WRITTEN EXPRESSION INSTRUCTION FOR ELEMENTARY STUDENTS WITH LEARNING DISABILITIES: A REVIEW OF LITERATURE

by

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Abstract

This review of literature describes the key components in writing instruction, the writing challenges faced by students with learning disabilities, and effective teaching practices designed to increase the writing abilities of elementary students with learning disabilities. Preliminary research indicates that an integration of a process approach with strategy instruction may provide the systematic, explicit, cumulative instruction needed to meet the needs of students with learning disabilities. Additional recommendations and possibilities for future studies are discussed.
Chapter 1: Introduction

The act of writing is an extremely complex process, requiring the integration of working memory, transcription (handwriting, spelling), attention, writing skills/processes, strategy use and student attitude. The seemingly simple task of writing a paragraph about a favorite pet requires the student’s ability to perceive and select the correct text structure in order to meet the intended purpose of the written passage (Englert, 2009; Englert, Raphael, Anderson, Anthony & Stevens, 1991); an understanding of the writing process, including idea generation and organization (Flower and Hayes, 1981; Graham & Harris, 2009); a degree of automaticity in the transcription process-spelling and handwriting (Abbot, Berninger, & Fayol, 2010; Graham & Harris, 2009; Graham, Berninger, Abbott, Abbott, & Whitaker, 1997; Graham, 1990); the ability to hold and organize ideas in working memory long enough to transcribe the thoughts onto paper (Berninger, 2009; Berninger et al., 2010; Bourdin & Fayol, 2000); and the student attitude that they are capable of using written expression to share their ideas (Graham, Berninger, & Fan, 2007). In addition, the student must remember to consider the needs of the audience and the mechanics (punctuation and capitalization) needed to compose a readable selection.

For students with learning disabilities, the challenge of applying and coordinating this myriad of components is often reflected in their poor writing performance characterized by simple word selection, disjointed text, minimal length, and missing components (Englert, Raphael, Anderson, Anthony, Stevens, 1991; Gersten & Baker, 2001; Graham and Harris; 2009; Saddler, 2006; Troia & Graham, 2002). For example, when writing about a favorite striped tabby, a third grade student may have tales of adventure and mischievous antics to share. However, being unable to navigate this complex process, the student simply generates, “I lik my cat. my cat has stripes My cat is fun. my cat plaz with yarn” (spelling and punctuation errors
intended). The student’s ideas and focus were lost in the maze of content, organization, spelling punctuation, and handwriting.

Ultimately, this difficulty with written expression negatively impacts student grades, college prospects and future career opportunities (Graham & Perin, 2007; National Commission on Writing, 2004). With nearly 3 million students currently identified as having a learning disability (National Center for Learning Disabilities, 2009) the need for intensive, systematic, and explicit writing intervention is immediate.

Statement of the Problem

The magnitude of student difficulty mastering the complexity of writing is reflected in both student writing scores and data on teacher instruction. According to the 2007 Writing Report Card produced by the National Center for Education Statistics (Salahu-Din, Persky, & Miller, 2008), only 33% of 8th graders and 24% of 12th graders met the criteria for proficient writing. For students with learning disabilities this number decreased even further. Only 6% of the students with learning disabilities in 8th grade were considered to be proficient writers, with 46% receiving a below basic ability score indicating that the students did not demonstrate even a “partial mastery of prerequisite knowledge and skills that are fundamental for proficient work” (Salahu-Din et al., 2008, p.6). This writing report card mirrors the findings of numerous studies and a meta-analysis on teaching expressive writing to 1st-9th grade students with learning disabilities. When writing narrative and expository text, students with learning disabilities write significantly more poorly both in terms of writing quality and quantity than their peers without learning disabilities (Englert, et al., 1991; Gersten and Baker, 2001; Troia & Graham, 2002).

Teachers are also impacted by the complexity of writing. Two national surveys (Cutler and Graham, 2008; Gilbert and Graham, 2010), designed to investigate writing instruction in the
classroom, questioned 178 primary and 97 upper grade elementary teachers randomly selected from across the United States. The survey results indicated more than 1/4 of the primary and 2/3 of the upper elementary teachers felt their teacher training in writing instruction was inadequate or poor. This lack of a sense of efficacy may, in part, contribute to the lack of time being spent on writing. In upper elementary, teachers reported that their students averaged 25 minutes a day writing passages at least paragraph length or longer with only 15 minutes per day spent on writing instruction. Primary teachers fared a bit better with the median response being 21 minutes per day.

