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Manipulatives in Writing: The Analysis of Prompted Descriptive Writing in the Fifth Grade

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THE FLORIDA STATE UNIVERSITY
COLLEGE OF EDUCATION

MANIPULATIVES IN WRITING: THE ANALYSIS OF PROMPTED
DESCRIPTIVE WRITING IN THE FIFTH GRADE

By

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A Thesis submitted to the
School of Teacher Education
in partial fulfillment of the
requirements for a degree of
Master of Science

Degree Awarded:
Summer Semester, 2010

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To my family, current and future

ACKNOWLEDGEMENTS

First and foremost, I would like to thank my family, my father Charlie and mother Glenda for always being my cheerleaders. You two are the wind beneath my wings. Next, I would love to thank my best friend, editor, statistical advisor, and sounding board Matt. I do not know where I would be without you. This work is for you. I would also love to thank my encouraging and enthusiastic friend Nicole for her constant warmth and support through the entire project. To my brothers, you are the coolest people I know, someone has to be the nerdy one and thank you for leaving that spot wide open for me. The Jemisons, thank you for your encouraging words.

I would also like to thank Dr. Rice my major professor who allowed me to move into a thesis track literally at the last minute with only the slightest amount of hesitation. Thank you as well for the direction, advice and support. Dr. Davis, thank you for always being so encouraging. Also, Dr. Piazza, thank you for taking on a thesis track student during your last semester, it was such a great kindness. Finally, Dr. Wood, you were the first professor to believe in me, and you allowed me to shine in so many ways; I'm forever grateful.

Thank you as well to the teachers and staff at both Florida State University and Florida State University School. Two teachers in particular allowed me to spend time with their wonderful students and I thank you for that opportunity.

My other friends, there are too many to simply list, but thank you for your guidance and support.

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ABSTRACT

The purpose of this research was to examine the writing responses generated by students if they were provided with manipulatives which could potentially stimulate ideas for descriptive writing responses. The participants of the study were fifth grade students at a charter school in the Southeastern United States. The guiding assumptions of the study were (1) manipulatives assist students in stimulating ideas in several content areas, (2) students who receive support in the writing process may be more successful in producing descriptive texts, (3) as writing topics become more abstract, students require more writing support. Data were collected over a two-week period in which students responded to four writing prompts which became more abstract in nature. Qualitative data regarding the trends involving student responses from a treatment and control group, gender analysis, and descriptive trends were collected and analyzed. Quantitative data regarding overall word count, descriptive word/phrase ratios, and holistic scoring were also collected and analyzed. Overall, several factors including gender, ability level, and writing developmental level contributed to the variations of student writing responses. This study has implications for both classroom teachers and researchers.

CHAPTER I

INTRODUCTION

Children who attend a public school may be losing their autonomy and ability to express themselves freely in the form of writing in the school system. The students, within the public school system, are expected to write in a formulaic fashion and respond to writing prompts which may not be developmentally appropriate based on the requirements of the prompt. Therefore, classroom teachers must take more classroom instructional time to teach the formulaic writing procedures rather than provide classroom instructional time for creative writing and alternative prompt writing activities. Students are learning a regimented and traditional writing approach which may be failing some students because their abilities to express themselves in writing is lacking in the five paragraph essay model.

The traditional writing assignments in the public school system have been impacted by the standardization of measures for student writing. The demanding five paragraph essay forces students to write inside a box which is hammered into their heads by their instructors through formulaic instructional practices. But, with these standardized measures comes the need for teachers to instruct students how to produce formulaic writing for a standardized passing score. Without a passing writing score, students may be placed into a remedial writing course or may be left at a future disadvantage based on their writing scores on a singular assessment. The need for writing instruction which complements the standardized measures while still providing a creative and worthy outlet for students to experience the joy of writing is paramount.

Teachers also need to be able to assess a student's writing ability quickly based on a short writing response. If a teacher is able to determine a student's writing abilities throughout the course of a school year based on simple practice writing prompt, a teacher may be able to focus on certain students who are not making gains as quickly in the classroom when compared to other students. A teacher may also be able to determine which students are the more advanced writers in the classroom so they may be provided with more challenging tasks, used as writing models in the classroom, or paired with struggling writers. Finally, a teacher may even be able to determine in which specific areas of writing students need individual practice. These short writing responses may provide a means by which to differentiate instruction.

Another trend in general elementary classroom writing instruction is the standardization of writing instruction. Several schools provide a specific writing curriculum for teachers to follow which often will lead students to obtaining higher scores on standardized assessments (Kern et al., 2003). While these standard practices might be beneficial for creating a basic standardized curriculum across an entire school district, teachers may also need other writing practice supplements.

Students' interest in writing has waned in recent years due to the standardization of the writing process (Foorman, & Nixon, 2006). At a national level, students are required to respond to given writing prompts in a methodical format in order to achieve passing scores. The standardization of writing trend in the public school system has led to a standardization of teaching writing in the classroom.

Purpose of the Study

With all of the previous statements about teachers' and students' needs in the writing classroom taken into consideration, this pilot study was developed as an exploration of students' written reactions to non-traditional writing prompts. The effects of how students responded to non-traditional writing practices were analyzed in-depth in several facets.

The study was also developed to analyze the quality of written descriptions generated by students when they are provided props to stimulate ideas for writing. The writing of a comparison group for responding to similar writing prompts without props or manipulatives to stimulate ideas for writing was also identified.

The study focused on utilizing the independent writing instructional process for analysis of student responses. Students were required to move through the first four stages of the writing process independently while responding to a given prompt.

Finally, in conjunction with creating treatment and comparison writing groups, the researcher analyzed other factors which might influence a student's writing response. These factors include gender, developmental writing level, and current writing abilities based on a standardized measure.

Research Questions

The researcher's classroom observations of student writing and field experiences involving classroom writing led the researcher to an interest in creating authentic writing activities. These activities would support students in developing the necessary skills to respond to standardized writing assessment prompts. How can teachers provide meaningful writing experiences in the classroom environment which support the student's need for the enjoyment of writing while still teaching the necessary skills to pass the yearly standardized measures? This paper does not answer the previous question, but it does address one aspect of writing in student's responses to short creative writing prompts in a non-threatening environment.

The researcher's interest involved requiring students to respond to a given prompt, which was not created with the typical design of a standardized writing assignment. Rather, students would move through a writing exercise, which requires more in-depth thinking and responses throughout the experiment. A gradual progression moving students from writing about concrete objects towards more abstract ideas or concepts was developed through the writing prompts given to the students during the course of the study.

The researcher was also interested in how students would respond to a writing activity when they were provided with "props" referred to in the study as: objects, pictures, and/or manipulatives. These items included token objects or pictures to assist in the development or stimulation of ideas in the writing process. The research question was, if students were provided with manipulatives to help generate ideas for descriptive writing responses, how would the writing responses of the students provided with manipulatives differ from the students with similar prompts without manipulatives?

From this main research question, three sub-questions were derived and to be addressed in the pilot study utilizing both qualitative and quantitative measures. The five sub-questions are as follows:

Sub-question one-

If the participants were provided a manipulative related to the writing prompt, would they tend to describe the manipulative in their writing, or would they use the manipulative as a guide to generate ideas?

Sub-question two-

As the provided manipulatives became more abstract in nature, would the participants become less descriptive about the object they were writing about?

Sub-question three-

If participants were never provided with manipulatives to assist in stimulation of ideas for their writing, would they still compose a response with the same level of description about an object or experiences with the object in their writing responses as those who did receive manipulatives?

Sub-question four-

Does a participants' gender affect in how he is able to respond use descriptions in short writing responses?

Sub-question five-

Is there a correlation between a participants' writing abilities as determined by standardized writing measures and the level of description composed by a participant in this particular study?

The first and fifth sub-questions will be addressed through qualitative analysis. The second, third and fourth sub-questions will be addressed using both qualitative and quantitative analysis.

Conceptual Framework

The conceptual framework for this study is based on the constructivist theory developed by Jean Piaget and the social constructivist views of Vygotsky.

First and foremost, through the use of alternative writing prompts as compared to standardized writing prompts, students will be moved through a process which will either create a new schema or alter previous schemata as described by Piaget (1952a). According to Piaget, when presented with new information students will move into a stage referred to as disequilibrium. The students will either assimilate their new knowledge to fit into previously

created schema or they will accommodate their new knowledge by changing their basic cognitive structures.

Jean Piaget emphasized the importance of concrete experiences for children whom are in the preoperational and concrete operational stages of cognitive development (Piaget, 1952b). Other educational researchers also support the utilization of concrete experiences for children who have reached the formal operational stage of development. The usage of manipulatives is supported by the theory developed by Piaget because students are able to arrange, manage, coordinate, and control the materials in front of them to gain new knowledge or build upon previous experiences.

Piaget (1952b) also emphasized a child's need to explore, question, clarify, and discover knowledge through various classroom experiences. Through the usage of alternative writing prompts, a student may be able to channel new ideas and develop a new schema for a descriptive writing voice.

Based on the assumptions and theory of Piaget, most fifth grade students are still within the concrete operational stage of development and few are beginning to develop formal operations in a few subject areas. With that fact in mind, fifth grade students may benefit from having an object in front of them while they formulate a writing response if the object is related to the writing prompt they are given.

In Vygotsky's work, there is recognition of the cultural and cognitive differences between children (1934/1986). Therefore, teachers should take into account students' individual needs when providing instruction. Teachers should also assume differences in writing style will be apparent in students based on the students' previous social experiences and interactions with the world.

This study incorporates Piaget's theoretical process of accommodation and assimilation cognitive by providing students with writing exercise which may increase the chance of disequilibrium due to the nature of the novel writing experiences (1952a). Piaget's theory of child development (1952b) is also recognized as a significant factor in how the students are able to write varying levels of descriptions in their writing response, which is based on the students' cognitive and writing developmental levels. Vygotsky's social constructive theory (1934/1986) is incorporated by allowing the students writing time to incorporate their previous social interactions in their writing responses. Students are also viewed as unique individuals who bring

with them their own personal experiences and backgrounds which will affect their formulation of a writing response.

Operational Definitions

Holistic scoring rubric was defined as an overarching assessment on each writing response provided by the student subject. The holistic scoring rubric took into consideration: topic/content development, descriptions/word choice, organization and sentence structure, for the overall assessment of the writing. In this study, the holistic score of a particular piece of writing was only one data point taken into consideration in the student's writing.

Lexical Density referred to the level of content-embedded words compared to the total number of words within a writing response. The lexical density in this study is significant the analysis of the number of descriptive words/phrases within a writing response as compared to the total number of words.

Writing prompt was defined as any written instructions given to the student in order to request him to complete a writing assignment. All of the writing prompts in this study were read aloud to the students in order to ensure the students' reading abilities did not affect their ability to complete the writing activities.

