scoring to increase legibility, though errors in writing conventions were not corrected). A second trained graduate student scored 20% of the writing samples (all the papers generated by 6 of the participants selected at random) to determine the reliability of the quality traits scale. The interjudge reliability coefficients were .87 for content, .77 for organization, .76 for sentence fluency, .79 for word choice, .89 for conventions, and .83 for all traits combined.

Structural elements for narratives and persuasive papers were different due to the unique characteristics of each genre. The elements for stories included the three categories of setting (description of the main character, locale, and time), plot (the initiating event, character goals, attempts to resolve the problem, outcome, and emotional reactions of the main character), and other (title and dialogue). A scale (for previous versions, see Graham & Harris, 1989; Troia, Graham, & Harris, 1999) to evaluate the presence and degree of development of these elements was used to score each narrative paper (see Appendix 3.2). For each element, a score of 0 was awarded if the element was not present, a score of 1 was awarded if the element was present, and a score of 2 was awarded if the element was highly developed. An additional point was awarded

if the main character had more than one clearly articulated goal (this never occurred). Likewise, an additional point was awarded if more than one story grammar episode (i.e., a unique plotline including an initiating event, attempt, and direct consequence) was evident (this never occurred). Based on this scoring scheme, we calculated the average for each element category (coincidentally, the maximum average score for each category was 2). A trained graduate student scored the typed writing samples, and a second trained graduate student scored one-fourth of the papers, selected at random, to determine the reliability of the narrative structural elements scale. The interjudge reliability coefficients were .68 for setting, .84 for plot, .89 for other, and .88 for all elements combined. Due to this range in reliability across coding categories, all subsequent analyses were based on the total story structure elements.

The elements for opinion essays included functional components identified by Scardamalia, Bereiter, and Goelman (1982)—premise, reasons, elaborations, and conclusion. A premise is a statement specifying the authors' position on a topic. Reasons are explanations to support or refute the position, another reason, or an elaboration. Elaborations are units of text that qualify or clarify another unit of text. Finally, a conclusion is defined as a summary statement that reiterates the author's position. The guidelines for parsing essays into elements are given in Appendix 3.2. One point was awarded for each functional element, and the total served as the score for each essay. A trained graduate student scored the typed writing samples, and a second trained graduate student scored one-half of the papers, selected at random, to determine the reliability of the persuasive structural elements scoring method. The interjudge reliability coefficients were .87 for premise, .58 for reasons, .66 for elaborations, .88 for conclusion, and .97 for all elements combined. The reliability estimates for reasons and elaborations were depressed because, in some instances, reasons were incorrectly coded as elaborations or vice versa. Due to this range in reliability across coding categories, all subsequent analyses were based on the total essay structure elements.

Motivational Attributes

We administered two experimental motivation scales in October and May—one to assess students' attitudes and self-efficacy beliefs with regard to writing (the Attitudes and Self-Efficacy Rating Scale, or ASERS) and another to assess students' writing-related goal orientations (the Writing Goals Scale, or WGS). Both used a 6-point scale, with 1 representing strong disagreement with a statement and 6 representing strong agreement. The ASERS, adapted from an instrument developed by Graham, Schwartz,

and MacArthur (1993), included 14 items and evaluated how much students like to write (e.g., "I do writing of my own outside of school") and the degree to which they view writing as a worthwhile endeavor (e.g., "Writing is a waste of time"), as well as their perceived competence in varied writing tasks (e.g., "When my class is asked to write a story, mine is one of the best"). The WGS, adapted from an instrument developed by Nolen and Valencia (2000), included 18 items and evaluated the degree to which students endorsed three types of goals—task goals (with a focus on learning how to write better; e.g., "In writing, I feel most successful if I see that my writing has really improved"), ego goals (with a focus on displaying one's writing abilities; e.g., "In writing, I feel most successful if I get one of the highest grades on a writing assignment"), and avoidance goals (with a focus on doing as little writing as possible; e.g., "In writing, I feel most successful if I don't have to revise my work"). Evidence of reliability is not available for either of these scales, and our small sample size precluded determining reliability estimates.

Portfolios

We asked each of the six teachers who nominated participants for our study to collect five samples of their target students' writing during the academic year, one approximately every 2 months. We informed teachers that the samples, which were required to represent narrative, expository, and at least one other genre (e.g., persuasive or poetic), would be used to: (1) help document growth in writing, (2) celebrate students' efforts and teachers' instructional success, and (3) facilitate students' critical reading of their own texts. The writing samples also were required to be products of classroom work rather than assignments completed at home. Each writing sample was accompanied by two entry slips—one completed by the teacher that focused on the teacher's instructional goals, methods, evaluation, and future plans and one completed by the student that focused on the student's evaluation and helpful writing strategies (we do not describe the entry slips in more detail here because they were not included in the data analyses for this study). Additionally, each writing sample was accompanied by a quality trait rating scale (described earlier) completed by the teacher—the scores assigned by the teachers were used in our analyses. Two trained students also independently scored 20% of the portfolio samples to determine reliability. The independent raters achieved an interjudge reliability coefficient of .77 for all traits combined. The reliability estimate for teachers' combined scores and those assigned by one of the independent raters was at least .61. Generally, the teachers assigned higher scores than did the independent raters.

