5-16-2008

The Effects of Direct Instruction in Writing on English Speakers and English Language Learners with Disabilities

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This dissertation, THE EFFECTS OF DIRECT INSTRUCTION IN WRITING ON ENGLISH SPEAKERS AND ENGLISH LANGUAGE LEARNERS WITH DISABILITIES, by KIMBERLY A. VIEL-RUMA, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in the College of Education, Georgia State University.

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ABSTRACT

THE EFFECTS OF DIRECT INSTRUCTION IN WRITING ON
ENGLISH SPEAKERS AND ENGLISH LANGUAGE
LEARNERS WITH DISABILITIES
by
Kimberly A. Viel-Ruma

Many students struggle on writing tasks with little success because writing is a complex task. Students with learning disabilities (LD) and students who are served in English to Speakers of Other Language (ESOL) programs generally perform at lower rates on writing tasks than their English-only speaking peers without disabilities. Several researchers indicate that students with disabilities may be able to improve their performance on writing tasks through the implementation of Direct Instruction writing programs. The purpose of the current study was to demonstrate the relationship between the implementation of an accelerated Direct Instruction program and student writing performance with students who have LD in written expression, and who are either English-only speaking or native Spanish-speaking. Specifically, using a multiple-probe across participants single-subject research design, two groups of students received instruction using the *Expressive Writing* program. One group of three students were concurrently served in both special education for learning disabilities in the area of written expression and in a program for students who were English Language Learners (ELL), and another group of three were native English speakers who had learning disabilities in written expression. Students were divided into two separate groups to determine the effect of an abbreviated instructional sequence on both groups of students

as the language background differences between the two groups did not allow them to be examined as one distinct group. The effects of instruction were measured by analyzing the number of correct word sequences, the number of words, and the types of errors when students were given three-minute writing probes. Additionally, performance on the Test of Written Language (3rd edition) (TOWL-3) and a classroom generalization measure were examined. Results indicated that when only half of the total lessons were presented to the students in both groups, the number of correct word sequences and the total number of words written increased on within-program writing probes, the TOWL-3, and on a generalization measure. An implication of these results is that adolescent students with writing deficits may be able improve their basic writing skills using half of the total program. Such a finding is important because students at this level who have not yet acquired these skills must quickly acquire them to be able to develop the more sophisticated skills required of students at their grade level. Limitations included the lack of the in-program placement test being proctored at the end of the intervention and the use of a nonconcurrent baseline with the second group of students.

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Kimberly A. Viel-Ruma

A Dissertation

Presented in partial Fulfillment of Requirements for the
Degree of
Doctor of Philosophy
in
Special Education
in
the Department of Educational Psychology and Special Education
in
the College of Education
Georgia State University

Atlanta, Georgia
2008

ACKNOWLEDGMENTS

None of the requirements leading to this dissertation could have been completed without the love, support, encouragement, and compassion of my family. I am grateful to them for all of the time they afforded me to work my way through this program and to complete this dissertation. Thank you, Bill, Lucy, and Abby. You guys are awesome.

I must further express my gratitude to my dear friends who on countless occasions gave me so much support when I couldn't quite manage to find the perfect balance between this program and the rest of my life. I couldn't have made it through without you. Thanks, Leeann, Connie, and Allyson. I really owe you.

Completing this program also would not have been possible without the ongoing support of an amazing cohort of colleagues and friends with whom I have had the incredible good fortune to work, laugh, and commiserate. DaShaunda, Michelle, and Shane - I am so grateful that I landed in your group. Your input, insights, and inspiration have been invaluable.

I also want to thank Dr. David Houchins for four years of counseling and advising as I have made my way through this program. As my advisor, instructor, and committee chair, his nonstop encouragement, especially during those times when the light at the end of the tunnel never seemed to get any closer, allowed me to continue to move forward toward this end goal. He has served as a constant resource regarding research, instruction, and all things higher ed. Thank you, Dr. Houchins, for always believing in my ability to reach this point and always being so available for advice and discussions.

Further thanks must be extended to Dr. Kristine Jolivette, Dr. Laura Fredrick, and Dr. Paul Alberto who so graciously agreed to serve on my dissertation committee. Dr. Jolivette, with her rare wit and wisdom, has provided me with invaluable counsel and direction about how to complete this degree and conduct quality research. I have benefited enormously from the gifted instruction, guidance, and humor of Drs. Alberto and Fredrick. The wealth of information and experience they have shared will continue to influence me throughout my career. My hope is that my future contributions to the field of special education will always be a positive reflection of the experiences that these four professors have given me.

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ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
DI	Direct Instruction
EBD	Emotional Behavior Disorder
ELL	English Language Learner
ESOL	English as a Second Language
LD	Learning Disabilities
MR	Mental Retardation
SI	Strategy Instruction
SRSD	Self-Regulated Strategy Instruction

CHAPTER 1

WRITING PERFORMANCE AND WRITING STRATEGIES: A REVIEW

Statement of the Problem

Writing is an important and necessary skill for students to master if they are to achieve both academically and socially. Strong written expression skills are essential for school success since proficiency in such skills is a basic requirement for most academic subjects (Christensen, Thurlow, Ysseldyke, & McVicar, 1989; Thomas, Englert, & Gregg, 1987). Currently, 35 states have formal writing assessments in place necessitating students to learn how to write at a proficient level (Schumaker & Deshler, 2003). Additionally, the No Child Left Behind Act (NCLB, 2002) requires that all students participate in high stakes testing to the fullest extent possible. A lack of writing success can cause grade failure or the inability to graduate with a general education diploma.

In addition to being a necessary skill for school success, writing is a complicated task that requires students to be cognizant of the mechanics of language (e.g., grammar, spelling, capitalization), while simultaneously expressing meaningful content through the use of appropriate vocabulary selection and a format appropriate for each particular type of writing genre (De La Paz & Owen, 2000). It is such a complicated task that some argue that writing is the most difficult skill that students must master in school (Hillocks, 1987). The difficulty that students experience when writing is evidenced by recent figures published by the National Assessment of Educational Progress (NAEP; Persky, Dane, & Jin, 2003) which further support the notion that students experience problems when

writing. In the report, only 28% of fourth graders, 31% of eighth graders, and 24% of twelfth graders are at or above proficient writing levels. Further, 14% of fourth graders, 15% eighth graders, and 26% of twelfth graders performed below a basic level of achievement in writing tasks (Persky et al.). Such figures indicate a need for many students to improve their writing skills (Applebee, Langer, Mullis, Latham, & Gentile, 1994). This is particularly evident for students who have learning difficulties or who do not speak English as their native language.

Students with Learning Disabilities

Challenges in writing are magnified for students with learning disabilities (LD) in the area of written expression. This group of students often lacks the cognitive abilities to meet all of the complex cognitive processes required to complete many writing tasks (Bui, 2002). Such cognitive deficits can negatively impact those students' abilities to employ grammatically correct usage in the course of planning and developing written text. In general, students with LD produce writing samples of a poorer quality than the samples of their peers without disabilities (Newcomer & Berenbaum, 1991). Students with LD exhibit less legible handwriting (Graham & Weintraub, 1996), shortened text length (Graham, 1990), and more errors in mechanics (Graham, Berninger, Abbott, Abbott, & Whitaker, 1997; Graham & Harris, 1989). Students with LD also tend to place an overemphasis on transcription skills (Graham, Harris, & Larsen, 2001). Transcription skills are those that relate to handwriting, spelling, and punctuation (Brooks, Vaughan, & Berninger, 1999). Because of the heightened emphasis on form, students with LD tend to pay more attention to the lower level mechanical skills instead of composing meaningful text (Palinscar & Klenk, 1992). Students with LD also spend minimal time planning to

write (Graham & Harris, 2000). This is critical because the amount of time spent planning has been shown to be key to the quality of the final written product (Bereiter & Scardamalia, 1987). Therefore, the finished written products of students with LD are generally less coherent and meaningful than those of their peers without disabilities (Wong, Butler, & Ficzere, 1997).

It is critical then to identify the most effective practices for teaching writing to students with LD as many of the problems that students encounter when writing may stem from ineffective instructional practices (Stein & Dixon, 1994; Troia, 2002). Because of the heightened focus that students with LD place on lower order transcription skills due to the difficulty that they exhibit in acquiring such basic writing skills, it is essential that writing instruction enhance the mastery of those transcription skills so that students will place more emphasis on composition development. Composition development skills are those higher order skills that allow students to generate text that is meaningful through appropriate vocabulary choice, sentence structure, and appropriate content (Brooks et al., 1999). Students with LD benefit by learning transcription skills as part of the writing process (Houck & Billingsley, 1989). Therefore, programs that emphasize transcription skills should be used in teaching students with LD to write.

English Language Learners

Students who are English Language Learners (ELL) are students who are enrolled in U.S. public schools who do not speak English as their primary language. The number of students who are ELL in American public schools increased from two million students to three million students between 1994 and 2000 (Meyer, Madden, & McGrath, 2004). During the 2000-2001 school year, students who were ELL represented 10% of the K-12

population in American school (Meyer et al.). It is projected that by 2030, 40% of the K-12 population in U.S. schools will be comprised of students whose first language is not English (McCardle, Mele-McCarthy, & Leos, 2005). Clearly, based on their sheer number, ELL students must be at the forefront of educational research. An increase in the amount of students who are ELL and who are being served in special education also is occurring (Donovan & Cross, 2002). Nearly 360,000 of the students served in special education programs are ELL and more than half of them are categorized as LD (U.S. Department of Education, 2003).

Students who are ELL often lag far behind their peers academically (Kindler, 2002). This is evidenced by the large number of students who are ELL who struggle with writing performance and do poorly on state assessments (Panofsky et al., 2005). Further evidence of the difficulties students who are ELL have academically is that this group of students who is of limited English proficiency account for 44% percent of the dropout rate (U.S. Department of Education, 2003). Few studies have investigated effective instructional practices for teaching writing to students who are ELL (Panofsky et al.). Specifically, the area of literacy for the adolescent learner who is ELL has been for the most part overlooked (Garcia & Godina, 2004). For this reason, most of the instructional practices that are used with students who are ELL are practices that have been empirically validated and established for native English speakers (Artiles & Ortiz, 2002). It is essential that programs that might meet the specialized needs of these students be studied since students who are ELL and have LD in the area of written expression exhibit difficulties in completing writing tasks successfully and performing at acceptable levels on state assessments. Little research has been conducted with this subgroup of students,

and further examination of their needs is necessary to understand their learning needs (Gersten & Baker, 2000).

One purpose of this dissertation was to examine the dilemma of identifying students who are ELL as having disabilities. It further examined the state of empirical research with those students who qualify for this status. This study also reviewed the literature base on instructional strategies in writing for students with disabilities with particular emphasis on strategies using Direct Instruction (DI) methods. Lastly, curriculum-based measures (CBMs) for writing were reviewed.

Method

Computer-based databases accessed via the GALILEO system were used to conduct literature searches in the topic areas covered in this dissertation. Several databases were retrieved and included ERIC (Educational Resources Information Center), Academic Search Complete, and PsycARTICLES from 1962 through 2007. The rationale for using these databases was that the journals that are contained within them frequently address instructional strategies and other research topics for students with disabilities.

Several descriptors were used in conducting the search and included: English language learners, learning disabilities, writing instruction, strategy instruction, self-regulated strategy instruction, direct instruction, curriculum-based assessment, and correct word sequence.

Several criteria for inclusion in the study were identified. The first was that the participants in the articles had to qualify for services for either students who are ELL or had been categorized as having a disability. Participants also had to be school-aged

between Kindergarten and the 12th grade. Lastly, all articles were published in peer-reviewed journals.

The Literature

English Language Learners and Disability

Difficulty identifying students who are ELL as eligible for special education services due to the confusion over whether their academic problems stem from difficulties in second language acquisition or from a possible disability has led to both over and under representation in different geographic locations and disability categories. Nationally, almost 400,000 of the students who are served in public special education programs are students who are described as ELL (U. S. Department of Education, 2003). This figure represents 9.6% of the total ELL population which is somewhat lower than the overall prevalence rate of 13.3% in the general population. This number suggests that students who are ELL may be underrepresented overall in national figures in special education programs (U. S. Department of Education). However, such disparity does not exist when representation is delineated by the various subcategories of disability. For example, students who are ELL are overrepresented in certain categories of special education such as LD, Speech/Language Impairments (SI), and Mental Retardation (MR) in specific regions and states (McCardle et al., 2005). Fifty-six percent of students who are ELL with disabilities are served in LD programs specifically for reading difficulties. The second highest number of students who are ELL with disabilities are served in programs for students with speech impairments (U.S. Department of Education). The disparity between over and under representation in the various disability categories is related to the type of diagnosis required for eligibility to be established. The special

education categories in which the most overrepresentation occurs are the categories that are the most subjective in diagnosing (Parrish, 2002). These are the categories that do not generally require a medical diagnosis, and are a result of referral and placement by educational professionals rather than medical professionals. Representation of students who are ELL in less subjective special education categories (e.g. visually impaired, hearing impaired) is generally proportionate with overall representation in the general population (Ferri & Connor, 2005). Recent data indicate that ELL representation as a percentage of the special education population is on the rise, but this increase is consistent with the increase in representation of ELL students in the general population (Donovan & Cross, 2002). However, it is important to note that all of the figures regarding students in special education must be viewed with some caution. Prevalence rates for these students have only in the last few years become available, and the methods and requirements of reporting vary from state to state. Additionally, some districts do not delineate ELL students served in special education into their own category. Such variability in reporting is indicative of the lack of consistency in identifying ELL students with disabilities and it cause for a call for more standardized procedures in the reporting process (Wagner, Francis, & Morris, 2005).

One major challenge to accurately identifying LD in ELL students that still remains in many states is the controversy surrounding the issue of classification of monolingual students who have typically been identified as having LD using a discrepancy model that compares achievement scores to IQ scores (Wagner et al., 2005). Unlike a medical model which stems from a physician's diagnosis of a clear presence or absence of a condition, LD in some regions must be identified and classified along a

performance continuum that includes subjective criteria for identification (Fletcher, Morris, & Lyon, 2003). However, identification of LD based on a discrepancy model has been found to have weak validity (Hoskyn & Swanson, 2002; Lyon, Fletcher, & Barnes, 2005; McKoon, 2003). The response of several states to changes in the Individuals with Disabilities Improvement Education Act (IDEA, 2004) that promotes the use of a Response to Intervention (RTI) model to identify LD may serve to alleviate some of the problems in identifying students who are ELL as having LD.

IDEA also indicates that students who are ELL must be assessed in their native languages (IDEA, 2004). Ideally, assessment would be offered in both languages (Francis, 2003), but few comparable assessments exist as these measures are both technically difficult and expensive to produce (Wagner et al., 2005). Simple translations on assessments from English to the target language are not appropriate as they do not eliminate cultural bias (Li, McCardle, Clark, Kinsella, & Berch, 2001). Validated assessments in other languages could ameliorate concerns that the use of IQ and achievement tests proctored in English are rife with cultural biases that hamper the performance of ELL students (Gunderson & Siegel, 2001).

The referral process also has made identifying students who are ELL as having LD. Since classroom teachers are responsible for making such referrals, they should be aware of the learning characteristics of students who are ELL. Most teachers will teach ELL students at some stage in their careers (McCardle et al., 2005). Inappropriate referrals for special education assessment for those students increase when teachers are not trained to understand the needs of students who are ELL (Hosp & Reschly, 2003). Teachers are also unprepared to make accommodations for the linguistic deficits of the

students in their classrooms which increases the likelihood that students will be referred for special services (Cushner, McClelland, & Safford, 2003). The problem is even more critical in urban areas that already have difficulty attracting qualified candidates and where students who are ELL are overrepresented in special education (McCardle et al.). Additionally, once referred, a major challenge in serving ELL students in special education is the lack of trained qualified special education staff since only 60% of special educators who serve ELL students have had any training in the area of ELL (Zehler & Fleishman, 2003). Of the 60% who had received training, the average amount of time spent in training was three hours.

Another factor that has complicated the identification of LD in students who are ELL was the existence of the IDEA 1997 exclusionary rule which stated that if a discrepancy between IQ and achievement existed as a result of environmental or cultural factors, students would not eligible for LD services (Fletcher & Navarette, 2003). Strict adherence to this rule could either reduce the possibility of overrepresentation of ELLs in special education, or prevent some students with disabilities from receiving necessary supports. In a survey of school psychologists regarding the exclusionary rule, only 50% of psychologists reported that they tried to comply with the rule, and 37% reported that they regularly ignored the rule. Less than 33% of those surveyed considered language proficiency, social history, or cultural values when diagnosing (Harris, Gray, Davis, Zaremba, & Argulewicz, 1997). Discussion and clarification of these factors as they relate specifically to students who are ELL must be undertaken.

In addition to more formal assessment, a more ecological approach should be considered (Wagner et al., 2005). Emotional factors like depression and anxiety can be a

factor in low achievement in ELL students (Ganshow & Sparks, 1993). Culture shock and loneliness can also play a role in the academic failure of non-English speaking students (Cummins, 1979). Even negative attitudes about a language can reduce the likelihood of successful academic language acquisition (Bialystock & Hakuta, 1994). Further issues that must be examined during the assessment process are the lack of formal schooling opportunities prior to learning English, and the low literacy in the native language that results from such limited educational opportunities. Also, the effects of interference from a first language that has little in common with English, and the effects of having a first language that has no written script on second-language acquisition should be explored (Schwarz, 2005).

The question of whether or not the limited English skills of some ELL students mask an underlying disability when teachers and other specialists assume that poor achievement is the result of poor language proficiency is central to the controversy surrounding the identification of students who are ELL as having LD. The result of this scenario is the under representation of ELL students who might benefit from special education services. The next question of whether or not the low achievement that is consistent with limited English skills makes some ELL students without any underlying disability a target for referral to special education since many of the linguistic mistakes (e.g. spelling and grammatical errors) presented by students with LD resemble the mistakes that occur in second-language acquisition is also problematic (Schwarz, 2005). The result is the overrepresentation in special education of students who are ELL who may only require more time to acquire a second language or more instructional

opportunities to develop the language skills they need to be successful (McCardle et al, 2005).

Two theories exist regarding the nature of learning difficulties in ELL students. The first theory, the linguistic interdependence model, asserts that students who exhibit learning problems in their native languages should exhibit similar problems in a new language (Cummins, 1979). This theory suggests that learning problems are static across languages. Several studies support this idea (Abu-Rabia & Siegel, 2002; DaFontoura & Siegel, 1995; D'Angiulli, Siegel, & Serra, 2001). In comparing native speakers of Italian, Portuguese, and Arabic with and without disabilities and native speakers of English with and without disabilities, all three studies (Abu-Rabia & Siegel; DaFontoura & Siegel; D'Angiulli et al.) indicated that those who exhibited learning problems in one language continued to exhibit those problems in another language, and those who did not exhibit learning difficulties in their native languages did not exhibit them in English. ELL students who are not considered to be at risk for reading disabilities do not show a substantial difference in phonological processing when compared to native speakers who also do not have reading disabilities (Chiappe, Siegel, & Wade-Wooley, 2002; Lesaux & Siegel, 2003).

