Persuading Students with Emotional Disabilities to Write: A Design Study

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Abstract

An exploratory study was undertaken to examine the implementation of strategy instruction in persuasive writing with a class of 10 adolescent students with severe emotional/behavioral disabilities (EBD). Several learner characteristics were observed to interact with curriculum and instructional variables. Modifications were made, on an ongoing basis, to respond to these student characteristics. After approximately four months of instruction, findings indicated that all students had mastered the components of effective persuasive essay writing, and performed competently on criterion writing measures, greatly different from performance at the beginning of instruction. Although the design of this investigation does not allow for definitive causal explanations, insights were gained regarding the interaction between EBD characteristics and strategy instruction. Implications for further research are discussed.
Persuading Students with Emotional Disabilities to Write:  

An Exploratory Investigation

Students with serious emotional/behavioral disabilities (EBD) face significant learning challenges in school (Lane, 2004); among these challenges is developing proficient expressive writing skills. Writing skills are of critical importance because of their emphasis on organized, rational thinking, considering the perspectives of others, and clearly communicating facts and opinions to others – skills that are of great potential value for students with EBD (Regan, Mastropieri, & Scruggs, 2008). Unfortunately, relevant research in this area is very limited. In a review of academic interventions for students with EBD, Lane (2004) stated, “academic interventions targeting written expression…represent, by far, the least developed instructional area of the three [i.e., reading, writing, math] examined in this chapter” (p. 475).

Unfortunately, students with emotional and behavioral disabilities are at a great disadvantage with respect to writing skills. Lane, Wehby, Little, and Cooley (2005a) reported that mean achievement in written language in self-contained elementary and secondary schools for students with EBD was below the 10th percentile. In a following study, these low scores were seen to decline over time (Lane, Wehby, Little, & Cooley, 2005b). Lane, Barton-Arwood, Nelson, and Wehby (2008) reported that written expression among students with EBD in self-contained schools was at the 15th percentile, and that these scores were associated with behavioral variables (e.g., school adjustment, externalizing, and internalizing; Furlong, Morrison, & Jimerson, 2004). Nelson, Benner, and Rogers-Adkinson (2003) reported that sample of students with EBD and co-morbidity in language disorders produced mean scores of 18th – 25th percentile on written language measures. Nelson, Benner, Lane, and Smith (2004) also reported that a random sample of students with EBD scored at the 15th percentile in broad writing, and
that these scores were associated with externalizing behaviors. Results of earlier investigations (e.g., Epstein & Cullinan, 1983; Scruggs & Mastropieri, 1986), and reviews of relevant research conducted over time (Reid, Gonzalez, Nordness, Trout, & Epstein, 2004) suggest that these deficits are perennial and consistently observed.

Some research, however, has been conducted recently in the area of writing. One promising instructional approach, that has successfully improved written performance with students with learning disabilities, is the Self-Regulated Strategy Development Model (SRSD) (Harris, Graham, Mason, & Friedlander 2008). The SRSD instructional approach provides supports in self regulation such as goal setting, self-monitoring, and self-instruction while explicitly teaching strategies to facilitate writing performance. SRSD has been successfully implemented in a very extensive body of research (e.g., Rogers & Graham, 2008; Graham & Harris, 2003; Graham & Perrin, 2007; Santangelo, Harris, & Graham, 2008). However, until very recently, little was known whether such instruction could impact learning of students with serious emotional disabilities.

Mason, Harris, and Graham (2002) described one application of the SRSD model with one third grade student described as having attention, learning and behavioral disabilities. The SRSD model was implemented using the planning and organizing strategy POW (P = Pick my idea, O = Organize my notes, W = Write and say more) and the strategy for writing stories: WWW, What = 2, How = 2 (Who is the main character? When does the story take place? Where does the story take place? What does the main character do? What happens? How does the story end? How do the characters feel? Mason et al., p. 498). Mason et al. provided writing samples to indicate how the student had progressed in writing. More systematic evidence was provided by Adkins (2005), who taught three second and third grade students with EBD, in 19 to 25 sessions, to
use the planning and story writing strategy, using a multiple baseline design. All students improved in number of story elements, number of words written, and overall quality indices on post intervention, maintenance and generalization probes.

More recently, Lane, Harris, Graham, Weisenbach, Brindle, and Morphy (2008) extended the Adkins study using the same SRSD writing strategy in teaching six second grade students who were at risk for EBD how to plan and draft a story. Students were taught individually in one of three legs of intervention implementation using the SRSD model over 10 to 15 sessions. All students improved at post intervention and maintenance assessment periods on number of story elements, quality and total number of words written over baseline performance. Finally, Mason and Shriner (2008) reported that expressive writing performance was enhanced when six elementary aged students with EBD, or at risk for EBD, and served largely in inclusive settings, were presented with one-to-one SRSD strategy instruction by trained graduate students. These authors selected a strategy for teaching persuasive essays, referred to as POW + TREE (Topic sentence, Reasons - three or more-, Ending, Examine; see Harris, Graham, & Mason, 2006). After instruction, all students gained substantially in their abilities to create a persuasive essay.

To date, some evidence supports the use of SRSD as a positive strategy for improving writing in students with EBD; however, that evidence at present is largely confined to a relatively small number of primary or upper elementary students with, or at risk for EBD, served largely in general education classes, and taught in one-to-one settings. It is presently unknown whether, or how, such a model can be employed effectively in whole class instruction with a population of secondary students with very serious emotional/behavioral disabilities who receive services in special, separate settings. This appears to be a significant limitation of the literature to date, since students with EBD, frequently characterized as deficient in communication skills,
perspective taking, reflective thinking, articulate self-expression, and using language in social situations (e.g., Furlong, Morrison, & Jimerson, 2004; Kauffman & Landrum, 2008), could potentially benefit enormously from increased written expression skills. Further, an increased ability to make a thoughtful, considered argument in writing, of the sort directly taught with the SRSD “POW + TREE” strategy, could be of particular benefit.

The present investigation was undertaken to determine how previous research using SRSD could be adapted for middle school aged students with serious emotional disabilities. This implementation took place in a separate setting school for students with serious emotional disabilities, and involved direct, daily classroom interaction with the students over an extensive time period. This paper describes the iterative decision-making process and development procedures employed, during the process of learning how to adapt instruction and instructional procedures to meet the needs of these students.

The present investigation employed quantitative and qualitative methods to study the processes of classroom instruction over time, as well as the outcomes associated with this instruction. This approach included many elements of “design experiment” or “design study” methodology (Brown, 1992; Collins, 1999; Palinscar, 2005), which is “based strongly on prior research and theory and carried out in educational settings, [and] seeks to trace the evolution of learning in complex, messy classrooms and schools…and produce instructional tools that survive the challenges of everyday practice” (Shavelson, Phillips, Towne, & Feuer, 2003, p. 25). Of particular interest in this investigation were the interactions between learner characteristics and instructional methods and materials; this methodological approach allowed us to make changes throughout the instructional period as needed, in order to study the learning process as it proceeded through several classroom and instructional modifications.
Research Questions

Specifically, the research questions addressed in the current investigation were:

1. Can the SRSD model of instruction for the POW + TREE persuasive writing strategy, used successfully in previous research with students with learning disabilities, be adapted for middle school students with serious emotional and behavioral disorders served in a separate setting?