Writing Workshop Instruction

The teachers who nominated participants for our study and all the other first- through fifth-grade teachers at Cascadia Elementary were participating in a comprehensive schoolwide program to support their use of writing workshop. The program, developed and managed by a community nonprofit agency serving several low-income schools in the area, included six core components: (1) ongoing professional development opportunities through bimonthly workshops and weekly individual coaching sessions to assist teachers in implementing daily writing instruction; (2) weekly classroom demonstrations to support the orchestrated use of exemplary children's literature, the writing process, and instructed composing knowledge, skills, and strategies; (3) weekly curriculum planning meetings and debriefings in grade-level teams; (4) trained volunteers to help students plan, draft, revise, and publish their work, primarily in the context of individual and small-group conferences; (5) placement of resident authors who shared craft lessons and their love of writing with students and teachers; and (6) publishing opportunities, including bookbinding support and public readings. Although the year we conducted our investigation was the first in which the majority of teachers at the school participated in the program, a small group of teachers, including three in our research project, had worked with staff developers from the nonprofit agency for several years.

Much of the instructional content of the professional development program was derived from the work of Donald Graves (1983), Nancy Atwell (1998), Lucy Calkins (1986, 1998), and Ralph Fletcher (Fletcher & Portalupi, 1998, 2001), influential leaders in the dissemination of the writing workshop model. The essential features of this model are listed in Table 3.2 and include authentic and self-guided student work that is typically shared or published, an instructional approach that employs mini-lessons, regular teacher modeling, feedback, and follow-up instruction, and routines for daily workshops, conferring, and collaboration. The teachers devoted 4–5 days per week, 45 minutes per day, to writing workshop instruction. The writing curriculum was rooted in genre study, with each genre cycle lasting about 9 weeks. Thus teachers covered four different genres—personal narrative, expository, poetry, and fictional narrative—during the academic year.

Within each genre cycle, several phases of instruction were employed. First, students experienced immersion, in which they were introduced to the structural elements of the genre, read and listened to touchstone texts that exemplified these elements, and generated "seed" ideas for their papers (e.g., favorite memories, area of expertise). Next, they engaged in planning, in which they selected one of their ideas for further develop-

TABLE 3.2. Essential Features of Writing Workshop Instructional Model

Student work
- Students work on a wide range of composing tasks for multiple authentic audiences and purposes.
- Students often select their own writing topics within a given genre.
- Students work through the writing process at their own pace over a sustained period of time.
- Students present works in progress, as well as completed papers, to other students in and out of the classroom to receive praise and feedback.
- Students' written work is prominently displayed in the classroom and throughout the school.

Instructional approach
- Teacher-directed mini-lessons are designed to help students master workshop procedures (e.g., using writing notebooks, working on multiple compositions simultaneously), craft elements (e.g., text structure, character development), writing skills (e.g., punctuation, capitalization), and process strategies (e.g., planning and revising tactics).
- Teachers overtly model the writing process, writing strategies and skills, and positive attitudes toward writing.
- A common language is used to communicate shared expectations and to give students feedback (e.g., traits).
- Follow-up instruction is provided to facilitate acquisition of target knowledge, skills, and strategies.

Routines
- A typical workshop entails a mini-lesson (10–15 minutes), then an individual progress check (5 minutes), followed by independent writing and conferencing (20–25 minutes), and finally group sharing (5–10 minutes).
- Regular student–teacher conferences are scheduled to discuss progress, establish writing goals, and provide individualized feedback, all in the context of high expectations.
- Collaborative arrangements are established by which students help one another plan, draft, revise, edit, and publish their written work.

ment, collected additional information (e.g., discussed their idea with a partner to gauge potential audience interest, researched facts about their topic using primary and secondary sources), learned how to incorporate unique text features (e.g., dialogue, key vocabulary and phrases, captions), and organized all the information they had gathered (e.g., completed a timeline or planning sheet). Then students drafted their compositions, receiving substantial teacher and peer support through conferences. In these conferences, students shared their work, discussed how they were using what had been taught, and received extensive feedback. Following drafting, students revised their papers, reading and sharing their texts multiple times. During this phase of instruction, the bulk of assistance was provided through conferencing, though mini-lessons were devised to help students improve their writing through adding supporting details, zooming in on pivotal moments, and deleting trivial information. Then

students edited their work with an editing checklist, both independently and with a peer. Finally, they published their work.

The observations we conducted throughout the school year in each classroom indicated that each teacher generally adhered to the writing workshop model, which was anticipated given the level of support provided by the professional development staff. Specifically, the teachers displayed use of between 70 and 85% of 27 critical workshop features we identified (these closely aligned with those listed in Table 3.2). However, teachers differed with respect to the specific management procedures (e.g., external reinforcement, physical arrangements), student engagement tactics (e.g., checking in, degree of autonomy), and instructional supports (e.g., materials, communicative transactions) they used. Because of space constraints, we do not discuss these variations here but report them elsewhere (see Troia, Lin, Cohen, & Monroe, in preparation).