Writing instruction is a complex task with many necessary components including what to teach, how to teach, and how to meet the needs of individual students. The majority of teachers reported following an eclectic approach to teaching writing, combining both a process and skills approach with more time and instruction dedicated to handwriting, spelling and grammar compared to planning and revision instruction (Cutler & Graham, 2008; Graham, Harris, Fink-Chorzempa, & MacArthur, 2003). When working with struggling writers, 80% of primary teachers reported making at least minimal adaptations to support their students’ needs. The most common adaptations included an increase in instruction in basic writing skills (i.e. “handwriting, spelling, grammar, punctuation, and capitalization” Graham et al., 2003, p. 288) and additional mini-lesson and conferencing time. One finding that the researchers found interesting was that the majority of adaptations for primary students were made by only 29% of the teachers surveyed. A survey of 4-6th grade teachers contradicted this with 3/4 of the adaptations utilized by the majority of the teachers several times a month. Meeting the needs of struggling writers involves a deep understanding of the components of writing, the individual needs of the student, and of evidence based practices designed to address those needs.
Teachers are critical to the success of any writing approach (Englert, 2009). Knowing how to support a student with learning disabilities is a challenging prospect. Because of their possible difficulties with each component in written expression, it stands to reason that students with learning disabilities need specialized instruction that addresses their unique needs. To address these needs and to more fully understand the complexities of writing, this article examines the main components of writing, the needs of students with learning disabilities, and the key strategies/approaches found to be the most effective when working with elementary students with learning disabilities.

**Research question**

What are the characteristics of effective written expression instruction for elementary students with learning disabilities?

**Definition of Terms**


Natural Process Mode- A way to teach writing in which the instructor encourages students to interact with each other’s writing; however, does not plan specific lessons to teach writing skills. (Hillocks, 1984)
<table>
<thead>
<tr>
<th>Term</th>
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<tr>
<td>Presentational Mode-</td>
<td>A way to teach writing in which the teacher dominates all the activity and the students are passive participants in learning. (Hillocks, 1984)</td>
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<td>Transcription</td>
<td>The use of spelling and handwriting to transfer ideas into written symbols.</td>
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<td>Working memory</td>
<td>The temporary storage of information necessary for carrying out tasks.</td>
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Chapter II: Review of Literature

In the last 25 years, experimental research in written expression has expanded following Hillocks’ (1984) meta-analysis on teaching written composition. Hillocks reviewed 60 experimental studies and found evidence strongly indicating that the most common methods of writing instruction espoused at the time: teaching writing through a presentational mode (teacher dominated instruction with students as passive learners) or natural process mode (teacher as guide, encouraging students to interact with each other’s writing with no planned lessons to teach writing skills) were the least effective. He also sparked a paradigm shift by challenging the belief that experimental research in writing had little value for teachers in the classroom or for other researchers. Since that time, and particularly with the new focus on using evidence based practices in the classroom, writing research has spider-webbed in multiple directions including focusing on components, processes and students with learning disabilities. Combining the current, collective understanding of key components and processes involved in written expression will enable teachers and researchers to more fully meet the needs of students with learning disabilities.

Components of Written Expression:

1. Writing Skills: Transcription and Grammar/Usage

   Difficulties with transcription (handwriting and spelling) have been shown to impact both the quality and quantity of text composition (Abbott et al, 2010; Berninger, 2009; Graham, 1990). Researchers hypothesized that “lower-level skills of getting language onto paper may interfere with higher-order skills, such as planning and content generation” (Graham, 1990, p
781). In a study using structural equation modeling with 300 primary and 300 secondary students, Graham et al. (1997) found statistically significant correlations between handwriting and spelling, handwriting and composition fluency, and spelling and composition fluency for primary students. Similarly, intermediate students had statically significant correlations between handwriting and spelling factors and handwriting and composition fluency.

Providing recent supporting evidence, a longitudinal study of 241 first and third grade students, Abbot et al. (2010) found evidence indicating a strong relationship between word-spelling and text composing. They found that spelling plays an important role in bridging the gap between ideas and written expression. Students must first translate their ideas into words in their “mental lexicon” (page 296) and then serve as a scribe to turn those mental words into written symbols. The researchers proposed two interpretations of their findings. The first is that students with strong spelling skills are more likely to express their ideas in written text than students who struggle with writing. The second interpretation is that the students’ working memory is impacted by their difficulties with spelling, causing less memory to be available for text organization and idea generation.

Findings are contradictory in the area of teaching grammar and usage. Previous meta-analyses of experimental and quasi-experimental studies conducted by Hillocks (1984) and Graham and Perrin (2007) cautiously submitted that the study of grammar did not increase the quality of student writing. These findings were challenged by a recent meta-analysis of 88 single subject design studies on writing intervention research (Rogers & Graham, 2008) which found that explicit instruction in grammar and usage increased the use of correct grammar in text written by struggling writers. The researchers suggested that the contradictory findings may be
due to the writers who were studied or on the method used to teach the grammar/usage skill.

