

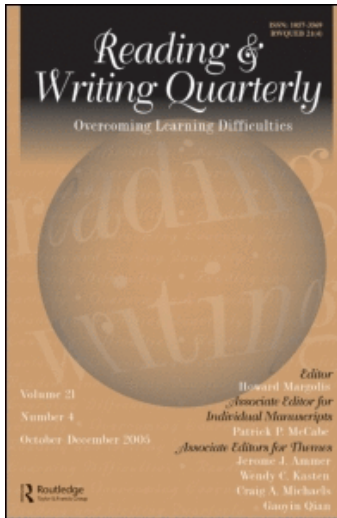
This article was downloaded by: [University of Michigan]

On: 11 September 2008

Access details: Access Details: [subscription number 788778081]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Reading & Writing Quarterly

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title-content=t713775334>

Effects of Self-Monitoring on the Narrative and Expository Writing of Four Fourth-Grade Students with Learning Disabilities

Yvonne L. Goddard ^a; Carole Sendi ^b

^a University of Michigan, Ann Arbor, Michigan, USA ^b Ottawa School District, Toledo, Ohio, USA

Online Publication Date: 01 October 2008

To cite this Article Goddard, Yvonne L. and Sendi, Carole(2008)'Effects of Self-Monitoring on the Narrative and Expository Writing of Four Fourth-Grade Students with Learning Disabilities',*Reading & Writing Quarterly*,24:4,408 — 433

To link to this Article: DOI: 10.1080/10573560802004514

URL: <http://dx.doi.org/10.1080/10573560802004514>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

EFFECTS OF SELF-MONITORING ON THE NARRATIVE AND EXPOSITORY WRITING OF FOUR FOURTH-GRADE STUDENTS WITH LEARNING DISABILITIES

Yvonne L. Goddard

University of Michigan, Ann Arbor, Michigan, USA

Carole Sendi

Ottawa School District, Toledo, Ohio, USA

This study assessed the effects of self-monitoring on the quantity and quality of creative writing of fourth-grade students with learning disabilities. The participants, four fourth-grade students with identified learning disabilities, self-monitored both the quantity and quality of their writing. Results show a statistically significant increase in writing quantity for all four students, as well as an increase in writing quality for three of the students. Further, qualitative evidence indicates that students' interest in writing improved as a result of the self-monitoring intervention. The students and the teacher also reported that they liked the intervention. A discussion of implications for practitioners is included.

Writing is the most sophisticated and complex achievement of the language system (Lerner, 1997). This may be because learning to write involves far more than being able to add knowledge and skills to existing oral language abilities (Graham & Harris, 1988). Graham and Harris (1988) state that the developing writer needs to master the process of generating language in the absence of a conversational partner. Effective writing involves taking an idea and being able to develop, and then express, that idea in written form. Written

Address correspondence to Yvonne L. Goddard, School of Education, University of Michigan, 610 E. University, Ann Arbor, MI 48109-1259, USA. E-mail: ygoddard@umich.edu

language requires a degree of competence in oral language skills, the ability to read, skills in spelling, knowledge of rules of written usage, and strategies for organizing and planning the writing (Lerner, 1997). While negotiating the myriad rules and mechanics of writing, the writer must maintain a focus on factors such as organization, form and features, purposes and goals, audience needs and perspectives, and evaluation of the communication between author and reader (Harris, Schmidt, & Graham, 1998).

WRITING CHALLENGES FOR STUDENTS WITH LEARNING DISABILITIES

Planning and managing the composing process are especially important skills for beginning writers (De La Paz, 1999). Experienced writers tend to view planning and composing as a continual process that includes developing an initial set of goals or plans to guide the writing process. These practiced writers regulate the writing process by allocating differing amounts of resources to given tasks. For example, they use webbing or outlining techniques to organize their thoughts. They monitor quantity and quality. They edit and revise. In contrast, novice writers (including students with learning disabilities) seldom set writing goals, usually write their composition in order of recall unmindful of the audience, seldom monitor their finished product in regards to the writing goal, and rarely revise a text in any organized manner (Zimmerman & Risemberg, 1997).

Among students who are less successful as writers, students with learning disabilities experience some of the most serious deficits in written language (Englert et al., 1991). Students with learning disabilities often find the writing task exasperating, if not impossible. In fact, these students often consider themselves to be nonwriters (Gaustad & Messenheimer-Young, 1991). According to Gaustad and Messenheimer-Young, students with a long history of writing failure need compelling reasons to risk putting their thoughts on paper.

In fact, students with learning disabilities often experience a great deal of difficulty getting their thoughts onto paper. For example, Wong (1997) noted that students with learning disabilities “write pitifully little” (p. 140). Further, they take an inordinate amount of time to produce the little writing they do. Thus, on measures of writing quantity, students with learning disabilities perform well below their non-disabled peers.

Further, writers with disabilities have only the most cursory idea of how to structure and organize their writing (Chalk, Hagan-Burke, & Burke, 2005; Newcomer & Barenbaum, 1991). They do little planning

in advance of writing (Graham & Harris, 1989; MacArthur & Graham, 1987). Typically, they do not know or remember how to develop or expand a composition beyond a perfunctory level. Graham and Harris (1993) found that almost universally, students with learning disabilities fail to use common writing strategies, such as making notes, setting goals, and monitoring the quality of the text produced.

As noted by De La Paz (1999), students with learning disabilities also make considerably more spelling, capitalization, and punctuation errors than their non-learning disabled peers. Additionally, they make more errors in word usage, generate shorter texts than their peers, and have less legible handwriting. According to De La Paz, their compositions are often judged to be of poorer quality than their non-disabled peers. On a scale measuring conformity to topic and text structure, Moxley et al. (1995) determined that there were significant differences between the writing of low achievers, normal achievers, and students with learning disabilities. In particular, students with learning disabilities had more trouble with capitalization, punctuation, fluency, and length of composition as compared to low and normal achievers. Thus, on measures of writing quality, students with learning disabilities perform well below their non-disabled peers. This becomes quite apparent when students take state assessments to meet NCLB requirements. Students with disabilities perform notoriously poorly on these assessments, especially on reading and writing tasks (U.S. Department of Education, 2005).

In sum, students with learning disabilities experience difficulty with both the quantity and quality of their writing. The next sections address these constructs in depth as related to teaching students with learning disabilities to self-monitor their writing.