EMPIRICAL FINDINGS

Group Differences at Pretest

We first compared the performances of the strong, average, and weak writers on the norm-referenced measures of reading achievement (means and standard deviations are given in Table 3.3) with multivariate analysis of variance (MANOVA) and associated post hoc pairwise multiple comparisons. There was a significant multivariate effect, $F(8, 50) = 3.93$, $p < .01$, and subsequent univariate tests showed group effects for all four WJ-III reading measures: Letter–Word Identification, $F(2, 28) = 20.34$, $p < .01$, $MSE = 104.95$; Word Attack, $F(2, 28) = 14.23$, $p < .01$, $MSE = 103.67$; Reading Fluency, $F(2, 28) = 8.03$, $p < .01$, $MSE = 180.88$; and Passage Comprehension, $F(2, 28) = 11.41$, $p < .01$, $MSE = 118.95$. On each reading subtest, strong and average writers performed similarly to each other and outperformed the weak writers.

We then conducted MANOVA with the WJ-III writing subtests administered at pretest (see Table 3.3 for means and standard deviations) as criterion measures in order to confirm the teachers' nominations of three distinct groups of writers. There was a significant multivariate effect, $F(10, 48) = 3.29$, $p < .01$, and subsequent univariate tests showed group effects for all five measures: Writing Fluency, $F(2, 28) = 12.53$, $p < .01$, $MSE = 367.81$; Writing Samples, $F(2, 28) = 13.18$, $p < .01$, $MSE = 117.50$; Spelling, $F(2, 28) = 14.95$, $p < .01$, $MSE = 134.89$; Punctuation/ Capitalization, $F(2, 28) = 7.15$, $p < .01$, $MSE = 183.70$; and Editing $F(2, 28) = 5.58$, $p < .01$, $MSE = 389.50$. On all but two of these subtests, strong writers performed better than weak writers, and average writers performed better than weak writers, though strong and average

TABLE 3.3. Literacy Achievement at the Beginning of the School Year for Teacher-Nominated Strong, Average, and Weak Writers

	Performance level		
Test	**Weak** (*n* = 10)	**Average** (*n* = 11)	**Strong** (*n* = 10)
WJ-II Reading			
Letter–Word	85.90 (9.41)	105.25 (11.58)	114.80 (9.85)
Word Attack	87.30 (12.88)	103.33 (7.55)	111.20 (9.47)
RFluency	85.10 (15.93)	102.92 (11.43)	108.30 (12.53)
Passage Comp	83.90 (11.95)	99.17 (8.76)	106.90 (11.80)
WJ-III Writing			
WFluency	79.60 (31.78)	111.64 (6.15)	120.20 (9.59)
WSamples	92.00 (14.51)	111.00 (9.42)	115.30 (7.51)
Spelling	83.60 (14.29)	103.82 (10.42)	110.90 (9.73)
Punct/Cap	86.00 (12.50)	94.40 (17.94)	108.90 (6.10)
Editing	84.00 (29.85)	102.90 (10.05)	112.40 (13.23)

writers performed similarly. On the Punctuation/Capitalization and Editing subtests, however, strong writers obtained significantly higher scores than weak writers, but average writers did not differ from either of these groups.

Given the results of these post hoc comparisons, which failed to verify the teachers' nominations, we conducted pairwise MANOVAs for strong versus average writers, average versus weak writers, and strong versus weak writers. There was not a significant multivariate effect for group when comparing strong and average writers, $F(5, 15) = 1.97$, $p > .14$, but there was when comparing average and weak writers, $F(5, 15) = 2.98$, $p < .05$, and strong and weak writers, $F(5, 14) = 5.61$, $p < .01$. These findings, in conjunction with those from the analyses of students' entering reading achievement, suggested that there were only two distinct groups of writers in our sample—good and poor writers. Consequently, we combined the strong and average writers into a single group for all subsequent data analyses. The descriptive statistics for good and poor writers are presented in Table 3.4.

We compared the good and poor writers on the pretest writing measures using MANOVA and obtained a significant multivariate effect, $F(5, 25) = 7.01$, $p < .01$. Subsequent univariate tests showed significant group differences favoring the good writers for all five writing subtests: Writing Fluency, $F(1, 29) = 23.99$, $p < .01$, $MSE = 368.37$; Writing Samples, $F(1, 29) = 25.70$, $p < .01$, $MSE = 116.79$; Spelling, $F(1, 29) = 27.06$, $p < .01$, $MSE = 139.30$; Punctuation/Capitalization, $F(1, 29) = 8.92$, $p < .01$, $MSE = 204.94$; and Editing, $F(1, 29) = 10.46$, $p < .01$, $MSE = 386.45$. We also

TABLE 3.4. Student Achievement and Motivation Performance at the Beginning and End of the School Year