More research is needed in this area.

In a review of their 20 years of research, Graham and Harris (2009) found that students with learning disabilities have difficulty mastering basic writing skills. They often are not fluent with their handwriting skills, often misspell words and forget or misuse their capitalization and punctuation rules. These difficulties contribute to challenges utilizing the students’ working memory to its full potential and in the creation of an organized, interesting written composition.

2. Working memory

Numerous studies have indicated that written language production is impacted by working memory (Berninger et al., 2010; Bourdin & Fayol, 2000; Graham, 1990). The studies suggest when students have not achieved automaticity in the areas of handwriting and spelling, they are expending brain power on these lower level mechanical skills, thereby putting a greater demand on their working memory, undermining the writing process. Having to focus on mechanics (handwriting/spelling) may result in having fewer opportunities for idea generation or may cause plans or ideas to be lost before they can be written (Graham, 1990).

3. Writing Processes

In the early 80’s, Flower and Hayes (1981) introduced the cognitive process model. To more fully comprehend the act of writing, this influential model focused on the inner processes of the writer as they engage in the three basic processes of writing: planning, translating and reviewing. Within these processes are multiple sub-processes. For example, planning involves
setting goals, generating ideas and organizing these ideas into a meaningful whole (Flower and Hayes, 1981; Troia & Graham, 2002). Students with learning disabilities may have difficulties in any or all of the three processes and their sub-processes. For example, students with learning disabilities tend to minimize planning and have a difficult time generating, organizing, classifying and labeling ideas. These students most often plan as they write, writing whatever information pops into their head, and using that thought to stimulate the generation of their next idea (Graham & Harris, 1997, 2009).

Revision consists of both evaluating and revising. Students with learning disabilities have difficulty talking a strategic approach to revision. Instead of looking to improve ideas or add/change content, they tend to passively process ideas without making mental connections between them (Englert, 2009), focusing their revision efforts instead on correcting spelling and making their paper look more atheistically pleasing (Graham & Harris, 2009).

4. Text Structure

Text structure is the organizational plan or framework within a piece of writing. For example, writing an article comparing and contrasting two types of pets incorporates different components than a text sequencing the steps needed to care for a new kitten. Multiple studies have found that students with learning disabilities tend to miss explicit signals within a text (i.e. topic sentence, signal words) and are often unable to identify basic text parts to determine text structure (Englert, 2009; Graham and Harris. 2009). Explicit teaching and modeling of text structures increases the writing quality of students with learning disabilities (Englert, 2009; Englert et. al, 1991; Gersten & Baker, 2001; Gersten, Baker, & Graham, 2003).
5. Self Regulation

To encourage the daily use and transference of writing skills, students must be taught how to self-regulate their own writing skills. Students with learning disabilities tend to be teacher dependent, needing teacher cues in order to produce quality text (Englert, Raphael, Anderson, Anthony & Stevens, 1991). In order to apply skills independently, students need explicit instruction on mega-cognitive awareness and how to self-monitor their use of writing strategies (Englert 2009).

6. Attitude

Student attitude can be defined as a learned response/mood to an object or situation (Graham et. al, 2007). Researchers theorized that attitude could impact writing ability in a variety of ways. For example, students with a positive attitude toward writing would put forth a stronger effort than students with a negative attitude. Graham et al. (2007) examined the structural relationship between student attitude and writing achievement for 241 typically developing students in first and third grade. Students were asked to write about their choice of two topics. The written passages were then scored in three areas: sophistication of vocabulary, average length of correct word sequences, and overall quality. After writing, the students were asked to complete a Likert-type scale. Students also completed the Written Expression Subtest from the WIAT-2. It should be noted that the participants were considered strong writers from well educated parents. This should be considered along with the findings. The study found that the correlation between attitude and achievement was statistically significant. The students’ attitude toward writing did impact their writing ability. Surprisingly, the data did not support a strong correlation between the opposite effects of writing achievement on student attitude. This
mirrors data found in experimental studies in which the writing achievement of struggling writers did not appear to impact their attitudes about writing. In general, elementary writers were optimistic about their writing abilities. (Graham, Harris, & Mason, 2005; and García & de Caso, 2004)

**Current Instruction for Struggling Writers**

**Process Writing Approach**

The act of writing involves an understanding and ability in the areas of mechanics and the writing process. As seen above, the task is daunting, particularly for those students who struggle with writing. Preliminary evidence indicates that a popular approach to writing, process writing (i.e. Writer’s Workshop), may not be explicit enough, by itself, for students with and at risk for learning disabilities (Graham & Harris, 1997; Graham, Harris, & Mason, 2005; Troia & Graham, 2002). The process writing approach emphasizes the act of writing itself; engaging in cycles of planning, writing and revising; writing for real audiences; and building a supportive writing environment where multiple opportunities exist for peer interactions and self-analysis. Instruction is individualized with the teaching of writing skills and processes taught during mini-lessons or teachable moments during writing conferences (Cutler and Graham, 2008; Troia & Graham, 2002).