The second theory, the script dependent hypothesis, (Lindgren, DeRenzi, & Richman, 1985) asserts that skills in any language are directly dependent upon the orthographic structure and the predictability of that language's grapheme-phoneme relationship. A learning problem may not be expressed in a native language if the phonetic nature of that language is transparent which means that the direct relationship between a letter and the sound that it represents is clear as is often the case in the Spanish

language. However, such a learning difficulty may be made more obvious if the phonetic characteristics of the language are irregular or dense. This occurs when the sounds of the letters show considerable variation when used in different words as in the English language (Schwarz & Terrill, 2000). This theory suggests that LD is not a static condition, and that LD manifested in one language does not indicate that LD will be obvious in other languages. Further, learning problems can also be masked in a native language through the use of strong compensation strategies that might not be accessible to students in a second language (Ganshow & Sparks, 1993). Geva, Yaghoub-Zedeh, and Schuster (2000) found that students who were ELL and of average abilities without learning difficulties in their first language did exhibit lower achievement than their non-ELL peers without disabilities on English language tasks. The notion that learning problems are fluid across languages further complicates the task of identifying LD in ELL students. Regardless of this controversy and the origin of the student's inability to master academic tasks, the task that remains for researchers is to determine which writing strategies and practices are most effective for assisting students who are ELL and who may have disabilities.

Current Instructional Practices in Writing

The process approach to writing, an approach that emphasizes the natural development of writing skills and which applies implicit instructional techniques, is currently the most typical instructional approach to teaching writing (Troia & Graham, 2002). Using this approach, students are given (1) many opportunities to write, (2) mini-lessons in critical writing skills only when the need for such instruction becomes evident, (3) a community of writers, (4) teacher and peer conferencing, and (5) regular occasions

for sharing and publishing their written work (Graves, 1983). An over reliance on methods like the process approach that do not incorporate explicit instruction into writing skills instruction exists for students with LD (Danoff, Harris, & Graham, 1993; MacArthur, Schwartz, & Graham, 1991). This is problematic since explicit instructional approaches have been shown to be more effective than implicit approaches when attempting to improve the quality of the writing samples of students with LD (Troia & Graham, 2002). Due to the often ineffective nature of this approach in teaching students with LD to write, several other more explicit methods of writing instruction have been examined. These methods are strategy instruction (SI), self-regulated strategy development (SRSD), and Direct Instruction (DI).

Strategy Instruction

Strategy instruction is the use of a well-designed instructional approach to master an academic task (Schumaker & Deshler, 2003). Effective SI can include advanced organizers, elaboration, procedural facilitators, general study strategies, metacognition, and attribution (Swanson, 2001). Often SI is more explicit at the beginning of instruction, but as learning progresses, greater emphasis is placed on more implicit techniques (Deshler et al., 2001). SI is initially explicit due to the fact that (1) students with LD often exhibit processing deficits that require more structure for learning to take place; (2) steps are taught using task analysis, and are, therefore, not as confusing as initial general exposure to the overall process; and (3) students with LD frequently experience failure, and the success attained at each step of instruction allows students to develop a feeling of achievement (Schumaker & Deshler, 2003). A number of studies have investigated the

effectiveness of using strategies for writing instruction especially in the areas of planning and revising.

Reynolds, Hill, Swassing, and Ward (1988) used an experimental group design with 54 middle school students with LD who were divided into three groups. All students were instructed in Language Arts resource rooms in the areas of prewriting, drafting, and revising using the standard curriculum. Following this training, one group received training in two strategies. The first was the Evaluative and Directive Phrases strategy (EDP; Bereiter & Scardamalia, 1982) which is a series of phrases designed to describe content and recommend revisions. The second was the COPS (Capitalization, Overall appearance, Punctuation, Spelling; Mulcahy, Marfo, & Peat, 1984) strategy which is used to prompt and facilitate revising skills. The first group received training in both the EDP and the COPS strategies. The second group received training only in the COPS strategy, and the third group received no additional revision instruction after the initial instruction that all students in all of the groups received. Results indicated that there was a significant group effect in favor of either treatment group in the area of mechanics when compared to the non-treatment group who received no additional training. Those in both treatment groups showed improved mechanics, but there was no significant difference between those groups (EDP plus COPS, and COPS alone) in their performance in the area of mechanics. No significant difference existed in performance by group between any of the groups in overall quality as measured by a holistic analytic scale which measured mechanics and general content.

Other researchers have examined the use of dialogue with self and others combined with other strategies. Englert et al. (1991), using a pretest/posttest group design

showed that 183 fourth and fifth grade students with and without disabilities increased their writing quality when strategy instruction was embedded into the process writing approach and was combined with a self-talk dialogue technique. Englert et al. focused on expository essays with high and low achieving students which included 55 students with LD who received instruction on how to use structured think sheets and self-talk to plan. The teachers then modeled use of the sheets and self-talk. Prior to the intervention, the writing samples of the students with LD were compared to the writing samples of a heterogeneous group of students without disabilities who served as a no treatment control group. The differences between the samples of these groups were found to be significant based on a holistic rating scale. Results indicated that after training, the samples of the students with LD improved to the point that they were not significantly different from those from the heterogeneous group.

Wong, Butler, and Ficzere (1996), in a pretest/posttest comparison group design study, used a strategy to teach planning and revising practices in writing persuasive essays to 20 secondary students with LD and 18 students labeled as low achieving. Of the 38 students, 20 were randomly selected to serve in an untrained control group. Students wrote two persuasive essays prior to training which served as a curriculum-based measure of pre-intervention performance. Additionally, students were pre and posttested using the writing vocabulary and writing grammar portions of the Test of Adolescent and Adult Language (Third Edition; TOAL-3). Instruction took place in the general education modified Language Arts classroom. Students wrote a total of six essays, and the development of each essay took approximately one week. The 18 students in the experimental group were trained to use interactive peer dialogues in pairs to plan and

revise their essays. Three writing production phases that served as the intervention took place after the teacher explicitly taught and modeled essay development. These phases were (1) working in pairs to interactively develop think sheets with the help of prompt cards that contained lead-in and concluding phrases; (2) developing writing samples independently using a software program by writing a rough draft; and (3) dialoging interactively in pairs using the COPS strategy to revise each other's writing. Posttest results indicated that students showed significant gains on both the TOAL-3 subtests and on the CBM essays in both cogency (degree of persuasiveness) and clarity (degree of ambiguity) in their persuasive writing samples as measured by a holistic rubric designed to measure these two skill areas. Also, significant differences existed between experimental and control groups.

Similarly, Wong et al. (1997) in another pretest/posttest group design used the aforementioned strategy which incorporated peer dialogue to teach 14 ninth and tenth grade students with LD and seven low achievers to plan, write, and revise compare-and-contrast essays. The intervention in this study was the same intervention used in the Wong et al. (1996) study. The change to the study was that the instructed writing genre was compare-and-contrast essays rather than persuasive essays. Although the number of participating students was small for a robust group design, results indicated that students spent more time planning, and that the word count and overall quality of their compositions increased. Additionally, students who received training improved their essay clarity and the organization of their ideas when comparing and contrasting as measured by a different holistic rubric designed to measure this particular type of essay.

Page-Voth and Graham (1999) used a group design to study the effects of goal setting on writing performance. Thirty seventh and eighth grade students with LD received training in goal setting and strategy instruction. In this study, students were randomly assigned to one of three groups: (1) goal setting alone, (2) goal setting plus a strategy, and (3) a control group who received writing instruction without either goal setting or a strategy. All training was provided individually outside of the classroom over six instructional sessions. Results indicated that while the goal setting plus strategy group showed the greatest gains in the length of the compositions and on the number of elaborations presented, no main effect was found between the goal setting and the goal setting plus strategy for overall quality (although both groups outperformed the control group) as measured by a holistic rubric.

Troia and Graham (2002) also found that a planning strategy could have a positive effect on the story writing performance of elementary students with LD. The intervention group was composed of twenty fourth and fifth graders with LD who were randomly assigned to a treatment condition in which they were taught three planning strategies: (1) goal setting, (2) brain storming, and (3) organizing. Instruction in these areas was represented by the mnemonics STOP and LIST (Stop, Think of Purposes, List Ideas, and Sequence them). A separate group of 20 students with LD who received instruction using a modified process approach served as the control group. Instruction in the planning strategies was implemented in groups of two students. All students were required to complete story and essay writing probes which were administered at pretest, posttest, and maintenance. Total instructional time for both groups ranged from 9.1 to 10.3 hours. Results indicated that the intervention group who used the STOP and LIST

mnemonic strategies spent more time planning and wrote stories that were qualitatively better than those in a control group who did not receive training as measured by a holistic rubric. These effects were maintained four weeks after the intervention ended. However, there were no significant differences between groups in terms of overall essay quality and length on the essays as measured by a holistic rubric. Additionally, students in the intervention group were unable to transfer gained skills to a generalization measure that was administered four weeks after the end of treatment.

Hallenbeck (2002), using the Cognitive Strategy Instruction in Writing (CSIW), which emphasizes modeling, scaffolding, collaboration, and structured think-sheets, taught four seventh graders with LD to improve their expository and narrative writing skills as measured by the length of their compositions and a holistic measure of quality. Instruction was provided three times per week in the resource classroom for seven months. Pretest and posttest papers were measured using a holistic rubric of quality and by an examination of the inclusion of required textual elements. Results indicated that three of the four students showed substantial improvements in writing performance as measured by the word count of their compositions. These three students increased their word count by 138-193%.

The Strategies Instruction Model (SIM; Bulgren, Schumaker, & Deshler, 1988) developed by the University of Kansas Center for Research on Learning (KU-CRL) is one type of strategy instruction. It consists of a series of streamlined steps or stages into which mnemonic devices have been incorporated so that students can effectively and efficiently complete academic tasks using the strategy (Schumaker & Deshler, 2003). This approach is a method of assisting students in internalizing the strategy. This SIM

approach incorporates a combination of the more explicit behavioral approach taken in DI, and the more implicit constructivist viewpoint of the process approach (Kamenuui & Carnine, 1998). The strategy is taught using eight stages including: (1) pretest and make commitments, (2) describe the strategy, (3) model the strategy, (4) verbal practice, (5) controlled practice and feedback, (6) advanced practice and feedback, (7) confirm acquisition and make generalizations, and (8) generalization. Several studies have examined the effectiveness of this approach.

Moran, Schumaker, and Vetter (1981) showed that 8th and 9th grade students with LD improved their paragraph writing skills when taught *The Paragraph Writing Strategy*. This strategy instructs students in specific ways to develop appropriate paragraphs with topic sentences and supporting details. The program assumes that students have already acquired adequate sentence development skills. In a multiple-baseline across paragraph type study design, three students with learning disabilities received instruction on three different genres of paragraphs for one hour per day, and each type was described and modeled by the teacher. Students were required to master one type of paragraph before moving to the next type. During baseline, average paragraph writing scores were 59%, 50%, and 44% using a holistic rubric of writing quality. After instruction, average paragraph writing scores increased to 95%, 90%, and 87% respectively using the same rubric.

Schumaker et al. (1982) used the *Error Monitoring Strategy* which was developed to improve students' ability to correct errors in their writing as a means of improving writing performance. The purpose of the strategy is to aid students in identifying and correcting errors in both sample essays written by others and in their own writing

samples. After teacher modeling and memorizing the steps of the strategy, the students practiced finding errors in sample essays that contained 30 contrived errors which were provided in the program. After students met a 90% criterion for finding errors in the practice sets, they began examining their own essays for errors. Using *The Error Monitoring Strategy* in a single-subject multiple-baseline across participants design, nine high school students with LD were taught to self-correct. Using the visual inspection method of analysis, researchers found a general upward trend in students' ability to self-correct. The students, who corrected less than 25% of the errors in their own essays prior to instruction, self-corrected more than 90% of their errors following instruction.

Hock (1998) used *The Theme Writing Strategy*, a strategy designed to teach students to develop compositions, in a pretest/posttest comparison group design with 20 college freshmen who had LD, Attention Deficit Hyperactivity Disorder (ADHD), and low achieving who served as the intervention group. The intervention group was required to participate in 6-10 hours a week of academic tutoring because of academic difficulties. Students were instructed in an introductory English course, and they were compared to a control group of 28 students enrolled in a different section of the English class that was not receiving instruction in the strategy and who also exhibited academic difficulties. At the end of the semester, despite the fact that the students in the intervention group had more academic difficulties, the experimental group achieved nearly the same grade average for the class (average = 2.5) as did the students without academic difficulties (average = 2.6) as measured on six essays graded with a holistic rubric.

Despite these successes with strategy instruction, generalization of these learned skills to different settings and writing assignments has been difficult for students to

accomplish despite the fact that generalization is a component of the SIM strategies (Troia, 2002). Such generalization is necessary for students to become independently functioning writers. For this reason, the development of writing self-regulation skills in conjunction with strategy instruction has been investigated.

Self-Regulated Strategy Development

Self-Regulated Strategy Development is a model of instruction where students learn a general strategy for completing tasks, but the selected strategy is then paired with procedures for regulating the use of the selected strategy and any negative personal behavior that might have an adverse effect on task completion (De La Paz & Graham, 1997). For example, COPS (Capitalization, Organization, Punctuation, and Spelling), STOP (Stop Think of Purposes), and LIST (List Ideas, Sequence Them) could be used with SRSD to potentially improve writing performance by increasing student initiative to use the strategy. SRSD procedures can include goal setting, self-monitoring, self-evaluation, and self-reinforcement (Troia, 2002). SRSD consists of six stages: (1) establishing background knowledge, (2) discussing the new information, (3) modeling by the teacher, (4) memorizing the strategy steps by the students, (5) supporting the student as provided by the teacher, and (6) producing independent work samples (De La Paz & Owen, 2000).

Training in SRSD in conjunction with other strategies has lead to improvements in composition length, completeness, and overall quality in student writing samples (De La Paz, 1999, 2001; Graham & Harris, 1989). Graham and Harris, using a pretest/-posttest comparison group design, taught 22 fifth and sixth graders with LD to use a writing strategy. Instruction took place in small groups outside of the classroom for 45

minutes, for 2-3 days a week across 2-3 weeks. Students were randomly assigned to a self-instructional strategy instruction alone group, or a self-instructional strategy instruction plus the SRSD component group. The comparison group consisted of 11 students without disabilities who had writing skills in the average range, and who did not receive the intervention. Four writing probes were administered: (1) pretest, (2) posttest, (3) generalization (in the resource room), and (4) maintenance (two weeks after instruction ended). A repeated-measures ANOVA indicated that while the difference in included story grammar elements and the quality between pre and posttests was significant with an effect size of 2.8, there was no significant difference between the performance of those students who received the strategy alone and those who learned the strategy in conjunction with SRSD.

De La Paz (1999), using a multiple probe multiple baseline design, taught 22 seventh and eight graders to improve writing performance. Six of the students had LD, six were low achieving, six were average achieving, and four were high achieving. The students were asked to write five paragraph essays in a general education inclusion Language Arts classrooms. Training took place over 15 class periods and included instruction in the use of SRSD in conjunction with the PLAN (Pay attention to prompts, List main ideas, Add support, and Number ideas) and WRITE (Work to develop a thesis, Remember goals, Include transition, Try to use different kinds of sentences, and include Exciting words) strategies. After the strategy and the SRSD training, students planned longer before writing, wrote longer essays, and showed improved overall quality as measured by a holistic rubric. Prior to instruction, 93% of the students did not make any formal planning notes before writing, and those who did plan, made short lists to direct

their writing. Following instruction, all of the students made planning notes, and all notes were advanced beyond simple lists. The length of the essays written by the students with LD increased by 250%. Students in other categories doubled their word counts. At the maintenance probe administered four weeks later, students with LD maintained their gains.

De La Paz (2001), in a multiple-probe across participants design, used SRSD with three middle grades students. Two students had language impairments and one had ADHD. The purpose of the instruction was to improve performance on writing five-paragraph essays. Students were instructed on how to use the PLAN and WRITE strategies to develop their essays. During baseline, only one student showed any planning in advance of writing. After instruction all students wrote out plans in advance of writing. The length of all students' essays more than doubled, and all students displayed positive trend lines in quality and inclusion of functional elements as measured by a holistic rubric and analytic scale. Therefore, a functional relation was established between the treatment and writing performance. The improvement in quality remained at least four weeks after the completion of the training.

Direct Instruction

DI is an explicit instructional approach that focuses on teacher modeling, task analysis, frequent questioning of the learners with directed feedback, scripted lessons, and choral response (Stein, Carnine, & Dixon, 1998). DI, developed by Engelmann, differs from the general concept of direct instruction in that direct instruction merely emphasizes the importance of explicitly taught skills (Stein et al.). With DI, instructional communication is precise and scripted so that all learners are presented with identical

stimuli, and the effect of that instruction is observed. Due to the identical nature of the stimulus, the chance that other instructional factors that might impact learning differences can be excluded is increased. Both direct instruction and DI are practices that are characterized by their focus on segmenting major skills into smaller sub-skills, providing frequent opportunities for student response and teacher feedback on response accuracy, and delivering quick paced, carefully sequenced passages from one level of mastery to the next (Swanson, 2001). The five primary components of DI are (1) constant focus on academic performance goals, (2) small group instruction, (3) sequenced instructional design that progresses through levels with an emphasis on big ideas and techniques, (4) consistent pre-service and in-service training for instructors, and (5) an assessment system that monitors the rate of achievement and level of mastery of students (Kameenui & Carnine, 1998). While empirical support for the effectiveness of DI exists in other content areas (Flores & Kaylor, 2007), few studies have examined the impact of DI writing programs on the writing performance of students with disabilities.

However, despite the dearth of research in this area, DI writing programs are available. Two DI writing programs are *Reasoning and Writing* (Engelmann & Silbert, 1991) and *Expressive Writing* (Engelmann & Silbert, 1983). In these programs, skills are introduced in sequential stages through teacher-directed scripted lessons that lead the students through several levels of mastery before moving to successive levels. Content focuses on planning and revising as part of the writing process, but also provides practice in the mechanics of writing which includes punctuation, grammar, and usage. Several studies have examined the effectiveness of these programs on the writing performance of students with disabilities.

Reasoning and Writing introduces higher order thinking skills to aid in the development of composition development through a series of five levels of instruction (Levels A-F). In levels A and B, students are introduced to more basic concepts like retelling stories or developing main ideas from pictures. However, by levels C and D students engage in the writing process by focusing on drafting, revising, editing, and critical thinking. The lessons in Levels E and F advance to focus on stylistic issues, organization, and form.

Two studies have examined the effectiveness of the *Reasoning and Writing* program (Engelmann & Silbert, 1991) with students with disabilities (Keel & Anderson, 2002; Roberts, 1997). Roberts examined the impact of the *Reasoning and Writing, Level C* program on eight students with LD in written expression using a single subject multiple baseline design. Students received instruction using the program on a daily basis in the special education resource classroom. Results indicated that a relationship existed between use of the writing program and improved test scores on the Spontaneous Writing subscales of the TOWL-3. Specifically, independent t-tests showed that significant differences existed on the pre and posttests of the Contrived Writing Composite, the Spontaneous Writing Composite, and the overall Writing Composite. It was determined that after several months of continuous instruction, several of the students improved their performance to such an extent that they did not meet eligibility criteria under the written expression subcategory of the LD category.

Using a pretest/posttest comparison group design, Keel and Anderson (2002) found that implementation of the *Reasoning and Writing* program increased the writing skills of students with LD and Emotional/Behavior Disorders (EBD). Ten participants in

the intervention group were provided with instruction for approximately 50 minutes per day using the program in the special education resource classroom. Instruction included 25 of the total 50 lessons included in the program. Instruction lasted for five weeks. From pre to post test, six of the ten participants made gains greater than one-half of a standard deviation after five weeks of instruction. Overall, participants showed statistically significant gains on three components (Syntactic Maturity, Contextual Spelling, and Contextual Style) of the *Test of Written Language, 2nd Edition* (TOWL-2; Hammill & Larsen, 1988). Additionally, the students in the intervention group showed significantly greater gains in writing achievement compared to an untrained control group who received instruction using the regular curriculum.