A **writing response** was any composed message created by the student which was created in order to answer or reply to the writing prompt given both orally and in writing. The entire writing response by the student included all words, letters, and punctuation left on the response paper provided to the participant for the study.

Descriptive word analysis applied concepts of lexical density, which determined the ratio of descriptive words/descriptive word phrases to other words in the entire writing response. A percentage of descriptive words was derived by dividing the number of descriptive words and descriptive phrases by the total word count.

Descriptive word ratio referred to the total number of descriptive words and/or phrases, excluding repetitions, within a student's written response to the total word count excluding repeated words. The descriptive word ratio was utilized as the main dependent variable in this study in order to numerically describe the level of descriptions in any particular written response.

Itemized trait analysis referred to specific writing traits which were scored within the total participant response. The traits analyzed in this particular study include: topic/content

development, description/word choice, organization, and sentence structure. Each of these specific traits was scored on a level of one to five, with five being the highest score possible for each trait. With all of the scores totaled for each trait, a holistic score for the entire written response was derived.

Coded description theme referred to the three different categories into which a student's written response was placed into after an entire reading by the researcher. Each of the three categories met a set of particular criteria. These criteria are further described in the following chapters.

Methodology

A mixed methods, quasi-experimental design was used, to study student writing responses to given writing prompts. Over the course of two weeks, a total of 43 fifth-grade students divided between two classrooms were given four writing prompts. The students involved in the study were already members of intact classrooms. One of the classrooms received manipulatives for three of the four writing prompts, and one classroom received a similar writing prompts without manipulatives. The manipulatives were designed to stimulate ideas for composing a descriptive writing response to the given prompt. The writing prompts were designed to request a participant to describe the object or idea through descriptive language using personal experiences. Student writing was analyzed with both quantitative and qualitative measures. Quantitative measures included: lexical density analysis, total word counts, itemized trait analysis, and holistic scoring. Qualitative measures included coded descriptive theme analysis, gender analysis, standardized assessment analysis, and researcher observations.

A complete assessment model for the overall and detailed analysis of the students' writing abilities in addition to their stylistic trends was derived through the quasi-experimental design. These stylistic trends along with writing abilities were analyzed while taking into consideration the student's demographic backgrounds.

Researcher Demographics

The sole researcher for the study was a graduate student at Florida State University majoring in elementary education with a focus in language arts. She previously graduated with a degree in elementary education from the same institution. The researcher has diverse experience

in elementary classrooms ranging from kindergarten through fifth grade. The researcher is certified to teach in the state the study took place and has a strong background in writing instruction and evaluation.

Limitations

First, all of the holistic scoring of the student responses was created by the researcher based on other rubrics in various unpublished dissertations. There was not another grader who cross-checked the scoring. There may be some scoring bias on the part of the researcher. The bias may be due to preconceived notions of what is considered “descriptive” or deemed as “good” writing for participants in the fifth grade. This should be considered a serious limitation due to the lack of a separate evaluator of the participants’ responses. Second, all of the student responses had the words counted and descriptive phrases counted twice by the researcher. A descriptive phrase was considered as any type of modification made to a noun or verb within the participants’ writing response. Only the researcher decided which words were deemed repetitive, which could also be another source of bias. The bias in the previous case is also due to a lack of another evaluator in the participants’ writing responses. Finally, the researcher determined what was deemed a “descriptive phrase” for the descriptive word analysis and descriptive word ratio. The researcher only counted individual descriptive words and descriptive phrases as a singular “descriptive token”. This method did not provide more credit to higher-level descriptive phrases such as idioms, metaphors, and analogies which may have inflated the scores of certain student populations. Those students who were naturally more verbose may have a disadvantage because they included fewer descriptive words as compared to students who wrote less but included more details.

The overall limitations created by the researcher were in regards the individual subjectivity bias in the scoring. The researcher’s level of subjectivity was not checked with an inter-rater. The initial design of the experiment did provide for another evaluator, who dropped out of the study at the last minute.

The original experimental design also allowed for seven total writing prompts which involved all of the different writing tiers and one final baseline writing sample from both the comparison and treatment groups. But, due to time limitations, only four of the writing prompts were distributed and analyzed in this pilot study.

Another limitation was the request by Teacher A to have her students participate in the treatment group, which did not allow for a random selection of which classroom would receive either set of writing prompts.

CHAPTER II

REVIEW OF THE LITERATURE

“Composition teachers and researchers share a common interest in improving the effectiveness of writing instruction. We devote considerable time and energy to examining the relationship between the contexts that writing teachers create and what students do in these contexts. We also grapple with the thorny matter of assessments and seek insights into how assessment can serve both instructional and measurement goals.” – Claire Wyatt-Smith

Introduction

Chapter two contains an overview of several research topics which are relevant to this study. First, cognitive development and constructive social development are discussed as an overarching framework for the study. Next, product and process writing instruction are discussed as differing writing instructional practices present in elementary classrooms. The stages of reading and writing development are described, followed by students’ perception of the writing process. Independent writing instruction is discussed because the design of the study incorporates this form of instructional practice. The policy leading to standardized assessment and specifically standardized assessment of writing follows independent writing instruction. Methods for determining writing ability and level including, lexical density, primary trait scoring, and holistic scoring/rubric assessment are discussed. Finally manipulatives and visuals in elementary education practice are discussed in the literature review.

Cognitive Development

At the forefront of children’s cognitive development is Jean Piaget and his stages of cognitive development (Piaget, 1952b). Several assumptions in educational research involving children throughout the past thirty years have been developed from Piaget’s work (Ojose, 2008). These assumptions include basic ideas about how children are able to process and understand any new material they are presented in their daily lives and how children’s abilities to process new knowledge changes as they grow and develop over time. It is also assumed that children need various novel experiences in order to develop cognitively. Piaget wrote about specific and comprehensive developmental stages children progress through as they are growing. These

stages are mutually exclusive and none of the stages may be passed over to move to a higher stage. Overall depictions of the stages are as follows:

Sensorimotor stage:

The stage is highlighted by the child only taking in new information from his direct environment. Children mainly learn through their visual and tactile skills. Children develop an understanding of object permanence and basic counting abilities. The stage ends after a child is able to develop a comprehensible language which may be understood and reciprocated by another human being.

Preoperational stage:

From the development of language until a child is able to develop logical processes, the student is considered to be in the preoperational stage of cognitive development. Logical processes are considered to be based on rational thinking in which objects and material maintain consistent conditions. Children tend to increase their language abilities as well as symbolic thought and reasoning. Children generally require materials and visual objects in order to symbolize and generate new ideas and concepts. Teachers and parents should provide problem solving activities for these children which require them to develop logical understanding. Students are not able to reverse mathematical understanding and do not have a concept of conservation of volume, length, or mass.

Concrete operational stage:

Children at the third stage of cognitive development still require “hands-on” activities in order to understand different concepts, but are starting to formulate abstract ideas. Students are able to consider two and three dimensions at one time when considering properties of objects. Children still require manipulatives in order to understand basic mathematical concepts, which is shown throughout several studies relating to teaching elementary school mathematics (Baker & Beisel, 2001; Mistretta & Porzio, 2000; Moch, 2001; Ojose, 2008; Taylor-Cox, 2001; Van de Walle, 2007). But, it is cautioned that these manipulatives must be directly connected to the abstract concepts taught in the mathematics classroom (McNeil, & Jarvin, 2007; McNeil, Uttal, Jarvin, & Sternberg, 2009). Manipulatives may also be beneficial for children at the concrete operational stage of cognitive development in other academic areas. Overall, children within this

stage still require concrete materials to represent concepts/ideas, but they are able to develop in-depth levels of understanding of abstract ideas.

Formal operational stage:

The final stage of cognitive development is characterized by a child's ability to make logical arguments with reasoning skills with generalization and evaluation of knowledge. Children are able to use only symbols to define and characterize mathematical equations. They are also able to represent linguistic ideas symbolically by effectively incorporating metaphor and irony in writing. Most children are no longer in elementary school when they move into formal operations.

The overall assumptions based on Piaget's cognitive theory of development theory have revolved around the student's need for progressive and developmental educational experiences in the elementary classroom. As children develop cognitively over time through various constructive learning experiences, they are able to understand more complex and abstract tasks. Their ability to comprehend more intangible and ethereal topics will be influenced by their life experiences both within and outside the classroom environment. Students are able to comprehend more complex tasks through concrete experiences which are the foundation to later stages of development. All people are assumed to pass through each stage and are not able to "skip" any of the stages (Piaget 1952b; Woolfolk, 2007). Piagetian theory also defines stages are stable as cognitive development changes over a long period of time (Kail, 2004).

The participants involved in the study would be generally moving from the concrete operational stage of cognitive development and into a formal operational stage based on their level of school and age. There were not any formal cognitive assessments given to the students in order to confirm the previous statement; it was assumed based on the participants' grade levels. The researcher took into consideration the participants' cognitive developmental levels when designing the study. Therefore the cognitive developmental stages of the participants within the study are considered in the overall methodology.

Constructive Social Development ~ Vygotsky

Vygotsky states that learning is a social process which takes place with other people (1932/1986). Generally Vygotsky is known for his theory of Zone of Proximal Development

(ZPD) in which a child is able to reach a higher level of learning through scaffolding (1978). The scaffolding takes place when another individual assists a child in reaching a higher level of learning from his initial level of learning. The child could not achieve this higher level individually, instead he required assistance. After assistance, a child is then able to raise his initial level of learning and a new ZPD is formed.

Vygotsky also supports learning in a social context in which students are able to unfold knowledge with other people. The theorist also supports the recognition of a students' cultural and social background when providing instruction (1932/1986).

The overarching conceptual theories developed by Piaget and Vygotsky generally affect how classroom instruction is developed. The writing product and process models are discussed next.

Writing as a Product

In the 1970's and 1980's, teachers and educational researchers focused on the final product produced and submitted by student writers. The bottom-up approach was created in order to teach students how to compose error-free writing (Haley & Austin, 2004). Students first learned how to compose sentences, then paragraphs, and finally essays through direct teacher instruction. Teachers also focused on proper grammar, sentence structure, and sentence variety in order for students to create "correct" writing products. The approach is very formulaic and teaches students the "parts" of writing individually as they build upon their writing repertoire.

The final written product created by the student based on a given prompt is often what is assessed by state mandated writing assessments. The only assessment is based on what the student has written on the given response paper. The pre-writing is not addressed or assessed by the state writing assessments. Therefore, it is important to note how the bottom-up approach is still what is assessed by most state boards of education (Wohlwend, 2009).

Often in product writing assessment, specific writing categories are analyzed in the research. These categories include: spelling, syntax, vocabulary, story structure, and word counts (Shanahan & Lomax, 1986). These final categories may be analyzed separately in an itemized trait analysis or holistically.