2. How do the characteristics of adolescent students with EBD interact with SRSD instruction?

3. What supports, inputs, interactions and modifications are required to implement this SRSD POW + TREE strategy effectively with a population of adolescents with significant emotional/behavioral disabilities?

4. What outcomes in writing performance are associated with SRSD instruction?

A design study-type approach was employed to address these research questions, because there was a need to explore the circumstances under which SRSD instruction could be effective, as well as to evaluate the potential effectiveness of the strategy itself. That is, given the student population, we were uncertain how many instructional sessions would be necessary, what structural arrangements would be needed, and what modifications or adjustments would be needed in order to facilitate optimal learning. We were also interested in observing the characteristics of the student population, and determining how these characteristics interacted with SRSD instruction as it was being implemented. With this design, we could not draw unequivocal causal conclusions; however, it was hoped that we would be able to gather evidence of importance to the implementation of SRSD instruction with adolescents with severe EBD, and to provide implications for further research with this population.

Method

Setting
This study was conducted in a specialized middle school for students with emotional and behavioral disorders in a large public school district in the eastern United States. This center was the most restrictive environment placement in the public school district of well over 100,000 students. All academic classes were taught by special education teachers and paraprofessionals who received training in the very explicit school-wide behavior management system. In addition, school counselors were present to provide ongoing counseling services to students. The middle school included 7th and 8th grade classes, and the class size ranged from 3-10 students per teacher and assistant. Students participated in four core classes (English, science, math, and history), physical education and two elective classes per day. All students participated in the state-wide high stakes testing and their scores were returned to their home schools. At the time of this investigation, there were approximately 68 students enrolled. Eighty-one percent were male and 18.82% were female. Ethnic and racial backgrounds of students were: 45.9% Caucasian, 27.1% African American, 17.7% Hispanic, 3.5% Asian, and 5.9% other. Forty-eight percent of the students participated in free and reduced lunch, and 22.4 % were characterized as limited English proficient.

A positive behavioral support system using a point system and daily vouchers was consistently used throughout the school. Vouchers (individual point sheets) were tailor-made to identify idiosyncratic behaviors targeted for each student; generally, points were earned for preparedness, properly participating in classroom activities, appropriately asking for and accepting help, respecting others and property, and promoting emotional and physical safety. Vouchers were completed at the end of every class period by teachers. Teachers discussed with students why or why not points were received. Points earned daily accumulated and students earned participation privileges in end-of-week special activities.
Another way in which the school managed behavioral issues was through the use of time-out (Lewis, Lewis-Palmer, Newcomer, & Stichter, 2004), implemented when students were experiencing extreme difficulties controlling their behaviors. Students who were especially volatile were also provided with “flash passes” which could be used at any time during the day as a pass to the Crisis Response Center (CRC), where students could go when they were in crisis. Students were sent to CRC for fighting, drugs, gang related activities, racial comments, stealing, or sexual comments. When this happened, students met with the CRC counselor and a determination was made regarding whether school detention or suspension was warranted. In-school detention and suspension also took place in CRC.

The school also provided the Pet Center, which housed various animals in a separate area within the school, and after-school programs such as art, video games, pets, taekwondo, fooze ball, and air hockey. Parent involvement also was an important part of the school’s policy.

Sample

Students served in this special middle school had a wide range of behavioral and emotional needs. Some students had significant psychiatric issues, including depression, bipolar disorder, thought disorders, anxiety, oppositional defiant disorders, antisocial behavior, and Attention Deficit Hyperactivity Disorder (ADHD). It is common for students to have several co-existing disorders. For example, the majority of students were dually diagnosed with a psychological and a conduct disorder or ADHD; others had probation officers because of infractions with the legal system, in addition to their emotional and behavioral disorders. According to the principal, approximately 60 to 70 percent of the students were on some type of medication.
Ten, eighth grade students classified as having serious emotional disabilities were participants. Students were selected by the building administrators as needing assistance with explicit writing instruction. All students had been diagnosed with a variety of serious emotional and behavioral disabilities, including serious anxiety disorders. The sample included eight males and two females. Five students were Caucasian, three were African American, one was Hispanic and one was from a mixed racial/ethnic background. Two of the students had emigrated from other countries. One student was dropped from the study because he was expelled from school for exhibiting aggressive behaviors toward his teachers during the course of the investigation. Another student’s placement was changed to a less restrictive environment to his home school during the study, but this student still participated in posttesting. Students’ pretest writing levels ranged from a third to an eleventh grade level on the Woodcock Johnson Writing Fluency subtest ($M = 6.5$, $SD = 2.6$) of the Woodcock Johnson III Tests of Achievement (WJ-III; Woodcock, McGrew, & Mather, 2001). Other WJ-III subtest standard scores similarly reflected below average mean performance, with wide variability: Written Language, 95.4 ($SD = 14.0$, range = 77 – 116); Math, 94.5 ($SD = 12.7$, range = 80 – 120); Broad Reading, 93.4 ($SD = 13.2$, range = 72 – 117); and Total Score, 93.8 ($SD = 17.0$, range = 75 – 120). Written essay performance, as assessed by the essay pretest (see Table 3), was low, with much less variability, across a number of criteria. Additional individual student demographic data obtained from school records are presented in Table 1.

**Teacher.** The middle aged African American female teacher was a fully licensed special education teacher with seven years experience working at this school. She had a master’s degree in special education and a strong reputation in the school as a caring, supportive teacher who arranged successful class environments for students, while holding students to behavioral and
curriculum standards. She was the assigned English teacher for these students and as such, had experience teaching writing to conform to the state standards of learning and regularly implemented writing instruction to students.

**Project staff.** Project staff included a team of four university researchers, consisting of one Caucasian female faculty member and three advanced graduate students, all female (two Caucasian, one Hispanic), all of whom had experience working with individuals with disabilities in various settings and were enrolled in doctoral programs. All staff received extensive training in implementing SRSD prior to beginning the study.

**Materials**

All materials were based on those developed by Graham and Harris (e.g., 2005) and as modified by Mason and Shriner (2008) to work with students with EBD. The Self-Regulated Strategy Development Model (SRSD) (Harris, Graham, Mason, & Friedlander, 2008) provides supports in self regulation such as goal setting, self-monitoring, self-instruction, and self-reinforcement while explicitly teaching strategies to facilitate writing performance. The specific SRSD strategy taught was the planning and writing for persuasive essays: POW + TREE, in which P = Pick my idea; O = Organize my notes; W= Write and say more; and T = Topic sentence – tell what you believe; R= Reasons (write three or more) – why do I believe this and will my readers believe this?; E = Ending – wrap it up; and E = Examine – do I have all my parts?