The *Expressive Writing* program is another program that has been shown to be effective for improving student writing samples. The *Expressive Writing* program is a program divided into two levels, 1 and 2. The program highlights basic skills such as writing and editing basic sentences and paragraphs. Its areas of emphasis are mechanics, sentence writing, paragraph and story writing, and editing. Level 1 is designed for students who encounter difficulty is devising topic sentences and staying on topic in their paragraphs, using correct punctuation, and planning for writing. Level 2 is designed for those students who have mastered those skills and are ready to advance to the use of more complex sentences, and editing for clarity and structure.

Walker, Shippen, Alberto, Houchins, and Cihak (2005) used the DI program *Expressive Writing 1* (Engelmann & Silbert, 1983) in a single-subject multiple baseline across participants study to improve the writing skills of three adolescents who ranged in age from 14-16 with LD in written expression. Instruction was provided for 45 minutes

on a daily basis in the special education resource classroom. During baseline, students wrote probes based on prompts that were similar to the prompts provided in the writing program. All probes were scored for correct word sequences. Students completed probes on a daily basis for lessons 12-50 during the intervention phase as part of the writing program. A functional relation between the use of the program and increased correct word sequences was established. Additionally, all three students made positive gains between pre and post test scores on the Spontaneous Writing subscales on the *Test of Written Language, 3rd Edition* (TOWL-3; Hammill & Larsen, 1996).

In a follow-up study, Walker, Shippen, Houchins, and Cihak (2007) found that the effects of Expressive Writing could endure over a longer period of time. In this study, researchers collected an additional maintenance point six weeks after the termination of instruction. The performance of the three students at that point had not decreased.

Educational theory is the foundation for how instruction is delivered (Darch & Simpson, 1990). One such learning theory is behaviorism. Behaviorists contend that learning occurs as a result of the interaction between an organism and a presented stimulus (Bijou & Baer, 1978). DI is rooted in behaviorism (Darch & Simpson). Instructional strategies that are developed and rooted in proven learning theories can be used to effectively teach students with LD (Carnine, 1997). Engelmann's DI instructional approach is an explicit instructional method that focuses on teacher modeling, task analysis, frequent questioning of the learners with directed feedback, scripted lessons, and choral response (Stein et al., 1998). The practice is rooted in the belief that instruction should be based on scientific analysis, and that to study learning scientifically, some factor in the learning process must be controlled. Since the learner cannot be held

constant, the stimulus (the instruction) must be held constant to determine its effect on the learner (Carnine, 1997). To support this, the concept of faultless communication is cornerstone to the concept of DI (Swanson, 2001). Faultless communication is a method in which all instruction is delivered in the same precisely scripted manner. The understanding is that through scripted instruction, instructional miscommunications can be avoided. DI also is recognizable by its focus on segmenting major skills into smaller sub-skills, and its carefully sequenced passages from one level of mastery to the next (Swanson). In DI, learning takes place in small increments and instruction is highly prescribed.

Numerous studies over the last 30 years have examined the effectiveness if DI in a variety of content areas (Schug, Tarver, & Western, 2001). As a result, several meta-analyses have examined the findings of the studies. White (1988), in examining 25 studies that utilized DI with special education students, found that DI approaches yielded large effect sizes and that there was no comparison group effect. Also examining the effect of DI on students with disabilities, Forness, Kavale, Blum, and Lloyd (1997) found that DI was one of only seven effective instructional strategies. Lastly, an examination of seven studies of DI math instruction indicated that such programs had effect sizes of more than 1.00 (Fischer & Tarver, 1997). Such evidence indicates that DI is an effective instructional model for students with special needs.

Large scale research has also shown that DI is effective for improving student success. Project Follow Through began as a social program similar to Head Start that, due to a lack of funding, evolved into a massive experiment in instructional models (Adams, 1996). Between 1967 and 1995, more than 75,000 students from low socioeconomic

backgrounds were provided instruction in grades K-3 at 170 sites. A variety of models were submitted to the federal government, and parent groups in participating districts were given the opportunity to select the instructional model that would be implemented in their district. In the final report, it was determined that only two strategies, DI and Strategy Instruction (SI), had any positive impact on student achievement, and only DI was successful at bringing student achievement close to the 50th percentile in all areas (Grossen, 1996). Additionally, the effects of the program appeared longstanding as follow-up studies indicated higher achievement test scores, improved attendance, and college acceptance (Gersten & Keating, 1987; Meyer, 1984). Despite the plethora of research using DI practices, little research has been conducted on its effect on writing instruction with students who have disabilities or who are ELL.

Empirical Studies with English Language Learners

Few studies have examined the impact of effective instructional practices on the performance of students who are ELL and those who are ELL and served in special education in any subject area. Using a qualitative multivocal method, Gersten and Baker (2000) found that a dearth of experimental studies on best practices both for students who are ELL and those who are ELL and served in special education existed as only nine (eight group design and one single-subject design) were found. A multivocal synthesis allows for a rigorous qualitative evaluation of a number of sources regarding a topic of interest (Ogawa & Malen, 1991). Multivocal syntheses included empirical studies, qualitative studies, documents related to policymaking, and interviews with researchers and professionals working in the field. The approach allows for trends, constructs, and relationships to be potentially established based on the provided information. Such an

approach can be used when a line of research in an area is just starting to be established, and there are few empirical studies to be examined. From the Gersten and Baker analysis, three themes emerged. The first was that English language instruction should be merged with content area instruction. The second was that the principles of effective instruction should be modified to meet the needs of students who are ELL. The third was that confusion, tension, and assumptions on the part of educators must be reduced so that more oral language opportunities are presented in the classroom. In order to investigate these emerging themes, more studies that target the learning traits of students who are ELL are needed.

Several empirical studies exist that have focused on students who are ELL in a variety of academic areas. In a multiyear study spanning grades two through five, Saunders, O'Brien, Lennon, and McLean (1998) taught 18 students who were ELL in an intervention group. Thematic literary units were the central instructional component and visual aids were incorporated into the units to introduce new vocabulary. In order to assist students in understanding the concepts introduced in the units, instructional conversations were utilized. Instructional conversations are directed, goal focused conversations between teachers and a small group of students. Results indicated that from the end of first grade to the end of fourth grade students in the treatment group made significant gains in spelling and reading on a standardized Spanish language achievement test. Additionally, mean national percentile scores for the intervention group increased from the 44^{th} to the 78^{th} percentile while the mean for those in the untrained control group increased from the 41^{st} to the 62^{nd} percentile.

Two studies have examined treatments as Response to Intervention (RTI) for struggling students who are ELL and at-risk for failure. Gilbertson and Bluck (2006) used a single-subject alternating treatments design to compare the effects of varying the pace of instruction (one second versus five seconds) on the letter naming ability of four kindergarteners. In the fast paced model, the teacher modeled saying the letter for one second, and then allowed a one second interval before providing the response when the student did not provide the response. In the slower pace model, the letter name was modeled for five seconds and a five second wait time was provided after the student viewed the letter. Results indicated that the slower five second method was more effective for increasing letter naming achievement as measured by the Letter Naming Performance (LNP), a school-wide assessment.

Linan-Thompson, Vaughn, Prater, and Cirino (2006) also examined the effect of a reading intervention as part of the RTI process with students who were ELL. Students who were identified as at-risk for failure were identified at the beginning of first grade received the intervention. At-risk was defined by a score that was more than one standard deviation below the mean of 85 on the Woodcock Language Proficiency Battery-Revised. Eleven schools participated in the study; three were Spanish language schools and eight were English Language schools. Those who qualified were randomly assigned to the intervention condition. In the English speaking schools, there were 31 students in the intervention group and 33 in the control group. In the Spanish speaking schools, there were 22 students in the intervention group and 17 in the control. Those in the intervention groups received supplemental reading instruction daily for 50 minutes for six months of the school year. Ninety-one percent of the students at the English speaking schools who

participated in the supplemental program were more likely to have met the required academic criteria for students at the end of first grade on a school wide reading assessment. Only 41% of the control group who received no additional training achieved this level of performance. These was no significant difference between the groups at the Spanish speaking schools.

Almaguer (2005) investigated the effects of cooperative peer-assisted reading instruction on reading performance in a quasi-experimental comparison group study with 80 students. Forty Spanish-speaking third-grade students who were ELL participated in an experimental group in which dyad reading was part of instruction. Another 40 Spanish-speaking students who were ELL served in an untrained control group who received only the standard reading instruction in the classroom. Dyad reading pairs, in which one lead reader who is generally a stronger reader reads in unison with an assisted reader who usually has weaker reading skills, served as the intervention. The experimental group participated in the treatment in which the strategy was incorporated into the Language Arts class for 30 minutes each day over a nine week period. Statistically significant gains were found when compared to the control group in the areas of reading fluency with an effect size of .74 and reading comprehension with an effect size of .60 as measured by the Comprehensive Reading Assessment Battery (CRAB). The CRAB uses 400 words from traditional folk stories. Students read aloud for three minutes and then answer comprehension questions. However, significant gains in reading comprehension were not found on cloze exercises which served as a second dependent variable.

Empirical Studies English Language Learners in Special Education

A few studies have examined the impact of instructional interventions for students who are ELL and have LD. Saenz, Fuchs, and Fuchs (2005) examined the impact of Peer-Assisted Learning Strategies (PALS) on the reading achievement of students who are ELL with LD. Overall, 132 Spanish-speaking students who are ELL participated in the program, but outcome data were collected on only 11 students (two with LD, three low achieving, three average reading, and three high achieving). Students participated for 15 weeks receiving instruction via the PALS method three times per week in the transitional bilingual classroom. All 11 students, but especially the students with LD, who participated in PALS showed substantial gains in reading comprehension as measured by the CRAB. Students with LD had an effect size of 1.03 which exceeded one standard deviation in this area. However, effects on reading fluency were not significant.

Klingner and Vaughn (1996) using two separate intervention groups and a control group compared the effects of cooperative learning and a peer tutoring strategy targeted at increasing reading comprehension in 26 students who are ELL. Seventh and eighth grade ELL students with LD were taught using a reciprocal teaching method for 15 days. Following that 15 day period, the group was divided into two comparison groups. One group received 12 days of instruction using cooperative grouping and the other group received 12 days of instruction using cross-age peer tutors. Both strategies were found to increase comprehension over that of a control group, and no significant difference was found between the two treatments.

Because of the lack of experimental research examining this population, it may be difficult to clearly identify the instructional practices that might best meet their learning

needs. A critical need exists for an increase in the amount and quality of studies conducted on instructional strategies for students who are ELL particularly those with disabilities (Gersten & Baker, 2000). Additionally, using norm-referenced tests with the ELL population in such studies may not be the best way to assess their performance. This is because norm-referenced tests use a sample population to identify the norm, and generally, such assessments are not measured using groups solely consisting of students who are ELL (Rhodes, Ochoa, & Ortiz, 2005). This is problematic because (1) the students are wrongly compared to a sampling population that is distinctly different from them, and (2) such tests result often in measuring language skills instead of content skills as compared to the norm group. It is even more problematic for those students who are ELL with potential learning difficulties because such assessments do little to assist in determining whether or not poor performance may be the result of poor language skills or learning deficits. In order to conduct future research, effective performance measures that can be implemented with this population must be examined.

Curriculum-based Measures

Curriculum-based measures (CBMs) are assessments that allow teachers to evaluate the effectiveness of instructional interventions by monitoring student progress over time (Deno, Fuchs, Marston, & Shin, 2001). Such measures evaluate specific skills that are being taught in the classroom rather than broad skills that might be taught during the course of the curriculum. Fuchs (1998) indicates that when such measures are used, students achieve at higher rates. The use of CBMs is preferable to standardized tests when measuring student performance because they are: (1) directly connected to the curriculum or skill being studied, (2) of short duration (typically 3-5 minutes),

(3) frequently and repeatedly administered which makes them more sensitive to changes in performance, and (4) usually graphically displayed to allow for the monitoring of student performance (Jenkins, Deno, & Mirkin, 1979). CBMs can be used as efficient measures of general achievement in academic areas (Deno et al.). Several studies (Espin, De La Paz, Scierka, & Roelefs, 2005; Tindal & Parker, 1989; Tindal, Parker, & Hadbrouk, 1991) examining the validity of CBMs in measuring writing samples indicate that CBMs can effectively measure writing quality.

One CBM of writing performance that has been shown to correlate with overall writing quality is the measure of correct word sequence (CWS). Using CWS, timed writing samples (typically timed for three minutes) are examined to determine the number of adjacent word parings that are used. In measuring CWS, words that are adjacent to one another in a sentence are grouped together to determine if they have been used correctly. For example, in the sample ^Children ^plays^ outside.^, four opportunities for CWS exist. First, *children* and the capitalization element are measured. Since this pairing is correct, a tally would be counted. Then *children* and *plays* would be paired. Since the verb is conjugated incorrectly, this pairing would not earn a tally for a correct CWS. Next, *plays* and *outside* would be paired. Again, due to the incorrectly conjugated verb, this would not count as a CWS. Lastly, *outside* and the ending punctuation would be analyzed. Since the word is correct and the ending punctuation is correct, this pairing would receive a tally for a CWS. This sentence would receive a two out of four possible CWS.

Tindal and Parker (1989) examined the relationship between holistic writing quality and several writing CBMs on the writing samples of general education middle

school students. In analyzing student work samples, the number of words written, words written legibly, words spelled correctly, and words written in correct sequence (percentage and event recording) were measured. The results were compared to a holistic measure of quality that was also used to assess the writing samples. The results indicated that the CWS measure utilizing percentages showed the greatest correlation with overall quality, and that only CWS showed a statistically significant relationship with writing quality.

Despite this finding, there are problems that are inherent to the use of percentages in analyzing data. One is that percentages are not sensitive to change, so the effect of a program on individual student performance might not be noticeable. For example, if a student correctly writes five sequences out a total of 20 opportunities for CWS, the student would score a 20%. However, a month later, if the student writes 20 CWS out of a total of 100 opportunities, it would appear that the student had made no growth. In a follow-up study that examined number of words written, words spelled correctly, and CWS (percentage and tally count), Tindal, Parker, and Hasbrouk (1991) investigated the relationship of five CBMs to overall writing quality. The CBMs were (1) number of words written, (2) words spelled correctly, (3) correct usage, (4) number of CWS, and (5) percentage of CWS. In that study, the number (and not the percentage) of CWS was the best predictor of writing quality.

Espin et al. (2005) examined writing samples of middle school students, and found that not only does the number of CWS correlate with holistic writing quality, but that the number of words written also appeared to have a relationship with improved writing quality. Holistic scoring rubrics are often used to assess writing quality. This

method of evaluation allows scorers to incorporate several aspects writing performance when grading writing samples instead of focusing on just one domain of writing like mechanics. The holistic rubric allows the assessment to judge the overall message and style of communication of the writing (Tennessee Department of Education, 2008). Four different groups were represented in this sample of 147 students: (1) students with LD, (2) students in basic or remedial English classes, (3) students in regular English classes, and (4) students in enriched English classes. The authors indicated a need for further research to determine if simple word count can serve as a predictor of writing quality in the writing samples of secondary students.

Conclusion

The purpose of this study was to examine the effects of a DI writing intervention on the writing performance of (a) English-only speaking students who are categorized as having LD, and (b) those who also qualify both for services in an English for Speakers of Other Languages (ESOL) program and having LD. Little research has been conducted on practices for students who are concurrently served in both programs. ESOL students with LD were selected as a group because little research has been conducted with this group of students in any academic area. The English-speaking group of students with LD was included because of the accelerated nature of the presentation of the program. Although the impact of the full *Expressive Writing* program has been documented with students with LD, using only every other lesson of the program has not been researched with this population.

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CHAPTER 2

DIRECT INSTRUCTION IN WRITING INSTRUCTION: THE EFFECTS ON ENGLISH SPEAKERS AND ENGLISH LANGUAGE LEARNERS WITH DISABILITIES

Statement of the Problem

Writing is an essential skill for academic success across all curricular areas (Alber-Morgan, Haussler, & Konrad, 2007). Poor performance on writing tasks can lead to decreased student achievement in all subject areas. The course grades of weak writers in all subject areas may decrease specifically due to their inability to express themselves in writing (Graham & Harris, 2006). Additionally, gaining admission to postsecondary educational institutions can be more difficult for students who have writing disabilities because of the weight placed on writing tasks in the admissions process (Graham & Perin, 2007). Employment opportunities also may be limited for those with weak writing skills as workers are often expected to use writing skills in salaried positions to write reports, develop presentations, and communicate ideas (College Board, 2003). On a personal level, the ability to express oneself in writing is important because writing about one's emotions can positively impact overall health (Gortner, Rude, & Pennebaker, 2006). Such positive impacts include fewer visits to the physician's office and lower rates of self-reported depression. For these reasons that extend far beyond the classroom, it is essential that educators utilize effective methods for developing the writing skills of their students.

The National Commission on Writing (College Board, 2003) reported that American schools are not sufficiently teaching writing and that the skill is not addressed with the same rigor as reading and mathematics. Recent figures published by the National Assessment of Educational Progress (NAEP; Persky, Dane, & Jin, 2003) further support the notion that students encounter difficulty while writing. In the report, only 28% of fourth graders, 31% of eighth graders, and 24% of twelfth graders are at or above proficient writing levels. Further, 14% of fourth graders, 15% of eighth graders, and 26% of twelfth graders performed below a basic level of achievement in writing tasks (Persky et al.). Additionally, the NAEP report indicated that less than 17% of fourth graders performed at a proficient level on informational writing tasks.

Such inadequacies have an impact on both higher education and the labor market. College instructors reported they believed 50% of their students were not prepared for college level writing after graduating from high school (Achieve, Inc., 2005). Businesses also suffer due to the lack of proficient writing skills in their employees. Currently, American employers spend over $3 billion annually in writing remediation for their employees (College Board, 2003).

Students with Learning Disabilities

Students with LD generally perform at lower levels on writing tasks than their peers without disabilities (Graham, Harris, & Larsen, 2001). These deficits are evident on most measures of writing performance that evaluate transcription skills including length of text, holistic quality, organization, and mechanical and grammatical errors (Monroe & Troia, 2006). They also exhibit less legible handwriting (Graham & Weintraub, 1996). Students with LD display difficulties in employing the cognitive strategies required for

successful writing (Troia, 2002). This can mean that they do not possess the knowledge of the syntactic and semantic conventions that are required to generate meaningful and organized text (Wong, Butler, & Ficzere, 1997). Lastly, students with LD appear to provide text in a random manner listing their thoughts instead of presenting their ideas in logical and reasoned text (Graham & Harris, 2006).

It is critical then to identify the most effective practices for teaching writing to students with LD as many of the problems that students encounter when writing may stem from or be exacerbated by ineffective instructional practices (Stein & Dixon, 1994; Troia, 2002). Students with LD place a heightened emphasis on lower order transcription skills due to the difficulty that they exhibit in acquiring such basic writing skills. For this reason it is essential that writing instruction enhance the mastery of those transcription skills so that students will place more emphasis on composition development. Students with LD benefit by learning transcription skills as part of the writing process (Houck & Billingsley, 1989). Therefore, programs that emphasize transcription skills should be used in teaching students with LD to write.