SELF-MONITORING WRITING QUANTITY

Self-monitoring is what occurs when an individual assesses whether or not a target behavior has occurred and then records the results in some way (Rankin & Reid, 1995). There are numerous ways in everyday life that people monitor their own behavior. Weighing and recording daily or weekly weight can encourage the dieter to change eating habits. People with diabetes may monitor their own blood sugars and make the appropriate adjustments in insulin intake. Likewise, integrating self-monitoring with the writing process can be a powerful technique for changing the academic performance of young writers.

Self-monitoring of writing has received limited research attention (Harris et al., 1994, 1998). However, self-monitoring has the potential to help students with disabilities become better, more independent writers (Harris et al., 1994). It allows them to assume the responsibility to monitor their performance and alter their own behavior, which can be motivating. It is also a metacognitive technique that helps learners think about getting their thoughts onto paper.

The use of self-monitoring for intervention purposes in the classroom is appealing for several reasons. When students with special needs use self-monitoring, they become more independent, thus reducing demands on teacher time (Graham, Harris, & Reid, 1992). Further, the act of self-monitoring, including self-recording, is highly motivating because it provides a visual record of students' performance over time (Graham et al., 1992).

Graham et al. (1992) state that self-regulation is the primary value of teaching procedures for self-monitoring. Self-monitoring provides information and feedback that allows individuals to gradually improve their outcomes (Watson & Tharp, 1997).

Self-recorded word counts are one way to encourage more writing by children and can be used as an indicator of progress in writing (Moxley et al., 1995). Several prominent authors counted the number of words or pages they wrote daily. British novelist Anthony Trollope, who wrote more than fifty novels, would set specific writing goals for each writing session (Zimmerman & Risemberg, 1997). He recorded the number of pages that he completed each day, averaging forty pages per week. Similar methods of self-monitoring were used by Ernest Hemingway and Irving Wallace to increase self-awareness of their writing progress. The technique of goal setting, which involves setting specific word or page goals for daily or weekly output, can help to focus, organize, and regulate the writer (Zimmerman & Risemberg, 1997).

The rationale for increasing the rate of writing is similar to that for increasing the rate of reading. The fluent oral reader reads with accuracy, expression, and speed. Similarly, the fluent writer may be one who writes with accuracy, expression, and speed (Moxley et al., 1995).

A few studies have concluded that encouraging students to use timed writings and personal word counts result in increased output and improved quality of writing. For instance, Moxley and his colleagues (1995) suggest that writing more and at a higher rate is linked to improved quality of writing. These researchers discovered a correlation between self-monitored timed writings and an increase in the total number of words written for first- through fourth-grade

students with disabilities. In another study, Harris et al. (1994) compared the effectiveness of self-monitoring of attention and self-monitoring of performance. Experiment 1 examined the number of spelling words written accurately, while Experiment 2 measured the number of words written and the quality of compositions for four students with learning disabilities in the fifth and sixth grades. The authors' conclusion regarding Experiment 2 was that the self-monitoring interventions succeeded in improving both writing output and on-task behavior.

In a study by Graham and Harris (1989), the focus was on teaching self-monitoring strategies to three students with learning disabilities to aid in the planning and writing of essays. Two of the three students produced, on average, longer compositions when compared to baseline performance. Rumsey and Ballard (1985) conducted research investigating the effects of self-monitoring writing behaviors, including self-recording of writing output for students with disruptive behaviors, ages nine to eleven. The students counted their daily output of words during a writing period, then graphed the output. Additionally, they self-monitored whether or not they were on-task when a signal was sounded. The authors concluded that the subjects increased both written word output and on-task behavior.

In summary, initial studies focused on the use of self-recorded word counts show an increase in the number of words written when students time and self-monitor their writing output. Self-monitoring of writing appears to be a practical way to monitor the amount of words written and to provide motivation to improve writing rates. However, there are few studies supporting this emerging body of evidence, especially recent studies. Thus, this study is designed to extend the findings of prior studies in regard to self-monitoring word counts. Specifically, this study examined the effects of self-monitoring on the number of words written for fourth-grade students who were required to take the state proficiency exam in writing following this study.

SELF-MONITORING WRITING QUALITY

Students may also assess and self-record (i.e., self-monitor) the quality of their writing. For example, a student may self-monitor basic mechanics (punctuation, capitalization, and indenting), paragraph components (topic sentences, supporting sentences, and concluding sentences), and overall neatness.

Graham and Harris (1989) taught students with learning disabilities to use the mnemonic device TREE to help define and generate

components of a good essay. TREE stood for four prompts: Topic sentence, note Reasons, Examine reasons (will my reader buy this?), and Ending. Upon completion of the writing, compositions were scored separately by two outside evaluators using a holistic rating scale. The quality ratings for all three students in the study rose following completion of self-monitoring. All three students showed substantial gains in several areas of writing performance. Positive changes were seen in the number of functional elements students included in their essays (e.g., a clear premise, reasons, and conclusions). Secondly, changes occurred in the types of elements (e.g., main character, locale, time, starter event, action, and ending) students included in their essays. Third, essays written following self-monitoring training were judged by outside evaluators to be qualitatively superior to those written during baseline. The authors concluded that the use of self-monitoring is an effective means for improving the writing quality of students with learning disabilities.

Written language has not often been used in combination with self-monitoring because of the difficulty of measuring writing's complex components objectively. However, the limited number of studies that have been conducted (Graham & Harris, 1989; Harris et al., 1994; Moxley et al., 1995; Rumsey & Ballard, 1985; Zimmerman & Risemberg, 1997) show that self-monitoring the quality of writing has a positive effect on the writing performance of students with learning disabilities. Therefore, another purpose of this study is to add to knowledge about the effects of self-monitoring writing by engaging students in self-monitoring the quality of their writing and examining the effects of this self-monitoring on their writing quality.

EXTENDING WHAT WE KNOW ABOUT SELF-MONITORING WRITING

The purpose of this study was to replicate and extend the current knowledge base regarding self-monitoring writing for students with learning disabilities. To date, several studies support the use of self-monitoring to improve writing quantity (Graham & Harris, 1989; Harris et al., 1994; Moxley et al., 1995; Rumsey & Ballard, 1985) and quality (Graham & Harris, 1989; Harris et al., 1994). Given the small samples sizes inherent in studying special education populations, replication and extension are important to verify the effectiveness of the methods studied (Cooper, Heron, & Heward, 1987; Neuman & McCormick, 1995). Therefore, this study aims to replicate previous studies by examining the effects of self-monitoring on writing outcomes for students with disabilities.

