THE EFFECTS OF AN INTERACTIVE WRITING PROTOCOL ON FIRST GRADE INDEPENDENT WRITING

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A Thesis

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I certify that this student has met the requirements for format contained in the University format manual, and that this thesis is suitable for shelving in the Library and credit is to be awarded for the thesis.

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Abstract

of

THE EFFECTS OF AN INTERACTIVE WRITING PROTOCOL ON FIRST GRADE INDEPENDENT WRITING

by

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Statement of Problem

First grade students can start the year barely knowing their letter sounds and writing strands of letters and drawing pictures to communicate. California Language Arts Standards for first grade require that students select a focus when writing, use descriptive words; print legibly, and space letters, words and sentences correctly (California State Board of Education, 1997). As a first grade teacher these standards can be overwhelming when students with limited English and low socioeconomic status enter first grade as emergent writers. However, McCarrier, Pinnell and Fountas (2000) stated that emergent writers can successfully transfer writing skills taught whole class to independent writing through a teaching method called interactive writing. According to the claims of these authors, first grade teachers can help their students develop from emergent writers to meet California State Standards using interactive writing. The current study allows for experimentation and focus on interactive writing to see how the instruction transfers to first grade students’ independent writing.

Sources of Data

This study was conducted using pre-test, post-test non-randomized control and treatment group, quasi-experimental research design nine. The control group consisted of eleven students, while the treatment group consisted of eighteen students. In order to determine if the skills taught during interactive writing
transferred to the students' independent writing, a pre- and a post-test writing sample was administered and collected from each participant in the control and treatment group by each group's respective teachers. The pre- and post-writing samples for the control and treatment classes were analyzed using a holistic rubric score, and a tally system that recorded a variety of skills (number of: words written, correct spaces, incorrect spaces, correct capital letters, incorrect capital letters, periods, question marks, exclamation points, correctly spelled irregular words, correctly spelled short vowel words, and correctly spelled other sound out words).

Conclusions Reached

Interactive writing contextualized the conventions of writing. The data indicates that students' meta-linguistic awareness while participating in interactive writing increased as indicated by the students' independent writing. While the basal had a positive impact on students writing, the students who participated in interactive writing took more risks with punctuation marks and word choice. Interactive writing positively affected first graders' independent writing.

Cynthia Gunston-Parks

April 21, 2009

Date
DEDICATION

This thesis is dedicated to my supportive husband, who helped me format the pages long into the night, and my parents, who encouraged me to continue my education.
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The completion of this thesis would not have been possible without the mentorship and professional guidance provided by Professor Cynthia Gunston-Parks. Professor Gunston-Parks contribution of time and dedication to this study is gratefully acknowledged. The researcher also acknowledges the assistance of the second reader, Professor Porfirio Loeza. Their influence and assistance to the completion of this research is deeply appreciated. Finally, the researcher acknowledges the dedication and hard work of the first grade students and teachers who participated in this study.
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Chapter 1

INTRODUCTION

Teaching first grade students is a challenging task. First grade teachers must teach their students to read and write proficiently by the end of first grade. First grade students start the year only knowing their letter sounds and write strands of letters and draw pictures to communicate. However, California Language Arts standards for first grade require that students select a focus when writing, use descriptive words; print legibly, and space letters, words and sentences correctly (California State Board of Education, 1997). First grade students must also write brief narratives and expository descriptions. In addition, students must also write using correct punctuation, capitalization and spelling of short vowel words. As a first grade teacher these standards can be overwhelming when students with limited English and low socioeconomic status enter first grade as emergent writers. California Standards are high and sometimes the curriculum is insufficient in helping students to obtain the level of reading and writing required.

Statement of the Problem

First grade teachers lack the research and resources to help first graders develop from writing strings of letters to writing coherent sentences with correct spacing. McCarrier, Pinnell and Fountas (2000) stated that emergent writers can successfully transfer writing skills taught whole class to independent writing through a teaching method called interactive writing. "Using interactive writing, teachers not only show children how writing works but invite them to participate, with support, in the act of writing" (McCarrier, 2000, xvi). According to the claims of these authors, first grade
teachers can help their students develop as writers from emergent writers to meet California state writing standards for first grade using interactive writing. The current experimental study focused on interactive writing to see how the instruction transferred to students' independent writing.

This study analyzed the effects of interactive writing lessons on first graders' independent writing. By analyzing the skills taught during interactive writing and skills used in students' independent writing, the researcher was able to determine if the skills taught transferred when students are writing their own pieces.

This study attempted to answer the following questions:

1. Does students' writing fluency (number of words written) increase after participating in interactive writing lessons?
2. Do students apply spelling knowledge from interactive writing lessons into their independent writing?
3. Do students apply punctuation knowledge from interactive writing lessons into their independent writing?
4. Do students correctly space their words after participating in interactive writing lessons?
5. Does the students' overall writing improve, as assessment by a district writing rubric, after participating in interactive writing lessons?
Rationale

*Interactive Writing*

Interactive writing emerged from the work of McCarrier, Pinnell and Fountas (2000) with the Literacy Collaborative teams from Ohio Stated University and Lesley College. Interactive writing lessons are composed of a multitude of components: shared learning experience, establishing a purpose, composing the text, constructing the text, rereading, revising and proofreading the text, revisiting the text, and summarizing and extending the learning (McCarrier, Pinnell & Fountas, 2000). Children are guided through the process of writing from planning to the construction of text with the knowledge of the teacher leading the way. Interactive writing begins with an experience in which the teacher helps provide background knowledge to engage the children in a shared experience. The lesson continues with children and teacher talking to determine the purpose for writing. Once the purpose is determined, the children and teacher discuss the composition of the text, deciding what to write together. The children and teacher then begin constructing the text together, while constantly checking for clarity in the message, revising when needed. The lessons conclude with the teacher summarizing the skills and techniques covered in the day’s lesson and extending the writing to the children’s independent writing (McCarrier, Pinnell, & Fountas, 2000).

*Writing Development Theories*

The field of writing research is young compared to most fields researched, originating around 1970 in North America (Nystrand, 2006). During the 1970s, writing research was primarily interested in the influence of cognition on the development of
writing. By the late 1970s and early 1980s, the affect of social and cultural influences on writing development shaped the writing research of the time. Current research in the field of writing development works to create a more comprehensive view of writing development.

Sociocultural development of writing development. The sociocultural theory of writing development expanded primarily from language development in the 1980s (Nystrand, 2006; Prior, 2006). The sociocultural theory was based on the premise that a person’s social and cultural interactions determined their behavior, attitude and beliefs. The sociocultural theory of writing development focused on how the context of the writing, specifically dialogue, events, environment and materials influence writing development (Daiute, 2000; Prior, 2006). Writers’ “generate their ideas and sustain their written voices through talk with others...anchored in sociocultural contexts...grounded, in fact, within dyadic encounters, literacy events and cultural practices” (Dyson, 2000, p. 46). Through dyadic encounters, interactions between the writer and others in the attempt to construct meaningful text, ideas for writing are generated. The opportunity to orally participate in different events, inside and outside the school day, is critical in learning to produce text.

Sociocultural theory of writing development and interactive writing. Interactive writing is based on the sociocultural model of writing development. The major premise of McCarrier, Pinnell, and Fountas’ (2000) interactive writing lessons is that the learning takes place through scaffolded dialogue between the teacher and the students. Through these interactions with the teacher and peers, the student learns how to compose text.
Writing development framework. The writing development framework, presented by Frederiksen and Dominic (1981), attempted to combine the cognitive and sociocultural views of writing development. Frederiksen and Dominic's (1981) framework consisted of three components: product, process, and constraints. The purpose of writing is to produce a written text that conveys meaning. While producing written text, textual constraints occur that limit the writer to what they can write next. Writers compose their writing through cognitive processes of writing: planning, translating, reviewing and revising. While composing and revising their text, writers are faced with four constraints: context, communicative setting, linguistic, and cognitive constraints. Contextual constraints occur as a result of the writing environment, as well as the purpose and functions for writing. Communicative constraints occur as a result of the writers' perceived audience, voice, and responses from the reader. Linguistic constraints refer to the language use and form while writing. Cognitive constraints include specific knowledge that enables writers to construct and express meaning. Overcoming these constraints is embedded in the interactive writing process.

Writing development framework and interactive writing. Interactive writing provides an instructional context to address each component of the Frederiksen and Dominic (1981) writing framework. McCarrier, Pinnell, and Fountas (2000) acknowledged the difficulty of producing a written piece of text and addressed these difficulties through the different components of interactive writing. Through interactive writing, the teacher and students produce a written text where the teacher gently guides the students through planning, translating, reviewing and revising in an attempt to address
the contextual, communicative, linguistic and cognitive constraints that students face while composing written text.

**Spelling**

In order to communicate effectively in writing, students must learn how to spell correctly. Misspellings can communicate an incorrect message, make reading the text more difficult, or convey the perception of incompetence on the part of the writer (Graham et al., 2008; Graham & Harris, 2002; Wanzek et al., 2006). There are two main theories of spelling processes: the dual-route theory and connectionist model, both of which are discussed in Chapter two. Interactive writing utilizes a combination of strategies to help students acquire spelling skills in the context of writing.

*Theories of spelling processes and interactive writing.* Learning how to spell with interactive writing is based primarily on the cognitive processes introduced through the dual-route and connectionist theories, with more emphasis placed on the connectionist theory. While attending to the message being constructed, children are also scaffolded on making connections to how words look and sound (McCarrier, Pinnell & Fountas, 2000). By focusing on the look and sound of words written, the interactive writing lesson utilizes the phonological and visual-orthographic processors described in the dual-process theory with the interaction described in the connectionist theory.

*Spelling instruction during interactive writing.* While constructing text, the teacher focuses spelling instruction on the following components: how words look and sound, how words make meaning, using analogies, and using references and resources to aid spelling of unknown words (McCarrier, Pinnell & Fountas, 2000).
writing the teacher prompts the students to make connections between the sounds in the words and the letters they write. To assist in making the connection, the teacher and students segment the words. The ability to segment phonemes of a word has been shown to assist in spelling (Blachman, 2000; Ball & Blachman, 1991; Ukrainetz-McFadden, 1998; Ukrainetz, Cooney, Dyer, Kysar & Harris, 2000). In addition to using segmentation, teachers connect spelling to the meaning of the word and context (Moats, 1995; Bear et al., 2007; McCarrier, Pinnell & Fountas, 2000). While spelling words during interactive writing, the teacher and students connect the unknown word to a known word by using analogies. The use of analogies has been suggested as a successful strategy for spelling instruction (Brown, Sinatra & Wagstaff, 1996). Interactive writing lessons use references and resources around the classroom to assist students’ spelling (McCarrier, Pinnell & Fountas, 2000). Three main resources used during interactive writing are a word wall, interactive word charts, and previously constructed pieces of interactive writing. By using a combination of spelling strategies while composing text, interactive writing trains students how to spell words.

Grammar/Writing Conventions

Grammar is also crucial to conveying meaning to the reader. Grammar consists of the style of sentence, punctuation and subject-verb agreement (Weaver, 1996). Research has found that teaching grammar in isolation does not improve reading, speaking, writing or editing (Weaver, 1996). There are two underlying theories of grammar instruction: behaviorist theory and constructivist theory. These theories are presented in Chapter two. Unlike the traditional way of teaching writing, interactive
writing teaches students grammar skills within the context of writing (McCarrier, Pinnell & Fountas, 2000).

**Theories of grammar learning and interactive writing**. Interactive writing is based on the constructivist theory of learning in which the learning of grammar skills is contextualized. Grammar instruction during interactive writing is scaffolded based on the knowledge and needs of the students (McCarrier, Pinnell & Fountas, 2000). During interactive writing, the teacher responds to the needs of the students as they construct the text together.

**Research on Interactive Writing**

Research on interactive writing is sparse. Of the articles the researcher was able to locate, two articles are qualitative, one article was quantitative and two articles were teacher researchers' accounts of interactive writing in their classroom. Using a qualitative approach to examine their interactive writing lessons, Brotherton and Williams (2002) found that they taught a variety of writing skills and strategies to their students. The analysis showed that concepts of print, punctuation, capitalization, spelling and composing strategies were all taught during interactive writing. To examine the effectiveness of interactive writing, Craig (2006), used quantitative research to compare an adapted interactive writing format with metalinguist games to determine if the students differed in phonemic awareness, spelling, reading comprehension, and word reading development over sixteen weeks. Craig (2006) found that both groups made progress in phonemic awareness and spelling, however, the adapted interactive writing group was able to read more words and comprehend better than the other group. The results
indicated that using contextualized instruction for writing in which instruction is differentiated may help children develop phonemic awareness, spelling and reading. Teacher testimonials claimed that interactive writing helped their students, kindergarten through third grade and special education, apply the skills and strategies taught during interactive writing into their independent writing through active engagement (Patterson, Schaller & Clemens, 2008; Button, Johnson & Furgerson, 1996; Wall, 2008). Through interactive writing the teachers saw an improvement in their students' writing. The teachers attributed the students' growth to the engagement and differentiated instruction during interactive writing lessons.

Interactive Writing in This Study

Due to the limited scope of the research in the field with interactive writing, this study focused on an analysis of the effects of interactive writing on first grade students' independent writing. Even though setting a purpose, planning and revising are important components of the writing process, the focus of this study was to examine the subjects' writing to determine if the spelling, punctuation, capitalization and content taught during interactive writing transferred into first graders' independent writing.

Methodology

Research Design

This study was conducted using a quasi-experimental research design nine. Using a pre-test and post-test this study measured the growth of the participants. The participants consisted of a non-randomized control and treatment group of first grade students in the fall of 2008.
Sample Population

Two first grade classrooms from the greater Sacramento area were selected to participate in this study. The parents/guardians of the first grade students were contacted and gave permission for their child(ren) to participate in this study. One classroom received the treatment (interactive writing), while the other classroom acted as the control, receiving writing instruction based on the current language arts adoption. All participants in this study qualified for free lunch. Half of the participants were boys and half were girls. Twenty out of thirty-eight students spoke a language other than English at home. The ethnicity of the students was diverse as well. A detailed description of the research population is presented in Chapter three of this thesis.

Teachers

The teachers of this study were chosen based on the availability of the teachers to the researcher. The researcher implemented the treatment group's interactive writing lessons. The control teacher continued to implement the current language arts adoption. The researcher had three and a half years of teaching experience at the time of this study. The control teacher had fourteen years of teaching experience. The teachers met while attending California State University, Sacramento pursuing a Masters of Arts in Education emphasizing Language and Literacy.

Instruments

Pre- and post-writing samples. In order to measure the effect of interactive writing on first graders' independent writing, pre- and post-writing samples were collected from each participant in the treatment and control groups. The pre- and post-
test writing samples were collected using two writing prompts administered by the control and treatment teachers to the students in their respective classes, before the treatment began and after the treatment ended. The researcher analyzed the writing samples by using a tally system and a district holistic rubric. The tally system tallied the number of words written, the correct number of spaces, the incorrect number of spaces, correct capitals, incorrect capitals, periods, exclamation points, question marks, correctly spelled irregular words, correctly spelled short vowel words, and correctly spelled other sound out words. The holistic rubric, developed by the participating school’s district, consisted of a scale ranging from zero to four.

*Video recording.* In order to determine the skills taught during the treatment, each lesson was video recorded and analyzed. The videos were analyzed using a combination of a tally system and anecdotal notes after the treatment was concluded. By analyzing each lesson, the researcher was able to determine if the skills analyzed in the participants’ writing had been taught during the writing lessons. In addition to analyzing the video for skills, the researcher also evaluated each lesson to determine the integrity of the interactive writing lessons. The control group lessons were not video recorded since they were scripted lessons and weekly conferences were held to discuss writing instruction.

*Procedures*

*Pre-test writing sample.* The treatment and control participants completed the pre-writing sample two days before the treatment began. The respective groups’
classroom teachers administered the pre-writing prompt. The participants were given as much time as they needed to complete their written responses.

*Treatment lessons.* The treatment group began the Monday after the pre-test was administered. The treatment consisted of twelve consecutive lessons occurring during twelve consecutive school days. The lessons ranged between twelve and twenty-seven minutes. The average lesson was twenty minutes. Each lesson consisted of a shared experience, determining purpose, composition, constructing text and summarizing skills.