	Performance level			
	Poor writers (n = 10)		Good writers (n = 21)	
Measure	October	May	October	May
WJ-III Reading				
Letter–Word	85.90 (9.41)		109.14 (11.73)	
Word Attack	87.30 (12.88)		106.86 (9.41)	
RFluency	85.10 (15.93)		105.10 (12.20)	
Passage Comp	83.90 (11.95)		102.52 (10.98)	
WJ-III Writing				
WFluency	79.60 (31.78)	80.56 (14.81)	115.71 (8.92)	115.62 (11.80)
WSamples	92.00 (14.51)	92.67 (19.05)	113.05 (8.64)	110.67 (12.14)
Spelling	83.60 (14.29)	82.67 (14.34)	107.19 (10.49)	107.24 (10.47)
Punct/Cap	86.00 (12.50)	76.89 (18.84)	102.43 (15.06)	103.05 (15.57)
Editing	84.00 (29.85)	88.67 (15.52)	108.43 (12.63)	110.25 (11.77)
Narrative Writing Probes				
Content	1.70 (0.82)	1.80 (0.79)	3.14 (1.11)	2.71 (0.96)
Organization	2.10 (0.88)	1.90 (0.74)	3.24 (0.83)	2.90 (1.00)
Sent. Fluency	1.60 (0.70)	1.60 (0.70)	2.81 (1.25)	2.76 (0.89)
Word Choice	1.90 (0.88)	1.80 (0.63)	2.90 (1.00)	2.76 (0.83)
Conventions	1.90 (0.88)	2.20 (0.92)	3.14 (1.11)	3.19 (0.93)
Total Quality	1.84 (0.59)	1.86 (0.60)	3.05 (0.86)	2.87 (0.72)
Total Elements	0.30 (0.17)	0.37 (0.22)	0.62 (0.24)	0.58 (0.20)
Essay Writing Probes				
Content	1.70 (0.67)	1.60 (0.52)	2.38 (1.07)	2.43 (0.93)
Organization	1.90 (0.57)	1.80 (0.63)	2.52 (0.68)	2.62 (0.92)
Sent. Fluency	2.10 (0.88)	2.20 (0.92)	2.14 (0.79)	2.38 (0.86)
Word Choice	2.10 (0.88)	2.00 (0.82)	2.38 (0.80)	2.38 (0.80)
Conventions	2.60 (0.70)	2.60 (0.70)	3.33 (0.86)	3.10 (0.83)
Total Quality	2.08 (0.54)	2.04 (0.55)	2.55 (0.63)	2.58 (0.63)
Total Elements	0.48 (0.32)	0.55 (0.44)	1.26 (0.94)	1.23 (0.75)
ASERS				
Attitudes	3.24 (0.51)	3.70 (0.60)	3.99 (0.50)	3.89 (0.67)
Self-Efficacy	3.13 (0.74)	3.29 (0.62)	3.63 (0.51)	3.80 (0.63)
WGS				
Task Goals	4.21 (0.49)	4.53 (0.50)	4.39 (0.52)	4.41 (0.43)
Ego Goals	4.28 (0.59)	4.28 (0.54)	4.27 (0.61)	4.21 (0.72)
Avoid Goals	2.87 (1.02)	2.97 (1.53)	2.32 (0.99)	2.26 (1.10)

compared the performances of the good and poor writers on the pretest experimental narrative and persuasive writing probes with respect to total structural elements and quality traits. There was a significant multivariate effect for group, $F(12, 18) = 3.24$, $p < .05$. Subsequent univariate tests revealed significant group differences favoring the good writers for total narrative elements, $F(1, 29) = 14.53$, $p < .01$, $MSE = .05$, and total essay elements, $F(1, 29) = 6.54$, $p < .05$, $MSE = 0.64$. For narrative quality, there were significant group differences favoring good writers for each trait and total quality: content, $F(1, 29) = 13.33$, $p < .01$, $MSE = 1.06$; organization, $F(1, 29) = 12.29$, $p < .01$, $MSE = 0.71$; sentence fluency, $F(1, 29) = 8.06$, $p < .01$, $MSE = 1.23$; word choice, $F(1, 29) = 7.43$, $p < .05$, $MSE = 0.92$; conventions, $F(1, 29) = 9.64$, $p < .01$, $MSE = 1.09$; total quality, $F(1, 29) = 15.87$, $p < .01$, $MSE = .62$. For essay quality, there were significant group differences favoring good writers for organization, $F(1, 29) = 6.30$, $p < .05$, $MSE = 0.42$; conventions, $F(1, 29) = 5.54$, $p < .05$, $MSE = 0.66$; and total quality, $F(1, 29) = 4.21$, $p < .05$, $MSE = 0.36$; but not for content, sentence fluency, or word choice, $F(1, 29) = 3.37$, $F(1, 29) = 0.02$, and $F(1, 29) = 0.78$ (all ps $> .07$), respectively. Finally, we compared the performances of the groups on the pretest measures of motivational attributes. The multivariate effect for group was significant, $F(5, 24) = 3.44$, $p < .05$. Subsequent univariate tests showed significant group differences favoring good writers for attitudes, $F(1, 28) = 13.69$, $p < .01$, $MSE = 0.25$, and self-efficacy, $F(1, 28) = 4.27$, $p < .05$, $MSE = 0.34$, but not for task goals, ego goals, or avoidance goals, $F(1, 28) = 0.53$, $F(1, 28) = 0.00$, and $F(1, 28) = 1.73$ (all ps $> .15$), respectively.