**Student materials.** Student materials included notebook computers and paper folders that contained all student materials used throughout the project. The student materials included a student contract for learning, a POW + TREE chart containing all steps in the strategy, a graphic organizer of the POW + TREE strategy that contained spaces for students to write in their
persuasive essay notes prior to writing the essay (see Figure 1), a sheet containing transition
words which could be used to assist in generating transitions while writing, a self-statement sheet
which was used to help students reflect on ways to think of good ideas, what do think while
working and when checking their work, self-evaluation essay charts, and copies of student
printed essays. Students also all had wireless notebook PCs which were connected to a school-
wide network and were used throughout the study during all phases of writing the essays. Since
all students used notebook pcs for all writing tasks before and after the study, this was not
considered a new variable introduced in this project. When students experienced difficulties with
their own notebook PCs, they used a larger PC located in the back of the room, or occasionally
used paper and pencil.

Training materials and procedures. Teaching materials included all student materials
as well as a detailed notebook containing all lesson plans for learning how to implement the
POW + TREE strategy based on those implemented in previous research (e.g., Mason & Shriner,
2008). Steps in the instructional sequence included the recommended SRSD stages of
instruction, such as developing background knowledge and discussing it, modeling the strategy,
memorizing the strategy, supporting the strategy with guided practice, and independent practice.

All teaching and project staff met together for training with experts in SRSD instruction.
During this training, all materials from the lesson plans and notebooks were described, and
videotaped model lessons from previous research studies were viewed. Instructors role played
implementing lessons until criterion performance in implementing SRSD was obtained, by all
project staff and the teacher. During instruction it became necessary sometimes to modify
lessons based on student performance. When this happened, changes were discussed and shared
electronically and in person with the teacher and all staff. An electronic web site was used to
house copies of all lesson plans and any changes. Project staff met daily to review SRSD components, along with student performance and progress. Project staff also met four days a week with the teacher and periodically with building administrators who expressed a desire to be kept up to date with the study’s progress. During teacher meetings all student performance data were reviewed, lessons and specific lesson components covered were addressed, specific issues with progress or lack of academic progress with specific students, and any behavioral issues were discussed. During meetings with the building administrators student progress was discussed, as well as any issues or upcoming schedule modifications due to field trips or school assemblies.

Procedures

After obtaining relevant Institutional Review Board approvals and student, parent and teacher consent, teacher and staff training, student pretesting took place, followed by instructional lessons, post testing, and maintenance testing. Prior to the initiation of the research, project staff were in the school observing classes and students. This was done at the suggestion of the school administrators and teachers, to provide students with an opportunity to become familiar with the individuals who would be working with them in their classes. Instruction occurred approximately four days per week, from October through the last week in February, during a 29 minute school-wide remediation period for a total of 55 sessions, or a total of 26.6 hours of instruction over more than four months. (This implementation period was considerably longer than we had originally planned). Individual students received a mean number of 42.2 ($SD = 5.8$) days of instruction, with a range of 33.5 to 50 days. When students were not present in class for instruction they were frequently in school, but participating in other activities, such as
The model of SRSD instruction was implemented to teach students how to write persuasive essays. Initially, the assigned classroom teacher delivered the instruction; however, over time project staff assumed more and more instructional responsibilities, until project staff were heavily involved in all of the daily instruction. This arrangement appeared more suitable to helping students move through the content to reach criterion and the independent stage of instruction. During instruction, project staff made continuous modifications and adjustments based on the individual emotional, behavioral, and learning needs of these students as described next.

**SRSD instructional procedures.** SRSD instruction included the six phases of instruction: Develop Background Knowledge, Discuss It, Model It, Memorize It, Support It, and Independent Performance, while emphasizing throughout self-regulation, independent use, and student ownership. The instructional goal was to have students internalize self-regulation strategies and write persuasive essays independently. Initially instruction was delivered and lessons directed by the teacher. However, instruction was carefully scaffolded to have students gradually gain ownership of the strategy. During stage 1, students acquired the knowledge for using the POW + TREE strategy to write persuasive essays. The POW component consisted of a general planning and organizing strategy, while the TREE component provided specific steps for writing a persuasive essay. Students practiced learning the planning and writing strategy acronym, what it represented and discussed background knowledge. During the second stage of instruction: Discuss it, students continued with learning the specific acronym of POW + TREE,
remembering what each component represented. Sample persuasive essays were reviewed and students practiced identifying sections of model essays.

During the third stage of instruction, Model it, the teacher modeled the entire planning and writing process using self-statements and the graphic organizer. The teacher modeled think aloud self-statements while she planned out each step involved in using POW + TREE from selecting the topic, to generating ideas for the organizer, to beginning writing. For example, the teacher used statements, such as “What do I believe?” “What is the next step I have to do?” “Did I answer all the questions?” And “I like that idea.” to model planning, self-evaluation, and self-reinforcement throughout the process. Students also completed their own self-statement charts that could be referred to during subsequent lessons. During the planning, a large graphic organizer was placed on the board, and students assisted with generating ideas that were written on the organizer. Goal setting was also introduced and students were taught that part of the goal for persuasive essay writing was to ensure that all components (topic sentence, three or more reasons, explanations for reasons, and ending) of the essay were completed.

During the fourth stage of instruction, Memorize it, students demonstrated that they had learned what the strategy steps were for writing persuasive essays. In this case, all students were required to state POW + TREE and describe what each component represented.

The fifth stage of instruction: Support it, consisted of collaborative writing. During this stage, students worked collaboratively with the teacher and progress writing was monitored by both students and teacher. At first, the class selected an essay prompt from two options, everyone

**Initial days of instruction.** The first day of instruction, the teacher introduced the study, explained what would happen and presented students with learning contracts to sign. The “Writing to Persuade Learning Contract” contained students’ names, the date with target
completion dates, the goal, how to meet the goal, signatures of both the student and teacher for the initial contract, and signature lines for both students and teachers and completion dates when instruction was successfully completed.

During the first day of instruction, all 10 students were present. The desks were spaced in rows on the left and right hand side of the room, but shaped into a large semi-circle with several students sitting in the back row across the room. The teacher’s desk was in the front left corner of the room and the paraprofessional’s desk was in the back right side of the room. There were several personal computers along the back wall of the room, an overhead projector, and notebook computer projector at the front of the room, and white board across the front classroom wall. This general seating arrangement remained constant across the majority of the study. Students kept their assigned seats while in this room.