*Control lessons.* Throughout the course of this study the control group received twelve consecutive lessons from the currently adopted language arts program. The control group's writing lessons included shared experiences, determining purposes, composing, spelling, punctuation, capitalization, phonemic awareness- segmentation and independent writing. Each of these activities did not occur daily (happening only when the language arts lesson plans instructed the teacher to do so) and each was distinct from one another throughout the lesson.

*Post-test writing sample.* The day following the last treatment lesson, the respective classroom teachers administered the post-writing prompt. The participants were given as much time as needed to complete their response.

**Definition of Terms**

For the purposes of this research, the following definitions will be used.

*Cognitive Development of Writing*

For the purpose of this research, cognitive development of writing is a cognitive process that views writing as goal-oriented (Flower & Hayes, 1981). While composing
and constructing print, the working memory, cognitive processes, long-term memory, motivation, the social environment and physical environment work to together to produce the written product (Hayes, 2000).

**Working Memory**

Working memory is a limited resource that is drawn on both for storing information and for carrying out cognitive processes (Hayes, 2000). Working memory is composed of phonological memory, a visual/spatial sketchpad, and semantic memory.

**Cognitive Processes**

For the purposes of this study cognitive processes is defined as the individual cognitive tasks that effect the production of text (Hayes, 2000). Cognitive processes are composed of text interpretation, reflection and production.

**Motivation**

For the purpose of this study, motivation is a key factor in producing writing. Hayes (2000) considered motivation to compose was based on the following: writing goals, predispositions, beliefs and attitudes and cost/benefit estimates.

**Long-Term Memory**

For the purpose of this study, long-term memory is where all the writer’s knowledge about the topic and writing is stored (Hayes, 2000). Long-term memory consists of task schemas, topic knowledge, audience knowledge, linguistic knowledge, and genre knowledge (Hayes, 2000).
Social Environment

For the purpose of this study, the social environment consisted of the audience for writing and the collaboration of others (Hayes, 2000).

Physical Environment

For the purpose of this study, the physical environment consisted of the text composed so far and the composing medium (Hayes, 2000). The composing mediums in this study were chart paper, easel, markers, and correction tape.

Interactive Writing

For the purpose of this study, interactive writing is a protocol for teaching writing that involves the students in the actual writing of the text in front of the other students (McCarrier, Pinnel, & Fountas, 2000). Interactive writing consists of the following components: shared learning experience, establishing a purpose, composing the text, constructing the text, rereading, revising and proofreading the text, revisiting the text, summarizing the learning and extending the learning (McCarrier, Pinnel, & Fountas, 2000).

Limitations and Delimitations of the Research

One of the limitations of the study is the bias that may be present in the analysis of the data. The students were selected based on availability, using the researcher’s classroom and a colleague’s classroom. This non-randomized sample was controlled for using a pre-writing sample. The researcher did find close to significant pre-treatment differences in the number of correctly spelled short vowel words in favor of the control
group. This result had an effect on the interpretation of how interactive writing affected first grade independent writing.

Another limitation of the study was the fact that only the researcher analyzed the interactive writing lessons for the presence of the appropriate writing instruction behaviors. It is possible that the researcher interpreted behaviors observed as more deliberate components of interactive writing.

Another limitation of the study is the natural maturation of the students. Students naturally develop writing skills over time. The purpose of this study was to analyze the effects of interactive writing on students' independent writing. In order to limit the effect of natural maturation, a control group was used to compare the growth between the treatment and typical basal instructional environment.

One of the delimitations to this study is population generalizability of the study. The participants were chosen based on convenience and were not randomized. The sample size of the students was limited, eighteen for the treatment and eleven for the control. Whereas most schools in California are diverse with a mix of students from socioeconomic backgrounds, this study consisted of 100% of the students qualifying for free lunch. The population of students participating in this study were from Asian, African American or Hispanic ethnicities. This study should be replicated with a randomized, larger, more diverse population to determine if these findings are indeed generalizable to other instructional contexts.
Organization of the Thesis

Chapter one of this study describes the overall information of the study, including the problem, rationale, methodology, and definition of terms, as well as limitations of the study. Chapter two presents the literature review pertaining to this study. The literature review will cover theories of writing development and researchers' view on effective writing instruction. In addition, theories of spelling processes and instruction will be presented. Theories of grammar acquisition and instruction will also be reviewed in chapter two. The literature review will conclude with a description of interactive writing lessons and research. Chapter three will review in detail the methodology of the current study, including the sample population, instruments, methodology and procedures. Chapter four will review in detail the results of the study, including the pre- and post-test writing samples, and a description of the content of the interactive writing lessons. This study will conclude with chapter five, in which a discussion of the findings and implications of the research will take place.
Chapter 2

LITERATURE REVIEW

First grade teachers are obligated to help first graders write in complete coherent sentences by the end of first grade (California State Board of Education, 2007). All their sentences must convey meaning using appropriate spelling and punctuation and must be on the same topic. The main issue facing these teachers in their crusade to develop writers is the lack of research on effect writing instruction on children’s independent writing. Chapter two presents a literature review of research related to the effects of a writing protocol on children’s writing. The literature review begins with a presentation of the two major theories of writing development, cognitive and sociocultural theories. The literature review continues with a discussion of research in theories of spelling processes and spelling instruction during interactive writing. Next, the researcher reviews literature in regards to theories of grammar instruction and grammar instruction during interactive writing. Chapter two concludes with the presentation of interactive writing protocol, current and past research findings in regards to interactive writing and a discussion of interactive writing in this study.

Writing Development Theories

The field of writing research is rather young, compared to most educationally researched topics. The conception of writing research is typically benchmarked around 1970 in North America. Even though 1970 is considered the benchmark year, other studies were conducted before this date, however, the studies were isolated from one another and unsupported in the field (Nystrand, 2006). During the 1970s, writing
research was primarily interested in the influence of cognition on the development of writing. By the late 1970 and into the 1980s, researchers began to analyze social influences of writing development. Since the 1990s, research in the field of writing has become more comprehensive, including not only the cognitive and social aspects of writing, but writing in all situated contexts, even beyond the school (Nystrand, 2006). The following components to this section will discuss the research on how cognition and social environments effects writing development.

Cognitive Development of Writing

Cognitive development theory of writing is based on cognitive theories of psychology. Cognitive theorists focus on people’s thinking and how thinking changes over time (Kail, 2001). Cognitive development is based on the premise that people are composed of mental hardware and software. Mental hardware refers to “cognitive structures, including different memories where information is stored” (Kail, 2001, p.17). Mental software refers to the cognitive processes that allow people to complete tasks. Changes in thinking occur over time as mental hardware and software becomes more sophisticated. Flower and Hayes (1981) extended cognitive development theory to the field of writing development.

Flower & Hayes original model (1981). Flower and Hayes were pioneers in regards to creating a cognitive development theoretical framework of writing development (Coker, 2006; Nystrand, 2006; Prior, 2006). Flower and Hayes (1981) considered the cognitive process of writing a goal-oriented process in which “the major units of analysis are elementary mental processes” in which “these processes have a
hierarchical structure” that “may occur at any time in the composing process” (p. 367).
The critical difference between this theory of writing development and the existing models at the time was the notion that the processes used during writing development were not linear, but co-existed while composing. Flower and Hayes’ (1981) model consisted of three major components: the task environment, the writer’s long-term memory and the writing processes. Each component is further compiled into sub-components, which affected the overall component. All of the components and sub-components work together throughout the composition to create the final written product.

Figure 1 shows Flower and Hayes (1981) cognitive process theory of writing.

The task environment consisted of the rhetorical problem and the written text.

![Figure 1. Initial Flower & Hayes (1981) Cognitive Process Theory of Writing.](image)

The rhetorical problem stems from the rhetorical situation and audience, as well as the
writer's own goals. According to Flower and Hayes (1981), "defining the rhetorical problem is a major, immutable part of the writing process. But the way in which people choose to define a rhetorical problem to themselves can vary greatly from writer to writer" (p. 369). Not only is the rhetorical problem a component of the task environment, but also the written text contributes to the environment as well. As a writer composes the text, "each word...determines and limits the choices of what can come next" (Flower & Hayes, 1981, p. 371). The combination of the rhetorical problem and the text produced so far contribute to the writer's environment.

In addition to the writer's environment, the writer's long-term memory affects the development of the composition. "The writer's long-term memory, which can exist in the mind as well as in outside resources such as books, is a storehouse of knowledge about the topic and audience, as well as knowledge of writing plans and problem representations" (Flower & Hayes, 1981, p. 371). Some problems exist with accessing and using long-term memory. The most prevalent is accessing the information by finding the correct cue to release the information into working memory. Another problem that exists with long-term memory is reorganizing and adapting the information to fit the demands of the writing problem. Both environmental tasks and long-term memory play key features in composing text, however, so does the writing process.

The writing process is complex and is composed of many sub-components that work together while the writer is composing. There are four major sub-components in the writing process: planning, translating, reviewing and monitoring. Planning consists of generating ideas, organizing them and goal setting. "In the planning process the writer
forms an internal *representation* of the knowledge that will be used" (Flower & Hayes, 1981, p. 372). The representation can be in the form of words or images. Ideas are generated using the writer's long-term memories. When the ideas are already well developed the writer may begin transcribing the ideas into written text, but when the ideas are more abstract, like an image, the writer must organize the information. "The process of organizing appears to play an important part in creative thinking and discovery since it is capable of grouping ideas and forming new concepts... (and) attends to more strictly textual decisions about the presentation and ordering of the text" (Flower & Hayes, 1981, p. 372). Generating ideas and organizing often lead into goal setting. This is not to say that these occur in order, but that each sub-component works together to create the writer's planning of the composition. During goal setting, the writer creates both procedural and content specific goals that occur throughout the composing of the text. In addition to planning the text, the writer has to translate the ideas onto paper. Translating is "essentially the process of putting ideas into visible language" (Flower & Hayes, 1981, p. 373). While translating, the writer juggles all the knowledge they have about written English. While planning and translating, writers are constantly reviewing and monitoring their compositions. While reviewing their compositions, writers are evaluating and revising their writing. Reviewing may be a conscious plan or an "action triggered by an evaluation of either the text or one's own planning" (Flower & Hayes, 1981, p. 374). As a writer composes they are constantly monitoring their current progress and their goals. Monitoring enables writers to move from one process of writing to the next. The writer
does not use these components in isolation, but rather cycles between and amongst them while composing.

A major premise the Flower and Hayes (1981) cognitive theory of writing is the notion of being goal-oriented, in which the writers create their own goals. According to Flower and Hayes (1981), “In the act of writing, people regenerate or recreate their own goals in the light of what they learn” (p. 381). Writers generate their goals by exploring and consolidating information they have found and retrieved. Writing typically starts with a high-level goal, which they state and develop as they have more specific information. Consequently as the writer composes and regenerates information, the writer redefines their writing goals. “The reciprocity between writing and planning enables (the writer) to learn even from a failure and to produce a new goal” (Flower & Hayes, 1981, p. 385). As writers compose, they are constantly moving back and forth through the components of writing. While moving through the components writers restructure their goals to meet the overall rhetorical problem they first encountered.

Flower and Hayes original model compared with interactive writing. Flower and Hayes (1981) cognitive theory of writing development is threaded throughout interactive writing lessons. Flower and Hayes viewed the cognitive process of writing not as a linear process, but a process that co-existed as composing occurred much like McCarrier, Pinnell and Fountas’ (2000) view of writing as a spiral interactive experience. The process of interactive writing takes into account the tasks environment, as well as the writing process and monitoring ones writing, even though these titles are referred to with different names. What Flowers and Hayes (1981) refers to as the rhetorical problem,
McCarrier, Pinnell and Fountas (2000) refer to as determining a purpose. During this phase, the teacher and students discuss the purpose and audience for composing. During interactive writing the teacher and students are constantly rereading and revisiting the composition to shape their writing. Flower and Hayes (1981) refer to this as how the text produced so far influences the composition. In addition to the text environment, there are similarities between the writing process of Flower and Hayes (1981) model and interactive writing’s composition and constructing phases. Flower and Hayes (1981) state that during the writing process writers plan, translate, review and monitor their writing. McCarrier, Pinnell, and Fountas (2000) describe essential components to the interactive writing process as composing the text, constructing the text, rereading, revising and proofreading the text, and revisiting the text to support word solving. During the composing processes in interactive writing, the teacher and students discuss their ideas, organization and goals for their written text. The constructing phase is where the teacher and students “translate” or write their ideas onto paper. While constructing their text, the teacher and students “review, evaluate and revise” their writing through rereading and revisiting the text on multiple occasions. While reviewing their work, the teacher and students monitor their construction to verify that their goals of writing or purpose of writing is met. The major difference between the Flower and Hayes (1981) model and McCarrier, Pinnell, and Fountas (2000) interactive writing is the lack of emphasis in Flower and Hayes model on the social environments influence on writing development.
Hayes revised model (2000). Due to an increase in the types and variety of studies conducted in the field of writing since 1981, Hayes revised the Flower-Hayes' cognitive model of writing in 1996, which was republished in 2000 (Hayes, 2000; Coker, 2006). In his new model of writing development, Hayes added an emphasis on working memory, visual-spatial reasoning, motivation and has reorganized the cognitive process section of the already existing model. In this revised theory there are two main components: the task environment and the individual. Figure 2 presents a graphic representation of Hayes (2000) revised cognitive process theory of writing.

The task environment consists of two components: the social environment, incorporating the audience and collaboration, and the physical environment, involving the text so far and the composing medium. Writing in and of itself is primarily a social act. “What we write, how we write, and who we write to is shaped by social convention and by our history of social interaction” (Hayes, 2000, p. 12). The compositions that writers undertake are shaped in part with the audience they are writing to and the collaboration they receive from others. Not only does the social environment influence writing, but the physical environment does as well. Adding to the notion that the text itself as it is being written shapes the composition of the writing, Hayes (2000) suggested that the writing medium influences the composition as well. “Variations in the composing medium often lead to changes in the ease of accessing some of the processes that support writing” (Hayes, 2000, p. 14). Depending on the product being composed, different mediums like a word processor versus using pen and paper can affect the ease of which a writer
The Task Environment

The Social Environment
- The Audience
- Collaborators

The Physical Environment
- The text so far
- The composing medium

The Individual

Motivation/Affect
- Goals
- Predispositions
- Beliefs and Attitudes
- Cost/Benefit Estimates

Cognitive Processes
- Text Interpretation
- Reflection
- Text Production

Working Memory
- Phonological Memory
- Visual/Spatial Sketchpad
- Semantic Memory

Long-Term Memory
- Task Schemas
- Topic Knowledge
- Audience Knowledge
- Linguistic Knowledge
- Genre Knowledge

Figure 2. Revised Hayes (2000) cognitive process theory of writing.

composes. In addition to the environment in which the composition occurs, the individual affects the composition of the text.
The second portion of the new model is the individual component to the process of writing. Whereas the task environment has two components, the individual consists of four components. The individual components are working memory (phonological memory, visual/spatial sketchpad, semantic memory), motivation (goals, predispositions, beliefs and attitudes, cost/benefit estimates), cognitive processes (text interpretation, reflection, text production), and long-term memory (task schemas, topic knowledge, audience knowledge, linguistic knowledge, genre knowledge).

Working memory is central in writing. It is the place in which "all of the processes have access to ...and carry out all nonautomated activities" (Hayes, 2000, p. 15). In this new model working memory consists of a phonological loop, visual/spatial sketchpad and semantic memory. The phonological loop is "the inner voice that continually repeats the information to be retained," while the visual/spatial sketchpad stores "visually or spatially coded information" (Hayes, 2000, p. 15). The semantic memory component is responsible for monitoring the meaning of the composition. Even though working memory is a critical component to this new model, it "is limited in the amount of material it can hold and in the length of time it can hold it" (Hayes, 2006, p. 29). In addition to adding working memory to this new model, Hayes (2000) also added motivation as a component of the composing process.