Growth in Writing Performance and Motivational Attributes

Because there were pretest differences between groups on most of the dependent measures, variance in posttest scores attributable to pretest scores needed to be statistically controlled. Additionally, variance in writing performance attributable to reading achievement (recall that scores on the reading subtests were strongly correlated with pretest scores on the writing subtests) also needed to be statistically controlled. A composite reading achievement score was derived for each student by averaging the standard scores obtained on the four WJ-III reading subtests we administered, which were significantly intercorrelated (rs ranged from .77 to .93). Consequently, a series of repeated-measures multivariate analyses of covariance (MANCOVAs) was conducted, in which time of testing (October and May) served as the within-subjects repeated measure, group (good writers and poor writers) served as the between-subjects factor, and reading achievement and grade level served as covariates when appropriate. The use of MANCOVAs corrected for the experiment-wise

error rate associated with multiple hypothesis testing using univariate tests. Separate MANCOVAs were used for the WJ-III writing subtests, the experimental writing probes, and the writing motivation scales, respectively. If the assumptions of homogeneity of covariance matrices and error variances for the dependent variables were not met (this occurred infrequently), appropriate statistical alternatives were used. Given our small sample size and the corresponding likelihood of committing a Type II error, we adopted a critical alpha level of 0.10 (approximate alpha levels are reported).

The first MANCOVA included the WJ-III subtest scores as criterion measures. There was no significant multivariate main effect attributable to time of testing, $F(5, 22) = 1.15$, $p > .36$, but the multivariate main effect attributable to group was significant, $F(5, 22) = 3.15$, $p < .03$. The interaction of time and group was not significant, $F(5, 22) = 1.21$, $p > .33$. Subsequent univariate tests showed significant group differences for Writing Fluency, $F(1, 26) = 11.00$, $p < .01$, $MSE = 180.54$, and Spelling, $F(1, 26) = 3.27$, $p < .09$, $MSE = 83.14$, but not Writing Samples, Punctuation/Capitalization, or Editing, $F(1, 26) = 1.38$, $F(1, 26) = 0.37$, and $F(1, 26) = 0.03$ (all ps $> .25$), respectively. Specifically, good writers performed better than poor writers on Writing Fluency (adjusted $M = 110.34$ and adjusted $M = 93.62$, respectively) and Spelling (adjusted $M = 101.46$ and adjusted $M = 95.27$, respectively).

The second MANCOVA, in which genre (narrative and persuasive) served as an additional within-subjects variable and grade served as the sole covariate (the reading composite was not a significant covariate for the experimental writing measures), included total elements, total quality, and the five separate quality traits as dependent measures. There were no significant multivariate main effects attributable to time of testing, $F(6, 23) = 1.78$, $p > .14$, or genre, $F(6, 23) = 1.02$, $p > .43$, but there was a significant main effect for group, $F(6, 23) = 4.36$, $p < .01$. The interactions of time and group, $F(6, 23) = 0.55$, $p > .76$, time and genre, $F(6, 23) = 0.59$, $p > .73$, and time, genre, and group, $F(6, 23) = 0.55$, $p > .76$, were not significant. However, the interaction of genre and group was significant, $F(6, 23) = 3.26$, $p < .02$. Subsequent univariate tests showed significant group differences that varied with genre for sentence fluency, $F(1, 28) = 14.60$, $p < .01$, $MSE = 8.20$; word choice, $F(1, 28) = 5.73$, $p < .03$, $MSE = 2.95$; conventions, $F(1, 28) = 3.12$, $p < .09$, $MSE = 1.69$; total quality, $F(1, 28) = 8.29$, $p < .01$, $MSE = 2.53$; and total elements, $F(1, 28) = 4.82$, $p < .04$, $MSE = 1.64$. Good writers wrote significantly better stories than poor writers in terms of sentence fluency (adjusted Ms = 2.79 and 1.59, respectively), word choice (adjusted Ms = 2.84 and 1.84, respectively), and conventions (adjusted Ms = 3.16 and 2.06, respectively), but the two groups performed simi-

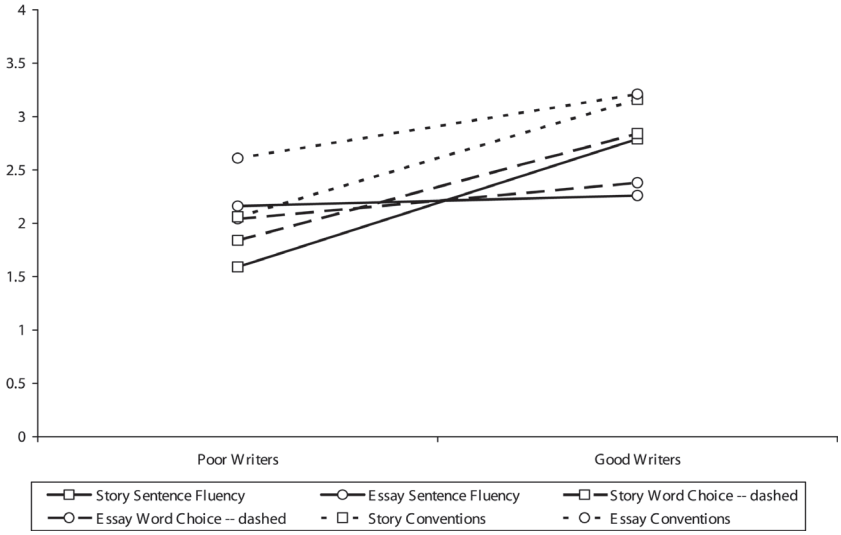

FIGURE 3.1. Adjusted means for sentence fluency, word choice, and conventions for each group on the experimental writing measures.

larly on these traits when writing persuasive essays (see Figure 3.1). As is evident in Figure 3.2, good writers wrote significantly better narratives than poor writers in terms of total quality (adjusted *M*s = 2.96 and 1.85, respectively), but the groups' essays did not differ on this dimension. Conversely, good writers wrote better essays than poor writers in terms of total elements (adjusted *M*s = 1.25 and 0.49, respectively), but their stories were similar in this respect.