English Language Learners

Many students who are ELL also struggle with writing performance and do poorly on state assessments (Panofsky et al., 2005). Yet, few studies have addressed best practices for teaching writing to students who are ELL (Panofsky et al.). For this reason many of the instructional practices that are used with students who are ELL are practices that have been empirically validated and established for native English speakers (Artiles & Ortiz, 2002). The studies that have been conducted using English-only speaking

participants need to be replicated with students who are ELL to determine if such practices are valid for this group of learners (McCardle, Mele-McCarthy, & Leos, 2005).

Even fewer studies to examine best practices for students who are both ELL and served in special education have been conducted. Because students who are ELL and have LD in the area of written expression exhibit difficulties in completing writing tasks successfully and performing at acceptable levels on state assessments, it is critical to examine interventions that meet the linguistic and cognitive needs of these students (Panofsky et al., 2005). Since so little research has focused on the instructional needs of these students, more research is needed to determine the effectiveness of specific interventions for this group (Gersten & Baker, 2000).

Overview of Related Literature

Currently, the most common approach to writing instruction in general education classrooms is the process writing approach (Troia & Graham, 2002). This approach relies heavily on the eventual development of writing skills by providing students with a variety of opportunities for writing and for sharing their writing (Graves, 1983). Learning to write well in this environment then becomes a problem for students with disabilities as this approach does not incorporate the explicit writing strategies that have been proven to be successful for students in this population (Danoff, Harris, & Graham, 1993). Such strategies include strategy instruction (SI), self-regulated strategy development (SRSD), and Direct Instruction (DI).

Strategy Instruction

Strategy instruction involves the use of procedural facilitators, planning sheets, and other metacognitive aids designed to enhance the mastery of academic subjects

(Swanson, 2001). This approach to learning has been found to be successful for students with disabilities because it allows them to have more structure in the learning process through the use of task-analyzed instructional steps (Schumaker & Deshler, 2003). Several studies involving SI and writing have shown its effectiveness in this area (Englert et al, 1991; Hallenbeck, 2002; Page-Voth & Graham, 1999; Reynolds, Hill, Swassing, & Ward, 1988; Troia & Graham, 2002).

In developing planning skills, Englert et al (1991) showed that elementary school students with and without disabilities could improve their writing performance by combining a structured planning think-sheet and self-talk. Results indicated that the writing samples of students with LD improved to the point that they were indistinguishable from the samples of their peers without disabilities who also received the training. Page-Voth and Graham (1999) showed that students with LD who were trained in either goal setting or goal setting plus a planning strategy outperformed students with LD in an untrained control group. While the group that received training in both strategies showed the greatest gains, no significant differences existed in either text length or the number of presented elaborations between the two groups. Also examining goal setting and planning, Troia and Graham (2002) found that using a combination of goal setting, brain storming, and organizing using the Stop Think of Purposes (STOP) and List Ideas, Sequence Them (LIST) strategies with fourth and fifth grade students with LD could improve writing performance. Students who received such training spent more time planning and wrote qualitatively better stories than those students with LD who received training in a modified process approach. These gains in story writing were

maintained four weeks after the end of the intervention. However, there were no significant differences between the groups in overall text length and quality on the essays.

In a single-subject design, Hallenbeck (2002) showed that the use of the Cognitive Strategy Instruction in Writing (CSIW) which used scaffolding and structured think sheets could be effective for improving writing for middle school students with LD. These effects were found in both the length and the overall quality of the expository and narrative writing samples. Three of the four participants increased their text length by more than 130%.

Reynolds et al. (1988) found that middle school students with LD could improve their writing skills when taught revision skills. Those who were trained in the Capitalization, Overall appearance, Punctuation, Spelling (COPS) strategy (Mulcahy, Marfo, & Peat, 1984) and those who were trained in both the Evaluative and Directive Phrases strategy (EDP; Bereiter & Scardamalia, 1982) and COPS strategy combined displayed improved performance in mechanics. Both groups showed statistically significant gains when compared to an untrained control group, but there were no significant differences in performance between the two intervention groups.

In addressing both planning and revising in two separate studies, Wong, Butler, and Ficzere (1996, 1997) showed that combining dialoguing dyads and the COPS strategy could improve writing performance on both a standardized assessment, the Test of Adolescent and Adult Language (3rd ed.; TOAL-3) and curriculum-based measures (CBMs) measuring essay cogency and clarity. Similar results were found in two separate studies with students who were LD and those who were labeled as low-achieving both on persuasive and compare-and-contrast essays.

Strategy Instruction Model

The Strategy Instruction Model (SIM; Bulgren, Schumaker, & Deshler, 1988) is a specific method of instruction that incorporates mnemonic devices into a sequenced series of eight stages (Schumaker & Deshler, 2003). This method is a combination of both the explicit behavioral approach of DI and the implicit constructivist process method approach of writing instruction (Kamenuui & Carnine, 1998). A number of studies have examined the effectiveness of this approach.

In two single-subject design studies, both the *Paragraph Writing Strategy* (PWS) and the *Error Monitoring Strategy* (EMS), both SIM strategies, were shown to be effective for improving student writing performance. Moran, Schumaker, and Vetter (1981) showed that the PWS could assist students with LD in mastering three different genres. The program was shown to have a functional relation with overall writing quality as measured by the program's assessments. Schumaker et al (1982) used the EMS to improve the revision skills of students with LD. Prior to the intervention, students self-corrected fewer than 25% of their errors, but after instruction using the strategy, they self-corrected more than 90% of their errors.

Hock (1998), using the *Theme Writing Strategy*, a SIM strategy, with college students, showed that students with LD and ADHD could improve their writing performance as measured by a holistic rubric. The writing samples of the students with disabilities improved to the extent that the quality of their samples was not distinguishable from the samples of the students without disabilities. Such improvements are noteworthy, but the students' ability to regulate and generalize these strategies to

novel writing situations is imperative if writing is to improve in all contexts. Therefore, the strategy of self-regulation has been combined with SI.

Self-Regulated Strategy Development

Self-regulated strategy development is an approach in which training in self-regulatory practices is combined with an instructional strategy (De La Paz & Graham, 1997). There are six stages in SRSD: (1) establish background knowledge, (2) discuss the new information, (3) model by the teacher, (4) memorize the strategy steps by the students, (5) support the student as provided by the teacher, and (6) produce independent work samples (De La Paz & Owen, 2000). These six steps are then applied to a selected strategy. Such an approach is intended to improve the use of the prescribed strategy by incorporating six steps which include self-monitoring, self-evaluation, and self-reinforcement (Troia, 2002).

A number of studies have examined the impact of SRSD on writing in the areas of text length and overall quality. Graham and Harris (1989) showed that students who received both strategy and self-regulation instruction, and those who received strategy instruction alone showed significant gains in story quality from pre-posttest, but there were no significant differences between the two treatment groups.

De La Paz (1999) instructed middle school students with and without disabilities in SRSD and also in the PLAN and WRITE strategy. In preparing five-paragraph essays, prior to instruction, only seven percent of the students engaged in formal planning, but following the intervention, all the students made planning notes before writing. Additionally, the length of text for students with LD increased by 250%. Then, De La Paz (2001), in a single-subject study, showed that with three middle school students with

Attention Deficit Hyperactivity Disorder (ADHD) and Speech Impairments, the same intervention had a functional relation with increased planning, text length, and overall quality. This improved performance was maintained four weeks after the end of the intervention.

Direct Instruction

DI is an explicit instructional approach based on task analysis, scripted lessons, and choral response (Stein, Carnine, & Dixon, 1998). The instructional stimuli presented to learners is always identical in DI programs in the form of scripted teacher presentations. The sameness of the presented stimuli allows for the assumption that no extraneous instructional factors have elicited the effect of instruction. DI is hallmarked by its focus on analyzing major skills into smaller sub-skills, providing frequent opportunities for student response, and delivering sequenced instructional steps from one level of mastery to the next at a quick pace (Swanson, 2001). Few studies have examined the impact of DI writing programs on the writing performance of students with disabilities.

Two studies have examined the effectiveness of the *Reasoning and Writing* program (Engelmann & Silbert, 1991) with students with disabilities (Keel & Anderson, 2002; Roberts, 1997). Roberts examined the impact of the *Reasoning and Writing, Level C* program on the written expression abilities of eight students with LD. After daily instruction using the program, results showed that there was a relationship between use of the writing program and improved test scores on the Spontaneous Writing subscales of the TOWL-3. After several months of continuous instruction, the majority of the students

improved their performance to such an extent that they did not meet eligibility criteria for special education in the area of writing.

Using a comparison group design, Keel and Anderson (2002) found that the *Reasoning and Writing* program improved the writing skills of students with LD and Emotional/Behavior Disorders (EBD). Ten students were provided with instruction for approximately 50 minutes per day using the program in the special education resource classroom. The intervention included only the first 25 of the total 50 lessons included in the program, so only half of the program was presented over five weeks. Between pre-posttest, six of the ten participants made gains greater than one-half of a standard deviation on the *Test of Written Language, 2nd Edition* (TOWL-2; Hammill & Larsen, 1988). Additionally, the students displayed significantly greater gains in writing achievement compared to the comparison group.

Walker, Shippen, Alberto, Houchins, and Cihak (2005) implemented the *Expressive Writing 1* (Engelmann & Silbert, 1983) program to study its effect on the writing skills of three adolescents with LD in written expression. Instruction was provided for 45 minutes on a daily basis in the special education resource classroom. Students completed probes on a daily basis for lessons 12-50 during the intervention phase as part of the writing program. All students displayed gains on posttest scores on the Spontaneous Writing subscales on the *Test of Written Language, 3rd Edition* (TOWL-3; Hammill & Larsen, 1996). Additionally, using correct word sequence (CWS) as the CBM of writing performance, a functional relation between the use of the program and improved writing was established.

In a follow-up study, Walker, Shippen, Houchins, and Cihak (2007) found that the effects of *Expressive Writing I* could endure over a longer period of time. In that study, researchers collected an additional maintenance point six weeks after the termination of instruction. The performance of the three students at that point had not decreased. What is most noteworthy about all of the maintenance scores for all of the students is that they exceeded their mean scores in the intervention phase despite the fact that they had been removed from the intervention for several weeks.

Curriculum-based Measures

Correct word sequences previously have been established as having a positive relationship with overall writing quality as measured by a holistic rubric (Tindal, Parker, & Hasbrouk, 1991). In this procedure, writing samples (generally those that were timed for either 3 or 6 minutes) are scored to calculate the number of adjacent word pairings that are used correctly. When calculating CWS, words that are immediately adjacent to one another in a sentence are paired together to determine if they have been used correctly. For example, in the sample ^Dogs likes bacon.^, four opportunities for correct pairings exist. First, *dogs* and the capitalization element are examined. Since this pairing is correct, a tally would be counted. Then *dogs* and *likes* would be paired. Since the verb in this sentence is incorrect, this pairing would not earn a tally for a correct pairing. Next, *likes* and *bacon* would be paired. Again, because of the incorrect verb, this would not count as a correct pairing. Even though the words *likes bacon* is correct in form as a stand alone, in the context of the sentence, the verb is incorrect, so credit cannot be given. Lastly, *bacon* and the ending punctuation would be scored. Since the word is correct and the ending punctuation is correct, this pairing would receive a tally for a CWS. This

sentence would receive a two out of four possible CWS. The sensitive nature of CWS as a measure allows it to serve as an indicator of writing quality.

Espin, De La Paz, Scierka, and Roelofs (2005) confirmed that CWS can serve as an indicator of writing quality when they examined the writing samples of 147 middle school students, and found that not only does the number of CWS correlate with holistic writing quality, but that the number of words written also appeared to have a relationship with improved writing quality. The students were divided into four groups, one of which was comprised of students with disabilities, and their writing samples were analyzed. The authors did specify a need for further studies to determine if simple word count can serve as a predictor of writing quality in the writing samples of secondary students.

Research Questions

The following questions were addressed in this study:

1. What is the effect of the *Expressive Writing* (Engelman & Silbert, 1983) program on the writing quality and writing fluency of students who are native English speakers and those who are ELL, and who have LD with documented deficits in written expression as measured by three-minute timed writing samples examining: (a) the number of correct word sequences; (b) the word count; (c) writing errors; (d) pre-posttest scores on the Spontaneous Writing subscales of the Test of Written Language (3rd edition; TOWL-3; Hammill & Larsen, 1996), and (e) pre-posttest counts of correct word sequences and length on generalization assignments from the participants' classrooms?

2. If any effects exist, will they be maintained in the resource room two and four weeks following the end of the intervention?
3. Do participating students and teachers find this program effective and desirable for teaching writing?

Methods

Participants

The three teachers who participated in this study were certified special education teachers in the state in which the study was conducted. All three were highly qualified under the guidelines of No Child Left Behind – two in the area of Language Arts and one in the area of Social Studies. Two of the teachers had Master's degrees in Education and one held a Bachelor's degree in Education. They had taught for a mean of 13 years. Two of the teachers had prior experience working with a Direct Instruction reading program at the middle school level. None of the teachers had any previous experience with Direct Instruction writing programs.

To determine if any differences in language acquisition had an effect on the impact of the program, two separate groups of students participated in the study. The first group was comprised of three students who were native English speakers who qualified for services in LD in the area of written expression. The second group was comprised of three students who were ELL and had been categorized as having LD in written expression. Despite their eligibility for ESOL services, teachers of these students referred them for further testing through Student Support Team (SST) services as their academic difficulties seemed to those teachers to be more than just the result of their language differences. Once they were referred, the students continued to display difficulties in their

academic classes. As a result, evaluation for special education services took place. Students were evaluated in both English and Spanish. These students were found eligible for special education services through this process.

The students who were ELL also qualified for ESOL services. Eligibility for such services in the state in which this study was conducted consisted of multiple criteria. These criteria consisted of the student having (1) a primary language other than English, (2) difficulty in communication and/or literacy in English to such an extent that the difficulty impeded participation in the classroom conducted in English, and (3) a language proficiency score below the 25th percentile on the Language Assessment Battery (LAB). All students were native Spanish language speakers originally from Mexico which assisted in preventing any effects that might have occurred due to differences in the primary languages or dialects of the participants.

Additionally, all students qualified as having LD in the area of written expression. LD in the state in which the study was conducted was defined as a disorder in one or more of the basic psychological processes involved in understanding, using language, or doing math calculations. This disorder must prevent the student from succeeding in the classroom, and it must not be the result of a lack of appropriate instructional opportunities, limited English proficiency, cultural factors, intellectual disability, emotional disorder, physical, visual, or auditory factors, economic disadvantage, or an atypical educational history (like lack of school attendance). This disorder cannot be primarily the result of motor disabilities, intellectual disabilities, or emotional/behavioral disabilities, or cultural or economic disadvantage (Georgia Department of Education, 2007). Such eligibility was further based upon a documented initial 20 point (and

subsequent 15 point) discrepancy between achievement in the area of written expression and cognitive ability.

A total of six students participated in the study. Three of the students (Allen, Adam, Andrea) were English-only speaking with LD in the area of written expression. The other three students (Jorge, Jose, Julia) were students who qualified for both LD services in the area of written expression and for ESOL services. Both sets of students received the same instructional package, *Expressive Writing 1*.

English-only Speakers with LD

Allen was a White 16-year old high school junior who had been served in a special education program for students with LD for the last eight years. On the WISC-III, he displayed a full scale IQ of 88. His most recent writing achievement score was a 72 on the Woodcock-Johnson-III. During the semester in which this study was conducted, he was in the special education resource classroom for his English class. He was in general education for the remainder of the day. His placement in a resource classroom for English was an indication that his performance in this area was substantially below grade level as the majority of his peers with LD in the school were served in an inclusive setting to receive grade level content.

Adam was an African American 16-year old high school sophomore who was being served in a resource room study skills classroom setting for one-period each day. His full scale IQ was measured to be 94 on the WISC-III. His written expression achievement was measured at 73 on the Woodcock-Johnson-III during the fall before the study was conducted. He was served in the study skills classroom to support his placement in general education social studies and math inclusion classes as it allowed for

him to complete assignments from those inclusion classes with the support of a special education teacher and to receive remediation in his deficit areas. No specific writing instruction was offered in either of the inclusion classes. No content area courses were offered in the resource room in this school. Adam had been served for deficits in reading and written expression for the last 6 years.

Andrea was a 15-year-old White high school freshman. She had a measured full scale IQ of 102 on the WISC-III, but displayed an 83 in achievement in written expression on the Woodcock-Johnson-III the fall prior to the start of this study. She also was served in a study skills classroom during the semester in which she was enrolled in social studies and science. She went to the resource room only for one period each day for study skills to support deficits in both reading and written expression. This support allowed her to complete assignments from her general education classes, and to receive remediation in her deficit areas.

English Language Learners with LD

Jorge had received services in a program for students with LD for the last three years. He was a 17-year old Latino high school junior who was originally from Mexico. His initial full scale IQ score on the WISC-IV was 75, however, his full scale score on the Universal Nonverbal Intelligence Test (UNIT) was 111, and the IEP committee determined that the latter score was most indicative of his true potential. His most recent writing achievement score was 79 on the PIAT. Jorge was served in the special education resource classroom for English. The remainder of his day was spent in the general education classroom.

Jose was a 17-year old Latino high school junior who was originally from Mexico. He had been served in a special education program for students with LD for five years. During the semester of this study, he received services in the special education study skills resource classroom in this setting, he received support for his other three academic classes which were in general education classrooms that were staffed with special education inclusion teachers. He displayed a full scale IQ score of 91 on the WISC-III and a 97 on the UNIT. His most recent standardized writing achievement score was a 56 on the PIAT.

Julia was served in a study skills classroom during this study. Julia was a 15-year old Latina freshman who was originally from Mexico. She displayed a full scale IQ of 88 on the Leiter-R. Her written expression achievement was measured at 70 on the Woodcock- Johnson-R. Julia was served for the remainder of the day in general education classrooms. One of those classes, Physical Science, was taught by both a general educator and a special educator in an inclusion setting.

Participants' demographic information is summarized in Table 1.

Setting

All participants were served in a special education resource classroom setting for either a Study Skills or English course on a daily basis. Only the first participants in each of the two separate groups were served in the same classroom. The remaining students were all served in separate classrooms. All the schools involved in the study followed a block schedule so classes lasted for 90 minutes per day.

Table 1

Participants' Demographic Information

Name	Gender	Age	Ethnicity	Grade Level	IQ	Writing
Allen	male	17	White	11	88*	72
Adam	male	16	African American	10	94*	73
Andrea	female	14	White	9	102*	83
Jorge	male	17	Latino	11	111**	79
Jose	male	17	Latino	11	97**	56
Julia	female	15	Latina	9	88***	70

*As measured by the Weschler Intelligence Scale for Children-III. **As measured by the Universal Nonverbal Intelligence Test. ***As measured by the Leiter-R

This study was conducted in three public high schools located approximately 35 miles from a major urban center in the southeast. The five classrooms in the study were either special education study skills resource classrooms or English/Language Arts resource classrooms. All writing instruction took place in the one resource classroom in which each student was placed during the semester. Other students were in each classroom. Instruction was provided to all class members in the language arts classroom and in Jose's study skills classroom since all students exhibited difficulties in written expression, qualified for the study, and placed into the same level of instructional materials. The other students in Julia's, Adam's, and Andrea's study skills classrooms who did not qualify for the study or for instruction in the first level of the *Expressive Writing* program continued to work on other independent assignments with the

paraprofessionals who were assigned to their classrooms. Data were kept only on the six who qualified for this study. For the English-only students, those who were the first to return their consent forms were the students on whom data were collected. The English Language Learners who participated in this study were the only three who qualified for both ESOL and Special Education so they were selected based on those criteria. Instruction was provided in the classroom by the special educator who was trained in DI procedures and in the implementation of the *Expressive Writing* program.