**Collaborative decision-making.** Since the project goal was to have students learn to use the POW + TREE strategy independently, all discussions and decision-making were focused on how to improve student learning and performance. Project staff met daily after instruction, and with the teacher and school administrators on a regular basis, to assess student learning and performance. Daily field notes, observational data, attendance records, student performance data, and videotaped records were used to assess procedures, methods, and materials. When student learning appeared to be progressing at a slower than expected rate, decisions were made to modify and adjust instruction. A collaborative decision-making process was employed, whereby all parties participated in, and agreed on instructional modifications. For example, when students had not yet achieved criterion level performance within the originally scheduled study completion date, administrators agreed to, and facilitated re-scheduling of classes to allow the instruction to proceed beyond the originally agreed-upon completion date. In order to accomplish
this, project staff met with teachers and administrators, all student performance data and progress
to date was reviewed, and discussion was held on how to best meet the original goal of having
students meet criterion with the writing strategy. Also, the teacher’s input was considered in
delaying student re-grouping until a time when it was thought re-grouping would be less
intrusive.

**Data Sources and Scoring**

All students were pre- and posttested on the Writing Fluency subtest of the Woodcock
Johnson III (WJ-III), as well as the Oral and Written Language Scales (OWLS) (Carrow-
Woolfolk, 1996). Prior to and subsequent to instruction, students were also provided with two
essay prompts, asked to select one and write essays in response to the prompts. A delayed
posttest was also administered to assess maintenance, approximately 12 weeks subsequent to
posttesting. All essay testing procedures were identical. In addition, students were individually
interviewed regarding their knowledge of the POW + TREE strategy, their perceptions of the
strategy instruction, and generalized use of the writing strategies.

**Essay scoring.** Four independent scorers read and scored each essay individually.
Scorers met to assess inter-rater reliability, and discussed disagreements until they were resolved.
The resulting inter-rater reliability was 98%. Each essay was scored using a holistic rubric with
a scale from 0-10. A score of zero was given for no essay parts, and ten for a complete essay. A
complete essay had to include the following components: (a) topic sentence; (b) more than three
reasons with explanations; (c) ending sentence; and (d) a logical sequence of writing, including
at least one counter argument. In addition, each essay was scored by number of words,
paragraphs, transition words, and parts of the essay, including: topic sentence, each reason, each
explanation, each counterargument, and an ending sentence.
On-task behavior. A time sampling procedure (Alberto & Troutman, 2008) was used to record students’ on and off-task behaviors during 30-second intervals for 15 minutes of most class periods. When the class was split into two separate groups later in the implementation period, each class was observed for 10-minute intervals, at varying times throughout the period. Trained observers sat in the front of the room where they could see the faces of all students, and used hand held devices with earphones to listen to audio recordings of “tapping sounds” every 30-seconds to prompt accurate coding. Coding was completed using hand held devices and/or paper-pencils. In addition, since there was a great deal of mobility in and out of the room by individual students, time individual students were out of the room was also coded. Students could be out of the room during the period for a number of reasons, including being in time-out or seeing a counselor or another teacher, or even attending student council meetings. Student attention to task was operationally defined as the following:

(a) student is in designated area of room,
(b) student is manually engaged with appropriate materials,
(c) student is reading/writing to the writing prompts,
(d) student refrains from making derogatory comments about task/other,
(e) student asks relevant question(s) to adult(s), as needed,
(f) student maintains focus on appropriate task and/or the writing tools, and
(g) student may appear in thought by intermittently and quietly looking away from material and not writing (engaged only with self not with others).

Other data sources. Throughout the implementation period, video cameras were employed daily to create a visual record of class activities. These recordings were reviewed regularly by project staff to assist with understanding the instructional process. In addition,
copious field notes were taken throughout the investigation to document characteristics of the students, and their responses to instruction. Staff met daily to make reflections on these data sources. Teacher, student, and administrator interviews were also conducted, to gain further insights on the implementation of SRSD instruction, and for triangulation with other data sources.

**Fidelity of treatment implementation.** Fidelity of treatment checklists during instructional lessons were used by trained observers. The checklists were designed to match the original lesson plans and contained all of the critical elements for each lesson. For example, for Lesson 1 (POW + TREE), the fidelity checklist contained elements relevant to the five components of the lesson: (a) state purpose and define “persuade”; (b) Describe and discuss POW; (c) Discuss what makes writing to persuade powerful; (d) Introduce TREE- uncover the rest of the chart; (e) Read and examine all elements of a writing to persuade paper; and (f) Lesson wrap-up and return materials. Examination of checklists indicated that the instruction had been delivered with a high degree of fidelity (mean = 96, range 90-100%).

**Data Analyses**

**Qualitative analysis.** Video recordings, field notes, notes of group meetings, and interviews were analyzed in order to determine how the student characteristics appeared to interact with instructional methods and materials in this investigation. All data were examined recursively using techniques of analytic induction and the constant comparative method. Analytic induction "involves scanning the data for categories of phenomena and for relationships among such categories, developing working typologies and hypotheses upon an examination of initial cases, then modifying and refining them on the basis of subsequent cases" (LeCompte & Preissle, 1993, p. 254). These processes were undertaken in order to generate general concepts or
themes that characterized writing strategy instruction with this sample of students with severe emotional and behavioral disorders.

**Quantitative analysis.** Pretest, posttest, and maintenance measures of achievement tests and essay writing were compared statistically by means of the Wilcoxon matched-pairs, signed ranks test (Siegel & Castellan, 1988). Nonparametric were employed throughout, as the criterion of homogeneity of variance was frequently not met, largely because of apparent floor effects on pre-tests. For this reason also, effect size data for criterion measures were calculated using posttest or maintenance standard deviations. On-task data were analyzed descriptively.

**Results and Discussion**

This investigation was implemented over a considerable portion of the school year, and involved ongoing data collection involving a variety of measures. Results are reported and discussed in the following sections with respect to (a) structural classroom modifications undertaken throughout the implementation period; (b) ongoing modifications made as a consequence of observed student characteristics; (c) results of observational data; (d) results of outcome measures including standardized tests and criterion essay measures; (e) descriptive writing outcomes; (f) student strategy scores; and (g) student, teacher, and administrator reports. Each is described, in sequence, as follows.

**Structural Classroom Modifications**

The present implementation was intended to determine and describe the optimal conditions for delivery of SRSD instruction with adolescents with severe EBD; consequently, a number of modifications in instruction were made on an ongoing basis in response to classroom situations (see Figure 2 for a timeline). These modifications included adaptations in instruction, materials, and activities. That is, instruction began as conducted by the regularly-assigned
classroom teacher. However, due to the fact student learning was not proceeding as rapidly as felt necessary, after about five weeks, it was determined that instruction would be undertaken by the university research team, on a whole class basis. Later, after about 12 total weeks of instruction, it was determined that it would be more appropriate to divide the class into two groups, using an additional available classroom, again led by the university research team. This was done to address the substantial heterogeneity in academic skills in the group, and also to create two separate groups that would interact more appropriately. Specifically, one individual student frequently exerted a negative influence on the behavior of several of the lower-achieving students during whole-class instruction, often encouraging off-task and noncompliant behavior. However, when moved to a smaller, more homogeneous group of higher-achieving students, this student participated much more appropriately. This revised instructional model was then followed throughout the remainder of the investigation.