Criticism started in the late 1980's on the writing product instructional model. The criticism focused on only the products of writing versus the process approach to teaching

writing. Much of the research disapproves of the focus placed on the final product written by the student instead of providing a guided scaffolding writing experience (Murray, 1980). But, the general purpose of writing as a product, in most elementary classrooms is to create an overall assessment of a student's writing abilities at one point in time. This approach is beneficial for teachers in order to determine student strengths and areas of future instruction. In this pilot study, the researcher assessed a student's product writing determine how manipulatives would influence a writing product composed by that student.

Reading and writing research tends to be merged in several studies in order to determine how the reading and writing connection influences a students' linguistic development. Writing products also tend to be analyzed throughout reading research in order to determine if writing abilities impact reading abilities (Espin et al., 2000). Generally, certain writing traits or categories are assessed and compared to reading traits or categories in order to determine if there are correlations. But, the idea of *how* writing abilities impact reading abilities is not researched as often (Shanahan, 1986). Therefore, this pilot research study may provide a mechanism for future research which compares the reading and writing abilities of specific students.

Next, process writing is discussed because participants were still required to move through the writing process while composing their writing response, even though they were not guided through the different stages during the designated writing time. The writing process approach is also discussed, because most teachers incorporate the process approach in their general writing instruction.

Writing as a Process

The writing process is considered a recursive practice based on the creation of a product through a process of idea generation (McCarrier, Finnell & Pountas, 1999; Fox, 2001). Often the writing process is taught thoroughly in a workshop method. The students and teacher take more time to work through the entire writing process through this instructional approach. The process of writing has been highly researched in the last thirty years and involves several important steps (Fox, 2001; McCarrier et al., 1999; Wigglesworth, 1997; Scheuer, de la Cruz, Pozo, & Neira, 2005; Scheuer, de la Cruz, Pozo, Huarte, & Sola, 2006). First, a purpose for writing must be established. In this particular pilot study, participants were provided with the purpose for writing in the form of a writing prompt. It is common practice for teachers to distribute writing prompts

and give students a purpose for writing in both classroom activities and in standardized writing assessments.

Once a purpose for writing has been determined, whether it is from an outside source or a personal reason for writing, the audience is determined by the writer. The consideration of how the audience affects the formatting of the writing response, the syntax, word choice, and level of idea development (Fox, 2001; McCarrier et al., 1999). The writer must also consider what the reader needs to know and how much information is necessary to complete the purpose for writing.

After audience consideration, the writer chooses a form in which to convey the message. Forms of writing may include: an essay, friendly letter, e-mail, narrative, list, sign, etc. (McCarrier et al., 1999). In this pilot study, the form of writing was determined for the students; they were asked to respond to the writing prompt with a descriptive paragraph.

Finally, the writer is able to construct a message after considering the purpose, audience, and form of writing response. All three of the previous steps take place in the pre-writing process. Depending on the given assignment, students may have more or less autonomy in determining these steps. In this research study, the participants were given relatively low autonomy because their form, audience, and purpose for writing were all determined before they received the writing exercise.

The construction of the writing message is a recursive process in which students make several decisions about the text they are generating. The process is reflective through each of the stages of the writing process (Fox, 2001). Several mental processes take place during the writing process as students read, re-read, write, and re-write text. These processes must be regulated by the participants while they are writing.

After the composition phase in the writing process, students then move towards the revision and evaluation phase. In the revision process, research has shown that students tend to be preoccupied with mechanical errors when editing their work (Graham, MacArthur, & Schwartz, 1995). Writers are able to re-read and evaluate their writing to make any necessary corrections to better address the audience, form, or purpose (McCarrier et al., 1999). The writer also evaluates the work after revision for soundness and clarity. But, if students are encouraged to add detail and elaborate on their writing, they will make additions to their text (Graham et al, 1995).

Writing practice consists of two necessary and significant processes: reflection and composition. Students require the time to reflect on current and previous ideas in order to compose their thoughts on a page (Fox, 2001). The more time spent reflecting tends to create more complete and well thought-out compositions. An extended reflective process does not allow enough time for students to complete their composition if there is a time constraint. Students must problem solve during the writing process in order to determine when it is essential to reflect on ideas and when to compose their ideas on the page. Students also need to be instructed on how to step away from composition to continue the reflective process during the revision of work already composed.

Stages of Reading and Writing Development

Adults including teachers and researchers working with children must first understand that students, especially primary school children, do not have the same developmental understanding of complex cognitive tasks required in writing as adults (McCutchen & Perfetti 1983). Researchers must also take this into consideration when evaluating students' work by bearing in minds the age and developmental level of their individual participants.

Previous literature has cited several sources defining stages of reading development (Espin, Shin, Deno, Skare, Robinson, & Benner, 2000; Fitzgerald, 2000; Tierney & Shanahan, 1991). There is also a developed model of a combined reading and writing developmental progression in which reading and writing are viewed as two linguistic processes that develop progressively (Fitzgerald, 2000). This is based on the theory that there is similar knowledge shared between reading and writing. In the 1930s several studies suggested a moderate but not significant correlation between specific skills in reading and skills specific in writing. It was found that the majority of "good" readers were also "good" writers, and vice versa with "poor" readers/writers (Tierney & Shanahan, 1991). However, the correlation found in the formerly mentioned study, was not definitive. The theory of reading and writing is composed of a large linguistic metaknowledge which students develop in stages. The metaknowledge is associated with pragmatics and several subcategories within pragmatics. Fitzgerald's research further defines these categories which are beyond the scope of this study.

The literature does not present many cohesive developmental scales for writing separate from the developmental reading stages. Few researchers have attempted to define a natural,

developmental progression for writers, but it has been a complicated process. Most of these developmental writing stages have not provided singular assessments in order to completely determine a student's writing level. Some assessments within the study lead by Espin et al. (2000) included: word counts, correct spelling of words, and correct word sequences.

Other researchers have also attempted to determine reading and writing relationships in order to create a developmental model. Shanahan (1986) compared three reading-writing relationship models: interactive model (in which students develop reading and writing skills in conjunction), reading-writing model (in which students' reading abilities directly influence their writing abilities), and writing-reading model (in which students' writing abilities directly influence reading abilities). It was found that the interactive model was the most effective at describing the relationship between reading and writing, and this should be taken into consideration while constructing a developmental model for reading and writing as a joint developmental process as opposed to reading and writing development separately. Shanahan (1986) also stated that the "nature of the reading-writing relation might change over time." Therefore, teachers need to be aware of student's abilities in all linguistic domains. While this pilot study does not focus on the reading abilities of students, their developmental levels in writing are analyzed.

Student Perception of the Writing Process

Previous research has shown how students develop their conceptual understanding of the writing process over time, and there is evidence that this process may be developmental (Scheuer et al., 2006). As students develop their understanding of the writing process, they are better able to elaborate while they are composing their writing pieces. Students are also more reflective about the writing process and view the revision and rereading stages as constructive. Once students move past focusing on the lexical aspects of written language, they are able to use writing a tool for communicating knowledge and expressing creative ideas. An elementary student's understanding of the reflective processes and information transmission in the writing process as a developmental process may affect how well they are able to respond to creative writing prompts.

Written products composed by students must also be recognized by instructors as developments from a student's own social context (Pantaleo, 2009). The world around students,

including both in and out of school experiences will directly affect the written work produced by these children. Any other form of text the students have had exposure to will also impact how and what they write.

Independent Writing Instruction

McCutchen stated, “When we think of writing and writing instruction, it is critical that we recognize that writing is a complex task.” Therefore, when teaching writing and moving students towards writing independently, several instances of scaffolding take place in the classroom before moving to this final stage of writing instruction. (The previous stages of writing instruction are not addressed in this study.) During independent writing, students have the opportunity to use their previous knowledge and understanding of the writing process in an individual writing activity. Independent writing may be initiated by the teacher or the student. Minimal writing support is provided by the teacher during this particular writing activity. Often, independent writing is used as an individual assessment of a student’s writing abilities. The writing is commonly graded on a holistic scoring rubric.

The general benefits in independent writing time involve the student’s personal development as a writer. Through independent writing, students are able to develop their own mature writing voice and practice refining this essential skill. The student also practices constructing and composing his own writing with minimal help from the teacher and/or other peers. Independent writing activities are often published after they move through the entire writing process (McCarrier et al., 1999). Because this is a student’s individual work, the teacher and other classmates are able to recognize their personal achievement.

One significant downside to independent writing is text readability (McCarrier et al., 1999). Due to a student’s developmental stages in fine motor skills, there is great variance in handwriting abilities within any given group of children. Most children are able to read their own produced text, but sometimes teachers and other audiences are not able to share the students’ writing experience, which may be detrimental to the independent writing process.

The usage of independent writing instruction in the general classroom is recognized most during elevation of students’ writing abilities (McCarrier et al., 1999). The public policies leading to standardized assessment and standardized writing assessments are further discussed.

Public Policy Leading to Standardized Assessment

A right-to-education movement began in the early 21st century (Foorman & Nixon, 2006). Initially, there was segregation in education between people from minority backgrounds or those with disabilities and the general “white” population. This segregation in the education system was influenced by the upheld *Plessy v. Ferguson* Supreme Court ruling in 1896. The law denoted that the 14th amendment would allow segregation as long as both parties received equal services.

In 1954, the famous finding “separate educational facilities are inherently unequal” (p. 495) in *Brown v. Board of Education* forever altered the educational landscape. Then, the Supreme Court ruling of *Lau vs. Nichols* in 1974, allowed students to be educated in their native language, until they are able to develop English proficiency in order to be successful in American classrooms.

Through the passage of these laws and the report *A Nation at Risk* by the U.S. Department of Education in 1983, there has been a standardization movement in order to ensure all students have access to equal educational experiences regardless of their ethnic, social, economic backgrounds or their individual learning abilities. *A Nation at Risk* (1983) reported: “We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people.” (p.1) The report also called for measurable standards for academic performance and standardized assessments in order to determine if students were meeting these standards (Foorman & Nixon, 2006). The standardization movement and the right-to-education movement which guaranteed students to an equal education led to the passage of No Child Left Behind Act (NCLB) of 2001 (Foorman & Nixon, 2006).

The passage of NCLB in 2001 required schools, school districts, and states to implement several changes which would essentially hold schools accountable for student educational progress. One of these requirements involved the assessment of students to determine if they made adequate yearly progress (AYP) in all essential subject areas. One of these subject areas was writing. Therefore, states were required to generate standardized writing assessments and rubrics in order to determine whether students were making AYP in the writing domain.

Standardized Writing Assessment

With the passage of No Child Left Behind (2001), there has been a higher expectation for teachers with the instruction of the “basic” academic areas including: reading, writing, science, and mathematics. There is an assumption derived from the law which mandates the teaching of a uniform writing process sequence by instructors. Benchmarks and standardization of measurements assume a supreme form of instruction and expectations for student’s writing and writing instruction (Wohlwend, 2009).