This study extends the extant research base by including fourth-grade students with learning disabilities in a suburban school district, in which students are preparing to take state-mandated high-stakes tests. In our review of the extant research, we found that no studies of self-monitoring writing for students with learning disabilities have been conducted since the adoption of the No Child Left Behind Act of 2002. If, as is intended, NCLB is influencing teaching and learning, it is important to study the efficacy of self-monitoring writing techniques in schools and classrooms situated in post-NCLB high-stakes accountability systems. Importantly, all of the students in this study took the state-mandated achievement test that provided scores for school accountability purposes under NCLB. Thus, this study is uniquely designed to provide insight into the efficacy of self-monitoring on students' writing capabilities in the context of a classroom influenced by NCLB.

Further, the study extends current research by having students measure both the quantity and quality of their writing, as well as by considering qualitative evidence of students' sense of self as developing writers. The inclusion of qualitative record-keeping and reporting is new to studies of self-monitoring. We believe, however, that this information is important to understanding the classroom dynamics that developed as a result of self-monitoring writing as well as students' perceptions of themselves as writers and of the writing process.

Based on our review of the extant literature, we posed two hypotheses for this study, considering the quantitative data we collected. First, we predicted that the amount of writing students would produce during timed writing periods would increase when students began self-monitoring their word counts. Second, we predicted that the quality of students' writing would improve if they self-monitored quality-related constructs in their writing.

Next, we asked two questions regarding qualitative outcomes of the study. First, we asked what the qualitative effects of self-monitoring would be on students' view of themselves as writers and of the writing process as well as on the affective environment in the classroom. Second, we asked about students' and the teacher's perceptions of the power, ease of use, and likeability of self-monitoring writing as carried out in this study. The following section describes the methods we used to test these hypotheses and answer the research questions.

METHODS

In this section, we describe our research participants, procedures, methods of data collection and analysis, and procedural reliability.

Participants

This study was conducted in a special education resource room at a suburban elementary school in the Midwest. The participants in this study were four fourth-grade students with identified learning disabilities receiving language arts services in a pull-out special education program. The four participants were the only students in the room during the study sessions. All participants met state and local eligibility criteria for learning disabilities, had writing goals included in their IEPs, and were identified by regular and special education teachers as demonstrating poor writing performance.

There were three females and one male, ages 8 to 10, in the fourth grade. Three students were Caucasian, and one was of Hispanic descent. IQ scores as measured by the WISC-III ranged from 113 to 126, and writing performance standard scores ranged from 74–92, as measured by either the Weschler Individual Achievement Test or the Woodcock Johnson Psycho-Educational Battery.

Procedures

The special education teacher conducted the study during a daily writing instruction period in the resource room. Instructional sessions were controlled such that the methods and classroom routines were highly predictable for the teacher and students.

Throughout the study, students maintained individual notebooks in which they wrote their stories. At the beginning of each session, the notebooks were distributed by the teacher or a student. A different story starter was provided for each session, and all students received the same story starter. Story starters were either narrative or expository (of the type requiring the students to argue a chosen point of view or to take a position on a controversial topic) and were selected or created by the teacher based on their relevance, potential interest, and developmental appropriateness for the students. The typewritten story starter prompt was attached by the teacher, prior to each writing session, at the top of the left facing page in students' notebooks.

Baseline

Students completed four baseline sessions prior to beginning self-monitoring. Baseline was continued until all students had experienced stability in writing output. Based on this criterion, intervention could have begun after three session, but for the sake of conservatism, the researchers chose to add a fourth session.

Baker, Gersten, and Graham (2003) note that planned brainstorming prior to writing can help students organize information. Therefore, once the notebooks were distributed, the teacher set a timer for exactly five minutes for a brainstorming session. After the teacher read the story starter aloud, the class began brainstorming as a whole group. As students shared their thoughts, the teacher wrote their ideas on a story web on a large dry erase board that was positioned in the classroom so that all students were able to see what the teacher wrote. The students were encouraged to write these ideas or to write their own thoughts into their notebooks below the story starter that was written on the left page. The students were encouraged, throughout the study, to refer to their notes and/or to the dry erase board as they wrote their stories.

Following each five-minute brainstorming session, the teacher set a timer for exactly ten minutes and students were instructed to begin writing. The students were told that if they completed their writing before the end of the ten minutes, they must remain seated and review their composition. They could make revisions at any time before the timer rang. Also, following the writing session, students were encouraged, but not required, to share (read) their stories with the class; this occurred across all conditions in the study.

After each writing session, during baseline and intervention, students gave their notebooks back to the teacher. For each student, the teacher recorded the number of words written and quality indices, as well as any anecdotal information about the affective environment and students' comments. Many of the stories that the students wrote were used for later work as part of the writing process (i.e., editing, rewriting, publishing). This was true of stories written before and throughout this study. Also, the procedures described for baseline were in place prior to baseline data being collected (i.e., students brainstormed for 5 minutes, wrote for 10 minutes, and used their essays in the writing process).

Self-Monitoring

Students read and wrote about sixteen story starters during self-monitoring. Procedures during intervention (self-monitoring) were structured the same as during baseline, except that students began self-monitoring procedures after writing for ten minutes. At the end of the ten minutes, students counted and graphed the number of words they wrote. Students also completed a checklist (see Appendix A), recording how many out of seven writing quality constructs they included in their compositions. The seven areas were neatness, indenting the beginnings of paragraphs, capitalization at the

beginnings of sentences, correct punctuation at the ends of sentences, use of a topic sentence, use of four to five detail sentences, and a closing sentence. So, for example, if students believed their written work was neat, had correct punctuation at the end of sentences, correct capitalization at the beginning of sentences, and had a topic sentence, they would have colored in numbers 1–4 on the Story Graph in Appendix A.

These seven areas were selected based on writing rubrics used throughout the school district; also, students had been taught these specific procedures for considering the quality of their writing prior to the beginning of this study (so that identifying these constructs in their writing was not new to these students). However, the students had never used any self-monitoring or self-scoring prior to the study.

Although students evaluated the quality of their writing based on the seven-point rubric in Appendix A, for research purposes the quality of students' writing was judged using portions of the 6 + 1 Trait Writing Rubric (Northwest Regional Educational Laboratory [NWREL], n.d.). The 6 + 1 Trait rubric scores each of seven writing traits (ideas, organization, voice, word choice, sentence fluency, convention, presentation) on a scale of 1–5 (with 1 = limited quality and 5 = well-developed writing skill), based on specific criteria for each trait.