Modifications were also made on instructional materials. For example, the graphic organizer used by all students was modified to include a column for “explanations”. Also, essays were written with missing parts, for students to identify missing essay elements. This was done to provide an “identification” level of learning essay parts, to provide an additional step and further facilitate later acquisition of the strategy on the “production” level (Mastropieri & Scruggs, 2009).

Finally, one major structural modification made during this investigation was to extend the instructional period approximately two months beyond the original target date for completion of the project (before winter recess). This modification was made because students, although learning, were not moving as rapidly through the lessons as originally anticipated. The reasons
for the slower overall pace of instruction were thought to be related to observed student characteristics, as described in the following section.

**Student Characteristics and Instructional Modifications**

Many instructional modifications were made throughout the course of the investigation, in response to the presenting characteristics of the students in this investigation. These characteristics, and corresponding modifications as they evolved throughout the investigation, are described in the following paragraphs.

**Cognitive organization.** Similar to the students with learning disabilities on which much prior SRSD research is based (Graham & Harris, 2003), students in the present investigation demonstrated relative deficits in organized conceptual thinking relevant to composing a persuasive essay. Although this finding may have been a manifestation of a more generalized academic deficit common in students with EBD (Lane, 2004), examination of pretest essay scores revealed substantial limitations in number of essay parts, transition words, and number of paragraphs written, all of which are indicative of a lack of careful, organized thinking, and which led to the overall low holistic writing score at pretest (see pretest data in Table 3). Lack of clear and comprehensive thinking about a topic may also lead to a minimal number of words written. For example, one student wrote the following for his pretest essay: “Kids my age should be able to have cell phones because we can use it for emergencies or to call friends.” Although sensible, this pretest represents a simple and rather obvious statement rather than an essay, and, beyond simple sentence and semantic structure, contains virtually no organization as a persuasive presentation. In response to the prompt, “Should students your age go to school in the summer?”, another student wrote, “Because they should enjoy the summer time they earned it. I’m not sure but not in school because they should learn in school.”
SRSD as applied in this investigation seemed particularly appropriate for addressing this characteristic, since the strategy (in this case, POW + TREE) directly targets cognitive organization in the conceptualization and execution of the persuasive essay. However, given other characteristics of this student population, additional modifications to implementation were necessary.

**Disorders of anxiety and affect.** Also described as internalizing disorders (Gresham & Kern, 2004), problems with anxiety or affect interacted negatively with instruction throughout this investigation. For example, some students were so quietly withdrawn it was often unclear whether they were covertly participating in the lesson. As project staff circulated the room to answer individual questions and to assist with task completion, it became clear that some students became anxious and did not want “teachers” very close to them. For example, Albert frequently made statements such as, “You are too close to me!” Other students appeared shy and unsure of their work. For example, Tom frequently put his arms over his work, closing his computer and covering everything he had written, whenever the teacher or staff approached, and sometimes swearing at university staff when they approached. On occasion, he deliberately manipulated his computer to make it freeze. Such behaviors were addressed throughout the investigation by allowing students sufficient personal space for their comfort when necessary, while still maintaining expectations of individual effort. At the same time, alternative times were identified for target students when it was possible to examine students’ work and provide feedback with less discomfort to the student.

Other disorders of anxiety seemed less pronounced. For example, George was typically very quiet and withdrawn. He made no eye contact, and frequently appeared not to be listening. However, with some degree of patience on the part of teacher and staff, George was observed re-
visiting his paper and making changes after re-direction, but without speaking. Albert repeatedly exhibited discomfort with the video camera, although it appeared to influence his work less as the investigation progressed over time. Albert did, however, obsessively sharpen pencils, keeping them in the pencil sharpener until reduced to only small stubs.

Disorders of mood also played a significant role in instruction. When asked to work, Maria once replied, “Okay, but you know it depends on how I feel behavior-wise.” Her affect often became negative, and directly inhibited her willingness to work. She brooded about perceived injustices for extensive time periods. For example, one day she was denied a small reward because of inappropriate behavior during writing instruction, and for the next two months she repeatedly brought up this perceived injustice to project staff. Another example is seen in an entry from class field notes:

Maria was beginning a new graphic organizer. After filling in the first line, she said, “I messed up,” and crumpled up the paper. We looked at the paper later and saw that she had written the topic sentence in the space for Reason 1. On the bottom of the paper she had scrawled, “Son of a bitch.”

When it was announced that the writing instruction was going to be extended beyond that originally planned, Maria demanded to speak with the principal, and made empty threats.

Sam’s affect often inhibited his writing performance. He once reported, “I have a lot on my mind and it is hard to focus.” The teacher and project staff accommodated disorders of mood by developing a sense, over time, of when to allow students time to regain their composure, and when to direct students to return to task. Students themselves also accommodated these moods, sometimes asking to go to “time-out” to calm themselves.
**Disorders of perception.** Disorders of perception in the form of fantasies or unrealistic thinking can have a significant inhibiting impact on student learning (see Kauffman, 2005; Kauffman & Landrum, 2008). Although a less common classroom problem in this investigation, one student in particular frequently exhibited disorders of perception of reality, often drifting into fantasy and speaking openly of a bizarre “outer world”; much of his thinking and schoolwork revolved around details of life on an imaginary planet. Such thinking served to prevent the student from focusing his attention on his writing assignments, and also at times served to separate him from other students in the class. This fantasizing was responded to by teacher and staff with understanding, inhibiting ridicule of other students, and frequently encouraging the student to retain focus on the writing task, and to re-direct his thinking to “real world” topics.

**Disorders of aggression.** Aggressive conduct disorders are among the most difficult problems exhibited by students with EBD (Furlong et al., 2004). These characteristics were frequently observed in most classroom sessions, were exhibited by most students on different occasions, and included expressions of anger, animosity, noncompliant behavior, and aggression against other students or teachers. One student, in fact, was removed from the setting during the course of this investigation as a consequence of violent, aggressive behavior exhibited toward other teachers in the school. Many of the students spoke aggressively to other students or teachers, refused to do schoolwork, or acted aggressively toward others. Sam, for example, exhibited erratic behavior, and frequently moved or re-arranged materials on Alice’s desk, simply because Alice became very upset when others touched her possessions. Following is an entry from class field notes:

Alice came into the classroom, and called Maria, “little bitch.” Maria responded, and Richard got involved. Alice disrupted the class throughout the whole period. The teacher
had to stay with Alice in the hallway while she screamed, kicked the door, and made derogatory remarks. Maria and Richard were arguing with her from inside the classroom. Tom, who was working diligently, became frustrated and angry because he could not concentrate. The same happened with Albert. Alice’s behavior was so outrageous that she got everyone off task and anxious.