The amount of classroom instructional time necessary to teach students how to write for standard writing assessments is significant. Teachers must teach students the formulaic procedure for the five paragraph essay response in order for the children to be successful on the yearly standardized assessments. These standardized assessments are considered “high-stake” because a student’s entire educational career may be negatively impacted by a failing score. The literature displays ways teachers may be able to incorporate the necessary skills for success on standardized writing assessments with more creative writing activities for students (Kern et al., 2003). The creative writing activities are more engaging for students while they are still practicing the writing process skills required for standardized assessment.

Within the last decade, teachers have tried to move away from only teaching students the five-paragraph essay format, to include other essential writing forms in the classroom (Kern et al., 2003). Often teachers express the need for students to develop skills in other forms of writing which may apply to responding to a standardized writing assessment (Kern et al., 2003). The inclusion of other writing forms in the language arts classroom has been seen as a positive shift in the writing curricula. This shift has been defined as a whole-language writing program in which students are taught how to self-regulate what they produce in the writing classroom, whether the writing is for creative purposes or for standardized assessment (Porcaro & Johnson, 2003).

Most states prefer printed writing submissions for standardized assessments. The use of technological writing, which diverts from the traditional paragraph or essay writing form, is not included in standardized writing assessments. A formulaic archetype and linear fashion of writing is also supported by these state driven writing assessments (Dyson, 2001). Students are expected to submit a pre-determined form of essay to answer the given prompt in order to

receive the highest possible score on the state achievement tests (Herrington, Hodgson, & Moran, 2009). The top essays found on state assessment websites tend to be five paragraphs long. The five-paragraph essay form includes an introduction and concluding paragraph with three supporting paragraphs composing the body of the work.

Best Practices for Teaching Writing

Teachers must recognize that writing time is essential for both creative writing endeavors and standardized writing assessment practices. Students should be recognized as having their own voice and ideas for writing topics regardless of their age and writing abilities. (Kern et al., 2003; Wohlwend, 2009)

Drawing on students' background knowledge in a writing assignment will generally allow the student to produce more complete and comprehensive work. When students are able to include as much information as possible from previous experiences and are able to write about these experiences, they are able to produce more authentic written pieces and more descriptive writing (Dyson, 2001; National Writing Project, 2006; Wyatt-Smith & Castleton, 1997). Students' texts should be considered within the student's experience and classroom contexts. A student's cultural and social backgrounds are significant factors in his compositions (Wohlwend, 2009). There are also several roles students play as writers while they are utilizing their background knowledge (Pantaleo, 2009). They take the time to become authors, editors, and planners as they move through the writing process, and teachers need to allow time to encourage these different roles.

Research shows six specific traits which are important in writing (James, Abbott, & Greenwood, 2001). These traits include: ideas and content, organization, voice, word choice, sentence fluency and conventions. According to James et al.(2001), teachers should model and instruct students how to incorporate all of these traits into their writing. The literature also expresses the importance to assess these traits in a holistic scoring model.

In order to incorporate best writing practices in the classroom, a teacher must be able to determine students' writing abilities. There are several forms of assessment for determine writing abilities including, lexical density, primary trait scoring, and holistic scoring, all of which are discussed below. Also, the students and teachers' roles in writing assessment are discussed.

Determining Writing Ability/Level

In previous studies involving word counts in order to determine a student's writing ability, there have been mixed results. There are several measures in order to determine writing ability (Nelson & Van Meter, 2007; Brokey, 1983; Espin et al., 2000). These measures include: word counts, discourse scoring, total words spelled correctly, sentence structure conventions, varied sentences structure patterns, vocabulary diversity (number of different words or NDW), holistic scoring, multiple choice tests, primary trait scoring, analytical scoring of errors and lexical density (Nelson & Van Meter, 2007).

At the word level, there are several studies involving primary students and middle school students. For younger students, those in primary elementary levels, a higher word count is directly related to a higher level of writing when compared to other assessment measures (Brodkey, 1983). Students will have higher word counts in their writing samples as they move into higher grades through primary schooling (Espin et al., 2000). However, as students progress through secondary school, a higher word count does not necessarily correlate to higher writing scores on other measures, including standardized assessments. Studies have also shown that the number of words spelled correctly may indicate writing level in students from first to sixth grade (Espin et al., 2000).

Lexical Density

Lexical density refers to the amount of words which carry content or significant meaning such as: nouns, action verbs, adjectives, and descriptive phrases versus the number of words which carry less meaning such as: pronouns, being/helping verbs, conjunctions, and articles (Ravid, 2006). Linguists often use lexical density in order to analyze spoken and written language. Lexical density may be used in order to assess student writing responses for different semantic content. Lexical density may focus on the use of active verbs versus passive verbs, and rich descriptions in writing versus general descriptions. In this particular study, lexical density is used as a tool in order to determine the ratio of descriptive words/phrases to a total word count.

Several forms of lexical density have been analyzed in different facets of applied linguistics. A study by Ravid (2006) analyzed ten different semantic noun categories in four different subject supplied compositions. Two narratives, one spoken and one written, were submitted, and two expository pieces, one spoken and one written, were submitted to the study

from each subject. The study found that as subjects age, they tended to use nouns considered more abstract and/or categorical on the noun scale. Subjects also used more abstract and/or categorical nouns in expository text and written text when compared to narrative or spoken discourse. The study also highlighted the significance of focusing at the word level structure of written or spoken discourse as a form of linguistic analysis.

Primary Trait Scoring

In order to evaluate the quality of texts, it is often essential to break down a written response into different traits for analysis. Tindal & Parker (1991) described two essential objectives for evaluating writing by the assessment of specific traits. First, different aspects of a text may be affected by a specific student's background experiences, culture, and language diversity. Second, using both qualitative and quantitative assessments in the evaluating of student writing is essential to creating an overall picture of a student's writing abilities.

By breaking down different writing traits into different categories, a researcher may assess a piece of writing based on specific qualities. Specific writing categories for primary trait scoring may include but are not limited to: content, organization, sentence fluency/variety, conventions, language use, communicative effectiveness, and ideas (Nelson & Van Meter, 2007; Verheyden, Van de Branden, Rilaarsdam, Van den Bergh, & De Maeyer, 2010). The traits may be assessed on a scale (in this research project, the traits were rated on a five point scale) with degrees of aptitude for each category. The degrees of aptitude of each trait are generally described in a progressive order within each category within the scale.

These different traits, from the analysis, may also be combined to create an overall holistic writing assessment to determine the effectiveness of the total writing piece. Below, holistic scoring is described in how it relates to primary trait scoring. Previous research has supported the "multi-leveled" analysis of data, and using primary trait assessment (Verheyden et al., 2010).

Holistic Scoring/Rubric Assessment

The use of rubrics to holistically score student writing is a common practice in the school system for all grade levels. Writing rubrics may be developed by teachers, school-districts, or state education boards. Most teachers develop their writing rubrics based on four to six target

writing traits with at least four achievement levels (Tompkins, 2007; James et al., 2001). Rubrics may be general and used for any given writing assignment with assessment criteria in different writing skills. Or, rubrics may be created for a specific writing task (Tompkins, 2007). The greatest benefit in using rubrics for assessment is the ability for the teacher and students to view their strengths and areas for improvement in writing practice. The writing rubric also supports the six-trait writing model in writing best practices (James et al., 2001).

Holistic scoring is a relatively fast way to score any written response on a rubric. A response is read in its entirety and then the answer is scored for quality (Oosterhof, 2003). Often the overall papers are grouped into high, medium and low categories. Through the use of holistic scoring, teachers are able to assess a student's writing for its overall merit, and analyze key areas for strengths and weaknesses.

A holistic rubric breaks down key writing skills such as: organization, word choice, sentence fluency, content, and conventions. It then provides a total score based on all of these writing skills. A range of element descriptions are often found within a writing rubric (Oosterhof, 2003). A student's level of writing is then matched with the description within the rubric. The descriptions may be numbered as well to provide a quantitative score. Therefore, the student is not assessed on only one aspect of their writing but rather a wide range of skills necessary for fluent writing. The modification of instruction based on a holistic rubric is essential for students to develop and master all of the different essential traits for articulate writing. (James et al., 2001)

Teachers and Researchers Role in Assessing Student's Writing

Recent research by Cooksey, Freebody and Wyatt-Smith (2007) highlighted how an assessor's judgment of a student's work particularly in writing may vary and could be deemed invalid in the classroom context without careful consideration by the teacher performing the assessment. The researchers found that holistic assessments do not provide consistent scores for students. Instead, these scores were not reliable for students due to different inconsistencies in writing tasks given by instructors. Therefore, it is essential for research studies to analyze several sources of information provided in a writing sample to provide an overall picture of student abilities. Teachers and researchers should also use consistent, holistic rubrics and "model" papers in order to make assessment more reliable.

Descriptive Writing

Descriptive writing tends to be rich in detail based on personal observation(s) and sensory input. This form of writing usually is shorter in nature and is found within another total writing piece. But, teachers may target this form of writing by assigning descriptive sentence, paragraph, or poetry assignments. Research in improving students' abilities to write descriptive sentences have taken a formulaic direct instruction route focusing on changing at the sentence level (Algozzine, 2004). The teacher is encouraged to ask students questions in order for them to deliver more details. Eventually, the teacher also asks for more specific use of language involving more exact words. Finally, the teacher has the students move different clauses in the descriptive sentences for desired variability in sentence structure. Modifications may be made for students with writing disabilities, who are learning disabled. This sentence level instruction of descriptive writing has been proven to be effective for some students, but it may not transfer to longer written passages.

Narrative Writing

Narrative writing is a specific form of writing composed of several different categories, but an overarching element is the telling of a story (Tompkins, 2007). Narratives may be original or developed from events in a person's own life. Personal narratives are contrived from events in a writer's life and reflect on these events. Students should be encouraged to draw on their personal experiences in order to enrich their personal narratives and other texts (Pantaleo, 2009).

Initially, younger students may struggle with writing personal narratives in response to a writing prompt (Pantaleo, 2009). But with prompting to draw on their personal experiences and classroom experiences with frontloading, students may be more successful. Primary students also tend to be more comfortable responding in writing with personal narratives, personal observations, and experiences if they are provided the opportunity in the classroom (Wyatt-Smith, 1997).

Narrative nonfiction writing is more informative but still involves aspects of a writer's life. They tend to be more autobiographical in nature and contain more facts and rigid descriptions (Tompkins, 2007).