While the seven-point rubric used by the students was most appropriate for students' use given their history with using this rubric, the 6 + 1 scoring guide allowed for a more comprehensive consideration of students' writing quality than did the seven-point rubric. At the same time, in keeping with the foci of the rubrics used by the students, only three of the six traits were scored: ideas, organization, and conventions. Although the authors believe that all components of the 6 + 1 traits rubric are important, the students were asked to assess limited aspects of their writing quality. Thus, we attempted to align the two assessments (the seven-point rubric used by students and the 6 + 1 traits rubric used by researchers) to examine similar aspects of writing quality.

Data Collection and Analysis

Word Counts (Writing Quantity)

After each writing session, the classroom teacher collected students' writing notebooks and recorded data for total words written. Total words written were scored as the number of legible words written during the 10-minute writing period. Each story was then independently scored for number of words written by two graduate students

majoring in special education. Interscorer agreement was calculated across all three readers using the following equation:

$$(\text{number of agreements}/\text{total passages}) \times 100$$

Finally, the first author collected, validated, analyzed, and graphed these data. One-tailed, dependent samples t-tests were run to compare total words written before and after the intervention. Line graphs, illustrating the trends and variability in each student's written output were also created.

Writing Quality

Similar to word counts, after each writing session, the classroom teacher collected students' writing notebooks and recorded data for students' individual assessments of their writing quality. Students with disabilities often overestimate the quality of their work (Stone & May, 2002). Therefore, to report objective writing quality data, several essays were selected and evaluated randomly from across all sessions. Quality measures were collected by a Ph.D. student in English education and the first author. The readers scored the selections separately using portions of the 6+1 writing traits rubric as described above, then met to compare scores. The students' essays were scored across three dimensions (ideas, organization, and conventions), with a potential score of five for each dimension, yielding a possible total score of 15 points for each essay (three dimensions \times five points). Interscorer agreement was calculated as

$$(\text{total number of agreements}/\text{total number of scored items}) \times 100.$$

Qualitative Records

For each session, the teacher recorded qualitative information about the affective environment and students' comments about their abilities, writing, self-monitoring, or any other comments or events that were relevant to the study.

Social Validity

At the conclusion of the study, the classroom teacher read questionnaire items (see Appendix B) to the students, who were directed to respond by checking their answers or writing brief statements in reaction to questions. Individual student responses were recorded in a spreadsheet and examined by the authors for trends and conclusions. Additionally, the classroom teacher completed a similar survey.

Procedural Reliability

Procedural reliability checks were distributed across the study, totaling 35% of the writing sessions. The first author and a graduate student majoring in special education made visits throughout the study to verify that experimental procedures were being conducted as described.

RESULTS

In this section, we present the results of the study in relation to our hypotheses involving writing quantity and quality, and questions related to qualitative outcomes pertinent to students' self-perceptions, the affective environment in the classroom, and results of the social validity questionnaires given to students and their teacher. We also report the results of procedural reliability assessments.

Word Counts (Writing Quantity)

As expected, self-monitoring writing resulted in greater quantities of writing for the participants. Students' writing quantity outcomes are displayed in Figures 1 and 2. In Figure 1, bar graphs are presented for each student, indicating average increases in words written from

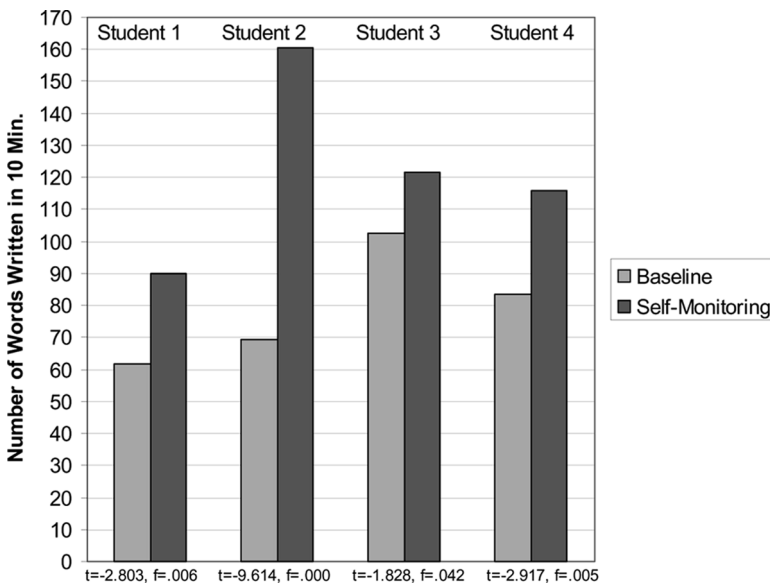


Figure 1. Students' writing quantity outcomes.

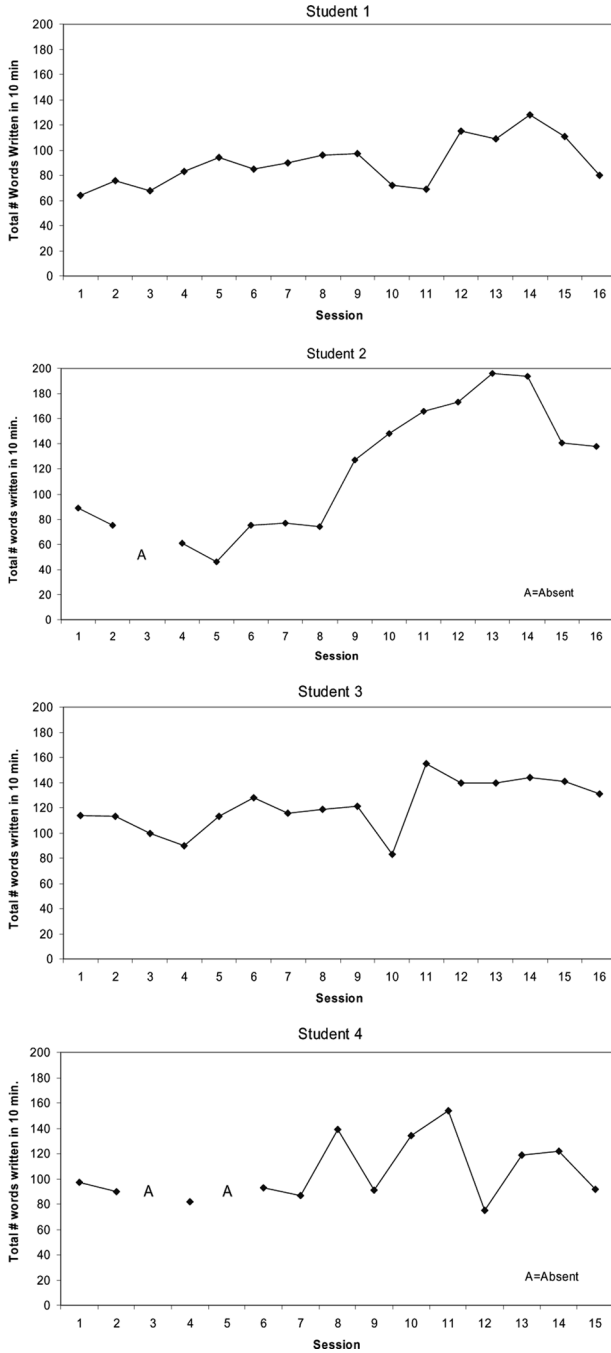


Figure 2. Line graphs of students' word counts during self-monitoring.