The setting of the study skills classroom was selected because this course was designed partially to provide students with the time and opportunity needed to strengthen areas of weakness without missing the curricular objectives of the required content area courses. The language arts classroom was selected as it is a class in which written expression skills are instructed.

Research Design

This study employed a single-subject design. A multiple-probe across participants design was used to determine if there was a functional relation between implementation of the program and participant writing performance (Barlow & Herson, 1984). The multiple probe design is a variation of the multiple baseline design. It allows participants to be probed at intermittent points rather than continuously during the baseline phase (Horner & Baer, 1978). A single subject design was selected due to the particular population of focus in the study. The population of students who are ELL with disabilities, while growing, was not easily accessible in larger intact groups as it is a low incidence population. Additionally, one dependent variable, the targeted academic behavior of CWS, was one that could be measured repeatedly which made this design an

appropriate choice. A multiple probe across participants was selected because such a design which incorporates replication across participants allowed for a functional relation to be established between a behavior and an academic intervention.

Independent and Dependent Variables

The independent variable in this study was the *Expressive Writing* program (Engelmann & Silbert, 1983) which consists of 50 instructional lessons and three assessment lessons. Since *Expressive Writing* follows the DI model, lessons are highly structured and scripted with a required teacher signal and subsequent choral response by the students. At the end of each lesson, a picture prompt provides the stimulus for a writing sample. This program addresses mechanics (including capitalization, use of commas and quotation marks), sentence development (including punctuation and use of introductory phrases), paragraph and story development (including indentation and use of varied sentence type), and editing. The level of the program that was administered was determined by the participants' scores on the program's placement test. All participants placed in level one of the program. There were two dependent variables: writing fluency and writing quality. These two dependent variables were measured by (1) CWS, (2) text length, (3) an error analysis, (4) the TOWL-3, and (5) a generalization measure.

Measures

The first measure was correct word sequence (Crawford, 2001) which measured writing quality. This measure allowed researchers to pinpoint errors students made in sentence development. Using this method, each sentence of the writing sample produced during the first three minutes of writing was examined to determine if adjacent words were used appropriately within the sentence. Appropriate usage includes correct

mechanics (spelling, capitalization, and punctuation). For example, in the sentence ^My^ house^ sit^ on^ the^ hill.^, seven opportunities for CWS exist. The first sequence "My" would be considered correct if the first word was capitalized and spelling was correct. Then each adjacent pair of words (e.g. "My house," "house sit," "sit on") would be examined as a unit to determine if the sequence of the words was correct. In this example sentence, the sequences that include the verb "sit" would be considered to be "not correct" as the verb is conjugated incorrectly. Out of a total of seven possible opportunities for CWS in this sentence, this writer would have scored a five. In order to measure CWS, students were asked to write about a daily writing prompt that was provided at the end of each *Expressive Writing* lesson. Students were given three minutes to complete this portion of their writing samples for scoring.

The second measure was the length of the writing sample, and this measure assessed the writing fluency displayed by the students. Length, as measured by word count, has been established as a valid curriculum-based measure in assessing writing as it may have a relationship with overall writing quality (Espin et al., 2005). A word count of the timed writing sample indicated whether or not students were producing greater amounts of text in the same limited time period as they progressed through the program. Again, three minutes was given to complete this portion of the writing sample. Errors contained in the writing sample were counted as part of the length measure. The same student writing samples were scored for both CWS and length.

The third measure, which assessed writing quality, was the analysis of the errors in the individual writing samples. Such an analysis allowed investigators to examine whether or not students made improvements in their use of the elements addressed in the

writing program. It further allowed them to determine whether or not spelling (a component of writing not addressed in *Expressive Writing*) was impacting the measure of CWS. Errors were subdivided into four categories: mechanics, sentence development, paragraph development, and spelling. Mechanical errors were defined as lack of subject-verb agreement, incorrect pronoun usage, lack of capitalization for proper nouns, and incorrect formation of past tense verbs. Sentence development errors were defined as lack of capitalization at the beginning of sentences, lack of end punctuation at the end of sentences, and the use of run-on sentences. Paragraph development errors addressed issues in indenting at the start of a paragraph and the use of multiple sentences in a paragraph. Spelling errors were exclusively defined as the misspelling of any words in the text. The purpose of this analysis was to determine whether or not specific skills were more or less impacted by instruction using this program.

The fourth measure, which also measured quality, was posttest performance on the spontaneous writing scales of the Test of Written Language-3, a standardized norm-based assessment. This scale is comprised of five sets of criteria that are applied to a writing sample. The writing sample is prompted by a picture about which a story should be written. This portion of the TOWL-3 more closely assesses the concepts taught using *Expressive Writing* than other parts of the test that may address skills not covered in *Expressive Writing*. Forms A and B were used for pre-posttest so that the tests were counterbalanced, and participants did not use the same form or picture prompt for both tests. For example, some of the students completed Form A as the pretest while other students completed Form B as the pretest. Additionally, if a student completed Form A as the pretest, that student completed Form B as the posttest. The opposite was true for

students who completed Form B as the pretest. The TOWL-3 scores are reported as quotient scores with a mean of 100 and a standard deviation of 15 points. The quotient scores are defined as follows: very superior (131-165), superior (121-130), above average (111-120), average (90-100), below average (80-89), poor (70-79), and very poor (35-69). Its components include the following areas: (1) spontaneous writing quotient, (2) syntactic maturity, (3) contextual spelling, (4) thematic maturity, (5) contextual style, and (6) contextual vocabulary. The quotient scores on this measure served as another measure of writing quality.

The last measure, also measuring quality, was the generalization measure students completed in their individual classrooms. This measure was unique to each of the classrooms in which the students were served. All pre-post-assessments involved writing assignments that were related either to a response to a story or film from the class, or a free writing exercise. For example, students in the language arts class were required to write reaction papers to the movie version of *The Scarlet Letter.* Students in the study skills classes were asked to write compositions related to their summer plans and to newspaper articles. Pre-intervention generalization writing samples were collected the day before the start of instruction and the post-intervention generalization sample was given the day after instruction ended. These measures were administered by the classroom teacher. Although students wrote for longer than three minutes, all scored portions of the samples were timed for three minutes and then scored for CWS and length.

Maintenance

Maintenance probes were conducted both 2 weeks and 4 weeks after the end of instruction. These picture prompt probes were obtained by using the even-numbered lessons in the program that were not included in the intervention which is explained in the Implementation section. No instruction was provided during the sessions, and only the picture prompts used in Lessons 26 and 28 were provided to the students. All maintenance data were collected in the student's resource Language Arts or study skills classrooms. Students were required to write for three minutes based on the picture contained in these lessons. The lessons were then scored for CWS, length, and error type.

Materials

The majority of required materials for this study were included in the *Expressive Writing* program (Engelmann & Silbert, 1983). Provided materials included student textbooks and workbooks, an instructor presentation book and separate guide, and an answer key. The program is comprised of components that address mechanics, editing, sentence writing, and paragraph and story writing. The rationale for using these materials is that *Expressive Writing*, when used in full, appeared to have had a positive impact on the writing skills of other English speaking students with disabilities (Walker et al., 2005; Walker et al., 2007).

Implementation

Pretesting and placement. The TOWL-3 and the placement test for *Expressive Writing* were administered to all participants prior to any instruction taking place which allowed for students' pre-intervention writing skills to be assessed. It also allowed for students to be placed in the appropriate level of the *Expressive Writing* program. The

placement test resembled the writing prompts that were provided at the end of each lesson of the program as it also was presented in the form of a picture prompt. Students were provided with a copy of the pretest prompt and the researcher read the directions provided in the *Expressive Writing* instructor's manual. The program allowed for students to write for 20 minutes based on what they observed in the prompt.

Both the researcher and a second trained scorer scored the placement tests in accordance with the guidelines outlined in the instructor's manual. The Spontaneous Writing portion of the TOWL-3 also was presented to students in the form of a picture prompt. On this measure, students were provided 15 minutes to write either a story or a narrative depiction of the prompt. Directions for completing this portion of the TOWL-3 were read to the students from the TOWL-3 implementation guide by the researcher. The writing products were scored according the scoring checklist provided in the TOWL-3, and all tests were scored by the researcher and a second trained scorer.

Baseline. Baseline performance level was established by giving participants writing prompts in the form of picture prompts on which they were required to write compositions. These prompts were taken from the even-numbered lessons of the program so they were similar to the writing prompts from the odd-numbered lessons provided during intervention. During the baseline writing prompts, participants were timed for three minutes, and the writing sample that was completed was analyzed for CWS and length. Instruction in *Expressive Writing* began when baseline stability was achieved in which no more than 20% variation in CWS over three consecutive sessions occurred (Kennedy, 2005) for the first students in each set of students. Students in the second and

third tiers continued to be probed during their baseline phases at a rate of two out of each three intervention sessions.

Intervention. During intervention, teachers and students followed the script for each consecutive odd-numbered lesson on a daily basis. This allowed students to be exposed to all of the skills presented in the *Expressive Writing* program while only completing half of the total lessons. The last activity of each lesson was a writing prompt on which the students wrote. The total time spent writing on the probes each day varied throughout the lessons as dictated by the *Expressive Writing* program. The range of writing time varied between 3 and 12 minutes. However, the portion of the samples that was scored for CWS and length represented only what was written during the first three minutes of the exercise. Each day, teachers first timed the writing for three minutes. Students annotated their progress at the three-minute point on each writing sample by inserting a star after the word that they were writing when three minutes passed. They were then given the remainder of the time proscribed by *Expressive Writing* to finish their paragraphs. Only 26 of the 50 lessons were presented to the students. This study sought to determine if any effects could be detected over a relatively short period as Keel and Anderson (2002) found with the *Reasoning and Writing* program when they presented only half of that program. Intervention began with lesson one and continued with each subsequent odd-numbered lesson. Presenting every other lesson rather than just the first half of the 53 lessons allowed for students to be exposed to all of the writing topics. If only the first 26 lessons had been taught, some of the content of the program would have been omitted. Additionally, the authors of the program recommended this same approach for providing accelerated instruction in *Expressive Writing 2*, the second level of

instruction of this program. This study applied the same approach to level one of the program. Two of the assessment lessons were even numbered, so omitting them did not disrupt instruction as only odd-numbered lessons were presented. Two odd-numbered lessons (lesson 15 and 55) were assessments, so they were omitted from the study. In total, all odd-numbered lessons between lesson 1 and lesson 55 were presented to students with the exception of lessons 15 and 55. A total of 26 lessons were taught. Each lesson was scripted, and all scripts were included in the program. Following the lesson, each student was required to write a paragraph based on a picture prompt provided in the instructional package. A three-minute time limit was placed on all scored writing probes. These paragraphs served as the probes on which CWS was measured. Once a 20% increase (Kennedy, 2005) in CWS was tracked for three consecutive sessions in the performance of the first participant, the second participant began treatment. Once the second participant met this same criterion (20% increase over baseline) for three consecutive sessions during intervention, the third participant started to receive the intervention. A decision rule was made that established that if a student did not achieve such an increase over baseline performance after six consecutive lessons which was the equivalent of approximately 25% of the total instructional sessions, the next student in the group would move into the intervention phase despite the fact that the 20% improvement criterion had not been met. Participants continued to receive instruction through the 25 odd-numbered instructional lessons included in the program.

Training. Instruction was delivered by the special educators in separate resource rooms. These teachers received a training session by the experimenter in a three hour block of instruction. The first part of the training consisted of a multimedia presentation

in which the researcher explained the study and detailed the *Expressive Writing* program. It also highlighted the basic tenets of DI. The second part of training consisted of the researcher providing instruction to the trainees who played the part of the students. Lesson 12 was randomly selected as the training lesson for this part of the training. Following this portion, the trainees were required to deliver one lesson with 100% accuracy while the researcher role played the part of the student. Lesson 14 was selected as the training lesson for this part of the training. The researcher did not have direct instructional contact with the participants.

Posttests. Following completion of the entire lesson sequence, each participant was given the spontaneous writing portion of the TOWL-3 as a posttest. Additionally, students completed a generalization exercise that mirrored the generalization pretest as a posttest measure. The generalization measure varied across students depending on their classroom placement. Generalization was measured in the resource classroom therefore it was not a measure of generalization across settings, but a measure of generalization across tasks. The *Expressive Writing* program provides picture prompts in all of its lessons therefore all student samples were based on such prompts. However, such a writing scenario may not occur in the natural classroom writing environment in which students are often prompted by topic sentences or teacher verbal instruction. For Jorge, Jose, and Allen the generalization probe for both pre and posttest came in the form of a reaction to a movie based on a book that was read for their Literature classes. Students were given the opportunity to read the book, watch the movie, and they were then required to write an essay based on whether or not they believed the movie accurately represented what was written in the book. Only the first three minutes of what they wrote

was scored for CWS and length. Students were then given an additional seven minutes to complete their essays. Andrea and Adam were required to write reactions to newspaper articles that were read aloud and discussed in their Study Skills classrooms. Lastly, Julia was asked to write essays regarding her plans for the summer break. All students were provided with verbal instructions only for their generalization writing assignments.

Maintenance. Maintenance probes were conducted two and four weeks following the termination of instructional sessions. These probes were conducted to determine whether or not any effects endured over time. As in the baseline phase, the probes used during this phase were pulled from the even-numbered lessons included in the program that were not used during intervention. The probes were identical in presentation (aside from the content of the picture prompt) to the probes presented in the intervention phase. These data points were visually analyzed against baseline and intervention points.

Treatment Fidelity.

To ensure that the special education teachers were conducting the lessons according to the script, the experimenter was present for six of the 26 intervention sessions so that 23% of all teacher-directed sessions were observed (Kennedy, 2005). This observation schedule was followed in the remaining classrooms. A fidelity checklist based on the script as written in the teacher's guide for the observed lesson was used to annotate adherence to the script. Several potential instructor behaviors were observed. These behaviors included deviations from the script, signaling, unison responding, and appropriate correction procedures. Treatment fidelity was calculated by dividing the actual number of steps completed by the teacher by the planned number of steps included on the checklist and multiplying by 100. See Appendix A for a sample fidelity checklist.

These checks were conducted across all implementers and observed lessons included lessons 3, 7, 13, 27, 39, and 47.

Of the six observed sessions for each student, two were additionally observed by a second observer who had been trained in the *Expressive Writing* procedures during the same training session as the teachers who participated in the study. Training was conducted by the primary investigator. This resulted in 33% of all observed sessions being observed by a second observer. A point-by-point method of interobserver agreement (IOA) was used to determine agreement between the two observers. This method entails dividing the number of agreements between responses by the number of disagreements plus agreements and then multiplying by 100.

Allen and Jorge. The steps of the instructional package in the English class were implemented with 97% accuracy. Interobserver agreement was conducted during lessons 13 and 39. Agreement between the observers was 100%.

Adam. In this study skills class, fidelity to the treatment was 96%. Lessons 27 and 47 were observed by two observers. Agreement between the observers was 98%.

Andrea. Fidelity to the treatment occurred in 96% of the steps of the instructional program in this study skills classroom. Lessons 13 and 47 were observed by two observers. Agreement between the two observers existed in 98% of the cases.

Jose. Ninety-eight percent of the steps of the program were completed accurately in this study skills classroom. Lessons 13 and 47 were observed by two observers. Agreement between the two observers was 99%.

Julia. The lessons in this classroom were followed accurately 98% of the time. Two observers were present during lessons 13 and 39. Agreement between the two observers was 100%.

Interscorer Agreement.

Additionally, all probes were scored by a second trained scorer for CWS and length. The second scorer was provided with a 30-minute training session by the researcher in which CWS and total length were defined. The training also provided five example sentences that were used to demonstrate scoring procedures for both measures. After training, the second scorer was required to complete scoring on five different sample sentences for CWS and length with 100% accuracy.

Prior to scoring each of the writing probes and the generalization pre and posttests for CWS and length, each writing sample was photocopied so that it could be scored by a second trained scorer. For CWS, the point-by-point strategy was again used, but for length, total agreement was used to calculate interscorer agreement. Using total agreement, the observations of both scorers are tallied, and then the smaller number was divided by the larger number, and then multiplied by 100. This method also was used for calculating interscorer agreement for the number of errors in daily writing samples.

English-only speakers. Allen's interscorer agreement on daily writing prompts for CWS was 96% and the agreement for length was 99%. The error tally agreement was also 99%. On the generalization measure, the CWS and length agreement were both 100%. For Adam, the daily writing prompt interscorer agreement for CWS was 98% while for length it was 99%. The error tally agreement also was 99%. CWS agreement on the generalization measure was 99% while the length was 100%. Andrea's CWS and

length agreement on daily writing prompts was 99%. The interscorer agreement for errors was 97%. Andrea's generalization measure agreement for both CWS and length was 100%.

English Language Learners. Jorge's interscorer agreement for CWS on daily writing probes was 97% and the agreement for length was 99%. The agreement for error count was 97%. His generalization measure agreement for CWS was 99% and 100% for length. On Jose's daily writing prompts, the agreement for CWS was 96% and for length it was 98%. Error count agreement was 99%. Agreement on the generalization measure for CWS was 99% and length was 100%. For Julia, the CWS and length interscorer agreement on daily writing prompts was 99%. For error count, agreement was 98%. Her generalization measure agreement for CWS and length was 100%.

Social Validity

A survey that assessed both the participants' and the teachers' attitudes toward the intervention was distributed. This survey measured attitudes about the intervention's effectiveness and ease of use. See Appendices B and C for both the teacher and student versions of this scale. Both versions were created based on the social validity scales used in the Walker et al. (2005) study although questions were added to make the scales more sensitive to the opinions of the participants.

Data Analysis

Writing probes were scored for CWS and the number of CWS was graphically displayed to allow for a visual analysis of the data. Visual analysis is beneficial because it allows a functional relation to be established even if statistical significance is not large enough to be detected, and it also allows for a more detailed analysis of the learning

process, not just overall effects (Kennedy, 2005). As an analytical tool, it allowed for a more in-depth examination of trends both within and between each of the phases.

The length of the writing samples was analyzed in a similar method. The total number of words written in each sample was tallied and graphed so that a visual analysis could be conducted. Each word that contributed to the meaning of the sentence (articles, prepositions, nouns, etc.) was counted as part of the length. If a word was determined to be undecipherable due to spelling error, it was not counted.

Effect size was measured between the baseline and intervention phases for both the number of CWS. Effect sizes were reported as the percentage on nonoverlapping data (PND; Scruggs, Mastropieri, & Casto, 1987). PND is considered a critical evaluative technique for determining the intervention effectiveness, and the absence of such overlap between baseline and intervention data points over time can indicate that the effects are reliable (Kazdin, 1984). PND was calculated by comparing the number of intervention data points that fell above the highest baseline data points since the target behavior was one that was desired to increase. This number was then divided by the total number of recorded intervention points.

An error analysis designed to specifically identify the types of errors made by the participants was conducted, and each occurrence of an error was tallied and graphed. Such an analysis allowed the investigator to delineate between the various subskills covered in the *Expressive Writing* program plus the spelling subskill. A mean score for errors in each of the taught categories was calculated during the baseline, the intervention, and the maintenance phase. Additionally, a visual analysis of the phases was conducted to evaluate trends in performance.