Manipulatives in Elementary Education Practice

Manipulatives in elementary and early childhood classrooms are a common device used to allow students to have a concrete experience with knowledge based on theoretical practice and child developmental theory. Manipulatives generally refer to any object or image which aids in the instruction of any particular concept to assist students in understanding a more conceptually complex idea at a more accessible concrete level (McNeil & Jarvin, 2007). They are used throughout the elementary curriculum and have also been utilized in secondary education. Manipulatives in the classroom are often praised by educators for their ability to assist students in remembering new information, providing a tactile and visual mechanism for conveying information, activating real-world knowledge, and making the learning experience present. Educational research utilizing manipulatives is also found in several different subject areas including: reading, writing, mathematics, social studies, and science.

The use of manipulatives during oral reading as a reading comprehension strategy has been proven to be effective. (Glenberg, Brown, & Levin, 2007). Students will retrieve and remember more information if they use manipulatives to “enact” the action from the sentences they read orally. Students are successful if they use manipulatives to aid in reading comprehension while working in small groups or individually with an instructor (Glenberg et al., 2007). In reading, it has also been found that manipulatives will assist students in remembering new information (Glenberg, Gutierrez, Levin, Japuntich, & Kascak, 2004). In the previously referred study, the students were provided with manipulatives which related to the narrative they were reading and were cued to use the manipulatives to show the actions taking place by the story characters. It was found that students were successful at remembering the information if they were “acting out” the story with the provided manipulatives and had better comprehension, when compared to students who only read the passage twice. In subsequent follow-up students were also able to remember the actions in the narrative if another student within their small group manipulated objects which corresponded action sequences in the story (Glenberg et al., 2007).

Manipulatives are often used in mathematics education in order to teach abstract mathematical concepts to students (Moch, 2001). Manipulative usage in the mathematics classroom also provides an alternative teaching strategy and hands-on practice when compared to “drill and kill” worksheets and assessments. Gradual release process is utilized by presenting

concrete, semi-concrete, semi-abstract, and then abstract problems by removing the manipulative support from students while they solve problems which would be only understood at a symbolic level without the assistance of manipulatives. Manipulatives, when used in a constructive approach, allow for students to interact with mathematical concepts. Students and teachers may also model and illustrate abstract theories with these hands-on tools. Often, it is encouraged that teachers provide manipulatives effectively and intentionally to teach a particular mathematical concept with the corresponding objects (Van de Walle, 2007).

Several studies in the mathematics classroom accentuate the importance and dynamics of manipulatives. The following studies highlight the significance of concrete experiences in mathematics for elementary students.

A study conducted by Zhou (2005) expressed how Chinese mathematics teachers used manipulatives in order to assist in the instruction of addition and subtraction concepts to their first and second grade students. The Chinese teachers expressed the importance of providing concrete experiences for the students before they move to abstract and symbolic methods when expressing mathematical ideas. The students were encouraged to create word problems using toys before initiating symbolic notations such as “+”, “-”, and “=”.

Another study, conducted by Baker and Beisel (2001), tried to determine which of three approaches assisted elementary school aged children find the average of numbers. The researchers also studied which of the three methods aided the students in knowledge retention. Three different groups were taught the concept of arithmetic average. One group was taught symbolically, a second group received visual scaffolding, and the final group received manipulative support. It was found that students with the visual scaffolding and manipulatives had a higher conceptual understanding. Students with the visual understanding retained the information the longest compared to the other two groups. Therefore, visuals and manipulatives are common tools to teach a new concept to students in the elementary classroom, and this may be applied to other subject areas.

Manipulatives are most common in the mathematics content areas within the elementary classroom. All of these studies in the mathematics classroom present a theory into practice basis for research in the support of manipulative usage.

Manipulatives in the science classroom are often used in order to teach students how to make effective observations. Students are often taught how to describe the necessary physical

descriptions of different natural objects with the use of manipulatives. Carrier and Thomas (2008) described how to utilize buttons in the science classroom to teach both observation and classification to students. The children were provided with several different buttons and they were instructed to note different qualities of the buttons and sort them according to their own rules. Krantz (2004) expressed the importance of using the 5-E learning cycle (engagement, exploration, explanation, elaboration, and evaluation) in the science classroom to teach interaction with different “slime” substances. Through physically manipulating substances, the students were able to compare and contrast different gooey substances. Manipulatives in the science classroom provide opportunities for inquiry, exploration, and observation.

The social studies content area refers to manipulatives often as artifacts. Artifacts are defined as any material object left by any society which has existed in a past or present time period (Pershey, 1998). They include pictures, period objects, and newspaper articles. Properties of artifacts include “history, material, construction, design, both intended and unintended function” (Pershey, 1998). Through artifact analysis, the students are usually taught how to make inferences based on the artifacts presented in the social studies classroom. These inferences allow students to better understand how people lived their daily lives from other time periods and cultures. Artifact analysis also allows students to “handle history” by looking at and interacting with manipulatives in their social studies lessons (Pershey, 1998). The usage of political buttons in the classroom was described by Palmer, Dyan, and Davis (1996). Teachers would collect buttons from different political parties from past or present political elections in order to teach students about different political slogans. Another more personal artifact for students to handle was described by Maxim (1997), in which students created their own time capsules. The creation of these capsules allowed students to understand how objects they use in their daily lives are a part of their own history. Finally, Gardner (1997) explained how to teach students archaeology techniques in upper-elementary social studies. Students looked at artifacts from different time periods relevant to the classroom social studies content. Then, they were taught how to make assumptions about how and why the objects were created and used. The students may also be able to compare and contrast their daily lives with others from another time or culture based on the artifacts presented in a social studies lesson.

Manipulatives in writing research often involve students in early childhood education (Rowe, Fitch, & Bass, 2003). Toys may be used to develop stories by students with the use of

small figurines to represent characters for a future text. The manipulatives have been found to assist with the development of dialogue in the students' stories (Rowe et al., 2003). Research focusing on narrative writing supported the usage of providing students input to "focus their attention" on the formulation of writing compositions and executing the writing task (Verheyden et al., 2010). Other researchers encourage students to use environmental resources and experiences to enhance their writing (Dyson, 2001). Students are viewed as "active participants in varied kinds of communicative events" as stated by Dyson, and these beginning writers should be provided with opportunities to incorporate these experiences into their writing practice.

Although there are numerous studies praising the usage of manipulatives in the elementary classroom for various content areas, there are also counter arguments against the usage of manipulatives. One review of these studies explained how manipulatives may not assist all students in all cases (McNeil & Jarvin, 2007). Manipulatives are also quoted as being "nontransparent", in that students must develop an understanding of the concept over time and manipulatives are not an educational panacea. One study presented a case in which manipulatives were both helpful and harmful when teaching students about money concepts (McNeil et al., 2008). In the first experiment, fourth grade subjects were divided into an experimental condition and control condition were given word problems involving money. The experimental condition was provided with "bland" bills and coins to help solve the word problems while the control condition was not provided with any form of bills while they were solving the word problems. It was found that students, who received the bills and coins, got more incorrect answers when compared to the control condition. In a second experiment, fifth-grade subjects in the experimental condition were provided with "perceptually rich" dollars and coins to help solve word problems involving money and the control condition did not receive the bills and coins. The students' errors were less-likely to be conceptual errors even though there were more errors found in the responses by the experimental group for the second experiment. Two significant findings were that "bland" objects when compared to "perceptually rich" objects, which were more relatable to students, were not helpful in assisting students in solving money-related word problems. Students also were less successful in utilizing manipulatives in an assessment situation to develop a correct answer. Instead, students who were in the control condition and used algorithms in order to solve problems were more successful.

The overall caution of this literature is to ensure that manipulatives will truly assist students in learning the content of the lesson while interacting with the provided materials. Teachers should also ensure the students are thinking critically during the lessons involving manipulatives, and they are not used to make the lesson just more “fun” (McNeil & Jarvin, 2007). Manipulatives must be utilized in an explicit and effective manner repetitively over time in order for students to gain the maximum benefits from this educational strategy, based on child development theory.

In totality, the literature has provided several uses for manipulatives in the elementary and secondary classroom. While some literature does express concerns in the use of manipulatives in the elementary classroom, there are several benefits found in several of the content areas.

Visuals in Writing and Other Content Areas

Research has presented how visuals may assist students with creative writing activities and offer an alternative writing activity when compared to traditional writing assignments (Richardson, Sacks, & Ayers, 2003). Students will also respond to visuals found in entire texts in order to create their own writing pieces (Pantaleo, 2009). Utilizing visuals to assist writing and reading activities may be used at any grade level. Research has found that students will model linguistic and narrative structures they are exposed to in the reading classroom to produce their own work which is based on the sociocultural theory of writing (Pantaleo, 2009). Therefore the students’ responses from the writing prompts in this study may be affected by previous exposure to similar literature from classroom or home experiences.

Vincent has also shown how students determined to be visual learners by their teachers will benefit from visually rich technology to supplement their writing lessons. Students who were able to learn within the visually rich environment were able to format their writing, add details, and increase the linguistic complexity to their stories (Vincent, 2001).

Visuals are also common in several subject area studies in the elementary classroom. Nelson (1997) described how to use “picture cards” in social science education to display different war periods in American history for upper elementary students. The “picture cards” were generally effective for boys, in that the students were able to actually “see” how people fought wars during different American time periods.

Overall, research has driven the writing curriculum in American schools over the course of several years. The overarching framework presented by Piaget and Vygotsky takes into consideration children's' developmental and social needs. Standardized assessments were developed to ensure students were receiving proper instruction in the writing discipline. Teachers attempt to incorporate best practices and evaluations for students in the writing domain. Finally, manipulatives and visuals are utilized in the elementary classroom as a scaffold for instruction in several content disciplines.

CHAPTER III METHODOLOGY

The pilot study was designed to determine how the use of manipulatives affects student responses to given writing prompts. The writing prompts were designed to give students a familiar topic to describe. The writing prompts were also designed to become more abstract throughout the treatment in order to determine whether or not students provided with manipulatives would produce more descriptive writing responses when compared to students who received similar writing prompts without the manipulatives.

The chapter provides a description of the subjects, teachers, school setting, writing prompts, writing prompt assumptions, other data collection instruments, procedures followed to gather and analyze data, protection of subject privacy, and other ethical concerns taken into account during the research.

Design of the Study

The pilot study employed a mixed methods research design. In terms of the use of qualitative methods, the researcher was interested in the intricacies of the descriptions provided by the participants in the writing responses. Quantitative methods were used in the, itemized trait analysis, holistic scoring, and lexical density analysis.

The researcher was interested in revealing any underlying trends in the students' writing in general and with regards to gender. The qualitative research also takes into account how the participants in the treatment group used the provided object or picture to help them stimulate ideas for responding to the writing prompt.