The third MANCOVA, in which a composite measure of writing achievement derived from averaging pretest WJ-III writing subtest scores (*r*s between subtests ranged from .56 to .86) served as a covariate (grade was not a significant covariate for the writing motivation measures), included the ASERS and WGS dependent measures. There was a significant main effect attributable to time of testing, $F(5, 21) = 3.61$, $p < .02$, but the multivariate main effect due to group was not significant, $F(5, 21) = 1.03$, $p > .42$. Moreover, the interaction of time and group was not significant, $F(5, 21) = 1.16$, $p > .36$. Subsequent univariate tests showed a significant pretest (adjusted $M = 4.35$) to posttest (adjusted $M = 4.46$) increase for task goals, $F(1, 25) = 10.09$, $p < .01$, $MSE = 0.27$, a significant pretest (adjusted $M = 4.34$) to posttest (adjusted $M = 4.18$) decrease for ego goals, $F(1, 25) = 4.35$, $p < .05$, $MSE = 0.24$, and a significant pretest (adjusted $M = 2.60$) to posttest

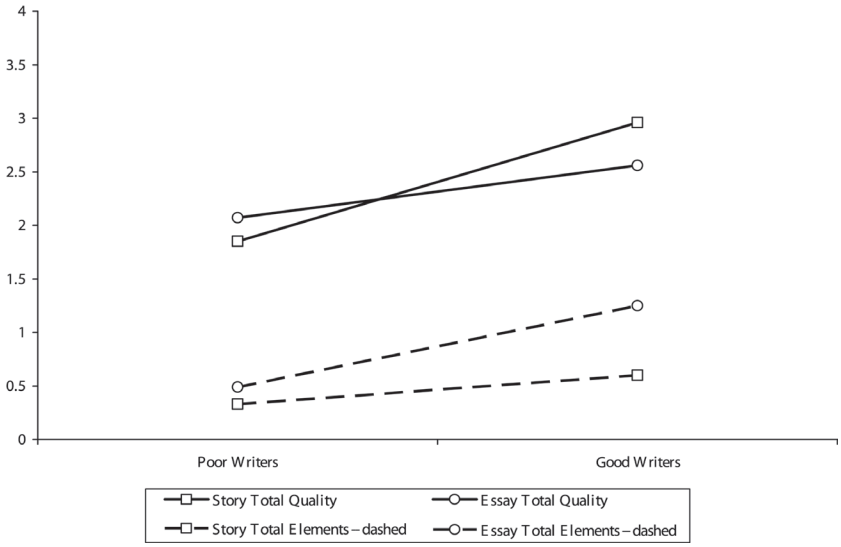

FIGURE 3.2. Adjusted means for total quality and total elements for each group on the experimental writing measures.

(adjusted M = 2.48) decrease for avoidance goals, $F(1, 25) = 4.56$, $p < .05$, $MSE = 0.10$.

Portfolios

Finally, we examined the writing samples collected by teachers over the school year for student portfolios. The writing samples were collected approximately every 2 months and represented the four genre study cycles of the writing curriculum—personal narratives were collected in November, expository feature articles were collected in January, poems were collected in March, and fictional narratives were collected in June. The first writing sample, a descriptive essay, was collected in September and was part of the school district's assessment program. We used paired-samples *t*-tests to identify significant changes over time in combined quality trait scores (see Figure 3.3) for the good and poor writers. Because some teachers were less diligent than others in collecting and scoring writing samples (i.e., some portfolios only contained three or four samples rather than all five), and because the scores for poems appeared to be inflated (see Figure 3.3), we compared only samples collected in September, January, and June. Significant differences in the quality of good writers' papers emerged when we compared writing samples from September and January, $M_{T3-T1} = 0.46$, $SD = 0.84$, $t(18) = -2.39$,