baseline to self-monitoring conditions. Additionally, Figure 1 provides the results of dependent samples t-tests, showing that all four students experienced statistically significant gains in their written output during self-monitoring.

Figure 2 contains line graphs illustrating the number of words written for each student during self-monitoring. These graphs provide more rich detail about students' writing that cannot be observed in Figure 1. Importantly, these graphs show students' gains in writing output across time.

In summary, all students experienced statistically significant increases in the average number of words written during self-monitoring phases. As shown in Figure 1, students experienced from 18% to 132% increases in the average number of words written from baseline to self-monitoring. In combination, Figures 1 and 2 show that, although some students experienced larger gains than others and some students' writing was more variable than others, all students experienced statistically significant gains in their written output. Finally, interscorer agreement for total words written was 97% across all essays.

Writing Quality

Three of the four participants experienced gains in the quality of their writing during self-monitoring. Student 1's quality scores averaged 5.5 in baseline; the average for self-monitoring increased to 8. Student 2's writing quality scores averaged 4.5 during baseline and increased to an average of 8.5 during self-monitoring. Student 3 had an average baseline of 10.5, with a slight decrease to an average of 10 during self-monitoring. Student 4's average baseline was 6.5, with an increase to an average of 8.5 during self-monitoring. For quality of writing, interscorer agreement across all items and students was 87%.

On the 6 + 1 Traits writing rubrics, results indicate that Students 1, 2, and 4 improved the quality of their ideas and the organization of their writing pieces. These students showed improvement in the clarity and focus of their writing and began to include more details and support for their ideas. As noted above, Student 3 experienced a slight decrease in scores for these traits. Of interest is that students' writing conventions (e.g., their use of proper capitalization, punctuation, and spelling) did not improve over the course of the study.

In summary, self-monitoring resulted in improvements in writing quality for three of the four participants. Notably, gains were recorded for ideas and organization for the three students whose

writing quality improved, but none of the students experienced changes in the proper use of writing conventions.

Qualitative Outcomes

It is important to examine writers' attitudes and sense of self-competence applicable to writing (Gersten & Baker, 2001; Gregg & Mather, 2002). Unlike prior studies, qualitative data are included in this study, providing information that the quantitative outcomes are unable to show, insights and support for the quantitative data collected. Several important outcomes of the study can be found in the anecdotal records kept by the teacher. Detailed information for each student is included below, followed by an overview and summary of the qualitative outcomes.

Student 1

This student was a hesitant writer who found writing extremely laborious. Additionally, she had difficulty reading her own work, so she was unwilling to share her work with others. Although her writing was organized, with a topic sentence, adequate details, and a concluding sentence, her stories tended to be short. Toward the end of the study, she began sharing her work with others more readily, which the teacher interpreted as a sign of Student 1's increasing efficacy toward her work.

Student 2

Student 2 had difficulty organizing her writing, particularly the sequencing of ideas and events. Her stories were always one paragraph long, regardless of topic changes or number of words written. She was enthusiastic, however, about beating her best score for number of words written. Notably, her science teacher indicated that on an exam about photosynthesis, this student's responses to short answer and essay questions were organized, well-supported, and demonstrated proper use of indenting, capitalization, and punctuation, unlike Student 2's work on prior exams.

Student 3

Prior to self-monitoring, Student 3 had difficulty organizing her compositions; this skill improved when she began self-monitoring her writing quality. Notably, she was more willing to approach writing tasks after beginning self-monitoring.

Student 4

This student appeared to be positive about his writing throughout the study. Prior to self-monitoring, this student's work contained many

run-on and incomplete sentences. Once self-monitoring began, he wrote fewer incomplete sentences, but his compositions still contained many run-on sentences.

Overall

Notably all four participants passed the State's Fourth-Grade Writing Proficiency exam as part of NCLB requirements the year this study was conducted. The average pass rate for the state that year was 79%. These findings are similar to the findings of Barry and Moore (2004) as well as Schumaker and Deshler (2003)—that, when students were given specific writing strategy instruction (not self-monitoring writing), pass rates for those students were similar to or exceeded the state's average pass rate.

Further, at two IEP meetings during this study, the students' compositions were shared as a means of considering their current level of performance and for determining their new goals and objectives. The participants in the meeting were impressed by these work samples, and one of the regular education teachers implemented self-monitoring writing in her classroom. She believed that Student 2 had begun writing better than many of the students in her regular education classroom, and decided to use the same prompts and procedures to try to improve the written expression performance of all of her students. In addition, another special education teacher who worked with fifth and sixth graders began using the same format with her students with disabilities. Both teachers indicated that self-monitoring was helpful for all of their students. Further, they have continued using the strategy to help improve their students' writing skills.

Notably, increases in students' enthusiasm about writing produced changes in the affective environment of the classroom. In particular, students began the study complaining about having to write for 10 minutes; by the end of the study, they were complaining because 10 minutes was not enough time. Also, the classroom was one in which much shuffling of feet, papers, and pencils could be heard during writing time when the study began, to a quiet, focused sense of purpose toward the end of the study. Further, many of the students became so enthused about the story starters that they began to submit their own story starter ideas, which were used frequently.

Summary of Qualitative Outcomes

Qualitative information collected during the study offers insights into students' views of themselves as writers, as well as their frustrations and triumphs. This information indicates that the affective environment within the classroom, as well as students' willingness to write, changed in positive ways over the course of the study. These are

important outcomes for students with learning disabilities, who are often reluctant writers and who frequently view writing as a chore. As indicated by the qualitative records collected during this study, self-monitoring is a strategy that has the potential to help students with learning disabilities overcome conceptions of themselves as incompetent writers, and it can build motivation for writing.