The researcher also utilized quantitative analysis methods in order to determine the students' overall writing abilities and how these abilities affected their writing responses. A holistic scoring rubric was developed to assess the overall effectiveness of the students' writing response. The holistic scoring rubric was developed specifically by the researcher and was peer reviewed by another teacher for accuracy purposes. The rubric was created to reflect four specific writing traits which would be easily assessed within a short writing response. Trait analysis embedded within the holistic scoring rubric was utilized to determine if participants were able to excel in specific writing skills through the writing prompts. Finally, the lexical

density was analyzed to determine the levels of content word versus non-content word ratio in the students' written responses.

Sample Selection Method

The sample was a convenience sample. The researcher chose to conduct the research study at a local charter school due to its affiliation with a local university. The two fifth grade classrooms involved in the study did not have any previous research events taking place; therefore the researcher was allowed to conduct the study in these two classrooms. The students who were members of the classroom were automatically asked to become participants in the study because of their classroom membership.

Student Subject Participation Procedure

Every student who was a member of the two classrooms participated in the study as justified by the university review board. If students did not meet all of the following requirements, their data were excluded from the study. The requirements included: (1) returning a signed consent form from a parent/guardian before the submission of the final writing prompt, (2) signing an assent form before the submission of the final writing prompt, and (3) providing a complete data set with all four writing responses submitted. The majority of the students met all of the requirements and only five students (three from the comparison group and two from the treatment group) out of the forty-eight total were excluded from the study. Only two children did not return a consent form, and the other three students did not have complete data sets due to absences during the data collection. All of the response forms from the three excluded students were destroyed before data analysis took place.

Exclusion of the students without a consent form was not necessary as required by the institutional review board. The research justified the writing assignments as general classroom practice which would not harm or affect the student's grade. The writing was then viewed as extra practice for the student to benefit from during the classroom time.

Before the first writing prompt was given by the researcher, there was one whole class meeting with the experimental and comparison group. The researcher explained the project to the students by informing them about the different writing activities in which they were invited to participate. The participants were first informed that all of their personal information would be

private, and nobody would know what they wrote in the writing activities. The students were told that they would be able to participate in responding to four writing prompts given by the researcher. The participants were encouraged to participate because the writing practice may help improve their scores on later writing activities and projects. But, they were informed that the writing activities would not affect their grades in any way. The students were also informed that their grade would not be affected if they choose not to participate in the study. The participants were told they may drop out of the study at any point if they wish. Finally, the researcher stated that the students may become frustrated when they are participating in the writing activities, but the feeling is normal and they should not become worried. The researcher then handed out the assent form and read the form to the students before they were asked to sign it if they wished to participate. The teacher participants held onto the assent forms until all of the data was collected by the researcher.

Writing Prompts

The table 3.3 displays the writing prompts delivered by the researcher to the participants.

Table 3.3

Descriptive writing prompts

	Treatment group	Comparison Group
Writing Prompt 1	In front of you is an apple. You may taste, touch, smell, and look at the apple. You may use this to help you write. Now, write to describe any experience you had with an apple. (Labeled 1 A)	Close your eyes and imagine an apple. Now, write to describe any experience you had with an apple. (Labeled 1 B)
Writing Prompt 2	In front of you is a paintbrush. You may touch, and look at the paintbrush. You may use this to help you write. Now, write to describe the paintbrush, and any real life experience you've had with a paintbrush. (Labeled 2 A)	Close your eyes and picture in your mind a paintbrush. Now, write to describe the paintbrush, and any real life experience you've had with a paintbrush. (Labeled 2 B)
Writing Prompt 3	In front of you is a picture of the effects of wind. You may look at the picture. You may use this to help you write. Now, write to describe wind and any real-life experience you've had with wind. (Labeled 3 A)	Close your eyes and picture in your mind wind. Now, write to describe wind and any real-life experience you've had with wind. (Labeled 3 B)
Writing Prompt 4	Close your eyes and think about the word equality. Now, write to describe equality any real-life experience you've had with equality. (Labeled 4 A)	Close your eyes and think about the word equality. Now, write to describe equality any real-life experience you've had with equality. (Labeled 4 B)

The students in the treatment group received the necessary manipulatives (objects or picture) which corresponded with each prompt at the same time they were given the writing prompt. The manipulatives distributed to the individual students with each writing prompt are represented in Table 3.4.

Table 3.4

Treatment Group Manipulatives

Writing Prompt	Provided manipulative (object/ picture
<p>In front of you is an apple. You may taste, touch, smell, and look at the apple. You may use this to help you write. Now, write to describe any experience you had with an apple.</p> <p>(Labeled 1 A)</p>	<p>Apple slices, three per student</p>
<p>In front of you is a paintbrush. You may touch, and look at the paintbrush. You may use this to help you write. Now, write to describe the paintbrush, and any real life experience you've had with a paintbrush.</p> <p>(Labeled 2 A)</p>	<p>One paintbrush per student. Each brush had a wooden handle and brown bristles.</p>
<p>In front of you is a picture of the effects of wind. You may look at the picture. You may use this to help you write. Now, write to describe wind and any real-life experience you've had with wind.</p> <p>(Labeled 3 A)</p>	<p>A picture of cotton flowers and grass arched due to a breeze. Each student received one picture each.</p>
<p>Close your eyes and think about the word equality. Now, write to describe equality any real-life experience you've had with equality.</p> <p>(Labeled 4 A)</p>	<p>N/A No manipulatives were provided for this writing prompt.</p>

Writing Prompt Assumptions

The researcher thoughtfully chose these four objects and concepts based on the participants' personal experiences with the different writing prompts. The researcher assumed every student subject had had an experience with an apple because they were often available in the cafeteria of the school where the study took place. The art teacher for the participants was also interviewed to ensure that all students involved in the study had experience painting in her

extracurricular class. Even students in a “pull-out” program had experience using a paintbrush in the general classroom; therefore they would be able to relate to this object based on something they had done in the school. It was also assumed the students had had personal experiences with wind just based on their daily experiences. Finally, the researcher assumed the students may have experienced equality either in the classroom where the teacher treated the students fairly, learned about the concept in social studies or mathematics, or on the playground with other students.

The researcher designed the writing prompts in order for the students to have a comfortable experience writing about objects or concepts with which they were familiar due to interacting with them on a regular or semi-regular basis. But, as a control, the researcher discretely chose objects that were not readily visible or available in the classroom. This was done to protect against contamination of the comparison group.

Data Collection Procedure

A specific routine was used for the administration of each writing prompt for both classes where the study took place. First, the researcher passed out the writing prompts and response pages to each student. If the students were in the treatment group, they received objects or a picture for the first three prompts. The students in the comparison group only received the writing prompt and response page. While the response page was face down on the students’ desks, the researcher read the directions and then the writing prompt for the students to respond to. After the prompt was read, the students were instructed to turn their papers over and they would have a total of fifteen minutes to compose a response to the prompt. If any student needed another sheet of paper for the response, it was provided by the researcher and then stapled to the original page.

After ten minutes of writing time elapsed, the researcher reminded the participants that they had a few more minutes to put their final ideas on paper and do any necessary revising. When two minutes were left, the researcher asked the students to complete their final thoughts. Finally, time was called after fifteen minutes of writing time.

Once the students finished writing, they answered three questions on a four-point Likert scale on the back of their response paper. The scale was rated from strongly agree to strongly disagree. The three questions included: I enjoyed writing about the topic, I felt comfortable describing the topic, and I had many ideas about the topic. Students simply circled their answers

for their responses. After the analysis of the Likert-scale responses, these responses were thrown out of the study because all of the students responded with “strongly agree” and the validity of these responses was questionable.

The response papers were collected by the researcher after the students finished writing and responding to the questions on the back of their response sheets. If the students were in the treatment group, the researcher also collected the objects or picture from the students as well.

Subject Privacy Procedures

The students’ names on the writing response papers were instantly blacked out and replaced with a corresponding number to protect the students’ identities. This process was done to ensure the privacy of the students and reduce bias in the researcher’s interpretation of the writing responses. All of the students’ names with the correlating numbers and personal information were kept on a locked spreadsheet on the researcher’s computer. After all of the responses were collected from the students and the names of the students were replaced with numbers, the spread sheet was permanently removed from the researcher’s computer. No other individual had access to the data which linked the students’ names with their randomly assigned number.

Qualitative Analysis Procedures

Several qualitative analysis procedures were used examining data extracted from the student responses. The various procedures are described below

Lexical Density Content and Analysis

The written responses were analyzed for lexical content and density. A word count was taken twice for each response by the researcher, in order to determine both the total number of words used by the participants in their writing responses and the total number of descriptive words/phrases in each writing response.

The word count was used to assist in determining the descriptive word ratio. The total word count was compared to the total number of descriptive phrases in order to create a descriptive word/phrase to total word count ratio. The total word count did not include any

phrases which were repeated within the same writing responses. But, if the writing response repeated the same singular word, it was counted.

A count for descriptive words written specifically about the object in the writing prompt or any experience a student had with the object from the writing prompt was taken. A total count was finally taken for the total number of descriptive words in the student subject's writing response. These three counts (object descriptions, experience descriptions, and overall descriptions) were taken to help determine the lexical density of the writing responses submitted by the participants.

Any repetition of descriptions, sentences or phrases were not counted in the total word count, total number of descriptive word count and object/experiences descriptive word count. Descriptive words included: adjectives, adverbs, and descriptive phrases. If the student included a descriptive phrase such as an: analogy, metaphor, or idiom it only counted as one descriptive token even if it contained several words. Articles and prepositions were not included in the descriptive word/phrase count because they did not offer any type of modification to the objects and/or actions they were describing. Therefore, if a student said "the cloud is as soft as a cotton ball" the phrase would be counted as only one descriptive token even though there was a comparison of the cloud being soft like a cotton ball containing the descriptive words "soft" and "cotton". The justification for the descriptive phrase counting as only one token when compared to the singular descriptive word was a decision made on the part of the researcher in order to ensure there would not be an influx of descriptive scores for specific student populations. The concern was that student populations who tended to use higher level descriptions may have inflated scores when compared to their classmates.

If there were any disputes about the part of speech of a word, or whether a descriptive word was modifying the object/concept or experience, a second party was brought in for a second opinion. The second party was only consulted once, and the word in question was not essential in composing a lexical density analysis.

If the student's overall word count was high, but with a low level of descriptions then the lexical density was low, whereas, if the word count was low with a high level of descriptions, the lexical density was considered high.

Itemized Assessment

Through the development of the scoring rubric, student subject written responses could be analyzed in different writing categories in order to determine if any trends existed in certain writing domains. The student response papers would be analyzed by viewing how a student progressed in their writing skills as the writing prompts became more abstract. The response papers could also be analyzed to compare the two classes in terms of ability of composed descriptive written responses based on whether or not they were provided with manipulatives order to stimulate ideas for writing.