The pre-posttest quotient scores of the spontaneous writing scales of the TOWL-3 were compared to determine if any effects were to be found between these scores, and to determine if the skills acquired during the intervention could be generalized to this measure. The Wilcoxan's (1945) Matched Pairs Signed-Ranks Test was utilized because it can detect changes across repeated measures in single subjects. The test is based on the magnitude of the difference between the pairs of scores. It is a nonparametric alternative to the t-test as both tests compare differences between measurements, but the Wilcoxon test does not require an assumption about the form of the distribution of the measurement unlike parametric techniques that assume a normal distribution (Litrell, Zagumny, & Zagumny, 2005). This analysis allowed researchers to determine if any statistically significant differences existed in the types of errors made by students between the phases and as instruction progressed over time.

Lastly, mean scores for CWS and length were tallied on the generalization pre and posttests. These results were compared to determine whether or not students could apply the skills taught in *Expressive Writing* to naturalistic classroom environments

Results

The purpose of this section is to report the findings of this study. The performance of each participant is stated. Research questions will be addressed in the order in which they were presented in the purpose section.

Correct Word Sequence

The first purpose of this research study was to examine the effects of the *Expressive Writing* program on the number of CWS contained in the three-minute timed writing samples of the participants. All participants showed gains in their mean scores

between the baseline phase and the intervention phase. For the most part, participants in both sets showed similar trend lines. Means for baseline, intervention, and the maintenance phases for the individual students are presented in Table 2. Figure 1 (native English speakers with LD) and Figure 2 (English-language learners with LD) contain the graphic representation of CWS scores throughout all phases of the study.

English-only Speakers with LD.

Baseline. The first student, Allen, met criteria for the intervention phase change after three baseline sessions as he achieved stability which was no more than 20% variation from the mean for three consecutive sessions during that phase. His scores of 20, 22, and 21 varied from the mean of 21 by five percent.

Intervention. During the intervention phase, Allen's scores ranged from 28-60, and his mean score during this phase was 42.7 which represents more than a 100% increase over his baseline CWS mean score. After three intervention sessions, Allen achieved CWS that were more than 20% higher than his mean baseline score which was the criterion for initiating the intervention with the second participant. Throughout the intervention phase, Allen maintained scores that were at least 30% above his baseline mean score.

Maintenance. During the maintenance phase, Allen's two-week score of 35 and his four-week score of 40 yielded a mean score of 37.5 which was more than 70% higher than his baseline mean score of 21. However, this mean was slightly lower than his intervention mean of 42.7.

A visual analysis of Allen's intervention data points indicates that a positive slope or trend of low magnitude exists in his performances within this phase. Moderate

Table 2

Overall Means for CWS and Length by Phase

Student	Baseline	Intervention	Maintenance
Allen			
CWS	21.0	42.7	37.5
Length	29.0	44.4	39.5
Adam			
CWS	26.0	33.2	33.5
Length	32.3	36.4	33.0
Andrea			
CWS	27.7	38.6	45.5
Length	31.7	40.2	46.5
Jorge			
CWS	21.8	34.5	43.0
Length	31.5	37.5	48.5
Jose			
CWS	18.1	30.0	30.0
Length	21.0	29.9	33.0
Julia			
CWS	19.6	26.8	
Length	25.0	32.7	

CWS = correct word sequence. Length = word count.

variability (Kennedy, 2005) is evident throughout the phase. The percentage of non-overlapping data points between the baseline and intervention phases was computed. There were no overlapping points for Allen between the two phases so the percentage was 100%.

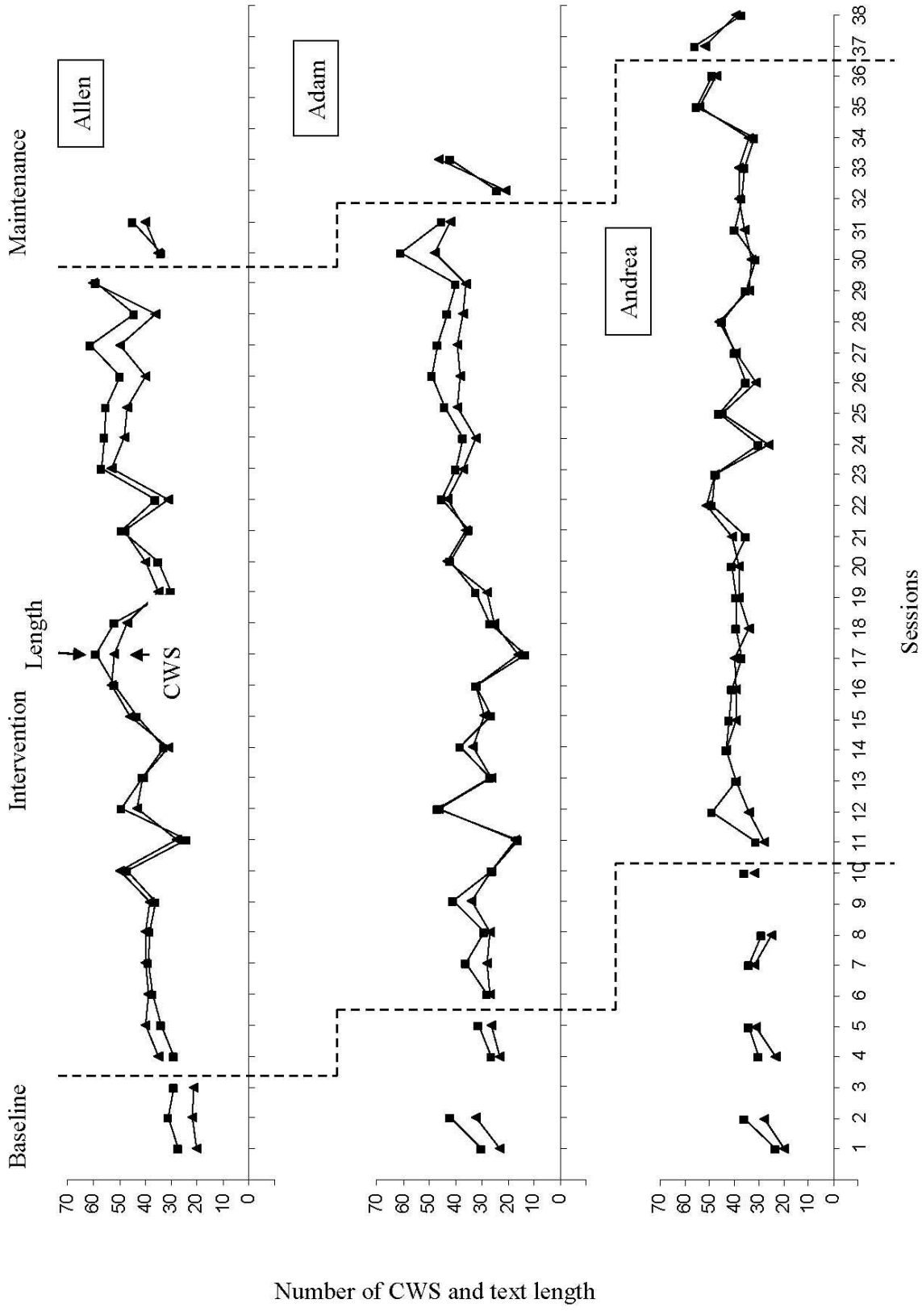

Figure 1. Native English Speakers' CWS and Length Scores

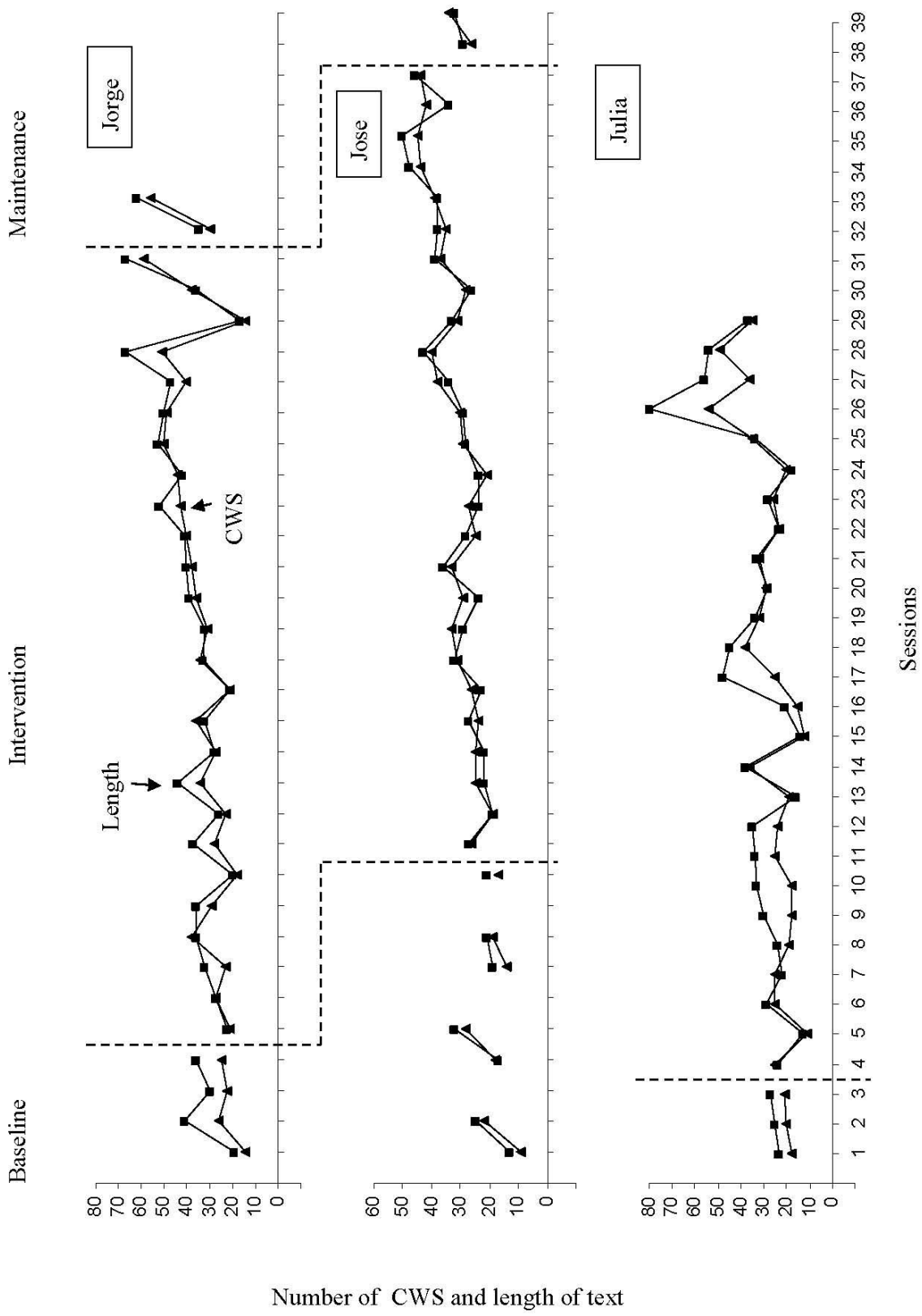

Figure 2. English Language Learners' CWS and Length Scores

Baseline. Adam, the second student, remained in the baseline phase for six sessions completing four data collection points (two data collection sessions for each of the three collected in the prior tier as outlined in the methods section). Adam's mean CWS score in the baseline phase was 26 with a range of 23-32. He did not achieve stability during the baseline phase (the third point of 32 was one point beyond the 20% criterion established as defining stability). Such a lack of stability is an indication of a lack of experimental control. The implication of not achieving stability during the baseline phase is that there is less confidence that future performance during and after instruction in the intervention phase can be attributed to the effect of the independent variable. However, because Allen achieved a 20% increase over his baseline mean for three consecutive sessions, Adam entered into intervention.

Intervention. Adam moved into the intervention phase after Allen (tier one participant) maintained three consecutive intervention points at least 20% above his baseline mean score. During the intervention phase, Adam's mean score was 33.2 (more than 25% above his mean baseline score) with a range of 16-43. Adam did not show three consecutive intervention points above his baseline mean until sessions 21-23 (scores of 43, 36, and 43). His scores then remained at least 20% above his baseline mean for all subsequent intervention sessions.

Maintenance. Adam's two and four-week maintenance scores of 21 and 46 respectively yielded a mean score of 33.5 for that phase which also was more than 25% above his baseline mean CWS score and somewhat higher than his intervention mean score.

A visual analysis of Adam's performance revealed a positive slope of low magnitude (Kennedy, 2005). Moderate variability existed throughout the intervention phase. PND was calculated at 54%, but it is important to note two factors concerning this low percentage. The first point is that the second baseline data point of 32 is an outlier in that phase. The other three baseline points are 23, 23, and 26. If the outlier was not present, the percentage would have been much higher. The second point is that even with the baseline outlier, most of the overlap occurred with data points in the first half of the intervention phase. There was only one point of overlap in the latter half of the intervention so the trend was increasing.

Baseline. Andrea, the third student, remained in the baseline phase for 10 sessions with seven collected data points (two for each of the three recorded sessions of Joe in the previous tier). During this phase, Andrea's mean score was 27.7 with a range of 20-32. Andrea began the intervention phase after Adam completed six intervention sessions because it had been previously established that if a 20% increase over the baseline mean was not apparent for three consecutive sessions then intervention for subsequent tiers would begin after a total of six intervention sessions had been conducted.

Intervention. After entering the intervention phase, Andrea achieved three consecutive scores 20% or more above her baseline mean in sessions 13-15 (scores of 34, 39, and 43). She maintained at least a 20% increase above her baseline mean score during the remainder of the intervention with the exception of sessions 25 and 27. Andrea's mean CWS score during the intervention phase was 38.6 (approximately 40% above the baseline mean score) with a range of 26-54.

Maintenance. Two and four-week maintenance scores of 52 and 39 respectively yielded a phase CWS mean score of 45.5 which was more than 60% higher than the baseline mean score.

Andrea also showed a positive trend in her data points during the intervention phase with low variability. PND was calculated to be 73% as there were seven points of overlap between the baseline and intervention phases.

English-language Learners with LD.

Baseline. In the first tier of this group, Jorge remained in the baseline phase for four sessions at which point he achieved stability with less than 20% variability away from his baseline mean score. His CWS mean score for this phase was 21.7 with a range of 14-25.

Intervention. After achieving stability, he entered the intervention phase. Jorge's mean during the intervention phase was 34.5 (more than 50% over his baseline mean score) with a range of 14-59. Jorge achieved three consecutive CWS scores 20% or more above his baseline mean during sessions 13-15 (scores of 34, 27, and 36). He maintained such an increase in all subsequent intervention sessions with the exception of 16 and 28 (scores of 21 and 14). See Figure 2 for the CWS and length graphs for the students who were ELL and LD.

Maintenance. The two and four-week maintenance scores 30 and 56 yielded a maintenance phase mean CWS score of 43 which exceeded his baseline mean score by almost 100%.

A visual analysis again revealed a positive trend during the intervention phase. Variability across this phase was low. The PND was 77% as six points of overlap existed between the two phases.

Baseline. Jose, the second student in this group, had a mean baseline CWS score of 18.1 with a range of 9-28. He remained in the baseline phase for 10 sessions with seven recorded data points (two for each of the three collected for Jorge in the previous tier). Because Jorge did not achieve three consecutive scores of 20% or higher than his baseline mean score during the first six intervention sessions, Jose entered the intervention phase after Jorge completed six intervention sessions (as outlined in the decision rule in the methods section).

Intervention. Once in the intervention phase, Jose achieved a mean score of 30 (nearly 70% above his baseline phase mean CWS score) with a range of 19-45. Jose achieved three consecutive CWS scores 20% or higher than his baseline during the first three intervention sessions (scores of 26, 19, and 25). He maintained an increase of at least 50% above his baseline phase mean score with the exception of session 23 (score of 21 which was nearly 40% above the baseline mean).

Maintenance. Two and four-week maintenance phase CWS scores of 26 and 34 yielded a phase CWS mean score of 30 which also was nearly 70% above the baseline mean score.

A visual analysis indicated that a positive trend existed in the data in the intervention phase. The variability in the data was low. The PND was 58% as a number of the points between the two phases overlapped. This may due to the high variability of

the data points in the baseline phase. Stability was never established, and the range of the scores was 9-28.

Julia. The performance of the last ELL student with LD, Julia, is represented on the nonconcurrent baseline graph. The nonconcurrent baseline is a variation of the multiple baseline in that all of the tiers are conducted at a different time (Watson & Workman, 1981). In such a design, the A-B tiers can be completely separated in time. This design provides the advantage of being able to study less readily available populations (like students who are ELL with documented disabilities in written expression) by allowing baseline data to be collected when a qualifying participant is found. At the beginning of this study, only two students who qualified for both ESOL services and for LD services in written expression were available. The researcher found this eligible participant after the study was already in progress. For this reason, she did not begin baseline with the other participants and instead began once consent for her participation was obtained. Additionally, she did not begin intervention based on the second tier student's performance in intervention, but instead began intervention once she had established baseline stability. Lastly, due to her late start date, Julia did not complete maintenance probes because the school year ended and she was then unavailable.

Baseline. Because of the nonconcurrent baseline design, Julia did not begin her baseline phase until the second participant was already 15 sessions into his intervention phase. Again, due to the nature of this design, Julia's entering baseline was not dependent on Jose's performance during his intervention phase. Julia achieved stability after three sessions in the baseline phase. She had a baseline CWS mean score of 19.6 with a range of 18-21.

Intervention. She then entered the intervention phase during which she achieved a mean of 26.8 with a range of 11-54. Julia achieved three consecutive scores of 20% or more above her baseline mean score during sessions 18-20 (scores of 38, 32, and 29). Due to time constraints, it was not possible to complete maintenance checks with Julia.

The visual analysis of Julia's intervention data indicated that there was a positive trend across the phase with moderate variability. The PND was 69% as several of the data points between the two phases overlapped.

Length

The second research question sought to determine the effect of the *Expressive Writing* program on the length of the participants' three-minute timed writing samples, and the relationship between the number of correct word sequences and the length of those samples. Also illustrated in Figures 1 and 2, in addition to the number of CWS, are the lengths of the participants' writing samples as measured by word count. See Table 2 for the CWS and length means for each phase.

Native English-speakers with LD

For Allen, during the baseline phase, the mean length of his writing samples was 29. During the intervention phase, he increased his mean number of words written per sample to 44.4 with a range of 24-61. Starting with the third intervention session, John increased the number of words he wrote by more than 30% over his baseline mean number of words and he maintained such an increase for the remainder of the intervention phase with the exception of sessions 10,12, and 21. His two and four-week maintenance check word counts of 34 and 45 respectively yielded a mean word count of

39.5 which was greater than 30% of his baseline mean of number of words written. A positive trend existed with moderate variability. The PND was 88%.

Adam displayed a mean number of words written of 32.3 during the baseline phase. During the intervention phase, the mean number of words written was 36.4 with a range of 13-61. Maintenance scores from the two and four week points yielded scores of 24 and 42 which resulted in a mean word count of 33 for that phase. Adam showed a positive trend with moderate variability for length across the intervention phase. The PND was 31%.

The third native-English speaker, Andrea, displayed a mean of 31.7 words written per sample during the baseline phase. Her mean during the intervention phase was 40.2 with a range of 30-55. Andrea's maintenance scores of 56 and 37 yielded a mean of 46.5 for that phase which was more than 40% above her baseline mean word count. Andrea also showed a positive trend for length across the intervention phase. The PND was 65%.