Aggressive behaviors exerted a substantial negative influence on academic engagement, and the aggressive behaviors of an individual student often resulted in several other students, or the entire class, losing focus on academics. Teachers and staff intervened on aggressive behavior in several different ways, including looking for “triggers” that predicted aggressive behavior and taking preventative measures, allowing students space and time to calm down when appropriate, allowing students to refer themselves to time-out, allocating additional levels of teacher or staff supervision, and removing students from the classroom to meet with counselors when necessary. For example, at the beginning of one class period, Alice spent most of the class time wandering around the room, talking loudly, misbehaving, and disrupting others. After several minutes of this behavior, research staff sat with her and encouraged her to work. As a consequence, in time Alice was able to finish her prompt, label the essay parts, graph her progress, and begin brainstorming for the next prompt. Although extensive in terms of the staff resources allocated to Alice in this situation, this level of supervision, with research staff sitting right next to her, allowed her to stay in class and complete her work, rather than simply being sent out of the classroom.

**Implications.** Although the cognitive, affective, and behavioral characteristics of the students in the class were accommodated effectively and relatively efficiently by the teacher and project staff, the overall impact on overall academic engagement was substantial, as described in
the following section. In large part, these characteristics all contributed to the extensive allocated time period necessary for the students to learn and master the SRSD strategy for writing persuasive essays.

**On-Task Data**

Students were observed throughout the investigation for on-task behavior, and time spent out of the room. Reliability of observation was .95 as calculated by agreements divided by total observations. Overall, it was noted that the proportion of on-task behavior was adequate ($M = 86\%$; $SD = 21\%$; range = 68 – 99\%) during the time students spent in class. However, the amount of time students spent out of the classroom, largely because of time-out, Crisis Response Center, or absences, was quite substantial ($M = 32\%$; $SD = 42\%$; range = 10\% - 50\%), and represented a significant challenge. Overall, mean student on-task behavior, counting time spent out of class, was 62\% ($SD = 17\%$). Given the established relation between academic time-on-task and academic achievement (e.g., Mastropieri & Scruggs, 2006), this level of academic engagement clearly played an inhibiting role in instruction. The degree to which on-task data taken during writing instruction differed from student engagement at other periods of the school day is uncertain; however, according to teacher reports, amount of time spent out of the classroom was similar throughout the day.

**Standardized Tests**

Student standardized test scores, and corresponding statistics, are presented in Table 2. As can be seen, students made statistically significant gains on the fluency subtest of the WJ-III, with a moderate effect size (ES) of .67. Although a small descriptive gain was observed on the OWLS measure (ES = .15), this difference was not statistically significant. This lack of reliable
gain on the OWLS was attributed to the relatively low level of concordance between the measure and the strategy being taught, with only a single item on the measure of direct relevance.

**Criterion Writing Tests**

Scores on the criterion measures of essay components demonstrated large, statistically significant effects on nearly all measures, as presented in Table 3. Students’ posttest and 3-month maintenance test scores indicated large and consistent increases over pretest scores on measures of number of words written, number of essay parts, number of paragraphs, number of transition words, and on holistic scoring of the quality of the essay. Effect sizes were generally quite large, with an overall mean of 1.47 (range = .66 - 2.46). These values correspond favorably to a standardized mean effect size of 1.15 overall for SRSD instruction, in a meta-analysis reported by Graham and Perin (2007).

**Descriptive Results**

In addition to the quantitative results of the SRSD intervention, some very obvious results of the strategy can be observed in the examination of student written products prior to and subsequent to the instruction. These differences were obvious with all students in this investigation. As an example, Table 4 presents Maria’s first essay, followed by her essay written after instruction in the SRSD POW + TREE strategy. In this example, the very substantial difference in essay length (in this case, 78 vs. 313 words), organization, and quality is clearly represented, and is similar to the differences observed on all students in this investigation. (See also two additional examples in the Appendix).

**Strategy Data**

Subsequent to writing final essays, students were interviewed on their strategy knowledge. Eight students were available for these interviews for the posttest, and six for the
delayed maintenance test. In the post interview, seven of eight students were able to retell all seven components of the strategy, and the eighth student was able to retell all components with prompting. When asked to re-create the graphic organizer, four students re-created all components, three re-created all except one component, and the eighth student re-created all except two components. When asked whether they had applied elements of this strategy in other situations, two students reported they had done so in science class, two in English class, and four reported applying the strategy in multiple classes.

In the surprise maintenance interview, conducted approximately three months after the end of instruction, five of six students were able to retell all seven components of the strategy, and the sixth student was able to retell all components with prompting. When asked to re-create the graphic organizer, three students re-created five components, one re-created four components, and two students re-created three components. When asked whether they had applied elements of this strategy in other situations, three students reported they had done so in multiple classes, two reported employing the strategy for personal use, and one reported not employing the strategy elsewhere.

**Student, Teacher, and Administrator Interviews**

There was general agreement on the part of all participants that the SRSD strategy had been effective in improving the writing skills of students in the class. For example, in interviews, Edward reported, “[POW+TREE] has helped me to get done with my work faster…You can think and look back at your notes. You don’t have to think while you’re typing.” Maria stated, “[POW+TREE] has helped me get less stressed out. It has helped me organize my thoughts…[POW+TREE] changed my opinion [about writing]. Before, writing was just like a hobby, something I liked to do. Now, I can see actually being able to get a job with writing…I
use [my organizer] in every period now.” For example, describing writing a paper on energy in science class, Maria stated, “Everybody was having trouble and I explained [POW+TREE] to Jay. Jay liked it.” Edward stated, “[It] made me explain my sentences more better for people to understand. Also to make sure I read through my work and check to see if I made any mistakes and to make corrections, to see if it makes sense to me and to others.” All student comments were generally positive about the writing strategy they had been taught.

The teacher and administrator reports were similarly positive. The teacher stated, “Without question, POW TREE helped weak writers by giving them a structured format for essays. For on-grade level writers, it helped them know where they needed to expand their supporting details and how to organize the information.” The administrator also acknowledged the importance of the SRSD strategy, and its potential for all students in the school.

Conclusions

The results of this investigation provided preliminary evidence for the challenges of teaching SRSD strategies to middle school students with significant emotional/behavioral disabilities, as well as the very substantial positive benefits that may result from these strategies, appropriately taught. In this investigation, in spite of numerous affective and behavioral challenges, students learned the POW + TREE writing strategy and employed it to significantly improve their writing of persuasive essays. Students improved in all elements of essay writing, including number of words written, number of paragraphs written, number of transition words, number of essay parts, and overall quality of writing as measured by holistic scoring. In addition, students gained statistically on a standardized measure of writing fluency, although scores on another standardized writing measure were apparently not influenced. Reports of all participants
related the observed gains to the instruction, and all indicated the particular strengths of the writing strategy.

Results of student scores on standardized and criterion measures represent gain over time, without reference to a control or comparison group. For this reason, final causal conclusions cannot be drawn. However, it seems probable, if not certain, that the observed gains were associated with instruction in the SRSD strategy, for the following reasons:

1. Large, statistically significant gains were observed in nearly all relevant test scores, coupled with a high degree of concordance between the structure of the essays produced and the strategy taught.