Limited peer reviewed, experimental research exists for the effectiveness of the process approach for students with learning disabilities. In an experimental study, Troia & Graham (2002) found preliminary evidence to suggest that strategy instruction alone produces stronger writing outcomes than process writing alone. Twenty 4th and 5th grade students with learning
disabilities were randomly assigned to either receive advance planning strategy instruction in the areas of goal setting, brainstorming and organization, or to a control group receiving process writing instruction that was comparable with the Writer’s Workshop peers received in their classrooms. Students in the strategy instruction group demonstrated a positive increase in story quality compared to their peers both immediately and four weeks later. The study findings should be considered only preliminary, however, as the process writing approach was modified to reflect the teaching that was occurring in the students’ classrooms and did not include planning, mini-lessons or conferencing, key components of Writer’s Workshop.

A more recent experimental study (Graham et al., 2005) added further support regarding the possible lack of efficacy of Writer’s Workshop for students with learning disabilities. In a study of 72 third grade struggling writers (both with and without learning disabilities) the control group received written instruction via Writer’s Workshop. The researchers verified that Writer’s Workshop instruction was given with fidelity and included a classroom routine of planning, writing, revising and editing, teacher conferencing, mini-lessons, and opportunities to share their work with their peers. Unfortunately, after the five month experimental period, the struggling writers showed little growth in the quality, length and completeness of their story, persuasive, narrative, and informational compositions. Additional research is needed to examine the efficacy of process writing, in particular, Writer’s Workshop, for students with learning disabilities. While this approach has many positive aspects, preliminary data supports the theory that this method alone is not explicit or systematic enough for struggling writers.

Researchers have proposed that the integration of process writing with direct instruction in skills and strategies may be needed to create an effective writing program for students with
A program funded by the U.S. Department of Education developed preliminary recommendations for evidence based instruction in writing for students with learning disabilities and recommends using a process approach to writing in tandem with explicit, multisensory, systematic, sequential, and cumulative instruction in teaching writing (http://www.ncsip.org).

**Strategy Instruction: Cognitive Strategy Instruction in Writing**

Students with learning disabilities do not “catch” incidental learning that occurs in the classroom. They need systematic, explicit instruction in order to learn skills most effectively (Englert et al., 1991; Gersten & Baker, 2001). One intervention that has been found to show positive increases in writing outcomes for students with learning disabilities is Cognitive Strategy Instruction in Writing (CSIW). The core of this intervention is the process of making the invisible cognitive processes behind writing “visible” to students with learning disabilities (Englert, 2009; Englert et al., 1991). By using “Think Sheets” to guide them, students are able to navigate through the writing process using inner speech, self-monitoring, and writing strategies. CSIW uses these think sheets to explicitly teach the writing process (planning, drafting, and editing) and writing strategies. The strategies needed for the writing process are made visible through the acronym “POWER” which examines each subcomponent of the writing process: planning, organizing, writing, editing, and revising. The use of text structure is specifically supported by using a think sheet during the organizational stage in writing. In order to help students understand text structure more completely, CSIW has students engage in text analysis. Students use think sheets to analyze both examples and non-examples of the text structures. Students then work towards writing their own passages based on the text structure taught. First
participating as spectators as the teacher models how to construct a written passage, followed by a gradual release of responsibility to independent student writing. Throughout the lessons, dialogue and peer collaboration is actively encouraged.

In an experimental study, 184 4th and 5th grade students (including regular education and students with learning disabilities) were a part of volunteer classrooms randomly assigned to either an experimental or control group. Students in the experimental group received CSIW intervention while the students in the control group received their regularly planning instruction including brainstorming, planning, drafting, editing and revising. Students’ writing was assessed in four separate sessions in September and May with reliability consistently above 80%. The findings of the study gave a strong preliminary indication for the positive impact of CSIW on the writing quality of expository texts. Compared to their peers in the control group, CSIW students demonstrated increased organization and reader sensitivity. They also demonstrated an increased ability to generalize their writing to self-selected writing topics. One major limitation of the study is the quality of instruction in both the CSIW and control classrooms varied depending upon on the teacher’s fidelity of implementation. Procedures were not put in place to limit this effect. Even with this limitation, the results strongly suggested that explicit instruction in text structures, within the context of making thinking “visible” with peer collaboration, significantly impacts writing quality.