Social Validity (Student and Teacher Questionnaires)

Students

All students indicated that they enjoyed self-monitoring their writing. They believed that self-monitoring helped them write more words and better stories and they wanted to continue using self-monitoring. Three of the students (Students 1, 3, and 4) preferred counting and graphing the number of words they wrote, and one (Student 2) preferred the writing quality checklist. All of the students believed that they wrote more when they liked the story starter topic, and all of the students liked the scary or mystery story starters best.

Teacher

The resource room teacher has continued to use self-monitoring with her students. Following is her perspective on writing and self-monitoring.

I learned a great deal from using self-monitoring of written expression with my students. During the intervention phase, it was rewarding to see the students' progress. Not only did they become more active learners, but they also became more proficient writers. To see their enthusiasm for writing increase was exciting. It was also professionally rewarding to receive positive comments from colleagues as they noticed the improved efforts of the students.

Procedural Reliability

Procedural reliability observations indicated that all procedures were carried out as described for each session observed.

DISCUSSION

Self-monitoring had significant, positive effects on students' writing. All participants in this study experienced statistically significant increases in their average word counts during self-monitoring. As

Wong (1997) noted, students with learning disabilities produce little writing. This study showed that self-monitoring has the potential to help these students produce more writing.

All students experienced some variability in their writing output throughout the study, as is typical for most writers. Despite the variability in their writing, all students experienced statistically significant gains in the number of words they wrote. Based on student interviews, the most likely reason for variations in output is students' interest in the story starter topic. In fact, this view is supported by Kasper-Ferguson and Moxley (2002), who found that the number of words written by students was affected by students' interest in the story starter topic. Other variables that could affect students'; writing may include students' physiological states (e.g., amount of sleep the previous night, activity level prior to the study session that may have affected cognitive arousal, etc.) or psychological states.

Three of the four students experienced gains in the quality of their writing. In particular, these three students improved the quality of their ideas and the organization of their written work. These results are significant because, as noted by Chalk et al. (2005) and Newcomer and Berenbaum (1991), students with learning disabilities struggle considerably with these skills. Notably, although these three students improved their writing in substantive areas (organization and ideas), they showed no improvement in writing conventions (spelling, capitalization, punctuation), consistent with findings of De La Paz (1999). In sum, despite the small number of student participants in this study, the quantitative outcomes related to word counts and writing quality are significant.

Further, qualitative outcomes support the quantitative evidence that significant and positive changes occurred in students' writing as well as their attitudes toward writing. For instance, at least two students experienced changes in writing quality that generalized to regular education classrooms. In fact, one regular education teacher believed that Student 2's writing had improved so much as to be better than the writing of some of the non-disabled students in her classroom, prompting her to begin using self-monitoring writing. This is important because, as De La Paz (1999) notes, compositions of students with learning disabilities are often judged to be of poorer quality than those of their non-disabled peers. Another significant finding was that all four students passed the State's Fourth-Grade Writing Proficiency assessment, completed to meet NCLB requirements. Given that students with disabilities perform poorly on these state assessments (U.S. Department of Education, 2005), these findings are important for teachers and students, suggesting that

self-monitoring writing has the potential to help students improve their writing outcomes on state-mandated assessments.

Students enjoyed self-monitoring their writing, and qualitative evidence suggests that they became more enthusiastic about writing as a result of the intervention. The teacher also liked self-monitoring writing and has continued to use the approach with her students. These findings are significant, given that students with learning disabilities become easily frustrated with writing tasks and often see themselves as nonwriters (Gaustad & Messenheimer-Young, 1991). Also, most teachers would appreciate interventions that resulted in students becoming more enthusiastic about writing.

These findings add to the extant literature base supporting the effects of self-monitoring writing (Harris et al., 1994; Moxley et al., 1995; Rumsey & Ballard, 1985). Specifically, as supported by this study and as shown in other studies, self-monitoring does indeed result in more writing and improved quality of writing for students with learning disabilities.

The outcomes of this study are important because they provide evidence that self-monitoring is a method that can help students with learning disabilities improve their writing. Writing is not a skill that develops naturally but is one that is especially difficult for students with learning disabilities. This study shows that students with learning disabilities have the potential to increase their writing output, a skill that Wong (1997) points out is difficult to improve for these students. Further, because these students often find writing a frustrating task (Gaustad & Messenheimer-Young, 1991), the results of this study have import for young writers with learning disabilities to experience success in writing.

Self-monitoring may be useful as a strategy to help students overcome their initial resistance to writing. Once they are able to produce increasing amounts of written work, students will have more of their own written material on which to focus their efforts at improving the quality of their writing. In other words, self-monitoring might be a useful tool for helping students perceive themselves as writers and for helping them get their thoughts onto paper. Once this feat is accomplished, teachers can help students focus on improving the quality of their work in more intensive, structured ways than those used in this study.

Limitations

The number and characteristics of the students in this study limits generalization of these findings. There were only four participants, with above-average IQ scores, ranging from 113 to 126. Further, the students received small-group writing instruction in a special education

classroom. Additional research with other populations of students, across a variety of settings, is necessary to explore the significance of self-monitoring writing for a broader population of students.

The participants were a convenience sample. Therefore, another limitation of this study is that there was no comparison group. Instead, as with other self-monitoring (e.g., Harris et al., 1994; Rumsey & Ballard, 1985) and writing studies (see Baker, Gersten, & Graham, 2003 for a summary), students' progress was evaluated from baseline to intervention. Given the small number of data points upon which the t-tests were performed, the significant effects that were found for all four participants in this study lend strong support to previous studies and add important information to the research base for self-monitoring writing.

The interest level generated by the writing prompts affected students' writing. Some prompts were easier for the students to relate to and write about than others. The students were immediately able to come up with a plethora of ideas on some prompts, and were able to tap into more background knowledge. Other prompts were more difficult for them and they developed writer's block. When this occurred, as it did for all students at one point or another, the writer's block that they developed was a factor in their writing output for that day. Story starter prompts can be motivating or not, and may be a significant contributor to writing output. Kasper-Ferguson and Moxley (2002) found that the number of words written by students decreased when the writing prompt or topic held little interest for students (as evidenced by student affect or negative comments from students). This finding was supported by students' responses to interviews in this study (see Appendix B). They indicated that they wrote more when story starters were interesting and less when they did not like a story starter. Thus, the story starter prompts were likely to have had an effect on students' writing output. Further, the appeal of story starters is likely to vary from student to student, resulting in some students' writing output being more variable than others.