Motivation is a major component to the individual portion of the composing process. Hayes (2000) believed that the act of composing is goal driven. Being goal driven, Hayes (2000) concluded that much of the writing process lies in motivation. Motivation can be in the form of the writer's goals, their predispositions, beliefs and
attitudes toward writing and a cost/benefit analysis. Hayes (2000) suggested that motivation can manifest in both long-term and short-term responses to immediate or long-term goals. An interaction amongst the goals can also help determine the course of action the writer takes. A writer’s predispositions, beliefs and attitudes toward their ability to compose also have an effect on their motivation and composition. According to Hayes (2000), “students who believe both that they are poor writers and that writing is a gift are likely to experience writing anxiety” (p. 19). When writers attribute composition to an outside force, instead of as a process to undertake, their perception and motivation to compose is challenged. Writers also seem to conduct a cost/benefit analysis when undertaking a writing task, which can shape their course of action as they compose, as well as their motivation. Along with working memory and motivation, cognitive processes shape the process in which writers compose.

The cognitive component of Hayes’ (2000) revised model is composed of three sub-components: text interpretation, reflection and text production. “Text interpretation is a function that creates internal representation from linguistic and graphic inputs” (Hayes, 2000, p. 22). The text interpretation occurs when the writer analyzes the rhetorical problem, researches information and then interprets the outside information into an understanding in either words or images. Not only do writers have to interpret text, but also they have to reflect as they interpret and produce text. In order to reflect on the information the writer has, and transcribe the information, the writer must problem solve, make decisions and infer. Writers “engage in problem solving when they want to achieve a goal but do not know as yet what steps will achieve it” (Hayes, 2000, p. 31).
While the writer is planning and composing their text, they are constantly problem solving how to organize and construct the information they possess on the topic. When writers reflect they are constantly going through decision-making. Writers “engage in decision making when they evaluate alternatives to choose among them” (Hayes, 2000, p. 32). While composing and evaluating text, the writer must make decisions on the adequateness of the text. To guide reflection of the text, writers must undertake problem solving, decision-making, and inferencing. Writers make inferences about their audiences’ knowledge and interest about the topic they are composing. Writers also make inferences about the information they are gaining from outside resources to compose their text. In order to reflect on their composition, writers must constantly problem solve, make decisions and infer. In addition to text interpretation and reflection, writers must produce text. “Text production is a function that takes internal representation in the context of the task environment and produces written, spoken, or graphic output” (Hayes, 2000, p. 22). Text production occurs from a mixture of the writing plan and the text produced so far. The writer is constantly going between planning, reflecting, inferring, the environment, and their memory to produce text.

The individual component of Hayes’ revised model (2000) consists of motivation, working memory, cognitive processes and long-term memory. Composing text would not be possible with the use of long-term memory in which all the writer’s knowledge about the topic and writing are stored. Long-term memory consists of task schemas, topic knowledge, audience knowledge, linguistic knowledge, and genre knowledge. Task schemas “will include information about the goals of the task, the processes to be used in
accomplishing the task, the sequencing of those processes, and criteria for evaluating the
success of the task” (Hayes, 2000, p. 37). The writer’s task schema is the information in
long-term memory on how to go about the writing task and is often retrieved by an
environmental factor. Another influence in long-term memory is the use of audience
knowledge. If a writer has experience writing to a particular audience, such as friends or
family, they draw on that knowledge to produce their text. However, if a writer does not
have previous experience writing to a particular audience, “they appear to consider
(them) in a limited and one-dimensional way” (Hayes, 2000, p. 37). Writers either have
information about their audience in their long-term memory to access or they create
information based on what they believe the audience might be composed of. In order to
develop genre knowledge, topic knowledge, and linguistic knowledge, writers need
extensive practice with feedback. “With increased experience, writers may acquire more
effective writing strategies, more refined standards for evaluating text, more facility with
specific genre” (Hayes, 2000, p. 39). Writers need lots of experience in text writing, in
order to store that information effectively in long-term memory.

Hayes’ (2000) revised model adds to and reorganizes the original model proposed
by Flower and Hayes (1981) based on the added writing research. The new framework
contained several significant changes that elaborated the cognitive processes and
incorporated the influence of social, affective, and motivational factors (Coker, 2006).
The new model focused on the interaction of the environment and the individual with
each composing of interacting sub-components. The “task environmental” composed of
the social and physical environment, while the “individual” composed of motivation/affect, working memory, cognitive processes and long-term memory.

*Hayes (2000) revised model and interactive writing.* Hayes (2000) revised cognitive model of writing development added the interaction and social component seen throughout interactive writing. Hayes (2000) like McCarrier, Pinnell and Fountas (2000) view writing as primarily a social act through which construction of print occurs. Through collaboration with others and the text, the production of print occurs. In addition to collaboration, both Hayes and McCarrier, Pinnell and Fountas (2000) view motivation and affect as a major component of writing. Hayes (2000) attributes motivation and beliefs of the individual to the effectiveness of the individual’s writing, while McCarrier, Pinnell and Fountas claim that through interactive writing students become more motivated and confident to write through their engagement with the teacher and other students. Interactive writing proposes that through repeating the planned sentence and rereading the text, the students are becoming more proficient at constructing and monitoring their individual writing. Hayes (2000) refered to these components as the phonological loop (the inner voice that repeats information to be retained) and semantic memory (monitoring meaning) both components of working memory. Interactive writing trains students to use cognitive function of writing described in the revised Hayes (2000) model of writing.

*Sociocultural Development of Writing*

In the late 1970s and 1980s, writing researchers began turning away from cognitive theory of writing (Nystrand, 2006; Prior, 2006). Instead of focusing their
writing theories on cognitive development, researchers began expanding sociocultural development, which focused on language development, into the field of writing development. They wanted to investigate the impact that a writer’s environment and experiences had on the process and production of a piece of writing. To answer this question, researchers began looking at anthropological studies, anthropological sites, cross-cultural psychological studies, writing practices in scientific and other workplaces, writing in relation to electronic media, writing across home, community, and other settings and writing in the classroom (Prior, 2006). The sociocultural theory of writing focuses on the influence of the writers’ social interactions, events and relationships on produced text (Dyson, 2000).

**Sociocultural theory.** The sociocultural theory primarily examined language development before being expanded into writing development in the 1980s (Nystrand, 2006; Prior, 2006). The sociocultural theory was based on the premise that a person’s social and cultural interactions determine their behavior, attitude and beliefs. The sociocultural theory was based on the work of Marxism, pragmatics, phenomenology and Vygotsky (Prior, 2006). Marx viewed society as being constructed from a concrete historical base, in which people evolved from the material in which they create. For instance the material items around a person or group of people create the society or social environment in which they live. Pragmatics viewed society as constantly reconstructed based on social interactions, in which meaning was constantly negotiated. Phenomenology also viewed social interaction as critical, but added that there are many layers to the social interactions that occur. Even though Marxism, pragmatics, and
phenomenology were prominent lines of sociocultural theory, Vygotsky was the most prominent (Prior, 2006). Vygotsky’s premise was that through day-to-day interactions people develop cultural practices as a consequence of communication and interactions with in institutions. As researchers began questioning how cultural differences influenced writing, they turned to sociocultural theory to expand their theory of writing (Daiute, 2000).

*Sociocultural theory of writing.* The sociocultural theory of writing focused on how the context of the writing, specifically dialogue, events, environment and materials, influence writing development (Daiute, 2000; Prior, 2006). “According to sociocultural theories of writing, learning to write means being socialized into a set of values, practices, and symbol systems; texts are cultural artifacts, and the activities involved in creating texts are group-specific rather than universal practices” (Daiute, 2000, p. 256). The act of writing, even independently, is never isolated, but a social action contingent on the regulations set forth in the social environment. Sociocultural theory sees writing as a social action, not just a means of communication (Prior, 2006).

Writers “generate their ideas and sustain their written voices through talk with others...anchored in sociocultural contexts...grounded, in fact, within dyadic encounters, literacy events and cultural practices” (Dyson, 2000, p. 46). Dyadic encounters refer to the interaction of students and teachers about the text. Dyadic encounters are the negotiation between the child’s plan, knowledge, writing and reflection of their writing. The dyadic encounters help to shape the context of the child’s writing. Not only does the dyadic encounters between the teacher and child help shape the child’s writing, events in
the child’s community influence the writing as well. Dyson (2000) claims that “informal interactions, collaborative work sessions, and formal meetings are all occasions for the generation, development, presentation, and revision of ideas encoded in diverse media, including print—and they are also occasions that reveal and sustain participants’ social relationship” (p. 51). Through these occasions or events, ideas for writing are generated by the child. Sociocultural theorists view the opportunity to orally participate in these different events, inside or outside of the school day, is critical in learning to produce different kinds of text genres. The sociocultural view of writing development focuses primarily on the social interactions between the writer and their environment on text production.

*Sociocultural theory of writing development and interactive writing.* Interactive writing lessons are based on the sociocultural model of writing development. The major premise of McCarrier, Pinnell and Fountas’ (2000) interactive writing lesson is that the learning takes place through dialogue that is scaffolded by the teacher to help students learn different genres of writing. Dyson (2000), when referring to sociocultural theory of writing in the classroom, stated that “children’s talk about and use of text is guided, then, not only by scaffolding interactions but also by their evolving understanding of event purposes, social relations, and textual expectations – understanding gained from and negotiated by oral participation” (p. 53). Throughout the interactive writing lesson the teacher and students are negotiating the purpose, composition and construction of the text together in order to gain an increased understanding of the writing process. The teacher
scaffolds the instruction, but also encourages the students to assist one another in the development of the piece of writing.

**Writing Development Framework**

The previous sections presented two major theoretical views of writing development, cognitive and sociocultural. This section presents a framework of writing development that attempts to combine the cognitive and sociocultural views of writing development. Frederiksen and Dominic (1981) produced a framework for writing development based on psychological aspects of writing. See figure 3 Framework for Writing Development for a visual representation of the proposed framework.

**Figure 3. Framework for Writing Development**

Frederiksen and Dominic’s (1981) proposed framework for writing development consists of three components: product, process and constraints. The purpose of writing is to produce a written text that conveys meaning. How a writer produces the written text is presented in this framework. While producing written text, textual constraints occur that limit the writer to what they can write next. Since the written product needs to convey
coherence and meaning, textual constraints are a challenge to writers. As writers compose their writing, they go through the cognitive process of writing. Writers plan, translate, review and revise their writing while constructing print. The constraints are composed of four perspectives: contextual, communicative, linguistic and cognitive constraints. Contextual constraints occur as a result of the writing environment, purpose and functions. Writers’ perception and understanding of these context situations guide them as they plan, transcribe, review and revise their writing. Communicative constraints occur as a result of the writers’ perceived audience, voice and responses of the readers. Communicative constraints focus on how the meaning of the writing is conveyed. Linguistic constraints refers to the language use and form while writing. The linguistic constraint includes the writers’ knowledge of the spoken and written language. Cognitive constraints include specific knowledge that enables writers to construct and express meaning. Cognitive constraints focus on the writers’ processing capabilities. Through these constraints and cognitive processes, writers compose written text.

**Writing Development Framework and Interactive Writing**

Interactive writing provides an instructional context to address each component of the framework. McCarrier, Pinnell, and Fountas (2000) acknowledge the difficulty of producing a written piece of text and address these difficulties through the different components of interactive writing. Through interactive writing, the teacher and students produce a single written text where the teacher gently guides the students through the cognitive process of writing (composing and revising). The students and teacher plan, translate, review and revise together in an attempt to address the contextual,
communicative, linguistic and cognitive constraints that the students face while composing written text.

Spelling

In order to communicate effectively in writing, students must learn to spell correctly. Misspellings can communicate an incorrect message, make reading the text more difficult, or convey the perception of incompetence on the part of the writer (Graham et al., 2008; Graham & Harris, 2002; Wanzek et al., 2006). Poor spelling can also interfere with the cognitive demands of composing and constructing text (Graham et al., 2008; Berninger, 1999; Graham & Harris, 2002). Additionally, spelling difficulties may constrain a child’s development as a writer (Graham & Harris, 2002). Spelling is one of the most valued skills in writing, yet one of the most challenging to learn (Wanzek et al., 2006). The following section on spelling discusses the two prominent theories of spelling processes (dual-route theory, connectionist model), effective instructional strategies and how spelling is integrated into interactive writing lessons.

Theories of Spelling Processes

Three prominent theories of spelling processes are presented in this section: the dual-route theory and connectionist model. The dual-route theory proposes that there are two separate, independent neural pathways that can be employed to spell and that these pathways are linked but can be dissociated (Moats, 1995; Hodges, 2000). The connectionist model utilizes the same cognitive processes as the dual-route theory, but emphasizes the simultaneous and interdependent use of the processes to spell words effectively (Moats, 1995).
**Dual-route theory.** The dual-route theory developed from the work of many neuropsychologist using both laboratory experiments and accidents of nature (Moats, 1995). The neuropsychologists studied the effect of the impairment of specific components of the communication system when one of the components was impaired. The dual-route theory contends different aspects of word knowledge are stored in separate locations in the neural network underlying written language production (Moats, 1995; Hodges, 2000). In the dual-route theory each location is referred to as a module. “Communication pathways” that work independently of one another connect each module. The dual-route spelling process theory is composed of two modules: a phonological processor and a visual-orthographic module.

The phonological processor or speech output lexicon stores the sound structure of words (Moats, 1995). The phonological processor allows people to spell words that are not previously known by analyzing their separate speech sounds for mapping to graphemes. This module is primary used to “transcribe a spoken word (real or nonsense) by identifying the speech sounds and generating reasonable letter spellings for those sounds, without knowing how the word is spelled by convention” (Moats, 1995, p. 24). The result of using the phonological processor to spell words is an accurately phonetic word that is not necessarily spelled correctly. In addition to spelling words not yet memorized, the phonological processor is responsible for learning and storing possible phonemes and phoneme combinations.

The visual-orthographic module, or graphemic output lexicon, stores information about the letters in printed words (Moats, 1995). Any learned words, no matter the level
of memorization, are stored in the visual-orthographic module. Since the visual-orthographic module is connected to both the semantic and phonological processors, spellings of words can be retrieved through a meaning or pronunciation cue. The visual representation of a word can take several forms: all lower case letters, all upper case letters, a combination of lower and upper case letters, typed, manuscript or cursive. As a person accesses the visual representation of a word they do not necessarily remember these differences, but the person remembers the strings of letters that compose the word (Moats, 1995).

The dual-route theory views the phonological and visual-orthographic modules as independent cognitive systems. Each module works independently for the same result, to spell words. Meaning cues prompt the word to access the information from modules. If the word is available in the visual-orthographic module then the spelling is retrieved without accessing the phonological processor module. Spellings of words can also be solely accessed through the phonological processor module. According to the dual-route theorists, the modules are not dependent on one another to operate.

Connectionist model. Whereas dual-route theorists claim the process modules are independent from one another, connectionist models focus on the interdependences of the modules for spelling (Moats, 1995; Adams, 1995; Hodges, 2000). The connectionist model was developed from the dual-route theory in reaction to perceived limitations of the dual-route theory. Connectionist model emphasizes, “that language learning depends on the extraction and recall of relationships among events or phenomena. All relevant knowledge is activated in memory when a word is spelled…and various aspects of word
knowledge interact with and influence one another constantly" (Moats, 1995, p. 26).

When spelling words, the connectionist model claims that the word knowledge stored in the different processors are activated and used. This knowledge is shared during production of the word, even though it is stored in different areas.

*Theories of spelling processes and interactive writing.* Learning how to spell with interactive writing is based primarily on the cognitive processes introduced through the dual-route and connectionist theories. While attending to the message being constructed, children are also scaffolded on making connection to how words look and sound (McCarrier, Pinnell & Fountas, 2000). By focusing on the look and sound of words written, the interactive writing lesson utilizes the phonological and visual orthographic processor described in the dual-process theory.

**Spelling Instruction During Interactive Writing**

While constructing the text, the teacher focuses spelling instruction on the following components: how words look and sound, how words make meaning, using analogies, and using references and resources to aid spelling of unknown words (McCarrier, Pinnell & Fountas, 2000). During the interactive writing lesson the students actively participate in each of the categories to help assist them in their own future independent writing.