English-language learners with LD

Jorge, the first ELL student with LD, displayed a mean of 31 words. During the intervention phase, the mean number of words that Jorge wrote was 37.5 with a range of 17-67. During the maintenance phase, his two and four week scores of 35 and 62 yielded a mean of 48.5 for that phase which represented more than a 50% increase over his baseline mean number of words written. A positive trend was established during the intervention phase. The PND was 31%.

Jose's baseline mean number of words written was 21. During the intervention phase, he displayed a mean of 29.9 words written per sample with a range of 19-50. During the maintenance phase, he showed a mean of 30.5 words written per sample

which was an increase of 50% over the baseline mean number of words written. The trend of Jose's intervention phase was positive but of low magnitude for length. The PND was 38%.

Lastly, Julia's baseline phase mean was 27.5 words written per three-minute sample. During the intervention phase, she showed a mean of 32.7 words written with a range of 19-80. No maintenance data were collected for Julia. Julia's performance during intervention showed a positive trend with high variability. The PND was 65%.

Percentage of CWS

In addition to the number of occurrences of CWS and number of words written, the percentage of CWS was also calculated. The percentage was calculated by dividing the total number of CWS by the total number of words written. Since there are more opportunities for CWS than there are for total number of words in any given writing sample, in some instances students achieved CWS percentages that were over 100%.

English-Only Speakers

During baseline, Allen's mean percentage of CWS was 72.3. Mean scores during intervention and maintenance were higher at 99 and 96 respectively. Visual analysis of Allen's graph shows immediacy and no overlap between baseline and intervention. However, there is no obvious trend as the data were moderately variable.

Adam's baseline mean percentage of CWS was 81.3. He also increased his intervention and maintenance percentages to 93.2 and 99 respectively. Again, no trend was apparent, and his data were also moderately variable with several points of overlap.

Lastly, Andrea's mean percentage of CWS in the baseline phase was 86. She also increased her mean percentages to 97.2 during intervention and 106.5 during

maintenance. Her trend line was also moderately variable with several points of overlap. See Figure 3 for CWS percentages for this group.

English-Language Learners

Jorge's mean percentage of CWS during baseline was 69.75. This figure increased during intervention to 92, but decreased during maintenance to 88. He did show a rapid increase in percentage initially in intervention, and there was only one point of overlap between baseline and intervention. Again, there was no obvious trend in the data path, and moderate variability existed throughout intervention.

During baseline, Jose's mean percentage of CWS was 84.85. This percentage increased to 101.5 during intervention, but decreased to 98 during maintenance. Several points of overlap existed and again a trend in the data path was not established.

Julia's baseline percentage was 78.7, and this increased to 86.6 during intervention. Julia's data were highly variable with a number of points of overlap, and no trend was established. See Figure 4 for CWS percentages for this group.

Error Analysis

A third research question examining writing quality was asked to determine the types of errors students made in their writing samples and the effect of the implementation of the *Expressive Writing* program made on those errors. Types of errors fell into four categories as described in the writing program itself: mechanics, sentence development, paragraph development, and spelling. Of the four areas, only the spelling category was not addressed by the *Expressive Writing* program. See Table 3 for the mean number of errors for each student during each phase.

Table 3

Mean number of errors per writing sample per phase

Student	Baseline				Intervention				Maintenance			
	M	SD	PD	SP	M	SD	PD	SP	M	SD	PD	SP
Allen	0.40	0.40	0.00	4.0	0.69	0.26	0.00	2.9	1.00	1.50	0.00	1.5
Adam	2.00	1.00	0.25	3.5	1.50	0.85	0.33	0.5	1.00	1.50	0.50	0.0
Andrea	1.87	0.71	0.43	1.0	0.65	1.00	0.03	0.6	1.50	1.00	0.00	1.5
Jorge	1.25	1.00	0.75	2.5	2.20	0.42	0.23	1.1	2.50	2.50	0.00	2.0
Jose	1.43	0.43	0.57	0.9	1.50	0.11	0.19	0.7	1.00	2.00	0.50	0.5
Julia	4.30	0.33	1.00	0.3	3.46	0.50	0.38	0.5				

M = mechanics. SD = sentence development. PD = paragraph development. SP = spelling.

English-only Speaking Students

Allen. Allen clearly had more errors in spelling than in any other area. In this area, his number of errors ranged from 0-8 throughout the intervention, but in the maintenance phase his range of the number of spelling errors he made was only 1-2. The range of errors in areas of mechanics, sentence development, and paragraph development were 0-2, 0-3, and 0 respectively. There was little variation in the number of errors in these areas across the phases.

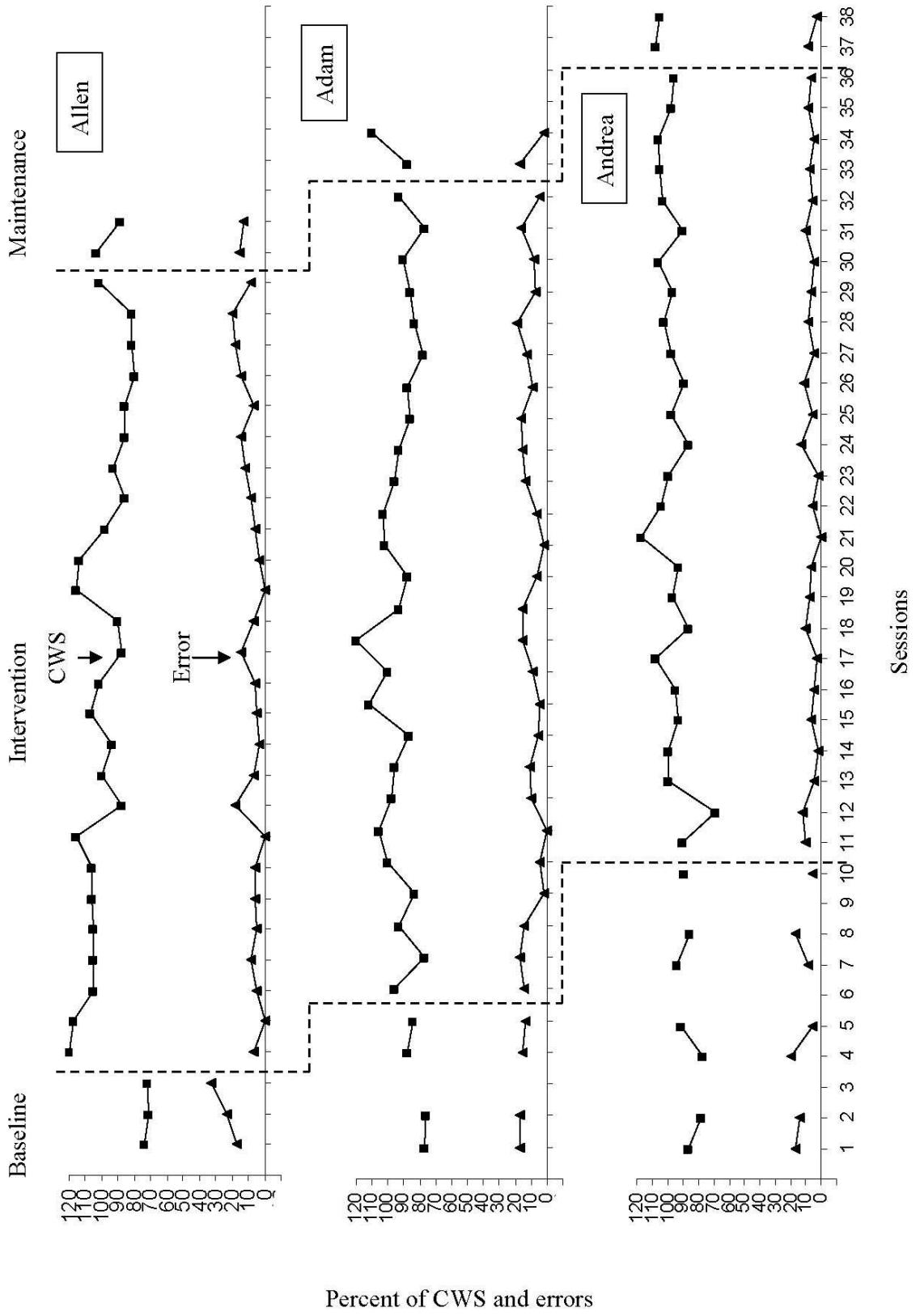

Figure 3. Native English Speakers' Percentages.

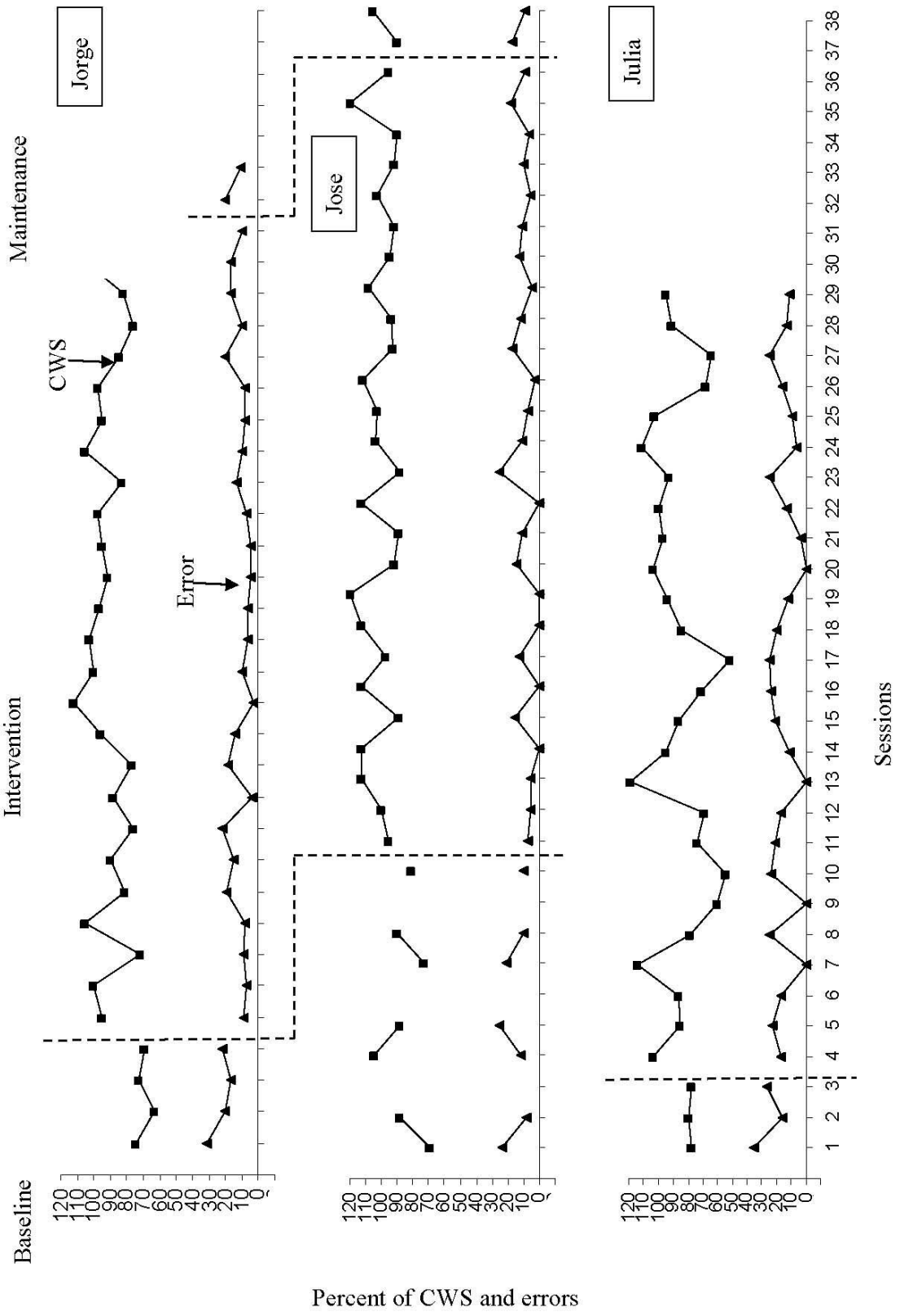

Figure 4. English Language Learners Percentages.

Adam. Adam displayed more errors in mechanics than in any other area. Though a variety of usage or mechanical topics were addressed in the program, his errors in the area did not decrease in a consistent fashion. Although he did show some decrease in errors in this subsection at different points of the program, such decreases were not steady. In the areas of sentence development, paragraph development, and spelling his ranges were 0-5, 0-1, and 0-2 respectively.

Andrea. Andrea did not seem to make more errors in one area than in another. The range of her errors in mechanics, sentence development, paragraph development, and spelling were 0-4, 0-3, 0-1, and 0-5 respectively.

English Language Learners

Jorge. Jorge made the greatest number of errors in mechanics with a range from 0-6. His range of the number of errors he made in the spelling area was 0-5. Ranges in sentence development and paragraph development were 0-2 and 0-1 respectively.

Jose. Jose also showed the greatest number of errors in mechanics throughout the intervention with a range of 0-5. Ranges in the other areas of instruction were all 0-2.

Julia. As with the first two students in this set, Julia also made the greatest number of errors in the area of mechanics. Her range of the number of errors she made in this area was 0-9. In the areas of sentence development, paragraph development, and spelling, her range of the number of errors she made was 0-3 in all areas.

Percentage of Errors

The percentage of errors committed in each writing sample was also calculated. This calculation was completed by dividing the total number of errors by the total number of words written. See Figures 3 and 4 for a graphic display of the error percentages.

English-only speakers. During baseline, Allen's mean percentage of errors was 24.3. This figure decreased during intervention to 8, but it rose to 14 during maintenance. Adam's baseline mean percentage of errors was 15.5. The mean then decreased to 9.7 during intervention and 9.5 during maintenance. Andrea's mean percentage of errors during baseline was 12.7. This figure lessened during intervention and maintenance to 6.9 and 6 respectively. For all of the students, there was low variability in their data.

English-language learners. Jorge's baseline mean percentage of errors was 22.5. This figure decreased to 10.8 during intervention, but rose again to 15.5 in maintenance. In baseline, Jose's mean percentage of errors was 15.6. During intervention, it decreased to 8.5, nut then increased to 13 during maintenance. Lastly, Julia's mean percentage of errors during baseline was 26. This number decreased o 18.5 during intervention. While the first two students exhibited low variability, Julia's data showed moderate variability.

Test of Written Language-3

The three portions of the Spontaneous Writing subtest of the TOWL-3 were administered both prior to the implementation and immediately following the termination of the intervention. This section of the TOWL-3 provides students with a picture prompt on which the students produce a narrative writing sample. Students were given 20 minutes to write. The forms of the test that were given (versions A and B) were counterbalanced which means that the picture prompts provided at the pre and posttest sessions were different. Out of the six students, five showed increases in their quotient scores on this subtest. Only one student, Jose, the second tier student in the group of students who are ELL, showed a decrease in his quotient score on this subtest.

A Wilcoxan Matched Pairs Signed Ranks Test was conducted to determine if the increases on the results of this test were significant for the group. Despite the overall increases for the majority of the group, no significant differences were found (Z = -1.782, p > .05). This indicates that posttest gains were not significantly improved over pretest scores. See Table 4 for TOWL-3 results.

Generalization

Each student was required to complete a measure of generalization in the classroom in which the study was conducted. Although this measure did not reflect generalization to other settings, it did reflect transfer of acquired skills to novel tasks. For example, all of the writing probes conducted using the *Expressive Writing* program and on the *Spontaneous Writing* subtest of the TOWL-3 employed the use of picture prompts to prompt student writing samples. However, on the generalization probes, student performance as measured by CWS and length was examined on assignments that were natural to the classroom environment and which did not involve the use of picture prompts. Generalization samples varied according to the classroom and the teacher as described in the methods section. In almost every case, students showed increases in both length and CWS on the three-minute timed sections of their writing samples. The only exception to this was Andrea who showed reduced length on her post-intervention generalization measure. See Table 5 for generalization scores.

Social validity

All of the teachers indicated on the social validity measure that they might use the *Expressive Writing* program in the future, and that they would be likely to tell other teachers about the program. All teacher participants indicated that they believed that their

Table 4

TOWL-3 Quotient Scores

	Quotient Scores		
Student	Pretest	Posttest	Gain
Allen	72	83	11
Adam	72	74	2
Andrea	79	91	12
Jorge	68	76	8
Jose	81	76	−5
Julia	59	66	7

Table 5

Generalization Measure (CWS and length scores)

	CWS			Length		
Student	Pretest	Posttest	Change	Pretest	Posttest	Change
Allen	42	61	19	52	76	24
Adam	34	51	17	41	45	4
Andrea	50	48	−2	56	55	−1
Jorge	21	49	28	43	65	22
Jose	23	29	6	25	38	13
Julia	19	28	9	21	38	7

CWS = correct word sequence

students learned to write better using the program. One teacher stated that she would continue to use the program in all of the classes in which she taught writing. However, the other two teachers stated that the picture prompts and the presentation of the lessons were sometimes too immature for their students.

Although all six students felt that they learned more using the *Expressive Writing* program, none of them preferred using the program over the strategies that had been used in the past to learn to write. They further indicated that although they would not recommend the use of the program to their peers, five of the six did report that they felt that they would use some of the skills they used during the intervention in the future.

Discussion

Writing is an essential academic skill that impacts a variety of academic subjects (Graham et al., 2001). Direct Instruction has been demonstrated as an effective method for improving the writing performance of students with disabilities at a variety of grade levels (Keel & Anderson, 2002; Roberts, 1997; Walker et al., 2005). The findings of this study may provide further support for the idea that some adolescent learners with deficits in written expression may be able to improve their writing performance through DI instructional methods. It also extends the research by suggesting that such improvements can be achieved using the *Expressive Writing* program at a shortened and accelerated rate by providing only half of the program lessons over a five week period. Additionally, this study further suggests that students who are both English language learners and who are served in special education programs for students with learning disabilities in written expression can benefit from the modified presentation of this program. This information is valuable because little research exists on the effectiveness of DI writing programs and

their effect on the writing performance of students with disabilities and those who are ELL.

Correct Word Sequence

This study sought to establish the effectiveness of a modified DI program on the writing achievement of both adolescent students with disabilities and those who were categorized as ELL with LD. The six participants in this study all showed at least a 20% increase in CWS performance during intervention over their baseline intervention, but it must be noted that increases in their performance lacked immediacy and the magnitude of the slopes was low. CWS previously has been established as having a positive relationship with overall writing quality as measured by holistic rubrics. Therefore, such increases in CWS may be indicative of an overall improvement in quality.

English-only Speakers

Allen appeared to show the most consistent growth across the program with no points of overlap between his baseline and intervention sessions. Though some variability existed across his intervention scores, a general positive slope existed throughout the intervention.

Similar upward trends also were indicated by both Adam and Andrea. Andrea also showed a relatively quick upturn in her performance by increasing her CWS by 20% in the first four intervention sessions. For Adam, the increase was more gradual as he did not achieve three consecutive points at which his CWS score was 20% over his baseline mean until the middle of the intervention phase. Again, for all the students in this group the rapidity of the change was low as was the magnitude of the change. Because the

students were probed on a daily basis using a CBM, some variability might have been expected due to the frequency of the probes.

English-Language Learners

The trends for the students who were ELL were similar to those of the English-only speakers. In general, the students showed improvements over their baseline performance during intervention although the improvements were not rapid and the positive trends were low. The same patterns of variability exist in their data, and several points of overlap between their baseline and intervention sessions are apparent. However, again, the frequency of the daily probe may have had some influence on these factors.