**Strategy Instruction: Self-Regulated Strategy Development**

A second intervention, Self-Regulated Strategy Development (SRSD), incorporates many of the same components as CSIW and has demonstrated a statistically significant positive impact on writing quality and quantity. In 2009, SRSD met the criteria for evidence-based practice for
teaching writing to students with and at risk for learning disabilities. Via explicit and systematic instruction, students are taught specific strategies for planning, drafting and revising their written work (Baker, Chard, Ketterlin-Geller, Apichatabutra, & Doabler, 2009).

Three studies help illustrate the positive evidence supporting this approach. Of the three studies reviewed here, one was experimental (Graham, Harris & Mason, 2005) while the other two were of single subject design with each participant serving as their own control (Reid & Ortiz-Lienemann, 2006; Saddler, 2006).

In the experimental study, 73 third grade students who met the at-risk criteria, were randomly assigned to three conditions, SRSD instruction only, SRSD plus peer support, and the control (Writer’s Workshop). These students were from an urban neighborhood in which 67% of the students received free or reduced lunch. Twenty of the students had a disability. The three groups were reviewed in terms of age and writing achievement as measured by TOWL-3 Story Construction, WJ-R Writing Fluency, and in reading and math performance measured by the Comprehensive Tests of Basic Skills (CTBS). No statistically significant differences between the groups were found.

The two single subject design studies had smaller numbers of participants who were teacher identified as struggling writers, three multi-age students with ADHD (one with a learning disability) and six 2nd grade students with learning disabilities respectively. The single subject studies also had a lower demographic of students receiving free and reduced lunch (8% in rural environment & 48% in an inner city school).
All three studies took baseline data in the form of writing samples and each gave explicit, systematic SRSD instruction as the treatment protocol. Instruction occurred in the following six stages and was criterion-based, with students moving on to the next stage, when competency was demonstrated (Graham, Harris, & Mason, 2005):

Stage 1. Develop Background Knowledge- The planning mnemonic POW (Pick my Ideas, Organize my Notes, and Write and say more) was introduced. A story elements mnemonic (or mnemonic based on genre of writing) was also introduced. WWW, What=2, How=2.

Stage 2. Discuss it- The strategy, its purpose and benefits were discussed with the student, followed by the students analyzing their baseline story for needed story elements. Students then graphed how many story elements they included in their composition.

Stage 3. Model it- The instructor explicitly modeled the process of using POW and WWW, What=2, How=2 while talking aloud, using self-instructions, self-talk and self-reinforcement (i.e. “What do I do next?” “Does this make sense?” “I think this part is super!”) Students helped the teacher by generating ideas, suggesting words, and recommending revisions and modifications to their plan.

Stage 4. Memorize it- Students practiced recalling the POW and WWW, What = 2, How = 2 or other mnemonics, their meanings and their purpose.

Stage 5. Support it- The students and teacher engaged in a collaborative writing experience. The students directed the process of goal setting, creating a plan, using a graphic organizer, and utilizing self-talk. From this plan, each student wrote an individual story, analyzing and graphing the story elements included. The teacher was available to support the process.
Stage 6. Independent Performance-Each student wrote a story (or other writing genre) including all the elements without any props (i.e. chart with steps, graphic organizer or self-talking chart).

In each study, student writing was evaluated for the number of story elements and number of words. The experimental study added a time component. Both the experimental and one single subject study examined the overall compositional quality. Both treatment fidelity and inter-rater reliability were high in all three studies.

In all three studies, students receiving the SRSD instruction wrote longer, more complete and qualitatively better papers. These effects included at risk writers, students with ADHD, and students with learning disabilities. These effects were maintained over time (three-ten weeks later.)

One limitation of the single subject studies is that the students act as their own control group. The studies are able to indicate a causal relationship between independent and dependent variables (Rogers & Graham, 2008); however care should be taken to examine other possibilities for student growth as a control group is not available. A second limitation is that the students were not selected randomly. This could also impact the results of the studies. That being said, Rogers and Graham (2008) in their meta-analysis of single subject studies, found that “major threats to internal validity are controlled through within- and between- subjects comparisons, and external validity is enhanced through systematic replication” (p.880).

An important finding with the SRSD approach is that there was little evidence that the skills generalize and transfer to other writing genres without explicit instruction. The experimental study found that with explicit instruction on how and why to use these strategies in
other settings and with other genres, students were able to transfer skills to the non-instructed genre of writing an informational piece. Interestingly, they did not transfer their skills when writing a personal narrative. More research in this area is needed; however, initial data indicates that explicit teaching in how and why to transfer strategies and skills is crucial for both at risk writers and students with learning disabilities. Other research studies have found that peer collaboration and dialogue increase the generalization of skills to non-taught genres (Englert et al., 1991; Baker, Gersten, & Graham, 2003). A second limitation of this and many SRSD studies is that instruction occurs within a one-on-one or pairs setting. Research needs to include implementation statistics for applying this intervention in a classroom or large group setting.
Chapter III: Results and Analysis Relative to the Problem

Students with learning disabilities are floundering in today’s classrooms. With 94% of these students receiving a below proficient score on the 2007 Writing Report Card produced by the National Center for Education Statistics (Salahu-Din et al., 2008), action must be taken.