*How words look and sound.* During interactive writing the teacher prompts the students to make connections between the sounds in the words and the letters they write. In order to make the connection, the teacher and students segment the words, saying the sounds in the words slowly to help make the connection to print. Many researchers have
found that a child’s ability to segment phonemes of a word assist with the child’s ability to spell (Blachman, 2000; Ball & Blachman, 1991; Ukrainetz-McFadden, 1998; Ukrainetz, Cooney, Dyer, Kysar, & Harris, 2000). Richgels, Poremba and McGee (1996) believe that children can learn to become literate using a holistic context of children’s writing and phonemic awareness, which includes segmentation. Interactive writing provides a purposeful, meaningful, holistic environment through which segmentation instruction occurs.

**How words make meaning.** In addition to being phonetic, spelling is also related to the meaning of words (Moats, 1995; Bear et al., 2007; McCarrier, Pinnell & Fountas, 2000). During interactive writing, students often make decisions about word choices and spelling based on the meaning of the sentence the class is composing. The teacher assists the students in making the decisions and explaining the reasons behind the decisions when necessary. By paying attention to the meanings of words when constructing the text together students practice skills necessary for independent spelling (McCarrier, Pinnell & Fountas, 2000).

**Using analogies.** Using analogy, or comparing known words to unknown words, is also a successful strategy for spelling instruction (Brown, Sinatra & Wagstaff, 1996). When spelling words during interactive writing, the teacher activates students’ prior knowledge of words to assist the spelling of unknown words. Through the use of analogies the students learn how to use the knowledge they currently posses to spell unknown words.
Using references and resources to aid spelling. In addition to using how words sound and look, meaning and analogies, interactive writing uses the references and resources around the classroom to assist students’ spelling (McCarrier, Pinnell, & Fountas, 2000). Three main resources are used during interactive writing: a word wall, interactive word charts, and previously constructed pieces of interactive writing. The word wall is constructed by the teacher and consists of words the students know. Interactive word charts are constructed by and with the students using rhymes and spelling patterns the students have learned. Previously constructed pieces of interactive writing are hung around the classroom in order for the students to access the information while constructing print. These references and resources are constantly referred to throughout the constructing process of interactive writing to help the students become familiar with their use and encourage the use during independent writing.

Grammar

In addition to spelling, grammar is also crucial to conveying meaning to the reader. Grammar consists of the style of the sentence, punctuation, and subject-verb agreement (Weaver, 1996). Even though research has found that teaching grammar in isolation does not improve reading, speaking, writing, or editing, Weaver (1996) suggested that grammar be taught minimally for maximum benefit. He suggested creating a scope and sequences of skills to be taught and re-taught across the grade levels, in order for students to understand grammar. California State Standards (California State Board of Education, 2007) recommend a scope and sequence of grammatical skills to be addressed at each grade level from kindergarten to twelfth grade. Based on California’s
recommended first grade standards this study focused on first graders use of correct ending punctuation (periods, exclamation points and question marks) in text. The following section presents two underlying theories of grammar instruction (behaviorist and constructivist), as well as how interactive writing assists students in punctuation acquisition.

Theories of Grammar Learning

Two main learning theories of grammar are prevalent in the teaching of grammar skills: behaviorist and constructivist. The behaviorist theory focuses on instructing grammar in a decontextualized, passive way to avoid poor habits from forming. The behaviorist theory is the prevalent in current grammar instruction (Weaver, 1996). Unlike the behaviorist theory, the constructivist theory claims that students learn to use grammar by creating hypotheses based on errors and experiences in writing. The teacher’s primary job in the constructivist theory is to assist the students on composing hypotheses based on their interests and needs (Weaver, 1996).

Behaviorist theory of learning grammar. The behaviorist theory of learning is the traditional way of teaching grammar. The behaviorists believed that practice makes perfect and if skills were practiced enough in isolation, application would occur (Weaver, 1996). According to the behaviorist model of teaching, teachers dispense predetermined curriculum that students passively practice and memorize, avoiding mistakes to prevent the formation of bad habits. Grammar lessons are taught, practiced or applied, then tested. Most practice or application is in decontextualized environments where everyone is expected to perform in a unified manner. Most research analyzing the effect of this
behaviorist model of grammar instruction has found that the instruction is ineffective (Weaver, 1996). In contrast to the isolated lessons of the behaviorist model, the constructivist model uses students’ knowledge to teach.

*Constructivist theory of learning grammar.* The constructivist theory of grammar instruction uses the knowledge that students possess to teach grammar skills. The basic premise of the constructivist theory is that students create hypotheses about grammar processes they are trying to understand (Weaver, 1996). The constructivist theory conceives errors as necessary for encouraging more sophisticated hypotheses. The teacher develops and negotiates the curriculum to meet the individual needs of the students. Students are seen as actively pursuing learning and constructing knowledge. The constructivist theory expects learning to be individualized, and flexible based on the students’ needs and interests. Assessment of grammatical concepts occurs in context, which captures a more in-depth picture of the students’ knowledge (Weaver, 1996).

*Theory of learning grammar and interactive writing.* Interactive writing is based on the constructivist theory of learning in which the learning of grammar skills is contextualized. Grammar instruction during interactive writing is scaffolded based on the knowledge and needs of the students (McCarrier, Pinnell, & Fountas, 2000). During interactive writing, the teacher responds to the needs of the students as they construct the text together.

Interactive Writing

Interactive writing emerged from the work of McCarrier, Pinnell and Fountas (2000) with the Literacy Collaborative teams from Ohio State University and Lesley
College. McCarrier, Pinnell and Fountas reviewed literature and conducted field tests for more than thirteen years to develop interactive writing. They believe that by “using interactive writing, teachers not only shows children how writing works but invite them to participate, with support, in the act of writing” (McCarrier, Pinnell, & Fountas, 2000, p. xvi). By actively engaging children in the writing progress, the researchers hope that children will transfer the strategies and skills required for independent writing.

*Interactive Writing Lessons*

Interactive writing lessons are composed of a multitude of components (McCarrier, Pinnell, & Fountas, 2000). Children are guided through the process of writing from planning to constructing the text with the knowledge of the teacher leading the way. Interactive writing begins with an experience in which the teacher helps provide background knowledge to engage the children in a shared experience. The lesson continues with children and teacher talking to determine the purpose for writing. After determining the purpose of writing, the children and teacher discuss composition of the text, deciding what to write together. Children and teacher then begin constructing the text together, while constantly checking for clarity in the message, revising when needed. The lesson concludes with the teacher summarizing the skills and techniques covered in the day’s lesson and extending the writing to the children’s writing. Refer to Figure 4 Essential Elements of Interactive Writing for a brief overview of components of interactive writing.
Shared Experience. Interactive writing lessons begin with a shared experience. Children come to school with a variety of experiences. In order to create class writing, children must have a shared knowledge or experience to pull from (McCarrier, Pinnell, & Fountas, 2000). One way in which children can gain a common experience is through active learning in the classroom; i.e. fieldtrips, science experiments, activities. “Experience is most powerful for students learning when it includes exploration, discovery, and talk” (McCarrier, Pinnell, & Fountas, 2000, p. 73). A shared experience can also be developed through literature, in which the teacher reads aloud to children. Engaging in a shared experience is the foundation on which the lesson takes place; children need to engage in planning and composing as well.
Setting the purpose. After creating a shared experience, the teacher and children discuss the purpose for writing during the interactive writing lesson. Both teachers and children participate in the conversation to set the purpose. By discussing a purpose children use and learn language to communicate meaning with others. While setting a purpose the teacher and children are discussing the text’s form and function. Establishing a purpose for writing is extremely important, so that children “learn that writing serves many different functions” (McCarrier, Pinnell, & Fountas, 2000, p. 74). When children help determine the purpose for writing, they build an oral text that they can expand on while they are composing and constructing.

Composing. Once a purpose is determined, the teacher and children begin the composing process. Composing engages the children in the planning process of writing. Composing consists of determining the organization and importance of ideas and concepts, how to address the audience and text structure. The composing process is not always formal or even conscious for most writers (McCarrier, Pinnell, & Fountas, 2000). The goal of composing during interactive writing is that the children and teacher “negotiate the composition of the text through an active discussion and guided planning” (McCarrier, Pinnell, & Fountas, 2000, p. 85). Through active engagement children will begin to internalize the composition process of writing. The goal is to help children plan when they are writing independently. Composing occurs throughout the writing process, as the text is read and reread and the purpose of writing changes. While children and the teacher are composing they are also constructing the text. Composition and construction of the text occur alternately throughout the writing of the text.
Constructing. The construction of the text occurs when the pen touches the paper. The teacher and children construct the text once they have agreed on a purpose and plan based on their shared experience. "Text construction includes writing the actual words, letter by letter; arranging words in space on the page; and using conventions such as space, capitalization, and punctuation to make the text readable" (McCarrier, Pinnell, & Fountas, 2000, p. 98). Construction is the point at which the children interact or share the pen with the teacher. While constructing the text the teacher chooses children, based on their needs, to come to the board to write the message. The children act as spaces, write individual letters, whole words or punctuation. The teacher also writes some of the text depending on the needs of the students. While constructing the text, the teacher explicitly teaches writing vocabulary, features of letters, punctuation, spacing, organization, concepts of print. Throughout the construction process, children and the teacher are rereading and revising the text.

Rereading, revising, and proofreading the text. While constructing and composing the text, the teacher and children reread and revise the text to clarify the meaning. The children and teacher reread the text as they write as a way to remember the whole text and plan the next part. While rereading, the children and teacher discuss the meaning of the text conveyed and the purpose set. If the purpose of the text is not conveyed correctly the children and teacher might revise the purpose or the text. Through rereading and revising, "children are learning that writers constantly check their work as they write, make sure the text is legible, recognizing the importance of conventions...constantly checking on the meaning to be sure the text is clear, (and) check
the text against their sense of the structure of language" (McCarrier, Pinnell, & Fountas, 2000, p. 75). Rereading and revising the co-constructed print engage children engaged in the process of making meaning of their written text.

*Summarizing and extending the learning.* The interactive writing lesson concludes with the teacher briefly summarizing and extending the key concepts covered in the lesson. Summarizing reinforces the skills and writing concepts they have learned from the lesson. The summary should help the children use the knowledge in their own writing. The teacher also extends the learning in a variety of ways. The text can be hung on the wall, used during shared reading, or reproduced as a book. Children can also use the interactive writing as a resource to generate their own writing.

There are many components of the interactive writing lesson. Children are engaged in a shared experience, setting a purpose, composing, constructing, rereading, revising and summarizing their learning. An individual lesson may last two to three days with the goal of constructing one or two sentences. Lessons are carefully planned to be engaging and powerful. Each lesson should range from twenty to thirty minutes with the children engaged every step of the way. The teacher plans the skills he/she wants to focus on during the lesson based on the needs of the students.

*Research on Interactive Writing*

Research with interactive writing is sparse. Of the few articles the researcher has been able to locate, two articles were qualitative, one article was quantitative and two articles were teacher researchers' accounts in their classroom. The researchers in the qualitative articles analyzed the interactive writing lessons to determine what skills and
strategies were taught during the lessons (Brotherton & Williams, 2002; Williams & Lundstrom, 2007). The quantitative article analyzed the effects of an adapted version of interactive writing compared to metalinguistic games on kindergarten children’s phonological awareness, spelling, and early reading development (Craig, 2006). The remaining two articles were teacher testimonials of interactive writing in their classroom (Patterson, Schaller & Clemens, 2008; Button, Johnson & Furgerson, 1996; Wall, 2008).

Using a qualitative approach to examine their interactive writing lessons, researchers found that they taught a variety of writing skills and strategies to their students. The analysis showed that concepts of print, punctuation, and capitalization were taught explicitly (Brotherton & Williams, 2002). While composing the text concepts such as return sweep, left to right direction, filling each line and spacing were discussed and directed by the researcher. The researcher also taught the appropriate place to use periods, exclamation points, commas, apostrophes, and hyphens through interactive writing. Concepts such as sentences and names beginning with a capital letter and the formation of capital and lower case letters were also included in interactive writing lessons. Spelling and composing strategies were also taught during interactive writing lessons.

Researchers found that many opportunities arose for students to use spelling strategies throughout the interactive writing lesson. While attempting to spell, researcher could provide guided spelling instruction to help students apply spelling strategies they had been taught (Williams & Lunstrom, 2007). Strategies such as “saying the word slowly,” “hearing the sounds in words,” word charts, remembering words in books, using
word families (Brotherton & Williams, 2002). In addition to the skills and strategies mentioned previously, researcher found that they were also teaching strategies for composing. The researcher focused students to make sure the text made sense and to think about their word choice while composing the text. Interactive writing provided a rich context in which the students could learn concepts of print, spelling, punctuation, capitalization and composing strategies and skills.

To examine the effectiveness of interactive writing, Craig (2006), used quantitative research to compare an adapted interactive writing format with metalinguistic games to determine if the students differed in phonemic awareness, spelling, reading, comprehension and word reading development over sixteen weeks. The adapted interactive writing consisted of a shared text, a written response to the reading and related word-building activities. The metalinguistic games consisted of segmentation and letter sound activities. Craig (2006) used a pretest-posttest comparison-group design with kindergarten students in a predominantly white middle-class population in a rural-suburban public school system. Children were evaluated using a battery of published assessments before and after the treatment occurred.

Craig (2006) examined the effects of both treatments on phonemic awareness, spelling, word reading and comprehension. In regards to phonemic awareness, Craig (2006) found that both training groups made progress. “The posttest results confirm the effectiveness of a sequenced program of metalinguistic games with letter-sound instruction, yet they also provide evidence for a contextualized approach that integrates explicit explanations, modeling, and practice of phonological and alphabetic skills in
reading, writing, and word study” (Craig, 2006, p. 725). In regards to spelling, Craig (2006) found that both groups showed growth in spelling development. Both groups showed a strong grasp of phonemic segmentation and letter-sound mapping when spelling words. Reading words and comprehension results showed that subjects in the adapted interactive writing group performed better than the subjects in the metalinguistic games group. Even though subjects in the adapted interactive writing group read more pseudowords than the subjects in the metalinguistic group, the difference was not significance. However, subjects in the adapted interactive writing group read significantly more real word than the metalinguistic group. The adapted interactive writing subjects also outperformed the metalinguistic group in the comprehension assessment. Craig (2006) found support for “the early use of writing to develop children’s alphabetic knowledge” (p. 726). These results indicate that using a contextualized instruction for writing in which instruction is differentiated may help children develop phonemic awareness, spelling, and reading.

Teacher testimonials consisted of the remaining literature located on the implementation of interactive writing. A few teachers turned to interactive writing in an attempt to teach students spelling, punctuation and grammar in an authentic way (Patterson, Schaller & Clemens, 2008; Button, Johnson & Furgerson, 1996; Wall, 2008). Teachers have reported that interactive writing helped their students, kindergarten through third grade and special education, apply the skills and strategies into their independent writing through active engagement (Patterson, Schaller & Clemens, 2008; Button, Johnson & Furgerson, 1996; Wall, 2008). Patterson, Schaller & Clemens (2008)
found that English Language Learners increased vocabulary, grammar and writing skills as well as confidence while writing. Through interactive writing the teachers saw an improvement in their students’ writing. The teachers attributed the students’ growth to the engagement and differentiated instruction during interactive writing.

*Interactive Writing in this Study*

Due to the limited scope of the research in the field with interactive writing, this study focused on an analysis of the effects of interactive writing on first grade students’ independent writing. Even though setting a purpose, planning and revising are important components of the writing process, the focus of this study was to examine the subjects’ writing to determine if the spelling, punctuation, capitalization and content taught during interactive writing transfer into their independent writing.

Chapter two presented a literature review on writing. The review presented two main theories of writing development (cognitive and sociocultural). Interactive writing is a combination of cognitive scaffolding with sociocultural experience to engage and develop proficient writers. The chapter continued with a discussion of the theories of spelling processes and spelling instruction during interactive writing. After discussing spelling, the review presented information on the theories of grammar acquisition and grammar instruction during interactive writing. The chapter concluded with a description of interactive writing and the research regarding its implementation. Due to the limited amount of research with interactive writing, the researcher chose to examine the effects of interactive writing on independent first grade students’ writing. Chapter three presents the methodology for this study.
Chapter 3

METHODOLOGY

First grade teachers lack the research and resources to help first graders develop from writing strings of letters to writing coherent sentences with spacing, correct spelling and punctuation. McCarrier, Pinnell and Fountas (2000) claim that by using interactive writing teachers can actively engage their students to produce coherent sentences in their independent writing. The purpose of this study was to analyze the effects of interactive writing lessons on first graders’ independent writing. Specifically this study analyzes the transfer of concepts of print, conventions, spelling and writing content in first graders’ independent writing. Chapter three presents the methodology used by the researcher to determine if skills taught during interactive writing transfer to students’ independent writing. The sample population, including the treatment and control groups, is described, as well as the instruments used to measure the results of this study. This chapter also describes, in detail, the methodology and procedures used to record the effects of interactive writing.