The itemized assessment broke down the holistic scoring rubric by four criteria including: topic/content development, descriptions/word choice, organization, sentence structure. The former two criteria could easily be impacted by whether a student was provided with an object/visual in order to stimulate ideas for writing. This is because they may have been able to be more descriptive and develop their ideas more accurately when compared to a student subject without an object for writing support. The latter criteria involve more basic writing practices which define more general skills. The comparison of the two former and latter criteria may provide the researcher with an interesting dichotomy between the experimental and comparison groups if there is a great effect on how the provided manipulatives affected student writing responses.

Holistic Writing Assessment

After all of the student names were replaced with numbers, and all word counts were taken (both total word counts and descriptive word counts), the papers for the two classes were shuffled together. The random order of the papers created a randomized stack to be assessed holistically by the researcher. All of the papers were therefore scored in a random order using the same holistic scoring rubric.

The holistic rubric was developed by the researcher and based on scoring guidelines from several dissertations and state writing guidelines. Please see appendix E, for the rubric used in the study. The responses were assessed for these criteria: topic/content development, descriptions/word choice, organization and sentence structure. These were the same criteria assessed in the itemized assessment. Each of these criteria was assessed within five different categories written in a continuous domain. The higher the quality of the response within one of the criteria, the higher the rating the student received in that particular writing domain.

Each of these criteria was assessed within five different categories, with the top category receiving five points and the lowest category receiving one point. The purpose for developing a point system was to create a quantifiable data set for future comparison and analysis. A response which displayed all of the necessary categories within each of the criteria received the highest possible score. Each criterion was set on a five point scale, with a five being the highest score for the response. The students received a score for each category and a total score on the holistic rubric, with 20 being the total number of points possible.

Gender Analysis

The teachers provided the researcher with information about student demographics. The researcher received demographics regarding students' ethnicity and the names of students on individualized education plans. Gender was provided and coded with the student's writing responses to be further analyzed. The students with diverse backgrounds and learning disabilities were not analyzed because the number of students with these diverse needs and backgrounds were not significant to the study due to the small population. These students from diverse backgrounds were not omitted from this pilot study.

Gender was analyzed using a t-test in order to determine whether male or female students wrote more descriptive written responses. Student's level of writing, length of response, level of descriptive response, and lexical content were analyzed according to the student's gender in both the experimental and comparison group. The gender of the students was also used in the quantitative analysis of the descriptive word ratio and in the qualitative analysis utilizing the coded description themes.

Standardized Writing Scores Analysis

The teachers involved in the study also provided all of the student participants' fourth grade writing scores on a standardized writing measure. In this assessment, the students are provided with a narrative or expository writing prompt. They are required to plan, and formulate a writing response. Finally, they must edit their work in forty-five minutes. These standardized writing scores were rated on a six point scale, with level three and a half being passing and level six as the highest score possible according to the state standardized measures. These standardized

writing scores are based on a state-provided holistic scoring writing rubric by two different graders. Generally, students will submit a five paragraph essay for these writing assessments.

Qualitative Analysis Coding Procedures

Throughout the reading and re-reading of the participants' writing responses, three main categories emerged from in-depth analysis. These categories were progressive in nature where there was a lowest and highest level of writing response. The participants' writing samples were then coded and separated into three groups based on the writing content of their responses.

The three groups were progressive in nature, ranging from concrete descriptions of objects to descriptions reflecting more abstract understanding. The categories developed were, concrete response, personal/experiential response, and universal response. Within the personal response there were two sub-categories: personal narrative response and narrative nonfiction response.

The concrete response category involved a paper which only reflected general physical descriptions about the object or concept within the writing prompt. The student subject only used descriptions which related to the object or concept in very concrete forms, often utilizing the senses for descriptive phrases. The writing may have included some metaphors, idioms, or analogies, but they only directly related to the object or concept.

The experiential/personal response category included response papers with descriptions of the object or concept presented in the writing prompt *and* a personal experience related to the use of the concept or object. The personal response had to include a *past* experience the participant or another main character in the participant's story. The personal/experiential response could not involve a "current" experience the student subject was having with the object or concept being described. The purpose for this previous response was to draw a line between any participants who may write elaborately only about the object placed in front of them as compared to those who took the next step to describe another previous experience in their writing response. The written responses were in the past tense and included activities and deeper understanding of how or why to use the concept or object in the student's everyday lives.

The student who included these personal stories may have gone into great detail about the setting, other characters and events with minimal inclusion of the object or concept from the

writing prompt. The students who included more personal narrative elements fell into the personal narrative subcategory of the personal response paper. If these papers were further developed and the participants were given more time to elaborate, their responses would fit a longer narrative response.

The student subject may have only used some narrative elements in their writing response, and the majority of their writing was about the actual object. The writing was generally more factual with fewer narrative elements about the plot or setting of a personal story. These student response papers fell into the narrative nonfiction subcategory of the personal response paper.

The final category is the universal response, the student response papers which included universal understanding of the concept or object in the writing prompt. The writing included descriptions which have been experienced by others outside of the student's personal experience. Rather, the responses reflected other people's experience(s) with a particular object. There were often in-depth concrete descriptions of the object as well. There often was a setting and characters involved in the universal response papers to give the reader an understanding of the story's background. These responses could be narrative or factual in nature.

If there were a case in which a student began at a lower progressive code at the beginning of their writing response and then moved towards a higher progressive code, they were always coded for the higher of the two different codes. For example, if a student subject began their writing response only describing an object in front of them or an object they had used in the past only using concrete terms, but then in a subsequent paragraph wrote about a previous experience using that object, they would receive an experiential code for their total work. The researcher would make a note on the students' writing response about the initial usage of a concrete writing response moving towards an experiential response on the paper.

Trends for the treatment and comparison group for the coded written responses were analyzed for differences involving whether the students would provide more concrete or abstract responses if an object or picture were present during the writing activity. Individual student subject trends were analyzed. Finally, trends for student subject coded written responses for the different prompts were analyzed.

Researcher Observations

The research took down field notes based on the direct observations of the students and teachers involved in the study throughout the entire implementation of the study. During the distribution of the writing prompts, implementation of the writing response treatment, and collection of writing responses, the researcher wrote field notes about various topics regarding the participants' observable actions. Students were quoted if there were questions or other vocal utterances. The students' demeanor was also noted. The researcher took note of the student subject's abilities to get started and complete their writing responses. These field notes were collected in order to determine any inconsistencies in student responses and provide a description of the classroom environment during the writing response period.

CHAPTER 4

DATA ANALYSIS

This study incorporated both qualitative and quantitative analysis methods in order to determine the usefulness of providing manipulatives for students who are responding to writing prompts with brief writing responses. The writing topics became more abstract in nature as the treatment progressed for both the treatment and comparison groups. The first section of this chapter provides a description of the school environment in which the study took place. . Descriptive statistics of the student sample and the two teacher participants are then included. The second portion of the chapter contains both quantitative and qualitative analysis of the collected data.

Description of the School Environment

The school involved in the study is a medium-sized developmental research school located in the Southeastern United States. The school has students ranging from kindergarten to twelfth-grade. The school fosters and encourages action research and experimental research from the teachers. The entire school is separated into elementary, middle and high school levels by different buildings for the different school levels. Only one media center/library, front office, and cafeteria is shared by all students in the different grade levels. All students in the school have been involved in experimental research and action research throughout their educational careers. The population dynamics of the school has 49.2% female students and 50.8% male students throughout the entire K-12 student population. Twenty-three percent of students in the school are labeled “economically disadvantaged” according to the school improvement plan. Therefore, the school is labeled Title I according to the state’s measures. Only 9.6% of students are disabled students and 1.5% of students are English speakers of other languages. A higher population of English speakers of other languages exists in the elementary school level.

The developmental research school is funded dually by a university system and the state. It is labeled as a charter school with limited enrollment. The school has been graded an “A” school for the last eight years, according to the standardized rating system in place by the state’s

measurements. Students are required to pay a minimal fee in order to attend the school. The parents of the students also have to apply to attend the school. Finally, the students who attend the school are pulled from three different local counties.

Description of the Subjects

The description of the subjects includes both teacher and participants involved in the entire study. Both samples from the treatment and comparison group are described below.

Student Participants

A total of forty-three participants were involved in the present study. Twenty-two students were in the treatment group and the other twenty-one students were in the comparison group. The comparison and treatment groups were intact fifth grade classes with two different teachers. The students in both groups had all of their core subjects (reading, writing, mathematics, science, and social studies) taught by the same teacher. There was not a case of departmentalization of subjects in this school's fifth grade program.

Table 4.1 describes the basic student demographics of the two groups:

Table 4.1

Basic Demographics of Participants

	Treatment group	Comparison Group
Males	8	14
Females	14	7
Total Number of Students	22	21

All forty-three participants met specific requirements. They turned in a parental permission form before the fourth writing prompt was dispensed by the researcher as required by

the FSU Institutional Review Board (IRB); signed an assent form; and completed a data set including writing responses from all four of the writing prompts. If any of these requirements were not met by a participant, he was removed from the study.

The students involved in the study have been members of the intact classrooms for the entire school year. Most of the participants involved in the study have been attending the same school for their entire school career, as there is little transition and mobility of the participants. Only two participants involved in the study were new to the school in the year the study took place. Therefore, a classroom community was easily developed, as the students involved were familiar with their classmates.

The ethnic demographics of the participants were not taken into consideration for data collection, but the classrooms were considered to be moderately diverse. Averages of twenty percent of the participants from both classrooms were considered from diverse (non-Caucasian) backgrounds. The student sample within the two classrooms was generated to reflect the ethnic composition of the state in which the study took place. Only two total participants spoke a language other than English at home and were considered ESOL (English speakers of other languages) students. One student from each group was from an ESOL background.

The participants who received academic accommodations were also recorded and taken into consideration when comparing the two samples. In the treatment group four participants were labeled ESE (exceptional student education) and one student was labeled Title I. In the comparison group, one student subject was labeled ESE, one student subject was labeled Title I reading, and three participants received accommodations for speech and language.

Table 4.2

Number of participants receiving accommodations in the two groups

Speech/ Language	Treatment⁰	Comparison³
Total number of students	group	Group
ESOL	2	6
ESE	1	1
Title I, Reading	0	1

Table 3.2 summarizes the ESOL and accommodations demographics for both research groups.

The comparison group had three times the number of students who were labeled as Title I, reading or speech/language when compared to the treatment group. The number of participants who required extra accommodations in the area of reading and language could impact the results from the data when analyzing the two classroom groups as a whole.

The researcher was not informed of the names of participants who received special accommodations or were labeled ESOL. Only the total counts of participants from each classroom with these accommodations or other labels were provided. The demographic information of the participants taken into consideration for this study was gender, due to the lack of participants with other demographic qualities.

Teacher Participants

Both of the teachers involved in the study were willing to allow the researcher to come in for the entire writing time block (fifteen minutes) on four different days in order to collect data. Teacher A requested to have the treatment group, which left teacher B's students to the comparison group.