Researchers have identified critical components that must be a part of written expression instruction for students with learning disabilities. First, automaticity of handwriting and spelling must be addressed (Abbott et al., 2010; Baker et al., 2003; Berninger, 2009; Graham, 1990). Second, the process of writing must be explicitly and systematically taught, including goal setting, planning, organization, transcription, editing and revising. Writing should be made as visible as possible through the appropriate use of graphic organizers (think sheets) and thinking aloud (Baker et al., 2003; Englert et al., 1991; Gersten & Baker, 2001; Saddler, 2006; Reid & Lienemann, 2006; Troia & Graham, 2002). Feedback, dialogue and peer collaboration are the third critical component of a successful intervention for students with learning disabilities. This environment of communication increases the students’ ability to internalize and generalize their knowledge and skills (Baker et al., 2003; Englert, 2009; Englert et al., 1991; MacArthur et al., 1995). Another important component of writing instruction is explicit instruction on the conventions used in each genre structure. Understanding the elements found in each type of text structure will help students organize their thinking and enable them to write a cohesive, complete text that is easily understood by their reader (Englert, 2009; Englert et al, 1991). Finally, teaching students self-regulation skills (goal-setting, self monitoring, self-reinforcement) is key to their becoming independent writers (Baker et al., 2009).
When looking at the above teaching needs for students with learning disabilities, a combination of the process approach and strategy instruction seems to have the potential for the largest impact on student writing.

Two other major concerns also need to be addressed. The first is teachers must be given appropriate training and support in order to implement a successful writing program with fidelity, particularly with the partnering of the process approach and strategy instruction. In a national survey, of primary grades, 72% of teachers completing the survey indicated that they taught using a combination of process writing and a traditional skills approach; however, what was taught and the amount of time spent teaching each skill varied significantly from teacher to teacher. 80% of the teachers reported that they taught at least one mini lesson a week; however, reteaching and reviewing of previously learned material occurred less frequently. (Cutler and Graham, 2008). Students with learning disabilities need consistent, systematic, cumulative instruction. Teachers must be given the training and the time necessary to deliver high quality writing instruction.

Secondly, writing instruction should no longer be relegated to a few minutes each day. The balance of time spent on teaching strategies, teaching writing processes and student composition should also be reviewed. In a random sampling of 178 teachers, an average classroom spent 50% of the educational time set aside for writing on teaching basic writing skills (spelling, grammar, handwriting, mechanics), 35% on writing, and 16% on teaching planning and revising (Cutler and Graham, 2008). Students may not be receiving enough instructional time learning how to plan and revise or for writing student compositions.
Chapter IV: Recommendations and Conclusion

Recommendations

Students with learning disabilities have unique needs that must be addressed. In addressing these needs, all students will benefit from the high quality, explicit instruction. In order to increase high quality writing instruction, the writing education provided at universities must be expanded to include instruction on evidence based writing for students with learning disabilities. Teachers need to be taught both the process approach, the strategy based approach and how to meld the two in a comprehensive, systematic, cumulative way designed to individualize and meet the needs of all writers. During teacher education, teachers themselves should have the opportunity to learn via explicit instruction, modeling, guided practice with scaffolding, leading to independent practice while working with students who are struggling writers. Simply listening to a lecture, creating a lesson plan or writing an essay on written instruction is not enough preparation to teach such a complex, integrated task.

A second recommendation is that teacher in-service and professional development time should have a writing component. To increase the fidelity of written instruction, a practicum, or peer mentoring component should be included. Again, sitting in a meeting, hearing the latest news on writing research is not enough to implement these new skills in the classroom. Teachers need time and opportunities to plan for and practice these new skills.

The development of evidence based writing practices for students with learning disabilities and other struggling writers is in its infancy, particularly when addressing the needs of these students within the regular education setting. The What Works Clearinghouse (WWC)
from the US Department of Education has recently added writing achievement to their list of improvement outcomes. The WWC evaluates research on instructional programs for students with learning disabilities. Unfortunately, only one program is currently listed and shows a potential negative impact on the writing of students with learning disabilities. (What Works Clearinghouse, 2010). Additional research is needed to more fully understand and evaluate educational practices for students with learning disabilities.