Research Design

This study was conducted using quasi-experimental research design nine. This study used a pre-test and post-test to measure growth of the participants. A nonrandomized control and treatment group participated in this study.

Sample Population

The target population of this study was chosen based on the availability of the population to the researcher using nonprobability sampling. The purpose of this study
was to determine if students transferred skills taught during interactive writing lessons. With this purpose in mind the researcher chose a sample population consisting of two intact classes of heterogeneous students. One intact class received the treatment, while the other class acted as the control.

The subjects of the study attended a K-6 elementary school in the greater Sacramento area. The school was composed of 376 students. The students at this school were composed of 32.7% African American, .3% American Indian, 37.2% Asian, 4% Caucasian, .3% Filipino, 21.3% Hispanic, 3.5% Pacific Islander, and .8% multiple or no response with 100% of the students receiving free or reduced lunch (School Accountability Report Card, 2008). The school has been in program improvement since 1998.

Of the eighteen students in the treatment class, 100% qualified for free lunch. Eleven of the eighteen students spoke a language other than English at home. Nine girls and nine boys participated in the study. The ethnicity of the students was diverse as well. The school identified six students as Asian, seven students as African American, and five students as Hispanic in the treatment class. Of the eighteen students, one student was retained in kindergarten and one student was retained in first grade. Even though two students in the treatment class were retained, the two students are representative of low to average first graders participating in this study.

Of the eleven students in the control class, 100% qualified for free lunch. Seven girls and four boys participated in the study. Four of the eleven students spoke a language other than English at home. The ethnicity of the control group is diverse as
well. The school identified two students as Asian, five students as African American, and four students as Hispanic. Both classes are representative of the school’s population.

Teachers

The teachers of this study were chosen based on the availability of the teachers to the researcher. The researcher implemented the treatment groups’ interactive writing lessons. At the time of this study, the researcher had three and a half years of teaching experience. The majority of the researchers teaching experience included instructing high poverty and diverse English language learners. Even though the researcher had only three and a half years of teaching experience at the time of this study, she had undergone immense training to assist with the development of language arts. In addition to participating in a multitude of trainings, the researcher attended California State University, Sacramento to obtain a Masters in Education emphasizing Language and Literacy. The control participants’ teacher continued to instruct the control group using the currently adopted language arts curriculum. The control group’s teacher has taught for fourteen years. She has taught high poverty and diverse English language learners for thirteen years. The control teacher attended California State University, Sacramento with the researcher in the Masters of Education emphasis on Language and Literacy program.

Instruments

In order to measure the effect of interactive writing on first graders independent writing, pre- and post- writing samples were collected from each participant in the treatment and control group. The most powerful source of information on which to base program decisions is analysis of independent writing (Rosencrans, 1998). “A student
composition provides information about ... what students have learned and how well they can communicate” (Calfee & Greitz, 2007, p. 272). By collecting writing samples from the participants, the researcher was able to analyze what the participants transferred from the interactive writing lessons. According to Calfee and Greitz (2007), “The facets required to construct a writing assessment are similar for virtually any scenario: the prompt, the procedure, and the rubric” (p. 276). Rubric alone are not enough to analyze writing samples, since they are general ratings for the content of the writing sample (Calfee & Greitz, 2007). Consequently, the pre- and post-writing samples in this study were also analyzed using a tally system that examined if a variety of skills were transferred to independent writing.

*Writing Sample Prompt*

In order to determine if participants transferred skills taught during interactive writing, a pre- and a post-test writing sample was collected from each participant in the control and treatment group. The pre- and post-test writing samples were collected using two writing prompts administered by the control and treatment teachers to the students in their respective classes before the treatment began and after the treatment ended. During writing assessments, “the prompt sets the stage for the writing task” (Calfee & Greitz, 2007, p. 276). The writing prompts for this study were developed by the participating school’s school district. Writing prompts must “develop a focus statement that directs students’ attention to the key topic for the composition, activate prior knowledge...and direct students in thinking about the task” (Calfee & Greitz, 2007, p. 276). Writing prompts must also present information regarding the purpose of the writing, including
“words like *tell, describe, explain, convince,* and *illustrate*” (Calfee & Greitz, 2007, p. 277). The pre-writing prompt asked participants to think about some things they did when they got home from school (such as playing with friends, visiting relatives, shopping). Before writing the participants were asked to first draw a picture that tells about their activity. Once the participants had drawn their picture, they were prompted to write sentences describing their activity. The post-writing prompt was the same as the pre-writing prompt, except that during the post-writing prompt the participants were asked to write about an activity they did on the weekends. In addition to the writing prompt, the procedures for conducting the assessment are critical.

*Writing Sample Procedure*

The respective groups' classroom teacher administered the pre- and post-writing sample prompts in the same manner. According to Calfee and Greitz (2007), “The *procedure* for a writing assessment...includes time, information about the topic, scratch paper, support and advice and strategy” (p. 279). The teachers administered both writing prompts by reading them aloud to the participants. The participants were allowed as much time and paper as they needed to complete their writing response. If a participant asked how a word was spelled, teachers responded by encouraging the participant to listen to the sounds in the word and to look around the room. The participants were encouraged to review and revise their writing before turning in their writing sample. Control and treatment teachers collected the writing samples after participants had written their response. At the end of the study, the researcher analyzed the pre- and post-writing samples using a holistic rubric score and a tally system.
Writing Sample Rubric

The pre- and post-writing samples for the control and treatment classes were analyzed using a variety of measures. The researcher analyzed the writing samples by using a holistic writing rubric designed by the participating school's school district. Holistic rubric scores are the most prominent scoring feature in large-scale assessments (Calfee & Greitz, 2007). Holistic rubric scores measure usually represents a single score and assesses writing based on a general impression (Dahl & Farnan, 1998). The rubric used in this study consisted of a scale ranging from zero to four. A score of zero consisted of no response, while a score of four consisted of meeting the criteria for a personal narrative: events told in order; keeps to the topic; provides details that make the story come alive. A score of one consisted of the student not meeting the criteria of the prompt: doesn't tell what happened to the writer; and no sense of order of events. To receive a score of two the student minimally met the criteria of the prompt: point of view was unclear; order of events was unclear or events may involve more than one story; includes one or two details. A three consisted of the student's writing having the making of a personal narrative, but needs work: provides some details about what happened, but not enough; may leave in things that don't have to do with story; not all events are in order. See Figure 5 Rubric Scores for a visual representation of the rubric score descriptions. In order for the researcher to determine if particular skills transferred from the interactive writing lessons to the participants' independent writing, a tally system was used to analyze the pre- and post-writing samples.
The researcher analyzed the writing based on a tally system, in addition to the holistic rubric score. Rubric scores did not give specific information on the content of a writing sample (Dahl & Farnan, 1998). By tallying a variety of skills, the researcher was able to observe if the students included skills taught during interactive writing into their independent writing. By tallying both the pre- and post-writing samples the researcher was able to determine if the students made growth in the skills taught. Refer to Figure 6 Pre- and Post-Writing Sample Tally Chart Categories.

<table>
<thead>
<tr>
<th>Score Criterion</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illegible or no answer</td>
<td>Doesn't meet the criteria of the prompt; doesn't tell what happened to the writer; no sense of order of events</td>
<td>Minimally meets the criteria of the prompt; point of view is unclear; order of events is unclear or events may involve more than one story; includes one or two details</td>
<td>Has the making of a personal narrative, but needs work; provides some details about what happened, but not enough; may leave in things that don’t have to do with story; not all events are in order</td>
<td>Meets the criteria for a personal narrative; events told in order; keeps to the topic; provides details that make the story come alive</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 5. Rubric Score Chart*

*Writing Sample Tallies*

By tallying both the pre- and post-writing samples the researcher was able to determine if the students made growth in the skills taught. Refer to Figure 6 Pre- and Post-Writing Sample Tally Chart Categories.

<table>
<thead>
<tr>
<th>Name</th>
<th># Words</th>
<th># Correct Spaces</th>
<th># Incorrect Spaces</th>
<th># Correct Capitals</th>
<th># Incorrect Capitals</th>
<th># Exclamation Points</th>
<th># Question Marks</th>
<th># Correct Short Irregular Words</th>
<th># Correct Short Vowel Words</th>
<th># Correct Other Sound Out Words</th>
<th>Rubric Score</th>
</tr>
</thead>
</table>

*Figure 6. Pre- and Post-Writing Sample Tally Chart Categories*
The number of words written was tallied to determine the writer’s length. According to Calfee and Greitz (2007), “the best predictor of scores on most college entrance writing exams is not the content or style, but rather the length of the essay” (p. 282), even in elementary school this holds true. Since length can be one predictor of writing success, the number of words was tallied for the pre- and post-writing samples. Additionally, conventions and concepts of print were tallied in the pre- and post-writing samples.

A variety of conventions and concepts of print, expected in first grade, were tallied to determine if the skills transferred to the participants’ independent writing. Conventions are a useful tool for both the reader and the writer. Conventions include the “the spaces in between groups of letters to indicate words, the capital letter at the beginning of each sentence, the period or stop to end an idea, the spaces between lines, all of these are acts of convention” (Graves, 1994, p.191). The researcher tallied the number of correct and incorrect spaces, as well as the number of correct and incorrect capitalizations. With the intention of determining the variety of punctuation used during student’s writing the number of periods, question marks and exclamation points were tallied in the writing samples. The researcher also analyzed the pre-and post-writing samples to determine if spelling strategies transferred into participants’ independent writing.

Spelling development through interactive writing lessons was also of interest to the researcher. According to Graves (1994), “Spelling, probably more than any other aspect in school curriculum, is used to mark social status” (p. 256). Children in the first
grade start with a variety of spelling skills. Some children begin first grade knowing how to write many words, while some children do not know how to write their name. The challenge to the first grade teacher is to scaffold those children from their level to help them communicate in writing. For first grade, the standard is that by the end of the year first grade students will spell three to four letter short vowel words and grade level appropriate sight words correctly (California Board of Education, 2007). In order to determine if students spelling changed as a result of interactive writing lessons, the researcher tallied a variety of measures. The number of incorrectly and correctly spelled irregular words; CVC (Consonant-Vowel-Consonant) words and other phonetically regularly spelled words were tallied. The researcher tallied CVC words separately due to the fact that the students had been taught how to spell those words. Using the combination of the holistic rubric and the tally system, the researcher was able to analyze the participants' pre-and post-writing samples thoroughly. In addition to analyzing the participants' writing samples, the researcher analyzed each video recording of the interactive writing lessons to verify the skills tallied had been taught.

**Video Recording**

In order to determine the skills taught during the treatment, each lesson was video recorded and analyzed. The videos were analyzed using a combination of a tally system and anecdotal notes after the treatment was concluded. The researcher tallied one if the treatment lesson included the following: staying on topic, beginning, middle, and end, shared experience, and planning. The researcher tallied zero if the treatment lesson did not include each of the previously mentioned topics. The researcher also tallied the
number of times each of the following occurred: concepts of print (spacing, writing to the end of the paper, returning to the beginning, capitalization, fixing capital to lower case letters, periods, question marks, exclamation points) occurred throughout the lesson. The number of times spelling topics (stretching words, using the word wall, sight words, other spelling strategies) were mentioned in the treatment lesson was also tallied. By analyzing each interactive writing video, the researcher was able to determine if the skills analyzed in the participants’ writing had been present during the writing lessons. In addition to analyzing the videos for skills, the researcher also evaluated each lesson determine the integrity of the interactive writing lessons. See Figure 7 Video Analysis Tally Chart Categories.

<table>
<thead>
<tr>
<th>Lesson #</th>
<th>Staying on Topic</th>
<th>Beginning, Middle and End</th>
<th>Shared Experience</th>
<th>Planning</th>
<th>Spacing</th>
<th>Writing to end</th>
<th>Return to beginning</th>
<th>Capitalization</th>
<th>Fix Capital Letters</th>
<th>Periods</th>
<th>Question Marks</th>
<th>Exclamation Points</th>
<th>Stretching Word</th>
<th>Using the Word Wall</th>
<th>Sight Words</th>
<th>Other Spelling Strategies</th>
</tr>
</thead>
</table>

Figure 7. Video Analysis Tally Chart Categories

The researcher evaluated each interactive writing lesson to determine if the lesson was true to the methodology described by McCarrier, Pinnell and Fountas (2000). According to McCarrier, Pinnell and Fountas (2000) each interactive writing lesson is composed of a shared experience, determining a purpose for writing, composing what to write together, constructing the print together and summarizing skills. While the interactive writing lesson occurs, the teacher helps to foster spelling, punctuation, and capitalization by scaffolding the students’ writing. The researcher recorded a one under each category if it occurred in the lesson. The column was left blank if the category did
not occur. The researcher also recorded summaries for each component of the lesson.

See Figure 8 Lesson Evaluation Interactive writing Categories.

<table>
<thead>
<tr>
<th>Lesson #</th>
<th>Shared Experience</th>
<th>Determining Purpose</th>
<th>Composition</th>
<th>Construct Together</th>
<th>Summarize Skills</th>
<th>Spelling</th>
<th>Punctuation</th>
<th>Capitalization</th>
<th>Phonemic Awareness- Segmentation</th>
<th>Independent Writing</th>
</tr>
</thead>
</table>

*Figure 8 Lesson Evaluation Interactive writing Categories*

*Treatment Instruction*

The treatment lessons were based on the interactive writing lessons described in McCarrier, Pinnell and Fountas (2000). Each lesson consisted of a shared experience, determining a purpose, composing, constructing and summarizing the skills used during the lesson. Throughout the lesson participants were encouraged to discuss, plan and write the message together with the teacher’s guidance. Each treatment lesson included these components.

In order for the participants to write as a group, they partook in shared experiences and established purposes for writing. The shared experience was a base of active learning from which participants could write (McCarrier, Pinnell, & Fountas, 2000). From these shared experiences the participants collaborated on a variety of writing topics and ideas. They all created the composition together. Once the participants took part in a shared experience, the participants discussed the purpose of writing with the guidance of the teacher. “The teacher and children are building an oral text that they continue to expand and share” (McCarrier, Pinnell, & Fountas, 2000, p. 73).
The teacher and participants used their shared experiences and purposes for writing to compose the text.

Once the participants and the teacher shared experiences and created purposes for writing, they began composing the text. While composing “children must think about the message they want to convey…the audience who will read the text…(how they will) clearly communicate the message, develop an understanding of the constraints that writing places on language…draw on their knowledge of how written language is structured and patterned…think about the organization of the piece and how to best sequence ideas” (McCarrier, Pinnell, & Fountas, 2000, p. 74). The teacher helps model and guide the participant in thinking about each of the afore mentioned components of composing text. Composing the text is completed orally through conversation with one another. Once the participants and teacher composed their plan for writing, they began constructing the text.

The participants and the teacher constructed the text based on their shared experiences, their purpose for writing and their compositions. The participants wrote the text on chart paper attached to an easel in the front of the group. While constructing the text, the participants actively wrote “the text, letter by letter…word by word, placing graphic symbols in order across the page from left to right, moving back to the left to begin new lines, and leaving appropriate space between words and between lines” (McCarrier, Pinnell, & Fountas, 2000, p. 74). Individual participants went to the chart paper to help write the text. For example, after the group agreed on the text, the teacher would ask a participant to write a capital letter; another participant would write the
correct letters that represented the sounds in words; and so on throughout the writing of the text. The teacher and participants attended to these details while keeping in mind the purpose they have set and the message they want to convey. While constructing the text, the participants and the teacher frequently reread the text to check for meaning and to anticipate the next word or phrase. At the conclusion of the lesson, the teacher summarized what the participants learned during the lesson.