The similarity of the patterns between the two sets may indicate that students of these two subgroups may be able to benefit from the same types of interventions. This finding suggests that it may be that students who are ELL with LD may be able to utilize programs that have been empirically validated with English-only speaking students with disabilities and be successful.

Length

In general, the students showed an increase in the length of their writing samples as they progressed through the writing program. Previous studies (Tindal & Parker, 1989; Tindal et al., 1991) have established length as having a positive relationship with overall writing quality. Therefore, such increases may indicate improvements in the writing samples.

The Relationship between CSW and length

In all cases, a positive relationship between CWS and length existed. All of the students' increases in CWS were mirrored by an increase in length. In only a few sessions

of Julia's and Jorge's intervention was a negative relationship detected between length and CWS. Such a relationship might be expected because as students write more, they also generate more opportunities to produce more instances of CWS. However, this may not always be the case as writing more words does not necessarily guarantee that those words will be written correctly.

CWS Percentages

To examine more closely and to quantify the relationship between length and CWS, I calculated the percentage of CWS. This figure was calculated by counting the number of CWS and dividing by the total number of words written, and then multiplying by 100. For all of the students, no particular trend in CWS percentages was found. Although students did increase their percentage levels during the intervention phase, such increases were not sequential, and for the most part, moderate variability across all phases was indicated. However, all students did achieve higher mean percentages overall during intervention and maintenance. It is important to note that while accuracy did not appear to increase in a consistent fashion as instruction progressed, students were writing more words and more CWS with the same level of accuracy. For example, a student who ends intervention with a 90% CWS percentage with a score of 45 CWS over 50 total words is exhibiting growth if that student started with a 90% CWS percentage with a score of 18 CWS over 20 total words.

Common Decrease Points

No apparent pattern existed regarding specific lessons in which students exhibited sharp decreases on their daily writing probes. Two students showed substantial decreases in their CWS and length scores on the writing probes in a few sessions. Aside from this

overlap between the students and decreased performance on those prompts, there were no other common points at which students showed decreased performance. This suggests that the content of the lesson or the specific picture prompt provided in that lesson was not the cause for such decreased performance and that such decreases should be attributed to other factors.

Error Analysis

For both groups, the number of errors committed in each writing sample did decrease somewhat over the course of the intervention. However, the occurrence of errors appeared to be highly variable. What is most noteworthy is not that the number of errors decreased, but that since students were generating greater amounts of text toward the end of the intervention as evidenced by the increased length, the percentage of errors made in each sample decreased during the intervention. Therefore while the number of errors made across all phases was relatively consistent, the proportion or errors to the number of words written did improve.

Percentage of Error

Though the rate of error did not consistently decrease throughout the intervention, all students did exhibit lower mean error rates during intervention and maintenance than in baseline. It is also important to note that students were writing more words by the end of the intervention and during maintenance. With such increases in the volume of words written, it might have been expected that students would have more opportunities to make errors in their writing. Instead they appeared to make fewer overall errors despite the fact that they were writing more.

Maintenance

During the maintenance period, student performance was mixed. While four of the students showed a positive trend during the maintenance phase, one showed a decrease from the first to the second maintenance point. Since maintenance probes were conducted both two and four weeks after the termination of the intervention, such a drop in performance might be expected if the effects of the intervention fade over time. Additionally, maintenance performance levels were typically below those of the intervention. However, they still exceeded the levels of performance established during baseline.

Generalization

The fact that five of the six students showed evidence of increased CWS following the intervention is noteworthy. Increases were most notable for Jorge who showed over a 100% increase in CWS, and for Allen, Adam, and Julia who both showed approximately a 50% increase in CWS. Jose's increase of approximately 25% was more modest. Increases in length were not as large. Allen, Jorge, and Jose each showed almost a 50% increase in length. Julia and Adam's increase in text length was 33% and 10% respectively. Andrea decreased by about 5% in each area. It is evidence that students may continue to display more CWS even when a picture prompt is not provided. This is especially important because most classroom writing tasks and other assessments do not provide students with such visual prompts so the ability to transfer those skills to other novel writing tasks is essential.

TOWL-3

Despite the fact that significant differences as measured by the Wilcoxon Ranks Test were not found between the pre-posttest results of the Spontaneous Writing subtest of the TOWL-3, five of the six students did show gains on the posttest. As stated previously, such gains were achieved in a relatively short period of time (only five weeks). However, it must be noted that five weeks between the pre and posttests is a relatively short period of time between tests. Therefore, it stands as a potential threat to the validity of these test scores.

This indicates that in a brief period of time students may be able to improve their scores on standardized tests. Although the gains were not statistically significant, three of the students who showed gains were able to be recategorized into higher ranked groups based on their increases in quotient scores. For example, Allen's increase from 72 to 83 allowed him to be reclassified as "below average" when he had formerly been classified as "poor." Similarly, Jorge's increase from 68 to 76 allowed him to be reclassified from "very poor" to "poor." Andrea, who had the largest gains of 79 to 91, was reclassified from "poor" to "average."

Social Validity

Overall, teachers seemed to like this program and stated that their students learned to write better while using it. However, they also felt that the content and the writing prompts were not sophisticated enough for the age and grade level of their students. *Expressive Writing* is designed for typically developing students in the upper elementary grades. However, a number of students with disabilities at the secondary level exhibit writing skills at that very level. For this reason, an alternate version of the program for

older students with below grade level writing ability might be developed. Such a version might incorporate writing prompts that are more developmentally appropriate for older learners while still addressing the fundamental skills of writing. Teachers also could amend the program by utilizing their own, more age-appropriate prompts during that portion of the lesson.

It is important to note that none of the students expressed a desire to use this program in the future. However, several of them did indicate that they learned to write better as a result of using the program. It also is important to note that despite the students' feelings about the program, they did show improvement on writing tasks, and their improved performance also serves to provide social validity for the program.

Limitations

A variety of limitations to this study exist. The first is the lack of the *Expressive Writing* placement test as a posttest following intervention. One purpose of this study was to determine if students could make gains using a shortened intervention as in Keel and Anderson (2004) and as recommended for *Expressive Writing 2*. It is clear that students generally did make improvements on all measures, but using the placement test as a posttest would have allowed researchers to determine whether those improvements were enough to place students into level two without completing all of the instructional lessons of level one.

Another limitation is that the third tier of the students who are ELL did not conform to a traditional multiple-baseline across participants design. Preferably, the student in the third tier would have begun the intervention phase once the second tier student reached a 20% increase over the baseline mean for three consecutive sessions as

had been previously established in the methodology (Barlow & Herson, 1984). Although such a deviation is acceptable, it does weaken the strength of the design.

Lastly, Adam did not achieve stability during his baseline phase. This is an indication of a lack of experimental control. Such variability in his baseline scores makes it difficult to determine if any improvement

Implications and Future Research

Several implications for this study exist. The first is that despite the low magnitude of the slope and the lack of immediacy of the response to the intervention, this particular DI writing program does appear to have a relatively positive impact on the writing performance of students who have LD in written expression (Walker et al., 2005; Walker et al., 2007). The intervention may also be beneficial to students who are ELL with deficits in written expression. This information is important because little empirical research exists on best practices for students in this subgroup. Future research should focus on this subgroup in all academic areas to determine effective instructional practices.

Another implication of this study is that the students who were English-only speaking and those who were students who are ELL showed similar patterns of improvement. This is noteworthy because one criticism of current practices is that the programs that are used to serve students who are ELL with disabilities are generally programs that have been empirically validated with groups of students who are English-speaking. It is important to establish whether or not both groups respond to interventions similarly because it may be appropriate to use those programs that have been found to be effective when instructing English-only students when providing instruction for students

who are ELL. Future research might be conducted on larger groups of students who are ELL so that the findings of those studies could be more generalized to the population as a whole.

A third implication of this study is that a reduced version of the intervention allowed students to make some gains. As was the case in the Keel and Anderson study (2002) using the *Reasoning and Writing*, when only half of the program's lessons were implemented, students still showed improvements in their writing skills. This is especially important information to have when working with adolescents because it allows them to more quickly cover basic skills that should have been instructed and mastered several years earlier. Future research might examine the effectiveness of such shortened presentations in other areas of basic skills when used in instructing adolescent learners. If those learners can increase their performance using such accelerated presentations, they might then be able to move more quickly into other more advanced programs at a faster rate allowing them to potentially close the gap between their performance and their grade level. However, it must be noted that the lack of immediacy and the low magnitude of the slope might have been impacted adversely by skipping the lessons. For example, Jose's performance might have been enhanced if the program looped back to review the new skills that were practiced in the skipped lessons.

Future research might incorporate some changes to the program itself. Since both the teachers and the students reported that the writing prompts were too simplistic, a future direction might be to use more age-appropriate (for older students with low skill levels) and culturally-relevant picture prompts in lieu of those provided in the lessons.

Also, picture prompts could be entirely eliminated and writing prompts that more closely resemble classroom and school writing assessments could be used instead.

Overall, the participants in this study showed some improvements in their writing on the daily writing probes, the TOWL-3, and a generalization measure. Such improvements are an indication that DI programs can be used to increase the writing performance of English-only speaking students with LD in written expression and their counterparts who are native speakers of other language.

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APPENDIXES

APPENDIX A

FIDELITY CHECKLIST

Expressive Writing Observation Checklist
Lesson #39
Observer(s) _____
Teacher _____Class _____
Date _____Time _____

If the instructor completes the step as described on the list, place an "X" in the "C" ("Correct") column. If the step is not completed as described in the checklist, place the letter that describes the error in the "E" ("Error") column. See the code below for a list of letters that describe deviations from the checklist. If words or sentences are omitted, mark through the words in the script that were omitted.

O = this step was **completely** omitted by the teacher or the students provided no response
P = this step was partially completed by the teacher (some words or sentences were omitted from the step) or only one or some of the students responded, but what was presented was accurate
M = a word or words in the step were mispronounced or misread

Step:	**C**	**E**	**Comments:**
1. "Open your workbook to Lesson 39. Find part A."			
2. "I'll read the instructions: Fix up the run-on sentences."			
3. "The run-on sentences in part A name the person more than once. What do the run-ons do?"			
4. Teacher gives signal			
5. All students respond			
6. "I'll read number 1: Tom heard a loud noise and he ran outside and he saw a big cow standing on the grass."			
7. "Is that a run-on?"			
8. Teacher gives signal			
9. All students respond			
10. Teacher calls on a student.			
11. "How do you know?"			

Step:	**C**	**E**	**Comments:**
12. Student responds			
13. "Everybody, fix up that run-on."			
14. Teacher observes students and gives feedback			
15. "I'll read the next fixed-up sentences: Tom heard a loud noise, period. Capital H, He ran outside, period. Capital H, He saw a big cow standing in the grass."			
16. "I'll read number 2: The man picked up the ball and threw it back to the children. Is that a run-on?"			
17. Teacher gives signal			
18. All students respond			
19. "It's not a run-on. It just names the man once. You don't have to do anything to that sentence."			
20. "Read numbers 3 through 6. Two of those items are run-ons. Fix up the run-ons."			
21. Teacher observes students and gives feedback.			
22. "Let's check your work. We'll start with number 3. I'll read number 3: Lacole was very excited and she knew that today was the last day of school. Is that a run-on?"			
23. Teacher gives signal			
24. All students respond			
25. "Teacher calls on student			
26. "How do you know?"			
27. Student responds			
28. Teacher calls another student			
29. "How did you fix up that run-on?"			
30. Student responds			
31. "Number 4: Rosa held her breath and jumped into the pool. Is that a run-on?"			
32. Teacher gives signal			
33. All students respond			
34. ""You didn't have to fix it up."			
35. "Number 5: Jill had two dogs and she liked to play with the dogs after school. Is that a run-on?"			
36. Teacher gives signal			
37. All students respond			
38. Teacher calls on student			
39. How do you know?"			
40. Student responds			
41. Teacher calls on another student			
42. "How did you fix it up?"			
43. Student responds			

Step:	C	E	Comments:
44. “Number 6: Jamar walked to school in the morning and took the bus home in the afternoon. Is that a run-on.”			
45. Teacher gives signal			
46. All students respond			
47. “You didn’t have to fix it up.”			
48. “Find part B in your workbook.”			
49. “I want to tell you a story about what happened, but one of the pictures is missing.”			
50. “Look at the first picture. I’ll say sentences that report on what happened in the first picture. Listen: A fly flew toward a cherry pie. A baker held a fly swatter.”			
51. “Look at the last picture. I’ll say sentences that report on what happened in the last picture. Listen: The fly flew out the window. The baker cleaned the pie off his face with his apron.”			
52. “Let’s figure out what must have happened in the blank picture. Get ready to tell me what the baker must have done.”			
53. Teacher calls on a student.			
54. Student responds			
55. “Get ready to tell me what the pie must have done after the baker hit it.”			
56. Teacher calls on student.			
57. Student responds.			
58. “Get ready to tell me what the fly must have done.”			
59. Teacher calls on a student.			
60. Student responds			
61. “I’ll say a story that tells what happened. Touch the first picture.”			
62. All students touch the picture.			
63. “A fly flew toward a cherry pie. A baker lifted up a fly swatter. Touch the blank picture.”			
64. All students touch the picture.			
65. “”The baker tried to hit the fly with a fly swatter. The fly swatter missed the fly. It hit the pie. Pie splattered all over the baker. Touch the last picture.”			
66. All students touch the picture			
67. “The baker wiped the pie off his face with his apron. The fly flew out the window.”			

Step:	C	E	Comments:
68. “I’ll say a story again. Then I’ll call on several students to retell it. When somebody retells the story, raise your hand if the student leaves out something important. Listen to the story: A fly flew toward a cherry pie. A baker lifted up a fly swatter. He tried to hit the fly with a fly swatter. The fly swatter missed the fly. It hit the pie. Pie splattered all over the baker. The baker wiped the pie off his face with his apron. The fly flew out the window.”			
69. Teacher calls on several students.			
70. “Tell the story. Try to use sentences that you would write. Everybody else, listen and raise your hand if the student leaves out something important.”			
71. Several students share their stories.			
72. “Find part C in your workbook.”			
73. “I’ll read the instructions: Put in the capitals and periods.”			
74. “Each sentence names something, then tells more. Read the passage. Put in the capitals and periods.”			
75. Teacher observes students and gives feedback.			
76. “Check your work. I’ll read the passage. Capital A, A girl had a frog, period. Capital I, It could hop very high, period. Capital T, The girl brought the frog to school, period. Capital A, A school bell scared the frog, period. Capital I, It hopped on the teacher’s desk, period. Capital E, Everybody started to laugh, period. Capital T, The teacher turned around, period. Capital S, She liked frogs, period. Capital S, She told the children that they could watch the frog, period.”			
77. “Take out a piece of lined paper. Write your name and today’s date.”			
78. Write part D on your paper. Find part D in your workbook. I’ll read the instructions: Write a paragraph that reports on what happened. Touch the words in the vocabulary box as I read them: barrel, rolled, truck, crashed, hill, an apple, tree, teacher, boy, caught.”			
79. “Look at picture 1. Several important things happened in picture 1. Say a sentence that tells what the truck did.”			
80. Teacher calls on several students			
81. Several students respond			
82. “Say a sentence that tells what the barrel did.”			
83. Teacher calls on several students			
84. Several students respond			

Step:	C	E	Comments:
85. “Look at picture 2. Say a sentence that tells what the barrel did in that picture.”			
86. Teacher calls on a student			
87. Student responds			
88. “Look at picture 3. Several important things happened in that picture. Say a sentence that tells what the barrel did.”			
89. Teacher calls on a student.			
90. Student responds.			
91. “Say a sentence that tells what an apple did.”			
92. Teacher calls on a student.			
93. Student responds.			
94. “Say a sentence that tells what the boy did.”			
95. Teacher calls on a student.			
96. Student responds.			
97. “Look at picture 4. Say a sentence that tells what he did.”			
98. Teacher calls on a student.			
99. Student responds.			
100. “Write your paragraph. Begin with picture 1. For each picture tell the important things that happened. Name the person or thing and tell the important things. Be sure to indent. You have 10 minutes.”			
101. Teacher observes students and gives feedback.			
102. Teacher waits 9 ½ minutes.			
103. “Finish the sentence you are writing. Don’t start another sentence.”			
104. Teacher waits until 10 minute point.			
105. “Everybody, stop writing. Let’s check your work. Make three check boxes under your paragraph.”			
106. “Check 1 says: Are there any run-ons in your paragraph? Read over your paragraph. Fix up any run-on sentences. Then make a check in box 1.”			
107. Teacher observes students and gives feedback.			
108. “Check 2 says: Does each sentence begin with a capital, end with a period and tell what happened? Read over your paragraph for check 2. Then make a check in box 2.”			
109. Teacher observes students and gives feedback.			

Step:	C	E	Comments:
110. “Check 3 says: Did you tell all the important things that must have happened? Read over your paragraph for check 3. If you left out a sentence, write that sentence under your paragraph. Make a mark in your paragraph to show where that sentence belongs. Also make sure that you wrote all the details in the correct order. Then make a check in box 3.”			
111. Teacher observes students and gives feedback.			
112. “I’m going to call on students to read their paragraph. Listen carefully and see if each paragraph checks out.”			
113. Teacher calls on at least 4 students.			
114. Students read their paragraphs.			

APPENDIX B

SOCIAL VALIDITY SCALE (STUDENT VERSION)

Use the following scale when responding to the statements below.

1=strongly disagree2=disagree3=neither agree or disagree4=agree5=strongly agree

1. I learned to become a better writer while using the *Expressive Writing* 1 2 3 4 5

2. I liked using the picture prompts in the *Expressive Writing* program. 1 2 3 4 5

3. I would recommend to other students that they use the *Expressive Writing* program. 1 2 3 4 5

4. I will continue to use what I learned in *Expressive Writing* when I write in other classes. 1 2 3 4 5

5. I liked using *Expressive Writing* better than other ways I have been taught to write. 1 2 3 4 5

Comments: _____

_____

_____

_____

APPENDIX C

SOCIAL VALIDITY SCALE (TEACHER VERSION)

Use the following scale when responding to the statements below.

1=strongly disagree2=disagree3=neither agree or disagree4=agree5=strongly agree

1. My students learned to become better writers while using the *Expressive Writing* program. 1 2 3 4 5

2. My students liked using the *Expressive Writing* program. 1 2 3 4 5

3. I would recommend to other teachers that they use the *Expressive Writing* program. 1 2 3 4 5

4. I will continue to use *Expressive Writing* with other classes in the future. 1 2 3 4 5

5. I liked using *Expressive Writing* better then other writing programs or strategies I have used in the past. 1 2 3 4 5

Comments:

_____

_____

_____

_____

APPENDIX D

TERMS LIST

Correct word sequence: two adjacent, correctly spelled words that are acceptable within the context of the phrase.

Curriculum-based measure: tool that uses probes based on district curriculum for measuring student competency and processing in basic skill areas

Direct Instruction: model for teaching that emphasizes well-developed and carefully planned lessons designed around small learning increments and scripted instruction.

English Language Learner: student whose primary language is other than English.

English for Speakers of Other Languages: range of services for students who are ELL and whose English language deficits negatively impact their performance in the classroom.

Learning Disability: a disorder in one or more of the basic psychological processes in understanding or in using language, spoken or written.

SI: speech/language impairment

Strategy instruction: procedures that rely on the skillful use of computations, problem solving, techniques, memory, fluency and comprehension, and writing. Instruction proceeds stepwise and includes a strategy description, modeling, use of assisted practice time, emphasis on students' awareness of these practices, and encouragement to continue the strategy use.