Other factors, such as physiological or psychological states, may have also affected students' writing output. Such factors were not addressed as part of this study. Future researchers might consider collecting data regarding the effects of a variety of factors that might influence students' writing output.

A final limitation to consider is the actual act of self-monitoring. When the students were asked to monitor the number of words written, they were fairly accurate in their count totals. On the other hand, when they were asked to monitor the quality of their work, they tended to paint a more positive picture of their abilities and gains than actually occurred. This overestimation of abilities is

consistent with the findings of Stone and May (2002) in that students with learning disabilities tended to overestimate their academic abilities when compared to actual academic outcomes and ratings of teachers and parents related to the students' abilities.

Implications

There are several implications of this study for teachers and students. Regular and special education teachers could easily implement this procedure in their classrooms. In fact, the teacher who conducted the study was enthusiastic about self-monitoring writing. Also, students with special needs are increasingly being included in regular education classrooms. For those students, and perhaps for all students in general education environments, self-monitoring writing is a strategy that can help students achieve success, while simultaneously requiring them to become more responsible, self-regulated learners (Graham et al., 1992).

Importantly, all four participants successfully passed the state's Fourth-Grade Writing proficiency exam, required as part of the NCLB mandate. This study is the first self-monitoring writing study to examine students' pass rates for NCLB writing tests. Thus, this finding is significant, given that scores of students with disabilities are often blamed for keeping schools from obtaining desired pass rates.

Another desirable aspect of self-monitoring is that it is a method that requires little teacher time, thus making it an acceptable intervention for inclusive classrooms. In fact, qualitative outcomes of this study provide some support for its use in regular education classrooms. First, regular and special education teachers who witnessed the improved writing of students involved in this study chose to implement self-monitoring writing in their classrooms, for all of their students. Second, at least two students experienced generalized improvements in their writing skills from the special education to the regular education classroom. Although in need of further study, these findings suggest that regular and special education teachers may be open to using self-monitoring writing in their classrooms, as well as that students with learning disabilities who spend time in inclusive settings may benefit by self-monitoring their writing in those settings.

Self-monitoring writing is not only easy to implement, but it also helps to build confidence and motivation. Students are able to see the results of their efforts immediately. Thus, self-monitoring can be an effective way to help students think differently about their writing and to motivate them to improve their own writing outcomes. Gersten and Baker (2001) found positive results for students' attitudes toward writing, but their meta-analysis involved only three studies. Therefore,

the results of the current study, showing that students' attitudes toward writing improved as measured by their comments and willingness to share their writing with peers, contributes to the extant literature base, providing further support that when students' writing improves, their attitudes toward writing are also likely to improve.

In their summary of writing research on students with learning disabilities, Baker, Gersten, and Graham (2003) indicate that writing difficulties start early, are persistent, and are a major contributor to referral and placement in special and remedial education programs. Thus, finding ways to motivate students with learning disabilities to write while simultaneously improving writing output and quality, as the current study did, is important.

Commonly, students with learning disabilities have spoken and receptive vocabulary skills that are far better than their writing skills (Gregg & Mather, 2002). Thus, merely getting their thoughts onto paper is a struggle for these learners. Self-monitoring encourages students to overcome some of their writing barriers. As illustrated in this study, students complained of having too much writing time when they began the study, but ended the study by complaining that they did not have enough time. By developing the ability to get their thoughts onto paper, the students began to see themselves as writers. Also, they had more written output with which the teacher could focus on improving writing quality, an important outcome for these students and their teachers (De La Paz, 1999; Wong, 1997).

Of further significance is the finding that, for those students who experienced writing quality gains in this study, their ideas and organization improved, but their writing conventions did not show improvement. This is important to note, given that instructional emphasis on ideas and organization are often secondary to instruction on writing mechanics (Gersten & Baker, 2001) and that organizing writing is a difficult skill for students with learning disabilities (Chalk et al., 2005; Newcomer & Berenbaum, 1991).

As students see their writing increase and improve, they are likely to be more willing to continue writing, improving their output and quality as they write more and more. Therefore, self-monitoring may be a way to "jump start" students' writing and begin a spiral of successful writing experiences for them.

SUMMARY

This study was conducted to determine the effects that self-monitoring writing had on the written language performance of elementary students with learning disabilities. The subjects were four

fourth-grade students with learning disabilities who attended a special education classroom for language arts. Students were taught to self-monitor the quantity and quality of their own writing. The results show a statistically significant positive relationship between self-monitoring and increased word counts in written language. Self-monitoring also had positive effects on the writing quality of three students. Further, students' attitudes toward writing improved, as indicated by their willingness to share their writing with their peers, their affective states, and their positive statements about writing as the study progressed and as indicated on their responses to an exit survey. Importantly, all four students involved in this study passed the state's writing test as part of NCLB requirements. Finally, students and their teacher enjoyed using self-monitoring and were interested in continuing to use self-monitoring to improve writing skills.

This study is important because it contributes valuable information to a little-studied academic skill—writing—that teachers often give modest instructional time to, or even overlook (Christenson et al., 1989; Newcomer & Barenbaum, 1991). Self-monitoring writing has the potential to improve the writing skills of students with learning disabilities. Gersten and Baker (2001) state that more research is needed to examine the effects of self-monitoring on students' writing. This study addresses that gap in the extant literature and adds to the mounting evidence indicating that self-monitoring should be considered a research-validated method that teachers can use to improve some aspects of their students' writing. In sum, self-monitoring writing is a method that is easy to implement and one that students who often find writing frustrating are likely to enjoy.

REFERENCES

- Baker, S., Gersten, R., & Graham, S. (2003). Teaching expressive writing to students with learning disabilities: Research-based applications and examples. *Journal of Learning Disabilities, 36*, 109–123.
- Barry, L. M. & Moore, W. E. IV (2004). Students with specific learning disabilities can pass state competency exams: Systematic strategy instruction makes a difference. *Preventing School Failure, 48*(3), 10–15.
- Chalk, J. C., Hagan-Burke, S., & Burke, M. D. (2005). The effects of self-regulated strategy development on the writing process for high school students with learning disabilities. *Learning Disability Quarterly, 28*, 75–87.
- Christenson, S., Thurlow, M., Ysseldyke, J., & McVicar, R. (1989). Written language instruction for students with mild handicaps: Is there enough quantity to ensure quality? *Learning Disabilities Quarterly, 12*, 219–229.
- Cooper, J. O., Heron, T. E., & Heward, W. L. (1987). *Applied behavior analysis*. New York: Macmillan.