Each interactive writing lesson concludes with a summary of the skills and content of the lesson. “Summarizing reinforces what has been learned; children’s reflection on what and how they have learned enables them to understand their own learning” (McCarrier, Pinnell, & Fountas, 2000, p. 76). The summary was used to briefly bring the participants attention to key points during the interactive writing lesson.

Control Instruction

The control writing lessons were based on the current district language arts adoption. The control group’s writing lesson followed a scripted program, which followed a distinct pattern for the course of the treatment. In order to determine the similarity and difference to the treatment lessons, the researcher recorded the appearance of components of interactive writing and each activity the participant partook in during the study. The researcher analyzed the teacher’s manual for each lesson taught during this study. The researcher recorded a one if the following categories appeared in the lesson and a zero if the lessons did not include the following categories: shared experiences, determining purpose, composition, spelling, punctuation, capitalization, phonemic awareness- segmentation and independent writing lessons. See Figure 9
Control Group Writing Lesson Analysis. In addition to recording the existence of each of the previously mentioned topics, the researcher also recorded the types of activities the control students participated in during each lesson.

<table>
<thead>
<tr>
<th>Lesson #</th>
<th>Shared Experience</th>
<th>Determining Purpose</th>
<th>Composition</th>
<th>Construct Together</th>
<th>Summarize Skills</th>
<th>Spelling</th>
<th>Punctuation</th>
<th>Capitalization</th>
<th>Phonemic Awareness-Segmentation</th>
<th>Independent Writing</th>
</tr>
</thead>
</table>

*Figure 9. Control Group's Writing Lesson Analysis

Procedures

*Pretest*

Two days before the treatment began the treatment and control participants completed the pre-writing sample. The respective participants' teacher administered the pre-writing prompt by reading the prompt aloud to the participants. The participants were given as many pieces of paper and as much time as needed to complete the writing prompt. If a participant asked how a word was spelled, the teacher responded by encouraging the participants to listen to the sounds in the word and to look around the room. The teachers collected the writing samples after the participants had written their responses.

*Treatment lessons*

The treatment began the Monday after the pre-test was administered, two days later. The treatment consisted of twelve consecutive lessons occurring throughout twelve consecutive school days. During the course of the treatment, there were two-two day weekends and one holiday. The duration of the lessons ranged between twelve and
twenty-seven minutes. The average lesson was twenty minutes. Each lesson consisted of a shared experience, determining purpose, composition, constructing text, and summarizing skills.

Control Instruction

The control participants received twelve consecutive lessons from their currently adopted language arts program. The control group’s lessons lasted on average twenty minutes. The control group’s writing lessons included shared experiences, determining purposes, composing, spelling, punctuation, capitalization, phonemic awareness-segmentation and independent writing. The previously mentioned categories did not occur each day and each was distinct from one another throughout the lessons.

Post-Test

The day following the last treatment lesson, the post-writing prompt was administered. The treatment and control participants’ teacher administered the post-writing prompt by reading the prompt aloud to the participants. The participants were given as many pieces of paper and as much time as needed to complete the writing prompt. If a participant asked how a word was spelled, the teacher responded by encouraging the participants to listen to the sounds in the word and to look around the room. The teacher collected the writing samples after the participants had written their responses.

Data Analysis

Each of the twelve treatment lessons was video recorded to determine the content taught throughout the treatment. The videos were analyzed to determine if the skills
analyzed in the participants’ writing were taught throughout the course of the treatment. The videos were also analyzed to verify the internal consistency of the interactive writing lessons. At the conclusion of the first three treatment lessons, the researcher viewed the videos to determine the internal consistency with the interactive writing lessons as described by McCarrier, Pinnell, and Fountas (2000). After the first three lessons, the research concluded that the interactive writing lessons followed the authors’ protocol. All twelve lessons were then analyzed following the conclusion of the treatment.

At the conclusion of the treatment, the control lessons were analyzed using the adopted language arts teacher’s guide. The lessons were analyzed to determine the similarities and differences between the control and treatment writing lessons. The researcher analyzed the teacher’s manual for the lessons taught for the duration of this study.

Pre- and post-writing prompts were analyzed at the conclusion of the twelve-week treatment. The analysis was postponed to limit bias or extra support to the participants who showed greater weakness on the pre-writing samples. The writing samples were tallied for concepts of print, spelling, and punctuation, as well as given a holistic rubric score for content.

Conclusion

First grade teachers are faced with a huge problem. How do first grade teachers help their students gain the experience and scaffold necessary to grow into writers who can convey meaning? McCarrier, Pinnell and Fountas (2000) claim that through interactive writing students can gain the experience necessary to transfer skills into their
independent writing. Unfortunately, there is very little research that examines the effectiveness of interactive writing on students' independent writing. This study examined the effects of interactive writing on first graders' independent writing. Using two intact first grade classrooms in a high poverty, diverse school, the researcher conducted a twelve-week study with a treatment group and a control group to analyze the effects of interactive writing on independent writing. In order to determine the effects of the writing program, the researcher analyzed pre- and post- writing samples from each group as well as videos of each interactive writing lesson. Chapter four presents the findings of this study.
Chapter 4
RESULTS

First graders enter first grade with limited writing knowledge. Most first graders start the year barely knowing their letter sounds and writing strands of letters, often using only pictures to communicate. However, California Language Arts Standards for first grade require that students select a focus when writing, use descriptive words; print legibly and space letters, words and sentences correctly by the end of the school year (California State Board of Education, 1997). Additionally, first graders must write brief narratives and expository descriptions using correct punctuation, capitalization and spelling short vowel words correctly. As a first grade teacher these standards can be overwhelming when students with limited English and low socioeconomic status enter first grade as emergent writers. In addition to the high writing standards, there is limited research in the field of effective writing instruction. Consequently, this study examined the effect of interactive writing lessons on various aspects of independent first grade writing samples.

Results

Treatment Instruction

Each treatment lesson was video recorded and analyzed to determine the skills taught during the interactive writing lessons. Through a tally system and anecdotal notes the researcher was able to analyze the content of each interactive writing lesson. The researcher tallied a one if the following elements were present and a zero if they were not present during the course of the lesson: shared experience, planning, staying on topic, and beginning, middle, and end. The researcher also tallied each time one of the
following topics was addressed: concepts of print (spacing, writing to the end of the paper, returning to the beginning), capitalization (capitalizing letters, fixing capital letters to lower case letters), punctuation (periods, question marks, exclamation points), spelling (stretching words, word wall, sight words, other spelling strategies. Appendix A Tallies of Skills Taught During Interactive Writing Lesson displays the results of the tally analysis.

Throughout the course of the study a variety of skills were taught to the treatment group. All twelve lessons included discussions about staying on topic, beginning, middle and end in writing, shared experience and planning. Over the course of the twelve lessons, spacing was mentioned forty-five times with the average of four times per lesson. Writing to the end of the paper was mentioned twenty-two times with the average of two times per lesson. Returning to the beginning of the paper occurred twenty-three times with the average of approximately two times per lesson. Capitalization was mentioned thirty-four times with the average of almost three times per lesson over the twelve treatment lessons. Over the course of the lessons, the treatment group changed the capital letters to lower case letters thirty times with the average of two and a half times per lesson. Periods were mentioned twenty-three times with an average of almost two times per lesson. Question marks were only mentioned three times over the course of the twelve lessons. Exclamation points were mentioned seventeen times with an average of just over one time per lesson. Stretching the word was mentioned eighty-six times with an average just slightly over seven times per lesson as a spelling strategy. The word wall was used four times over the twelve lessons to assist with spelling. The researcher
mentioned the word was a sight word sixty-six times with the average of five and a half times per lesson when spelling a word. Other spelling strategies were used thirty-nine times with the average of just over three times per lesson.

In addition to analyzing the lesson videos for skills taught, the researcher analyzed the lessons to determine if the lessons were true to the methodology described by McCarrier, Pinnell and Fountas (2000). According to McCarrier, Pinnell and Fountas (2000), each interactive writing lesson is composed of a shared experience, determining a purpose for writing, composing what to write together, constructing the print together and summarizing skills. Throughout the interactive writing lesson, McCarrier, Pinnell and Fountas (2000) claimed that students are taught spelling, punctuation and capitalization. Appendix B Lesson Evaluation Interactive Writing Categories shows the components of interactive writing taught in each lesson.

Throughout the course of the twelve lessons a variety of interactive writing components were included. Shared experience, determining the purpose, composing, constructing print occurred throughout each lesson. Summarizing the skills occurred in ten out of the twelve interactive writing lessons. Spelling, punctuation, and capitalization occurred in each lesson taught. As a part of spelling, segmenting (stretching the sounds) occurred in each lesson as well. In addition, students wrote independently for ten minutes. Given the video analysis, the researcher concluded that the interactive writing treatment lessons followed the prescribed interactive writing lesson protocol.
Control Instruction

The control group’s writing lessons were based on the current basal adoption. The researcher recorded the appearance of components of interactive writing lessons in the scripted control lessons in order to determine the similarities and differences between the control lessons and the treatment lessons. The researcher also analyzed the teacher manual for these components. The researcher recorded a one if the categories appeared. Appendix C Control Group Writing Lesson Analysis shows the control groups lessons using the components of interactive writing.

Throughout the twelve control lessons a variety of writing components were evident. Even through these interactive writing components occurred in the control treatment, they were practiced independent of each other unlike in the interactive writing treatment where they occurred together. Shared experience, determining purpose, and composing occurred in five out of the twelve lessons. Constructing the print together and summarizing the skills taught did not occur in any of the twelve lessons. Spelling occurred in all twelve lessons. Punctuation occurred in eight lessons. Seven of the eight lessons only referenced periods. Five lessons included capitalization and two lessons included segmentation to help with spelling. Finally, the control participants wrote independently three times.

Control Writing Samples

The control participants’ pre- and post-test writing samples were analyzed using a tally system, in addition to a holistic rubric score. The researcher tallied the number of words, correct spaces, incorrect spaces, correct capital letters, incorrect capital letters,
periods, exclamation points, question marks, correctly spelled irregular words, correctly spelled short vowel words, and correctly spelled sound out words other than short vowel words. The holistic rubric score was a scale from zero to four; zero being the lowest and four being the highest score on the districts' writing rubric. Appendix D Pre-Writing Sample Tally Chart Control Group and Appendix E Post-Writing Sample Tally Chart Control Group present the tallies for the pre and post writing samples for the control group.

T-tests for dependent samples were calculated using SPSS to assess gains within the control group. The gains in the number of words written were significant ($t=-2.572$, $df=10$, $p=.028$). The control group also showed significant gains in correctly spelled irregular words ($t=-4.248$, $df=10$, $p=.002$) and correctly spelled short vowel words ($t=-2.483$, $df=10$, $p=.032$). Correctly spelled sounded out words ($t=-2.068$, $df=10$, $p=.066$) and incorrect number of spaces ($t=-2.015$, $df=10$, $p=.072$) for the control group were not significant categories, but certainly noteworthy. The rubric score ($t=-2.206$, $df=10$, $p=.052$) was also noteworthy, however, the growth was not statistically significant. The number of periods in the students' writing was not significant, however, the t-test showed directionality ($t=-1.614$, $df=10$, $p=.138$). In the areas of the correct number of spaces ($t=-1.045$, $df=10$, $p=.321$), question marks ($t=-1.000$, $df=10$, $p=.341$) and exclamation points ($t=1.000$, $df=10$, $p=.341$), were not significant in all categories for the control group. Finally, incorrectly used capital letters ($t=-.535$, $df=10$, $p=.605$) and correctly used capital letters ($t=.265$, $df=10$, $p=.796$) were also not significant. See Table 1 T-Test for Dependent Samples Results for the Control Group Writing Samples.
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*Table 1. T-Test for Dependent Samples Results for the Control Group Writing Sample*

*Treatment Writing Samples*

The treatment participants’ pre- and post-test writing samples were also analyzed using a tally system, in addition to a holistic rubric score. The researcher tallied the number of words, correct spaces, incorrect spaces, correct capital letters, incorrect capital letters, periods, exclamation points, question marks, correctly spelled irregular words, correctly spelled short vowel words, and correctly spelled sound out words other than short vowel words. The holistic rubric score, a scale from zero to four was used to determine the overall writing quality. Zero being the lowest and four being the highest
score, was also assigned using the district’s writing rubric. Appendix F Pre-Writing Sample Tally Chart Treatment Group and Appendix G Post-Writing Sample Tally Chart Treatment Group present the tallies of the pre and post treatment writing samples.

T-tests for dependent samples were calculated for the treatment group as well, using SPSS to assess gains. The writing rubric score gains for the treatment participants was extremely significant (t = -6.018, df=17, p=.000). Correctly spelled other sounded out words (t=-3.078, df=17, p=.007), and the number of words written (t= -3.345, df=17, p=.004), were very significant as well. Additionally, the number of correctly spelled short vowel words (t= -2.580, df=17, p=.019) and correctly used capital letters (t= -2.474, df=17, p=.024) showed significant gains in the treatment group. The number of correctly used spaces not significant, however, the gain for the treatment group was close (t= -1.429, df=17, p=.171). Correctly spelled irregular words (t= -1.175, df=17, p= .256), exclamation points (t= -1.000, df=17, p= .331), periods (t= -.369, df=17, p=.717), incorrectly used capital letters (t= -.430, df=17, p=.672), and incorrect spaces (t= .566, df=17, p=.579) were not significant. The t-test could not be computed for question marks because the standard error of the difference was zero for the treatment participants. Table 2 t-Test Results for the Treatment Group Writing Sample shows the results of the t-tests.

Control and Treatment Writing Samples Compared

T-tests for independent samples were calculated using SPSS to assess differences between the control and treatment groups’ independent writing samples. The t-test for independent samples for each sub-skill category was also conducted to determine if the
Table 2. *t*-Test Within Group Gains Results for the Treatment Group Writing Samples

differences between the control and treatment groups’ scores were significant. Table 3: Independent *t*-Test Results for the Treatment and Control Group Writing Samples shows difference between the groups.

A number of measures showed no significant difference between the control and treatment groups’ pre-test and a significant difference for the post-test. The difference between the control and treatment groups’ number of correctly spelled irregular words on the pre-test was not significant (*t*=1.231, df=27, *p*=.229), however the post-test difference was significant (*t*=3.321, df=27, *p*=.003) in favor of the control group. The difference between the control and treatment groups’ number of incorrect capital letters on the pre-test was not significant (*t*=1.815, df=27, *p*=.081), however, the post-test difference was significant (*t*=2.226, df=27, *p*=.035) in favor of the treatment group. The control and
treatment group did not show significant difference in the number of incorrect spaces used on the pre-test \((t=1.448, \, df=27, \, p=.159)\). The post-test, however, showed a significant difference \((t=2.869, \, df=27, \, p=.008)\) in favor of the treatment group in the number of incorrect spaces used on the post-test writing sample. The pre-test writing sample showed no significance \((t=1.289, \, df=27, \, p=.208)\) in the difference between the control and treatment groups’ number of words written, however, the post-test writing showed significant \((t=1.785, \, df=27, \, p=.086)\) difference between the groups in favor of the control group.

A few measures showed almost, but no significant difference among the treatment and control groups’ pre and post writing samples. The difference between the treatment and control groups’ number of correctly spelled short vowel words was not significant \((t=1.919, \, df=27, \, p=.066)\), however the difference was close to being significant for the control group. The post-test difference was also not significant \((t=1.750, \, df=27, \, p=.091)\) for the number of correctly spelled short vowel words, nevertheless, the difference was still worth noting in favor of the control group. The control and treatment groups’ difference in the number of exclamation points used on the pre-test was not significant \((t=.353, \, df=27, \, p=.727)\). While the post-test differences for exclamation points was not significant \((t=-1.431, \, df=27, \, p=.164)\), there is directionality in favor of the treatment group.