Finally, writing interventions should be a part of the Response to Intervention (RTI) process. A system of assessment and progress monitoring should be established so students do not have to fail before receiving support. The first step would be to include evidence-based practice in each classroom, followed by a tier approach to support students based on their needs. Students should be evaluated for growth frequently and additional supports put in place as necessary.

For teachers wanting to integrate an evidence based strategy approach into their classrooms in the near future, SRSD may be a good place to start. Multiple books have been written by Steve Graham and Karen Harris to guide the implementation process. In addition, two websites may be helpful. Project Write (http://kc.vanderbilt.edu/projectwrite/index.html) provides information on stages of instruction, lesson plans and SRSD resources to help teachers implement this approach with both individual students and whole classrooms. Secondly, a tutorial for persuasive writing can be found at http://iris.peabody.vanderbilt.edu/pow/chalcycle.htm. This tutorial guides a teacher from assessment to instruction. The focus is on middle school students; however, the approach has also been shown to be effective for 2-5 grade elementary students as well.
Prior to implementation, teachers should consider that research suggests a process approach combined with strategy instruction may be the more successful than strategy instruction alone. Using SRSD alone has been shown to produce positive results but initial research suggests that for generalization and transfer of knowledge, the process approach is beneficial. Unfortunately, there is still limited research in this area and even less information on how to successfully merge the two approaches in the classroom. Student assessment through progress monitoring is essential to ensure that the intervention is being taught with fidelity and is an appropriate match for student needs.

Areas for Further Research

As indicated above, even with almost 50 years of writing research completed, the study of writing components, processes, and their integration still have many avenues available for further exploration. Additional studies investigating the effects of the integration of process writing and strategy instruction within the context of classroom instruction need to be completed.

In order to investigate the effects of integrating process writing and strategy instruction on the quantity, organization, and quality of elementary writing, two experimental studies, completed in tandem, should be developed. Each study would have four instructional groups: process writing alone, strategy instruction alone, an integrated approach using process writing and strategy (SRSD) instruction, and a control group.
Sample Future Method

Participants

40-50 4th grade students with learning disabilities from urban classrooms would be identified and asked to participate in the study. Students would meet the criteria for learning disabilities outlined by Troia and Graham, (2002):

1. Identification by the school district as having LD, following the guidelines of the state (revised from criteria of Troia and Graham, 2002 due to changes in the Individuals with Disabilities Education Act (IDEA) LD qualifications);
2. a verbal or performance IQ scale score between 80 and 135 on the Wechsler Intelligence Scale for Children- Third Edition;
3. an achievement discrepancy of at least one standard deviation in reading or written expression as determined by composite score on a standardized norm referenced test of educational achievement;
4. absence of sensory, motor, and emotional disabilities;
5. English as the primary language; and
6. the ability to write four coherently connected sentences, based on writing samples provided by classroom teachers. (p. 293)

40 students would be selected as a base number because of the context in which this study would occur. 1/5 of the students in each classroom would have learning disabilities. The ratios would be kept consistent as the ratio of special education to regular education students impacts classroom dynamics in areas such as discussion, brainstorming and peer collaboration. The students with learning disabilities would be randomly placed in eight classrooms, two
classrooms for each approach. The ANOVA would be performed to ensure the classroom groupings were not significantly different in terms of IQ and writing ability (limiting the null hypothesis).

Eight volunteer teachers with a minimum of 5 years teaching experience would be asked to participate in the study. Each teacher would be given pre-service training in their group condition; process writing, SRSD strategy approach, or a process writing and SRSD integration approach. The control group teachers would not receive additional training. The pre-service training would conclude with a practicum component in which each teacher would work with small groups of students (not those that would participate in the study). Each teacher would need to achieve a 95% on a rating scale designed to measure the integrity of the teaching of each approach. Additionally, each teacher would be given a checklist to follow to ensure that they met each component and would be observed and throughout the experiment to ensure the fidelity of instruction. Observations would be more frequent at the onset of instruction to make corrections quickly and limit the impact on the experiment.

**Writing Probes**

Prior to instruction, each student would be given three informational writing probes with their choice of two topics for each probe. These probes would be evaluated by graduate students trained until they achieved a strong inter-rater reliability. Probes would be typed with spelling and punctuation errors kept intact and evaluated for number of words, text structure components, organization and overall quality, including spelling, capitalization, grammar and punctuation. Each probe would be evaluated by two independent graduate students. At the end of the instructional period, and for two maintenance periods (3 weeks & 6 weeks after instruction),
students would again be given three writing probes with their choice of two topics. Each probe would be scored as listed above.

The teachers would not see the assessment criteria or the results of each probe. They would not know precisely which components of writing were being assessed. They would be free to use their own progress monitoring assessments as prescribed by their approach to gauge student progress and design instruction.