2. Students were able to describe, discuss, and apply the strategies when asked.

3. Teacher, administrator, and student reports supported the efficacy of SRSD instruction.

4. Outcomes of the present intervention were closely aligned with those of previous SRSD research with typically achieving students and students with learning disabilities (e.g., Graham & Harris, 2003).

Research literature has consistently documented the academic deficits of students with EBD, although the reasons for these deficits are not entirely clear. However, it seems possible that problems with cognitive organization, anxiety and affect, perceptions of reality, and aggressive conduct disorders interact negatively with opportunities to learn, on an ongoing basis, resulting in lower achievement in many academic areas. Indeed, such difficulties were observed continuously throughout this investigation, and seemed very directly linked to the substantial time spent off-task, or out of the classroom altogether. Although the teacher and project staff were able to accommodate these characteristics to a great extent, considerable instructional time was lost in the process. The strategy was very successfully taught, and learned, by the end of this
intervention; however, students’ affective and behavioral characteristics contributed to the necessity for extending the instruction considerably beyond the amount of time usually allocated to other students (e.g., students with learning disabilities) to learn the same strategies (see Harris, Graham, Brindle, & Sandmel, in press). Such results provide a possible explanation for the consistent findings of low academic achievement scores of students with EBD (Lane, 2004; Lane, Barton-Arwood, Nelson, & Wehby, 2008; Scruggs & Mastropieri, 1986).

A moderate level of task engagement (86%) was obtained during the time students were in class, possibly assisted by the number of teachers, and small group instruction employed throughout the investigation. However, overall engagement was lowered significantly by student absences from class, often because of disruptive behavior; this lowered level of overall engagement probably contributed substantially to the overall slowed pace of instruction. Clearly, SRSD instruction in itself did not resolve these longstanding behavior problems. However, it also became clear that behavioral self-control in itself was not the immediate cause of observed student deficiencies in written expression. All students demonstrated substantial limitations in ability to structure and organize a persuasive argument, and to present a clearly-expressed opinion in writing to a reader. The structured, systematic training embedded in the SRSD strategy was observed to interact very positively with these characteristics, and to provide opportunities for substantial improvement in cognitive organization and writing skills.

In light of the relative shortage of research on writing instruction for students with EBD (Lane, 2004), the present results contribute substantially to our knowledge of writing instruction with this population, and how the characteristics of the students interact with the characteristics of instruction. Although the present results seemed very positive, the one-group design leaves open the question whether a different method of instruction might have been even more
effective, or whether alternative means of addressing behavioral challenges would have resulted in superior outcomes. Future research, including experimental models with random assignment and comparison conditions, could provide further information on instruction to improve writing of persuasive essays, or other types of writing, by students with EBD. Future research could also consider instruction on an individual or more homogeneous small-group level, to determine whether this is more efficient. Finally, since some decrement was observed on the 3-month maintenance scores, relative to posttest scores, a brief review or booster session implemented prior to maintenance testing might demonstrate the extent to which strategy use may be enhanced over time. At present, however, it can be argued that the SRSD strategies for writing, with appropriate supports, hold considerable promise for improving the academic skills of students with emotional or behavioral disorders.
References


Table 1

**Student Characteristics**

<table>
<thead>
<tr>
<th>Student</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Age</th>
<th>Co-morbidity with EBD</th>
<th>Problem Behaviors</th>
<th>Behavioral Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alice</td>
<td>Female</td>
<td>African American</td>
<td>13.8</td>
<td>ADHD, and depression(^1)</td>
<td>Externalizing and Internalizing</td>
<td>Interpersonal skills; tolerance level; and anger management</td>
</tr>
<tr>
<td>George</td>
<td>Male</td>
<td>Caucasian</td>
<td>14.8</td>
<td>Maladjustment(^2)</td>
<td>Internalizing</td>
<td>Self-control (verbal and physical); participation in school tasks and activities</td>
</tr>
<tr>
<td>Richard</td>
<td>Male</td>
<td>African American</td>
<td>13.7</td>
<td>Negative moods(^3)</td>
<td>Internalizing</td>
<td>Improve: appropriate interaction, keeping hands to himself, and accept teacher assistance and comply with teachers</td>
</tr>
<tr>
<td>Albert</td>
<td>Male</td>
<td>Multi-racial</td>
<td>13.9</td>
<td>Autism, LD, OHI, and negative moods(^1,2)</td>
<td>Externalizing and Internalizing</td>
<td>Develop age appropriate work behavior and improve: following directions, and interacting appropriately with adults and peers</td>
</tr>
<tr>
<td>Maria</td>
<td>Female</td>
<td>Caucasian</td>
<td>13.9</td>
<td>LD, anxieties, and depression(^3,4)</td>
<td>Internalizing</td>
<td>Increase positive and respectful interactions with peers and adults</td>
</tr>
<tr>
<td>Sam</td>
<td>Male</td>
<td>Caucasian</td>
<td>14.3</td>
<td>LD and ADHD, depression, sleep disorders, and noncompliance(^5,6)</td>
<td>Externalizing</td>
<td>Improve: accepting feedback, complying with teachers, develop appropriate ways of interacting, and reduce disruptive behaviors</td>
</tr>
<tr>
<td>Edward</td>
<td>Male</td>
<td>African American</td>
<td>14.0</td>
<td>Hyperactivity, depression, and aggression(^2,3)</td>
<td>Externalizing and Internalizing</td>
<td>Decrease disruptive behaviors and participate responsibly in class</td>
</tr>
<tr>
<td>Tom</td>
<td>Male</td>
<td>African American</td>
<td>14.1</td>
<td>ADHD, and depression(^3,8)</td>
<td>Externalizing and Internalizing</td>
<td>Improve and use coping strategies to comply with school routine and procedures</td>
</tr>
<tr>
<td>Bruno</td>
<td>Male</td>
<td>Caucasian</td>
<td>13.3</td>
<td>LD, SPL, and OHI, ADHD, depression, and anxieties(^1,2)</td>
<td>Externalizing and Internalizing</td>
<td>Improve peer interactions and social skills</td>
</tr>
<tr>
<td>Jose</td>
<td>Male</td>
<td>Hispanic</td>
<td>13.7</td>
<td>Depression(^3)</td>
<td>Internalizing</td>
<td>Maintain school appropriate interactions with peers, and keep body to self, and accept teacher assistance.</td>
</tr>
</tbody>
</table>

*Note: LD = Learning Disability; SPL = Speech and Language Disabilities; OHI = Other health Impairments; ADHD = Attention Deficit Hyperactivity Disorder; 1 = Children’s Depression Inventory; 2 = Behavior Assessment System for Children, 2nd edition; 3 = Reynolds Adolescent Depression Scale; 4 = Revised Manifest Anxiety Scale; 5 = Conners Parent Rating Scale-Revised; 6 = Personality Inventory for Children, 2nd edition; 7 = Sentence Completion Test; 8 = Thematic Apperception Test;*
Table 2