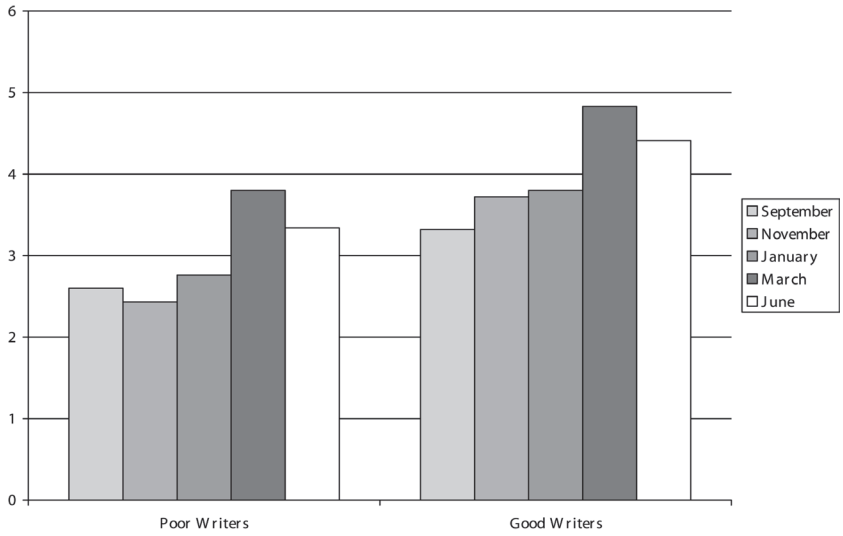

FIGURE 3.3. Combined quality trait scores for portfolio samples for each group.

$p < .03$; January and June, $M_{T5–T3} = 0.58$, $SD = 0.96$, $t(16) = –2.47$, $p < .03$; and September and June, $M_{T5–T1} = 1.11$, $SD = 1.02$, $t(16) = –4.49$, $p < .01$. Poor writers did not show this pattern of growth: $MT3–T1 = 0.38$, $SD = 1.46$, $t(7) = –0.73$, $p > .48$; $M_{T5–T3} = 0.49$, $SD = 0.73$, $t(6) = –1.76$, $p > .12$; and $M_{T5–T1} = 0.69$, $SD = 1.25$, $t(6) = –1.45$, $p > .19$, respectively.

DISCUSSION AND IMPLICATIONS

Since the pioneering work of such scholars and practitioners as Donald Graves (1983) in the early 1980s, writing workshop has become the zeitgeist for apprenticing young authors. Yet only a handful of studies have attempted to establish the effectiveness or efficacy of this instructional model, and none have determined what differential effects, if any, are present for writers with different levels of proficiency. We thus set out to examine how writing workshop instruction, implemented within the context of extensive professional training and support, influences writing-related outcomes for elementary school students who vary in their writing abilities. There are three important findings relevant to this research question. First, based on two sources of data—norm-referenced tests of writing achievement and experimental written composition probes—we found that good and poor writers did not benefit appreciably from writ-

ing workshop instruction in terms of their writing performance when entering literacy skills were held constant. Rather, a number of initial differences between groups that favored good writers were also observed at the end of the school year, which means that the writing achievement gap between these students was not closed. Second, we found that good writers demonstrated significant growth (a 32.8% score increase) in the quality of their writing portfolio samples, scored by their classroom teachers, from September to June. In contrast, though poor writers made a 28.5% improvement in the quality of their portfolio samples, this gain was not significant. Third, children's motivational stance toward writing improved regardless of writing competence—there was a small but significant increase in task goals (2.5%) and small but significant decreases in ego goals (3.7%) and avoidance goals (4.6%).

Three issues must be considered when interpreting these findings. First is how much students' progress was affected by variability in the writing workshop instruction they experienced. For instance, although we did not perform statistical analyses to compare students' growth between the six classrooms, an inspection of average portfolio scores suggests that students placed in classrooms with teachers who had the most teaching experience and who had worked previously with the nonprofit professional development staff made the largest gains (M = 1.4, range = 1.2 to 1.8), whereas students placed with teachers who had the least amount of experience with teaching in general and with writing workshop instruction in particular made the smallest gains (M = 0.4, range = –0.4 to 1.0). This difference is particularly interesting given that the quality scores for the portfolio samples were assigned by the students' classroom teachers.

Prior research has documented writing workshop implementation variability (e.g., Agate & Graham, in press; Lipson et al., 2000), and we too found that, although the essential components of writing workshop (e.g., daily workshop time, student-centered assignments, teacher modeling and feedback, and guiding routines) were evident in each classroom, teachers differed with respect to how they managed the workshop environment and the specific teaching strategies they employed. It may be that students made less progress in classrooms with teachers who used less effective management, engagement, and instructional tactics, perhaps largely due to the teachers' inexperience. We did observe that the three teachers whose students made the smallest gains in writing performance engaged in less diverse communicative transactions with their students and made fewer adaptations for struggling writers. Furthermore, two of the three teachers employed more punitive consequences and provided fewer opportunities for students to collaborate on writing projects and manage their own or others' writing behaviors. These findings foreground

the importance of exploring links between teacher attributes, quality of writing instruction, and student writing outcomes.

The second issue is the reliability of the portfolio writing quality scores, which were assigned by teachers and found to have somewhat low correspondence with scores assigned by independent raters and to be generally higher by comparison. It may be that teachers were biased in their assessment of their students' writing performance because of the investments they each had made to writing workshop instruction. Understandably, teachers would expect their students to show growth in their writing during the school year, and these expectations might be reflected in their scoring. Gearhart's research (Gearhart & Herman, 1998; Gearhart & Wolf, 1997) has demonstrated how difficult it is to isolate and control the influence of differentiated teacher support across writing samples and across students when using classroom portfolios to evaluate students' writing performance, raising the question, "Whose work is it?" In essence, she suggests that portfolio entries are suspect as reliable and valid indicators of student's writing skills because the extent and type of assistance provided during the planning, drafting, revising, and publishing of papers can be expected to vary in the context of different classroom writing assignments and of a diverse group of students. It is not simply that reliable scoring is critical—the papers that are scored may not represent independent observations of writing performance in the first place.