- De La Paz, S. (1999). Teaching writing strategies and self-regulation to middle school students with learning disabilities. *Focus on Exceptional Children*, 31, 3–16.
- Englert, C. S., Raphael, T. E., Anderson, L. M., Anthony, H. M., & Stevens, D. D. (1991). Making strategies and self-talk visible: Writing instruction in regular and special education classrooms. *American Educational Research Journal*, 28, 337–372.
- Gaustad, M. G. & Messenheimer-Young, T. (1991). Dialogue journals for students with learning disabilities. *Teaching Exceptional Children*, 23(3), 28–32.
- Gersten, R. & Baker, S. (2001). Teaching expressive writing to students with learning disabilities: A meta-analysis. *The Elementary School Journal*, 101, 251–272.
- Graham, S. & Harris, K. R. (1988). Instructional recommendations for teaching writing to exceptional students. *Exceptional Children*, 54, 506–512.
- Graham, S. & Harris, K. R. (1989). Improving learning disabled students' skills at composing essays: Self-instructional strategy training. *Exceptional Children*, 56, 201–214.
- Graham, S. & Harris, K. R. (1993). Self-regulated strategy development: Helping students with learning problems develop as writers. *The Elementary School Journal*, 94(2), 169–181.
- Graham, S., Harris, K. R., & Reid, R. (1992). Developing self-regulated learners. *Focus on Exceptional Children*, 24, 1–16.
- Gregg, N. & Mather, N. (2002). School is fun at recess: Informal analyses of written language for students with learning disabilities. *Journal of Learning Disabilities*, 35, 7–22.
- Harris, K. R., Graham, S., Reid, R., McElroy, K., & Hamby, R. (1994). Self-monitoring of attention versus self-monitoring of performance: Replication and cross-task comparison studies. *Learning Disabilities Quarterly*, 17, 121–139.
- Harris, K. R., Schmidt, T., & Graham, S. (1998). Every child can write: Strategies for composition and self-regulation in the writing process. In K. R. Harris, S. Graham, & D. Deshler (Eds.), *Advances in teaching and learning. Vol. 2: Teaching every child every day: Learning in diverse schools and classrooms* (pp. 131–167). Cambridge: Brookline Books.
- Kasper-Ferguson, S. & Moxley, R. A. (2002). Developing a writing package with student graphing of fluency. *Education and Treatment of Children*, 25, 249–267.
- Lerner, J. W. (1997). *Learning disabilities: Theories, diagnosis, and teaching strategies*. Boston: Houghton Mifflin.
- MacArthur, C. & Graham, S. (1987). Learning disabled students' composing under three methods of text production: Handwriting, word processing, and text production. *Journal of Special Education*, 21, 22–42.
- Moxley, R. A., Lutz, P. A., Ahlborn, R., Boley, N., & Armstrong, L. (1995). Self-recorded word counts of freewriting in grades 1–4. *Education and Treatment of Children*, 18, 138–157.
- Neuman, S. B. & McCormick, S. (Eds.) (1995). *Single-subject experimental research: Applications for literacy*. Newark, Del.: International Reading Association.
- Newcomer, P. L. & Barenbaum, E. M. (1991). The written composing ability of children with learning disabilities: A review of the literature from 1980–1990. *Journal of Learning Disabilities*, 24, 578–593.

- Northwest Regional Educational Laboratory (NWREL). (n.d.). 6 + 1 trait writing. Retrieved November 15, 2005, from <http://www.nwrel.org/assessment/pdfRubrics/6plus1traits.PDF>.
- Rankin, J. L. & Reid, R. (1995). The sm rap-or, here's the rap on self-monitoring. *Intervention in School and Clinic*, 30, 181–188.
- Rumsey, I. & Ballard, K. D. (1985). Teaching self-management strategies for independent story writing to children with classroom behavior difficulties. *Educational Psychology*, 5(2), 147–157.
- Schumaker, J. B. & Deshler, D. D. (2003). Can students with LD become competent writers? *Learning Disability Quarterly*, 26, 129–141.
- Stone, C. A. & May, A. L. (2002). The accuracy of academic self-evaluations in adolescents with learning disabilities. *Journal of Learning Disabilities*, 35(4), 370–383.
- U. S. Department of Education. (2005). No Child Left Behind annual report to Congress. Retrieved April 11, 2007, from <http://www.ed.gov/about/reports/annual/nclbrpts.html>.
- Watson, D. L. & Tharp, R. G. (1997). *Self-directed behavior: Self-modification for personal adjustment*. Pacific Grove, Calif.: Brooks/Cole.
- Wong, B. Y. L. (1997). Research on genre-specific strategies for enhancing writing in adolescents with learning disabilities. *Learning Disability Quarterly*, 20, 140–159.
- Zimmerman, B. J. & Risemberg, R. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology*, 22, 73–101.

APPENDIX A: MY STORY GRAPH

Name: _____

Date: _____

Neatness

Indenting

Capital letters: at beginning of sentences and proper nouns

Punctuation: end of sentences

Topic sentences

4–5 detail sentences

Closing sentences

Story 1	Story 2	Story 3	Story 4	Story 5	Story 6
7	7	7	7	7	7
6	6	6	6	6	6
5	5	5	5	5	5
4	4	4	4	4	4
3	3	3	3	3	3
2	2	2	2	2	2
1	1	1	1	1	1

APPENDIX B: STUDENT OPINION QUESTIONNAIRE

Self-Monitoring

- 1. Did you enjoy self-monitoring your writing? ___ Yes ___ No
- 2. Do you think self-monitoring helped you write more? ___ Yes ___ No
- 3. Do you think self-monitoring helped you write better? ___ Yes ___ No
- 4. Would you like to keep using self-monitoring? ___ Yes ___ No
- 5. What did you like best about self-monitoring?
- 6. What did you like least about self-monitoring?

Comparison

- 1. Which activity did you think helped you more? ___ Counting words ___ Using the checklist
Why?
- 2. Which activity did you prefer? ___ Counting words ___ Using the checklist
Why?

Story Starters

- 1. Do you think you wrote more if you liked the story starter (if you rated it high)?
- 2. Do you think you wrote less if you didn't like the story starter (if you rated it low)?
- 3. Do you think you wrote better if you liked the story starter?
- 4. What were your favorite kinds of story starters?