A number of measures showed no significance between the treatment and the control groups’ writing samples. Both the pre- and the post-test writing samples revealed no significant difference between the treatment and control groups for correctly spelled...
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sound out words other than short vowel words (pre-test: $t=1.094, df=27, p=.284$; post-test: $t=.887, df=27, p=.383$). The pre- and post-tests revealed no significant difference between the number of periods used in writing (pre-test: $t=.141, df=27, p=.889$; post-test: $t=1.028, df=27, p=.313$). The difference between the control and treatment groups pre-tests showed no significant difference ($t=.879, df=27, p=.387$) for the number of capital letters used correctly. The difference between the control and treatment groups post-tests showed no significant difference ($t=-1.027, df=27, p=.313$) for the number of capital letters used correctly. Just as the difference between the control and treatment groups’ pre-test for the number of correct spaces was not significant ($t=.447, df=27, p=.658$), the difference between the groups’ post-test was not significant ($t=.516, df=27, p=.610$). The difference between the treatment and control groups pre-test rubric score ($t=1.040, df=27, p=.308$) and the difference between the post-test rubric score ($t=-.225, df=27, p=.824$) was not significant.

First grade teachers are challenged to teach their first grade students to write proficiently by the end of first grade. With limited research on the effect of writing strategies on children’s independent writing, the teaching task becomes more challenging. This study examines the effect of interactive writing lessons on first graders’ independent writing. Chapter four presented the results of the data analysis. Discussion of the attributes of the treatment as well as the control lessons occurred. The treatment lesson information was analyzed to determine if the skills measured on the writing tests were taught during the interactive writing lessons and if the treatment lessons followed the protocol of the recommended interactive writing lessons. All skills were taught through
the course of the interactive writing lessons, some skills more than others. Following the analysis of the interactive writing videos the researcher concluded that interactive writing protocol was followed. Following the presentation of the instruction analysis, the pre-and post-writing samples’ results were presented. Two t-tests were conducted to determine if the growth of the pre-test to the post-test in the treatment and control groups was significant. Independent t-tests for each area measured were also conducted on pre- and post-samples to determine if the difference between the treatment and control groups was significant. Chapter five presents a discussion of the study’s results, as well as a discussion of recommendations for further research and classroom implementation. Finally comments are made regarding limitations of the research both internally and in regards to generalizability.
Chapter 5
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Students enter first grade with a range of knowledge and experience in writing. Some first graders write random strings of letters or pictures, while others write one or two sentences and still others will write entire paragraphs on given topics. Consequently, first grade teachers are challenged to help all first grade students become proficient writers by the end of the academic year. While trying to meet the needs of their first graders, teachers struggle to find research that examines the effectiveness of writing strategies on students' independent writing. One such strategy that has been proposed as an effective integration of composition and writing conventions is interactive writing. To ascertain whether, indeed, this strategy could be demonstrated to be effective at a level of statistical significance, a pre-test-post-test, control group design was devised by the researcher to address the question of the effectiveness of the Interactive Writing strategy on students' independent writing. Chapter five provides a discussion of the results, as well as limitations and recommendations for implementation in the classroom and future research.

Discussion

A review of the outcomes of the data analysis indicated mixed results when measuring the effectiveness of interactive writing. Further anecdotal notes and observations of the researcher shed additional light on an interpretation of the results of the data analysis. The topics discussed are components the researcher measured in the pre- and post-test writing samples, as well as tallied during the interactive writing
lessons: number of words, correctly used capital letters, incorrectly used capital letters, correctly used spaces, and incorrectly used spaces. Correctly spelled irregular words, correctly spelled short vowel words, correctly spelled other sound out words, number of exclamation points, number of periods, number of question marks, and the writing rubric score were also measured and compared using the pre- and post-test writing samples.

Number of Words

The number of words written was close to significant in favor of the control group when comparing the post-test writing samples (p=.086). However, when examining the standard deviation the control group (sd=11.11) had greater variance across subjects, while the group participating in interactive writing (sd=7.78) had more internal consistency within the group. The significance of the number of words written was also reflected in the individual groups’ gain scores. The control group participants’ growth in the number of words written was significant with p=.028, however, the treatment group participants’ growth was more significant with p=.004. As students constructed print in the interactive writing they counted the words in the sentence before and while the text was written. Counting the words acted as a place marker for the students to remember which words came next. The intent of the word count was not to generate a lengthy piece of writing, but simply to assist the students in remembering what came next in the sentence sequence. The control group did not address the number of words written during the writing activity. However, the results indicate that both groups gained in the number of words written from the pre to the post-test. Both the basal and interactive
writing programs did not seem to differ from one another in their effect on writing fluency (or number of words written).

Correctly Used Capital Letters

There was no significance between the control and treatment groups’ pre- and post-writing samples in regards to the number of correctly used capital letters (p=.387, p=.313). When examining the individual groups’ gains, the control group’s gain was not significant (p=.796); however, the treatment groups’ gains were significant (p=.024). During instruction, the group using the basal text discussed correctly used capital letters five times, while the interactive writing group discussed capital letter usage thirty-four times. Results support the authors of interactive writing’s claim that contextualized instruction of writing conventions has a positive effect on students’ independent writing.

Incorrectly Used Capital Letters

There was a significant difference between the groups’ post intervention measure (p=.035), and not the pre intervention measure (p=.081). However significance was not attributed to treatment since there were near significant between group differences before treatment began (in favor of the control group). Further, while the mean of the treatment group increased slightly (more errors) (mean=2.0556 to mean=2.3333) the mean of the number of errors of the control group increased (more errors) even more (mean=4.2727 to mean=5.0909). Even though the treatment group addressed fixing capital letters thirty times, the interactive writing did not seem to affect the incorrectly used capital letters. The control group did not address changing capital letters to lower case letters; instead they focused on changing lower case letters to capital letters.
Correctly and Incorrectly Used Spaces

The number of correctly used spaces was not significant between the control and treatment groups' pre- or post-writing samples (p = .658, p = .610). Neither group's individual gain scores were significant (control, p = .321, treatment, p = .171), however the treatment group was close. While the control group did not address correct spaces during the lessons, the treatment group addressed correct spacing forty-five times throughout the twelve lessons. The treatment group seems to have more awareness of spacing, even though the growth is not statistically significant.

There was no significance between the control and treatment group on the pre-writing sample (p = .159), however, there was significant difference on the post-writing sample (p = .008) between groups, favoring the treatment group in regards to incorrectly used spaces. The control group's gain score was not significant between the pre to post-writing sample, but was close to statistical significance (p = .072). The treatment group's gain scores pre- to post-writing samples was not statistically significant (p = .579), even though the errors decreased. The group receiving the basal instruction made more errors after the treatment period elapsed where as the interactive writing group's number of spacing errors decreased slightly. There seems to be more meta-linguistic awareness among first graders in the interactive writing group, than in the basal group.

Correctly Spelled Irregular Words

When comparing the number of correctly spelled irregular words, the control and treatment groups' difference was not significant on the pre-writing sample (p = .229), but was significant on the post-writing sample (p = .003) in favor of control group. The
control groups’ gains from pre-to post-writing sample was every significant (p=.002), where as the treatment groups’ pre-to post- writing sample gains was not significant (p=.256). Even though direct teaching of irregular words did not occur in the control groups’ classroom, the control groups’ teacher frequently used and taught the students how to use the word wall to assist spelling irregular words. During interactive writing, the treatment group’s teacher mentioned the use of sight words sixty-six times; the word wall was mentioned only four times. Most of the spelling instruction during interactive writing was focused on sounding out, instead of using the word wall to help spell irregular words. This was an oversight on the part of the teacher researcher, not of interactive writing, since McCarrier, Pinnell, and Fountas (2000) emphasize using the word wall to assist students spelling.

*Correctly Spelled Short Vowel Words*

There was no significance between the control and treatment groups’ pre and post writing samples, however the scores were close to significant on the pre (p=.066) and post (p=.091) writing samples. Both groups improved in the number of short vowel words spelled correctly, however, the treatment group wrote more correctly spelled short vowel words (mean= 1.7222 to 3.5556) than control group (mean= 3.5455 to 5.8182). The control group’s gain scores from pre-to post-writing samples was significant (p=.032). The treatment group’s gain scores from pre-to post-writing sample was also significant (p=.019). Whereas the basal group addressed writing short vowel words fifteen times, the interactive writing group addressed stretching words eighty-six times. The results indicate that both programs are effective in teaching students how to spell
short vowel words in their independent writing. Even though both programs seem to be equally effective, it is interesting to note that the basal group began this study using slightly more correctly spelled short vowel words in their writing than the interactive writing group. In spite of this, the interactive writing group almost tripled in their use of correctly spelled short vowel words.

Correctly Spelled Other Sound Out Words

When analyzing the difference between the control and treatment groups in terms of correctly spelled other sounded out words, there was no significance between groups on the pre- (p=.284) or post- (p=.383) writing samples. The individual gains of the control group was not significant, either, for the number of correctly spelled other sound out words, however the score was close (p=.066). The treatment group’s gain scores from pre- to post-test was very significant (p=.007). Whereas the basal group did not address how to spell words other than short vowel words, the interactive writing group practiced stretching out words eighty-six times and engaged in other strategies like looking around the room thirty-nine times. The gains in the treatment group could be attributed to the creative process of interactive writing. While the basal group only practiced writing short vowel words, the interactive writing group experimented with writing many types of words through the twelve lessons.

Number of Exclamation Points

In terms of the number of exclamation points used, no significance between groups was found for the pre- (p=.727) or post (p=.164) writing samples, although the post writing sample showed a direction favoring the treatment group (mean=.0556 to
.1667), over the control group (mean = .0909 to .0000). The individual gains of the control and treatment groups were not significant (control- p=.341, treatment- p=.331). Whereas the control group did not address using exclamation points, the treatment group addressed exclamation points seventeen times. Through interactive writing students were exposed to exclamation points, which seemed to show in their writing, where as the basal group was not exposed and quit using exclamation points altogether.

Number of Periods

The number of periods used while writing was not significant on the pre- (p=.889) or post- writing sample(p=.313) between the treatment and control groups. The control group’s gain score for using periods was not significant (p=.138), but showed directionality. The treatment group’s gain score was not significant (p=.717). While the basal program addressed periods eight times, interactive writing addressed periods twenty-three times. The basal program’s instruction seemed to be more successful in teaching students to use periods in their independent writing than the interactive writing group; however, their use was not significant.

Number of Question Marks

A comparison between groups was not possible due to the lack of data from the treatment group (pre and post test no question marks).

Writing Rubric

There was no significance on the pre-(p=.308) or post- writing samples’ (p=.824) rubric scores between groups, however, the treatment group’s mean score increased (mean= 2.000 to 2.7778) more than the control group (mean= 2.1818 to 2.7273). The
control group’s gain from pre-to post-writing sample rubric score was not significant, but worth noting ($p=.052$), where as the treatment group’s gain from pre- to post-writing sample rubric score was very significant ($p=.000$). Interactive writing had a statistically significant impact on students’ independent writing; the basal had an impact but not quite at the level of statistical significant.

Anecdotal Notes on Students’ Behavior

While at first the students were extremely excited and engaged in the interactive writing lessons, the students toward the end of the twelve lessons began to waver in their engagement. Towards the end of the lessons the students were not as engaged in the interactive writing process. After participating in interactive lessons for twelve straight days, the researchers’ students began to display disruptive behaviors that took away from the interactive writing experience. The researcher concluded that whereas interactive writing was exciting and engaging, and appears to have a powerful effect on first grader’s writing, it must be noted that the students began to become bored with the same routine and needed to experience a combination of teacher modeling and interactive writing.

Conclusions

Interactive writing contextualized the conventions of writing. The data indicates that students’ meta-linguistic awareness while participating in interactive writing increases. While the basal group had a positive impact on students writing, the students who participated in interactive writing took more risks with a variety of punctuation (exclamation points and periods), and increasingly engaged in more risk taking behaviors in their writing, sounding-out words other than short vowel words.
Limitations of Findings

One of the limitations of the current study was the rating of the students' independent writing. Having no other raters for the writing samples this study prohibited any test of inter-rater reliability, thus limiting the generalizability of the findings. Even though there was no other rater, the internal consistency of the ratings was increased due to the researchers experience rating first grade students writing for the past three years.

Related to this was the limitation imposed by the narrow range of the district's holistic writing rubric. By using the district's writing rubric, the researcher assigned a number to the writing based on holistic criteria. Calfee and Greitz-Miller (2007) point out that by using a holistic writing rubric it is hard to know what the score actually means. The researcher selected a holistic rubric to evaluate writing quality since most large-scale assessments use holistic scoring.

Therefore, it is apparent that there are limitations with this study, which affected the analysis and scoring of the data collected. However, in spite of the previously detailed limitations, this study has the potential for contributing significantly to the areas of writing instruction research.

Recommendations for Classroom Implementation

The results of this study support the use of interactive writing in the classroom. Through participating in interactive writing, students developed a greater meta-linguistic awareness of writing. The students also took more risks using a variety of punctuation marks and attempting to spell words other than those studied in class. In addition to the writing sample analysis that shows greater awareness and use of writing conventions, the
researcher’s anecdotal observations showed that the students became disengaged during instruction towards the end of the treatment period. Despite the researcher’s affective concerns, interactive writing was proven to show benefits in students’ independent writing and should be used in combination with other writing instruction strategies.

Kissel’s (2008) writing instructional framework encompassed interactive writing with other components of writing instruction. The framework consists of five components: gathering experience, teacher’s writing demonstration, sharing their ideas, students’ writing, conferring with the teacher, and students sharing their writing with the class. Figure 10 Kissel’s (2008) Framework for Writing Instruction shows the components of writing instruction.

<table>
<thead>
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<td>1. Gathering Experience (5 Minutes)</td>
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<td>2. Teacher’s Writing Demonstration (5-7 Minutes)</td>
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<td>3. Students Share Ideas (2-3 Minutes)</td>
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<td>4. Writing and Conferencing (10-15 Minutes)</td>
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<td>5. Author’s Chair (5 Minutes)</td>
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Figure 10. Kissel’s (2008) Framework for Writing Instruction.

As in interactive writing, gathering experience is a time in which students build a basis for a common experience to write about (McCarrier, Pinnell, Fountas, 2008; Kissel, 2008). Kissel (2008) expanded the experience to include the students’ experiences in their own life. Both interactive writing and the writing instructional framework use the experiences as a way to generate ideas for writing.
While the teachers demonstrate writing, they utilize both interactive writing techniques and modeling (Kissel, 2008). While utilizing interactive writing techniques the teacher writes in front of the children, interactively constructing a piece of text with the assistance of the students (McCarrier, Pinnel, & Fountas, 2000). The teacher would also model writing different genres in front of the students explicitly discussing the strategies that he or she uses as a writer (Kissel, 2008). During this time the teacher could model how to compose different genres of writing, while discussing concepts of print, spelling and punctuation.

The students also spend time during Kissel’s (2008) framework sharing their own ideas for writing. This sharing occurs after the teacher models composing. Student sharing time is implied in the protocol of interactive writing, but is not directly discussed. Students share their writing intentions with their peers. During this sharing time students have opportunities to use oral language to talk about their experiences and intentions for writing and to gain feedback from their peers.

Once students have had the opportunity to share their ideas for writing, they are given time to write and conference with their teacher. During the writing time, students actively compose using their experiences, using the teacher modeling and shared ideas as a guide. In an ideal situation, students are given choice on the genre, topic and how they compose. As students are writing, the teacher observes the students’ writing and interactions with their peers, taking notes regarding the students’ interactions to better understand the meaning of students writing, as well as the social influences (Kissel, 2008). Conferences occur between the teacher and the individual student to ascertain the
meaning of the student's writing as well as to make suggestions to help the student in an area where the student struggles (Calkins, 1994; Kissel, 2008). While conferring, the teacher keeps notes as to the topics discussed and the student's current writing topic. The observations and notes are used to plan future writing lessons.

The writing instruction concludes with the students sharing their writing. To share their writing, students have the opportunity to share their writing with the class and receive feedback on their writing. Typically one or two students would share a day in a designated author's chair (Graves & Hansen, 1983; Kissel, 2008). Whereas students are constantly engaged during interactive writing, there is not a designated time for students to share their independent writing with the class. This sharing time could result in helping the students to realize that their writing serves a real purpose and that their writing can hold a real message (Kissel, 2008).

While interactive writing shows strong evidence for teaching students skills in a contextualized format that they then transfer to their independent writing, interactive writing alone is not necessarily motivating enough. When combined with other writing instruction, interactive writing components, such as shared experiences and composing the text interactively with the students may produce more effects on independent writing and help the students stay engaged in instruction over a period of time.