*Achievement Data Results*

<table>
<thead>
<tr>
<th>Test</th>
<th>Pretest Mean (SD)</th>
<th>Posttest Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodcock Johnson Fluency</td>
<td>18.40 (5.04)</td>
<td>21.78 (4.99)</td>
</tr>
<tr>
<td>OWLS</td>
<td>88.40 (11.89)</td>
<td>89.88 (8.13)</td>
</tr>
</tbody>
</table>


\[1\] Significantly greater than pretest, \( p < .05 \), according to the Wilcoxon Matched-Pairs, Signed Ranks Test.
Table 3

*Essay Results*

<table>
<thead>
<tr>
<th>Essay Components</th>
<th>Pretest Mean (SD)</th>
<th>Posttest Mean (SD)</th>
<th>Maintenance Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$(N = 10)$</td>
<td>$(N = 9)$</td>
<td>$(N = 6)$</td>
</tr>
<tr>
<td>Number of Words</td>
<td>82.80 (67.75)</td>
<td>230.78 (115.78)$^1$</td>
<td>174.17 (83.25)$^2$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES* = 1.28</td>
<td>ES = 1.10</td>
</tr>
<tr>
<td>Number of Parts</td>
<td>3.90 (1.52)</td>
<td>7.61 (2.52)$^1$</td>
<td>6.50 (1.23)$^2$</td>
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<tr>
<td></td>
<td></td>
<td>ES = 1.47</td>
<td>ES = 2.11</td>
</tr>
<tr>
<td>Number of Paragraphs</td>
<td>1.16 (.95)</td>
<td>4.78 (1.47)$^1$</td>
<td>3.42 (1.39)$^2$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES = 2.46</td>
<td>ES = 1.63</td>
</tr>
<tr>
<td>Transition Words</td>
<td>1.50 (1.51)</td>
<td>10.33 (5.00)$^1$</td>
<td>3.50 (3.02)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES = 1.77</td>
<td>ES = .66</td>
</tr>
<tr>
<td>Holistic Scoring</td>
<td>3.2 (1.40)</td>
<td>5.44 (1.67)$^2$</td>
<td>4.67 (1.86)$^2$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ES = 1.40</td>
<td>ES = .79</td>
</tr>
</tbody>
</table>

* ES = Effect Size using posttest or maintenance SD

$^1$Significantly greater than pretest, $p < .01$, according to the Wilcoxon Matched-Pairs, Signed Ranks Test

$^2$Significantly greater than pretest, $p < .05$, according to the Wilcoxon Matched-Pairs, Signed Ranks Test
Maria’s Pre- and Post Test Writing Samples

First Essay (“Should students have cell phones?”):

Children from the ages 10 and up should have cell phones. When children need to call there parents or 911 they need to have a cell phone. Like if I broke my leg, And couldn’t move what would I do sit there? I would need help and what would I do if no one else was around. I would need too call for support or help. All these reasons and more are why we need a cell phone.

Second Essay (“Would you rather be given a sweater or a gift card as a gift?”):

I would rather receive a 30$ gift card than a sweater as a present because, you have more options, it’s less humiliating, cooler, more ordinary, and gift cards are more popular.

First, with a gift card you have more options. You can get what you want. You can get more than just a sweater. Plus, you can spend it on what you want rather than have someone pick you out a tacky sweater.

Second, getting a gift card is a lot less humiliating. Because, when you get a sweater from your grandmother, you are going to get laughed at rather you like it or not by all your friends. You are defiantly going to look and feel weird. Plus, everyone in school is going to criticize you.

Third, gift cards are a lot cooler that stupid sweaters. You can use the gift cards with your friends if you want. Then you can use the gift card just about anywhere. Plus, with a sweater you don’t have to feel pressured to tell everyone that your grandmother got you the stupid sweater and that she made you were it to school.
Fourth, a gift card is a normal gift. A sweater is not. Plus, gift cards don’t itch you to death like stupid sweaters do. Then gift cards don’t suffocate you I swear that who ever designed the sweater made it as a touchier device.

Fifth, gift cards are very popular. Everyone has had a gift card at leased once in there lives. So, you don’t have to feel out of date with the times. Plus, if you have no use for it you can give it to someone else without feeling embarrassed about it.

In conclusion, give a gift card as a gift not a sweater. There great to have and they won’t embarrass you. Therefore, gift cards are much better gifts than sweaters.
Figure Captions

*Figure 1.* Graphic organizer.

*Figure 2.* Study timeline.
**TOPIC Sentence**
Tell what you believe!

Yes_______  **POW + TREE**  No_______

| Transition Words | R  Reasons -3 or More  
|                 | Why do I believe this?  
|                 | Will my readers believe this?  
|                 | E  EXPLAIN Reasons  
|                 | Say more about each reason |

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**E ENDING**
Wrap it up right! **DID YOU?** __________

**E EXAMINE** **DID YOU?** __________
APPENDIX: PRE-POST WRITING SAMPLES

Jose’s Pretest

Kids my age should be able to have cell phones because we can use it for emergencies or to call friends.

Jose’s Posttest

I would have a $30 gift card as a gift. My first reason is that I could use it to buy gifts for people I care about. Another reason is to use it to buy some movies or some video games.

My next reason is to save the money for something special.

My first reason is that I could use it to buy gifts for people I care about. If I go to the store and I see something nice that someone would like, then I would get it in secret.

Like the time I saw a beautiful ring that my mom would like I gave it to her as a present for Christmas. Also try to get it as cash and send it to my grandfather he’ll need it more than me.

Another reason is to use it to buy video games. If there is a real cool game that is the store I’d go buy it and play it when I have time. Or maybe a new movie just came out I would ask my parents if they can they take me to the store, and buy it to watch it with them. Save up for a game that I want so when I save enough I can get.

My final reason is to save that money for something special. Like buying stuff for my cousins back home. Also buying stuff for camp, the summer, the pool, a party or for winter and snow.

Maybe just saving it for something cool that might come out like a movie or a game. Or to buy a gift for a very special girl that I care about a lot.

This is why I would get a gift card as a gift. It’s important to be careful for the things you buy or get. If you are not careful you may get mad or very upset so be careful.

Bruno Pretest
Kids should NOT go to school during the summer because I think that they should have a bigger brake.

**Bruno Post Test**

I will choose a digital camera

Which would you rather have to take a picture with a digital camera, film (35mm) camera or a disposable camera? First a digital camera is better because you can see the picture you took.

Second you can have more options like for example the numbers of pictures you take. Third you can take the memory card anywhere you go.

‘First. A digital camera is better because you can see the picture you took. Also you change the cameras settings like for example Black and white settings.

‘Second you can have more options like for example the numbers of pictures you take. The more memory the more pictures you can take.

‘Third you can take the memory card anywhere you go. Another the digital camera are much better then any other camera in the world.

This is why I should get a digital camera.