The third issue is related to our research design: because we did not use an experimental or pseudo-experimental control group design, we cannot draw conclusions regarding the causality of changes (or lack thereof) in students' writing performance and motivational attributes. We simply do not know whether writing workshop instruction and/or support from the nonprofit agency led to the outcomes we observed or whether there are more suitable explanations. For instance, though our sample did not display notable progress in their writing performance on independently scored measures, it is entirely possible that they may have actually lost ground in their writing had they been in classrooms in which writing workshop was not implemented or in which teachers did not have the same degree of professional development and instructional support. In fact, Glasswell (1999) reported that Matthew effects are evident in writing just as they are in reading—there is a widening gap between writers over time that is exacerbated by poor instruction and limited individualized assistance and adaptation.

Why did these students fail to make substantive gains in their writing performance? We surmise that, aside from variability in the quality of teaching, the writing workshop instruction implemented in these students' classrooms did not include two critical agents of successful

outcomes, especially for struggling writers—systematic and integrated teaching of transcription skills and a focus on self-regulation in writing through goal setting, progress monitoring, and self-evaluation (De La Paz, 2007; Gersten & Baker, 2001; Gleason & Isaacson, 2001; Graham, 1999; Troia & Graham, 2003). Handwriting and spelling instruction rarely receive more than a passing nod from those who advocate writing workshop, as was the case in our investigation, but research has found that transcription skills account for two-thirds of the variance in writing fluency and one-fourth of the variance in writing quality for children in the primary grades and about 40% of the variance in written output for students in the intermediate grades (e.g., Graham, Berninger, Abbott, Abbott, & Whitaker, 1997). If children have difficulty with handwriting and spelling and, consequently, must devote substantial effort to transcribing their ideas, they will have fewer cognitive resources left available to engage in effective planning and revising behaviors and to focus on writing content, organization, and style (Graham, 1990; Graham & Harris, 1997; McCutchen, 1996). Without adequate instruction to help students become more accurate and fluent in text transcription, growth in writing will be limited.

Likewise, self-regulation is essential for writing success because it can: (1) help students attain greater awareness of their writing strengths and limitations and consequently be more strategic in their attempts to accomplish writing tasks; (2) enable them to reflect on their writing capabilities; (3) adequately manage paralyzing thoughts, feelings, and behaviors; and (4) empower them to make adaptations to composing strategies when necessary (see Harris & Graham, 1992; Troia, 2006). Although the writing workshop approach used by teachers in our study did promote self-management via student-selected topics, individualized pacing, and self-evaluation during conferencing and while using procedural facilitators (e.g., checklists), there was little emphasis on establishing concrete process- and product-related goals or using data to monitor progress in writing; the professional development program privileged celebrating the accomplishments of students (i.e., completing a genre cycle) over critical feedback about their writing. Inexperienced writers need explicit instruction in goal setting, progress monitoring, and self-evaluation because they typically fail to do these things on their own and because good writing places a heavy premium on these components of self-regulation (e.g., Graham, MacArthur, Schwartz, & Page-Voth, 1992; Harris, Graham, Reid, McElroy, & Hamby, 1994; Schunk & Swartz, 1993).

Writing workshop, when implemented well, can serve as a strong foundation for improving the writing performance of students. However, our research suggests that young writers do not necessarily benefit from this approach. Moreover, such an approach does not appear to be ade-

quate for narrowing the achievement gap between good and poor writers. Even after accounting for initial score differences, good writers in our study outperformed poor writers in writing fluency by 1.1 *SD* and in spelling by 0.4 *SD*; they also displayed about a 1-point advantage in story writing quality on the 6-point scale we used, though the groups were relatively equal in the quality of their argumentative essays (although good writers did use over 2.5 times the average number of essay elements used by poor writers). To bolster the effectiveness of process writing instruction, teachers should address basic writing skills such as handwriting and spelling, which are still being developed in elementary school students, and consider how to incorporate into their writing programs the critical elements of writing strategy instruction that positively affect struggling writers' knowledge, skills, and dispositions (see Honeycutt & Pritchard, 2005, for concrete examples). Moreover, teachers should be mindful of the specific needs of struggling writers and plan and implement instructional adaptations (e.g., use computer technology to support writing, reteach specific skills and strategies, confer more often) accordingly. In a national survey of primary grade teachers conducted by Graham, Harris, Fink-Chorzempa, and MacArthur (2003), nearly 75% of all reported adaptations for struggling writers were made by just 29% of the respondents, and no single adaptation was made by more than 40% of the teachers. Nearly 20% of the teachers reported making no adaptations for poor writers, whereas another fourth of the sample reported making only one or two adaptations. We also observed rather limited application of adaptations among our small group of teachers. Apparently, instructional adaptations in writing are not widely used, and this does not bode well for the many students in our schools who struggle with writing.

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