Recommendations for Future Research

Whereas this study had a limited sample size, eighteen in the treatment group and eleven in the control group, replicating this study with an increased sample size would make the findings more generalizable. By increasing the sample size, the researcher
would also be able to examine the effects of interactive writing on sub-groups of the treatment group to determine how sub-groups, such as English language learners, struggling readers, and children with learning disabilities, respond to interactive writing. One of the added benefits of interactive writing was the social interaction of composing with peers and the teacher. Through this social interaction, students increasingly used language to discuss experiences and components of writing. Due to the small sample size, the current study could not determine how interactive writing, through these social interactions, affected students learning English or from specific backgrounds or socioeconomic status compared to the basal text. With a larger sample size, sub-populations could be compared to determine the effects of interactive writing on their independent writing.

Whereas this study focused on using only interactive writing to instruct writing in the classroom, future research should include comparing interactive writing instruction to a combination of interactive writing with other writing strategies to the basal alone. Interactive writing alone showed strong effects on first graders’ independent writing, however, the students’ engagement during interactive writing seemed to wane towards the end of the treatment period. If combined with other writing instruction strategies, the researcher wonders if this decrease in engagement would still occur. Combining interactive writing with other components of writing instruction, like modeling, graphic organizers, writing conferences may produce even stronger effects on the students’ independent writing.
While using a holistic score gives an overall picture of the students’ writing, future researchers should consider using an analytic or trait rubric score to give a fuller image of the students’ complete independent writing (Calfee & Greitz-Miller, 2007). An analytic or trait rubric score gives a rubric score for each of the following components: ideas, organization, voice, word choice, sentence fluency, conventions and punctuation (Calfee & Greitz-Miller, 2007). By using an analytic or trait rubric score the researcher would be able to analyze the students independent writing across those components for a more complete picture of the students’ independent writing.

Overall interactive writing had a strong impact on first grade students’ independent writing. The students who participated in interactive writing seemed to have more metalinguistic awareness and took more risks than the students who participated in the basal instruction. Interactive writing is a promising approach to writing instruction with first grade students.
APPENDIX A

Tallies of Skills Taught During Interactive Writing Lessons
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<th>APPENDIX A. Tallies of Skills Taught During Interactive Writing Lessons</th>
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APPENDIX B

Treatment Lesson Evaluation Interactive Writing Categories
APPENDIX B. Treatment Lesson Evaluation Interactive Writing Categories

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Lesson 1 - 17 Minutes

- Set purpose for shared experience (walk around school)
  - Went for walk pointing out and discussing things around campus
- Discuss walk - what we saw, heard...
- Planned writing
  - Students gave ideas for sentence (beg)
  - Teacher focused students on topic sentence that was about walk instead of specific part since writing was about walk
- Wrote (see analysis)
  - We went for a walk around the school
- Concluded with summary of lesson
Lesson 2 - 22 Minutes

- Reread yesterday's sentence
- Read Story *Hilda Hen takes a walk*
  - Focus kids on writing about a walk
- Students close eyes as teacher describes walk from yesterday
- Students brainstorm 2nd sentence
  - Sentences are out of sequence, so teacher redirects the students for sequencing "What did we do first?"
- Teacher and students discuss details of what did (making sentence)
- "First, we lined up"
  - Repeat sentences
  - Students write
- Sequencing words (first, next, then)
- Brainstorm what did we do after lined up
- "We went outside and saw the leaves fall"
  - Repeat orally
  - Count words
  - Students write
- Summarize Lesson
- Journal write
Lesson 3 - 19 minutes

- Review shared experience
- Reread students writing
- Students brainstorm
  - What did they see, hear
- Teacher puts together students ideas into a sentence
- "The leaves are green, yellow and orange"
  - Repeat sentence
  - While students write
  - Word Choice (change instead of are)
  - Tense (changed instead of change)
  - Plural (color to colors)
  - Comma (list)
  - Checking for meaning (changing words)
    - The leaves didn’t turn green, wrote oranges but meant orange
  - Comma
  - Letter formation/writing correct way (d, b)
  - Telling sentence needs period
- Can anyone thing of other details to add?
- Reread story
- "Brown" students say
- Teacher creates sentence "The leaves were brown too"
- Comma before too
- Telling sentence period

- Read story
- Summary-
  - Choose 1 thing and describe

- Journal-
  - Choose 1 thing and describe it

Lesson 4- 20 Minutes

- Shared Experience Halloween
- First sentence what the whole story is going to be about
- Focus on school day Halloween
- Students brainstorm
  - “Breakfast”- if first sentence about breakfast then the whole story needs to be about breakfast, Do we want that? No
- Teacher gives sentence “Today is Halloween”
  - Period or exclamation point
  - We are excited so, exclamation point
  - Syllables
  - Calendar (today)
  - Capital because holiday
- Review what we are doing today
Students say “we are going to have a Halloween Party”

- Count Words
- Syllables (go-ing)
- What kind of to
- Repeat sentence orally
- Look back at text to help spell (we already wrote Halloween look here to help you)
- What’s missing? period, exclamation point
  - Could write either one
  - Exclamation is for excitement
  - Exclamation is chosen

Students want to add movie, cartoon movie

Teacher asks students you want to add detail of watching a cartoon, yes

“We are going to watch a cartoon movie”

- Compound word (car-toon)

Summary- we chose 1 thing and wrote 2 details

Journal- students choose 1 thing to write about with 2 details

Lesson 5- 27 Minutes

- Shared Experience- what have we done so far today
- Teacher reviews
Think about 1 thing to write about that we have already done

Students brainstorm
- Recess, lunch
- Vote lunch wins

When writing about something you start with sentence that tells about lunch and write 2 details

Students brainstorm

"After we ate lunch, we went outside to play"
- Teacher gave sentence
- Count words
- Final e (ate)
- Word choice (add outside, so readers know where we played)
- Reread
- Comma (after introduction)

What details to include (we don’t have to write all details)

Looking around room

Carrot (editing for outside)

Compound (out-side)

Ideas “what did you play”
- Jump rope (students)

“We played jump rope!”
- Compound
- Read sentence
  - Students brainstorm
    - Kickball and dodge ball
  - "We played kickball and dodge ball"
    - Compound (kick-ball)
  - Summary- main event and 2 details
  - Journal- choose 1 thing did today and 2 details

Lesson 6- 19 Minutes

- Discuss walk to fence
- Tell 1 sentence that talk about fence and 2 sentences to tell about it
- Students brainstorm
- Topic sentence means the next 2 sentences would be about that sentence
- Teacher brings many ideas to make sentence
- "We walked to the fence"
  - Count words
  - ed at end
  - Formation of d
- What did you see?
  - Telling what really happened, not make believe
  - Most focused on street, but one looked up
- "We saw a bird and a jet"
- Teacher made when others saw the same thing
- Repeat sentence
- Words while write
- Formation of b
- Formation of d
- That was exciting, we were excited to see the jet, what do we need
  - "An exclamation point"
  - Finish tomorrow"
  - Journal- write about what you saw @ the fence for real 2 things

Lesson 7- 15 Minutes

- Review walk from yesterday
- What did you see?
- Students report
- Teacher summarizes what students say
  - What are we going to write about?
- Student says, "We saw a lot of houses and cars."
  - Students agree
  - Count words
  - Repeat
  - Looking around the room (I’ve seen the word saw before, here it is)
  - Plural (Houses- s at the end because it’s more then 1)
- Finger word and excited to see the cars
  - Period or exclamation
  - Students exclamation

  o Read sentence
  o Read story
  o Celebrate writing four stories, reread
  o Summarize writing- about things we do everyday, tell what we did
  o Journal- write what you did

Lesson 8- 25 Minutes

  o Choose 1 thing to write about from the things we have done so far
  o Students share
  o Teacher focuses on topic
    - We are going to write about P.E.
  o First sentence about P.E.
    - We know it’s pe because it’s Thursday
  o “Today is Thursday, we have P.E.”
    - Past tense (have to had we already did it)
    - Comma
    - Looking around the room (P.E.)
    - Abbreviation
  o What did we do during PE?
o Students brainstorm

o “We galloped, walked, and skipped around the rectangle”
  ▪ Comma (list)
  ▪ Students sound words by themselves
  ▪ Look at sound spelling cards for b and d

o Summarize
  ▪ Choose 1 main idea and 2 details

o Journal same

Lesson 9- 18 Minutes

o Reread story from yesterday

o Students brainstorm with buddy
  ▪ Teacher comments on students ideas focusing on PE

o Students brainstorm with group

o “We threw and caught a ball with our partner”
  ▪ Count words
  ▪ Repeat sentence
  ▪ Students needed to be pulled into participating
  ▪ Finger in air to write words
- Monitoring writing (the- all letters lowercase? not the beginning of sentence? yes)

- Repeated

- Looking at walls to spell words (student does this by herself)

- Spelling by meaning (our belongs to us)

- Students all respond to finger space

- Are we excited or just telling information?
  - period

  - When at your desk you can choose to write exclamation point if you were excited

  - When you are telling a story you can ask reader a question

  - Students brainstorm questions
    - students share statements, no questions
    - Dropped because students only stated statements, no interest

  - Journal- 1 thing happened today and 2 details

Lesson 10- 23 Minutes

  - Think about your day
o Students brainstorm

o Teacher focuses on shared experience together

o Students share using sentences not fragments

o great thing about writing in journal is you can choose what you write

o Recess

o Interesting beginning (not just we had recess, but “Recess is fun”)

o “Recess is fun”

  - Repeat sentence

  - Look around room for recess

  - hold up fingers to segment word (3 fingers fun)

  - reread sentence

o “Some of us played kickball and some played jump rope”

  - Meaning for spelling (some not sum like addition answer)

  - Inflectional ending

  - Compound word (kick-ball)

  - Formation of b with sound spelling card
- repeat sentence to remember next word
- look at writing to spell
- compound word (jump-rope)
- final e
- are we asking, excited or telling information
- putting punctuation at end of sentence not end of line

  o “Some played dodge ball”
  - repeat sentence
  - count words
  - formation of d using sound spelling cards

  o Summarize
  - talks all about recess
  - stays on topic

  o Journal
  - Choose 1 thing and describe

Lesson 11- 21 Minutes
Teacher gave topic- substitute did something special with you today

Students brainstorm what they learned today

“Miss Wills taught us a song!”

- repeat sentence

- count words

- using words you already know to help you spell (will-wills)

- excited or okay, period or exclamation point

Students brainstorm what was special about song

Teacher keeps focus on song, summarizes students ideas into sentence

“The song was about being nice, kind, and loving”

- repeat sentence

- count words

- look at writing to spell words

- syllables (be-ing)

- final e

- comma (list)
- Syllable (lov-ing)
- drop e at end when adding ing
- exciting so exclamation

  o Journal- something you did yesterday and write about it (holiday)

Lesson 12- 12 Minutes

  o Reread story from yesterday
  
  o Teacher reviews yesterday and using signs to sing
  
  o Do you think that can be a part of our story? yes
  
  o “We sang with our hands”

    - repeat
    
    - count words
    
    - tense (sing- song)
    
    - repeat meaning to spell (our)
    
    - plural
    
    - something else about the song?
    
    - Students comments repeat what is written
- we must be done writing on that topic

  - Summary

    - when we wrote all our stories we choose 1 idea and described it

  - Journal

    - when write, write more then one thing and describe it
APPENDIX C

Control Group Writing Lesson Analysis
APPENDIX C Control Group Writing Lesson Analysis

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Lesson 1-

- Spelling- Pretest (short o sounds), practice book 213, short o followed by consonant, penmenship (practice book 198-205), Spelling patterns -ock, -op punchout letters
  - Self-selected topic
- Writing- Independent journal writing
  - Daily Language- capitalize a Name- Dan and ann can look at the bird.
- Phonemic Awareness- segment and blend picture sounds, children guess the picture names
Lesson 2-

- Daily Language- Capitalize the first word in a sentence, spell short o- ken gut a box.
- Phonemic Awareness- Blending sounds, echo the words
- Spelling- building words with short o, penmanship, high-frequency words review on wall
- Writing- Shared writing (children bring a photo from home or draw a picture of themselves, label each picture with a caption that includes the name of the person, where the photo was taken, what the person was doing)

Lesson 3-

- Daily Language- Punctuation, short o sound- Pat is nott big
- Phonemic Awareness- Blending silly rhyme (students blend words)
- Spelling- Short o sound, match and spell on index cards, practice book complete the sentence
- Grammar- Is it a sentence? tell children that to be complete a sentence must have two parts: a naming part and an action part. Write sentence on board, children id parts, practice book to complete the sentence, practice by cutting up strips
Lesson 4-

- Daily language - Recognizing a complete sentence, short o sound, It. is hote
- Phonemic Awareness - Stretch a word with a rubber band
- Spelling - short o sound, clap and spell words, write the word on index cards
  put it in the bag that rhymes with hot or not hot, practice book (2 pages)
- Writing - writing answers to questions, title asked a question, story answered
  the question, brainstorm with children, list their responses, practice book
  independent

Lesson 5-

- Daily Language - Recognizing a complete sentence, short o spelling, The fox.
  is onn top
- Phonemic Awareness - blending phonemes: riddles
- Spelling - short o sound, test, penmanship, high-frequency words (review clap
  and spell)
- Grammar review - is it a sentence (model on board, students write in sentence,
  students write dictated sentence)

Lesson 6-

- Daily Language - Capitalize a sentence, the man has a mop.
- Phonemic Awareness - blend sounds together to make picture card name
Spelling- Short e sound- pretest, practice book, teach short e followed by consonant, penmanship, spelling patterns -ell, -est, students suggest words that have the ending, teacher writes

Writing- Independent journal

Lesson 7-

Daily Language- Capitalize a name, the short e sound, Jan can see a red bird.

Phonemic Awareness- blending sounds together, echo word

Spelling- short e sound, review principle, make crossword with punchout letters, penmanship, high-frequency words (clues, students find words)

Writing- Shared writing, class message, children brainstorm- message begins with a greeting, children discuss and agree on one, teacher write message, volunteer dictate a few sentences, teacher writes, point out how to do return sweep, capital letters, end punctuation

Lesson 8-

Daily Language- Recognizing a complete sentence, short e sound, The minister pulls a rug.

Phonemic Awareness- blending phonemes

Spelling- short e- students write word on paper, practice book, penmanship

Grammar- telling sentence, remind children of sentence, model, students underline telling sentence, practice book
Lesson 9-

- Daily Language- Punctuating a telling sentence, short e sound, Let's gett in the van
- Phonemic Awareness- Segment and blend animal names together
- Spelling- punchout letters, practice book, penmanship
- Writing- writing sentences on a topic, model that a topic is what a group of sentences is about, children suggest, teacher record, practice book

Lesson 10-

- Daily Language- Punctuating a telling sentence, short e sounds, My pt is funny
- Phonemic Awareness- Blending riddles
- Spelling- short e sound, test, penmanship, high-frequency words review
- Grammar- telling sentences, teacher model, students underline, dictate sentence

Lesson 11-

- Daily Language- punctuation, I can sing
- Phonemic Awareness- blend sounds to guess picture
- Spelling- Pretest- short u, practice book, the vowel u is followed by consonant, penmanship, -um, -ump these words can help spell other words, punchout trays, students brainstorm, teacher records
Lesson 12-

- Writing- independent writing

- Daily Language- capitalize a name, short u sound, Jess and jen can cut the paper.

- Phonemic Awareness- Blend poem

- Spelling: Short u, review principle, making words, penmanship, high-frequency words (read and use in a sentence)

- Writing: class letter, model on chart paper, children retell their day in order, teacher records
APPENDIX D

Pre-Writing Sample Tally Chart Control Group
# APPENDIX D. Pre-Writing Sample Tally Chart Control Group

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APPENDIX E

Post-Writing Sample Tally Chart Control Group
APPENDIX E Post-Writing Sample Tally Chart Control Group

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APPENDIX F

Pre-Writing Sample Tally Chart Treatment Group
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APPENDIX G

Post-Writing Sample Tally Chart Treatment Group
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Dyson, A. (2000). Writing and the sea of voices: Oral language in, around, and about
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