**Instruction**

Instruction would occur over a two month time span with 1 hour set aside daily for writing for four days each week. Graham and Harris (1997) recommended that 45 minutes each day should be dedicated to the process of writing (planning, revising, or writing). The additional 15 minutes would incorporate time to teach specific writing strategies and skills. Teachers would use the lesson plans and information provided at the pre-service training to design and implement lesson plans for their classrooms. The control classroom teacher would also teach for 1 hour per day using their typical classroom instruction.

**Results**

Writing probes would be compared with each treatment group and the control. The two pairs of four groups would be compared against each other to check for the validity and reliability of the experimental results.
Additional Areas for Further Research

Additional research questions needing further exploration include the effects of applying interventions in small versus whole group settings and in inclusion versus pull out settings. A second crucial research topic is how to measure growth in writing for students with learning disabilities. A few curriculum based measures have been developed but the data and results are still in the initial stages. Finally, with the multiple facets of writing, research needs to be continually assessed and integrated in order to create a cohesive whole that is available and applicable for students with learning disabilities in the classroom.

Summary and Conclusion

The act of writing is an extremely complex process. Students with learning disabilities and their peers often have difficulty producing a cohesive, organized, high quality written composition. By integrating a process and strategy based approach, explicitly teaching handwriting and spelling skills to encourage automaticity, and building a community of dialogue and feedback, research supports that the task of writing may be demystified and made possible for many students with learning disabilities. When asked to write a persuasive essay on why cats make the best pet, a third grade student with learning disabilities will know they have the skills needed to write a strong composition; start goal setting, brainstorming and organizing their ideas; transcribe their thoughts onto paper; make revisions; and ultimately share their text with a peer who goes home convinced he needs a cat to make his home complete.
References


doi:10.1023/A:1026458102685

of Educational Psychology, 100, 907-919. doi: 10.1037/a0012656


http://www.jstor.org/stable/356600 *


http://ezpolson.nmu.edu:5904/ids70/resolver.php?sessid=l7r467fckmppllg5qnv4i30k5o6&server=csaweb115v.csa.com&check=1d05816d6c42e8eb5ea46f0249742cf2&db=psycarticles-set-c&key=EDU%2F82%2Fedu_82_4_781&mode=pdf

Graham, S., & Harris, K. (2009). Almost 30 years of writing research: Making sense of it all

doi:10.1111/j.1540-5826.2009.01277.x


http://ezpolson.nmu.edu:5904/ids70/resolver.php?sessid=8drk7ldvvu8afpi4m1pqpkora6&server=csaweb112v.csa.com&check=e617e7bf9a190bac700b5f1ccc035a6&db=psycarticle&set-c&key=EDU%2F89%2Fedu_89_1_170&mode=pdf


Graham, S., Harris, K., & Mason, L. (2005). Improving the writing performance, knowledge,
and self efficacy of struggling young writers: The effects of self-regulated strategy
doi:10.1016/j.cedpsych.2004.08.001


in the classroom: part of a balanced approach to writing instruction for students with
disabilities. *Focus on Exceptional Children, 35*, 1-16. Retrieved June 25,
2010, from General OneFile via Gale:
http://ezpolson.nmu.edu:5558/gtx/start.do?prodId=ITOF&userGroupName=lom_nmichu


instruction model that integrated a process approach, strategy instruction, and word
Stable URL: http://www.jstor.org/stable/1511234

Participation and Equal Accountability*. Retrieved July 10, 2010 from
http://www.ncld.org/on-capitol-hill/policy-in-action/policy-briefs/nclb-and-students-with-
ld-ensuring-full-participation-and-equal-accountability

National Commission on Writing. (2004). Writing: A ticket to work…or a ticket out: A survey
of business leaders. Retrieved July 10, 2010 from

NCSIP II Improving Instruction for Students with Disabilities. (2010). Evidence Based
Instruction: Writing. Retrieved July 5, 2010 from
http://www.ncsip.org/instruction/writing.html

Reid, R., & Lienemann, T. O. (Fall 2006). Self-regulated strategy development for written
expression with students with attention deficit/hyperactivity disorder. Exceptional
Gale:http://ezpolson.nmu.edu:5558/gtx/start.do?prodId=ITOF&userGroupName=lom_nmi
chu

intervention research. Journal of Educational Psychology, 100, 879-906. doi:
10.1037/0022-0663.100.4.879

development: Effects on young writers with learning disabilities. Learning Disabilities
Complete via Gale:
http://ezpolson.nmu.edu:5558/gtx/start.do?prodId=PROF&userGroupName=lom_nmichu

(NCES 2008–468). National Center for Education Statistics, Institute of Education