Teacher A instructed the treatment group. She has five years teaching experience, and this was her first school year teaching the fifth grade. She previously taught fourth grade and she moved up with the same class of students during the school year the experiment took place. She received her undergraduate degree in special education and her master's degree in elementary education. Both degrees were earned from a state university institution. She is currently working on her Ph.D. in English Education. Teacher A was also interviewed by the researcher about her current writing instruction practices. She exclaimed, "I enjoy teaching writing in conjunction with other subjects in order to have students think deeper about the subject matter. I also believe that creative writing opportunities are very important in the classroom." These quotes and observations were based on field notes taken by the researcher.

Teacher B instructed the comparison group. She has four years of teaching experience, and this is her first year teaching fifth grade as well. Her previous teaching years were spent teaching in a third grade classroom at the same school. The year the experiment took place was her first experience working with the students in her class, as she did not move up with her

previous students when compared to Teacher A. She earned her bachelor's and master's degrees from the same major state university system. When interviewed, Teacher B expressed an "inability to take enough time to teach writing in the classroom." She believes the students "enjoy writing, but they do not get enough practice because of our current class schedule." She also tries to incorporate writing, but she "doesn't have the time to complete the entire writing process with all of the writing projects students are assigned."

The teachers were both required to have fifteen minute writing periods daily in their fifth grade classrooms. These teachers expressed how it was normal to have only fifteen minutes a day devoted to writing instruction unless writing was incorporated into other subject areas.

Both teachers involved in the study taught in the same school for their entire teaching career. They also moved up grade levels to teaching fifth grade in the same school year. Neither teacher has a tenured position at the school currently. Finally, both teachers are actively involved in supporting research endeavors at this school.

While two intact classrooms and two teachers were involved in the study, in no way did the teachers conduct any of the research activities. The teacher's role in the study was to collect necessary consent and assent forms from the students and place in a provided file folder. The teachers kept a list of the participants who turned in the consent and assent forms for the study. The consent and assent forms were given to the researcher after all of the writing prompts were administered and data collection had ceased.

Therefore, teacher demographics have been provided to show a comparison between the two fifth grade classroom environments as designed by the individual teachers. While the teacher participation was minimal in the data collection process, they did provide the classroom time and space in order to collect the necessary data from the participants.

Research Methods

The data analysis section is divided into two parts: qualitative analysis and quantitative analysis in, which different components of the students' responses are analyzed. The qualitative analysis describes the nature of the students' writing responses for both the treatment and comparison groups for each of the writing prompts. The analysis also describes the coded descriptive themes and provides samples of student responses to give evidence of specific characteristics found within the three different levels of the descriptive themes. Gender is also

taken into account in the qualitative analysis by comparing stylistic trends between a randomly selected sample of the male and female participants. Finally, issues discovered within the data collection phase of this research which are highlighted through the qualitative analysis are discussed.

Previous standardized assessments are also described within the qualitative analysis section. The spread of the scores in the standardized assessments were not significant enough to determine any findings to be studied with quantitative methods. This finding was based on the lack of spread in the standardized scores. Most of the participants involved received an average score with only three total participants scoring above average. Therefore, only trends are analyzed by comparing students' standardized scores from the previous years and their coded descriptive themes.

The qualitative analysis also provided informative descriptions based on the researcher's observations of the participants before, during, and after the data collection phase of the study. The general insights noted describe the students' behaviors and general writing practices while observing the treatment and comparison groups. Finally, the observations also described the classroom setting of the two different writing groups.

The quantitative analysis section analyzes the findings based on the holistic scoring rubric, itemized trait analysis, gender analysis, and lexical density. These numerical scores developed from the holistic scoring rubric were analyzed with descriptive statistics in order to compare both of the student groups involved in this study. The data were analyzed in order to determine if students who were provided with manipulatives scored relatively higher on the holistic rubric when compared to the other group.

The quantitative section also utilizes descriptive and inferential statistics when analyzing the descriptive word ratios for each of the writing responses from both the comparison and treatment groups. Finally, the quantitative section compared how the males and females differ in their descriptive word ratios for each of the writing prompts through the usage of descriptive and inferential statistical analysis.

Qualitative Analysis

In the qualitative analysis, student writing responses were coded and placed into one of three progressive writing categories based on the overall content of their work. These writing

categories were referred to coded descriptive themes. As described previously, three themed categories were entitled concrete, personal/experiential, and universal responses.

The comparison group did not have manipulatives (objects/pictures) in order to stimulate ideas for their writing response while the treatment group was provided with manipulatives. The student responses were coded “concrete” if the student did not refer to a personal experience or a universal experience in order to describe the object or concept in the writing prompt. The paper was considered to be a concrete response if there were only descriptions based on the physical attributes of the object or concept. In the case of the fourth response paper, the requirement was to describe a concept embedded within a single word. The word did not have any physical attributes to describe. Therefore, if the student response only involved comparing one idea to another idea, for the fourth writing prompt, the paper was also considered to be in the concrete descriptive coded theme. The rationale for placing the comparison of two basic ideas as concrete was due to the student not relating a personal or universal experience relating to the abstract concept; rather they were only using a simple comparison of two words.

If a participant wrote a response which contained a personal event which took place in the past, his response was coded as a personal/experiential response. The student may describe their personal response in any way as long as it took place before the writing and not during the actual writing task. The student may write first in a concrete form by describing the object/concept, but if they moved towards telling a personal narrative, they were then moved to the personal/experiential condition.

Finally, if a student responded with a worldly experience or with a branch of universal knowledge (one experience which was separate from their own personal experiences), they were coded as universal within the coded descriptive themes. These responses tended to have content area knowledge embedded within the student’s writing.

The first section of qualitative analysis attempts to answer the first and third sub-questions posed in the study:

Sub-question one: If the participants were provided a manipulative related to the writing prompt, would they tend to describe the manipulative in their writing, or would they use the manipulative as a guide to generate ideas?

Sub-question three: If participants were never provided with manipulatives to assist in stimulation of ideas for their writing, would they still compose a response with the same level of

description about an object or experiences with the object in their writing responses as those who did receive manipulatives?

The first section responds to these sub-questions by examining student subject's writing responses through examples and departmentalizing these different writing samples into three coded descriptive theme categories.

Response One

Due to the flaws in the original writing prompt, writing response one was only used by the researcher as a baseline writing assignment. These flaws were based on the word "imagine" contained in the first original writing prompt which led the participants to create "fantasy-like" compositions. The analysis of the treatment and comparison group responses is discussed below.

In the treatment condition, the participants in general focused on the apple slices in front of them in order to respond to the writing prompt. Several students used their senses of taste, touch, smell, hearing, and sight in order to describe the apple. Responses were rich in detail where the apple was described as: "sticky", "wet", "cool", "cold", "red", "green", "sweet", "crunchy", "soft", and "sour." One particular student's rich description involved an in-depth observational response of how the apples changed color over the writing period. The student subject said, "If you look at it for a while the part nearest to the core will turn an orange-brown color." The student response is clearly focused on the apple in front of them, so it is a model concrete response for the first writing prompt.

About half of the participants in the treatment group wrote a response which moved into the personal/experiential response coded description theme. These student response papers usually referred to eating apples at home for a snack. The participants included both characters and a setting for their personal narrative. One student wrote, "One day I was hungry so I grabbed a snack off the kitchen counter. It was an apple." Another wrote, "I eat apples for lunch on most days." Both of these students described a previous experience with an apple which moved them into the personal/experiential response category according to the criteria of the coded descriptive themes.

None of the participants in the treatment condition wrote a universal response according to the coded description themes criteria in the first writing prompt.

In the original writing prompt, the students in the comparison group were requested to “imagine” an apple in front of them. The word “imagine” may have cued the participants to create a fantasy narrative instead of using a personal experience to describe the apple. Most of the student response papers involved the participants telling a fantasy with the apple as a character, or prop in the stories. It was clear from the responses generated by the participants in the comparison condition that the participants were not able to separate the word “imagine” in the phrase, “imagine an apple in front of you”, with the concept of writing a fantasy. Therefore, the writing prompt was changed slightly after writing prompt one and the participants were requested to “picture in their mind” when used to write about the remaining objects or concepts.

The writing responses, for the first writing prompt, from the comparison condition were not analyzed further for content. Instead, they were only to be considered a baseline writing assignment for future reference.

Response Two

The second writing prompt requested the students to describe a paintbrush and any previous experience they had with a paintbrush. Participants in the treatment condition received a generic paintbrush along with their writing prompt to assist their generation of a writing response. The participants in the comparison condition did not receive a paintbrush, but they received a similar writing prompt.

The participants in the treatment group generally divided in half whether they used the paintbrush in front of them to make concrete descriptions, or if they used previous personal experiences involving a paintbrush in order to describe a paintbrush. Those participants who provided literal responses were very concrete in their descriptions and only focused on the object in front of them. The participants expressed how the “bottom is gold and the top is brown,” “this paintbrush feels rough at top of paintbrush and the other end with the tip of the brush feels like a soft furry hair ball...,” and “as I touched it, it felt soft, light, and hard.” These participants were able to provide very concrete response to the writing prompt, but they did not take the next step and incorporate a personal experience into their writing to describe any experience they had with a paintbrush.

Even though the “concrete” participants in the treatment group did not incorporate a previous personal experience in their writing about the paintbrush, it should be noted how rich the descriptions were about the paintbrush that was placed in front of them. The participants

were very capable of describing the visual aspects of the paintbrush through their sight and touch senses. A few students even used sound to describe the paintbrush by dropping it on the table and relaying the sound in their writing response. These descriptions included phrases such as “apricot gold paintbrush tickles my nose as I brush it across...it clicks as I let it go.” The previous example is a very rich description of a current experience which the student may be able to elaborate on to include a previous experience. It could be assumed the participants were writing about a very present and current experience they were having with the manipulative.

The other students in the treatment condition who provided an experiential response according to the coding response themes criteria, generally referred to painting in art class or receiving a painting set as a gift. These students had samples of both personal narrative writing responses and narrative nonfiction writing responses in the treatment group.

Personal writing responses from the treatment group involved a setting and possibly characters other than themselves as the main character in their narrative. One student expressed, “I was in a busy parking garage at FSU. In the back where my painting buddies and I painting a mural. I had a soothing variety of colors.” The student subject provided a descriptive setting *busy parking garage* and a main character *I* and secondary characters, *my painting buddies*. Then there was a continuing story of the action taking place. The writing example was a baseline example of expectations of student responses falling into the personal narrative subcategory of the descriptive coding.

Another student began writing with a rich description of the paintbrush in front of them, but then elaborated in order to include a personal experience with a paintbrush. The paper was coded as an experiential/personal writing response because the student subject moved to the next level of writing in order to relay more information. The student started with, “My brush is warm and cold at the same time. I have painted a picture before with paint. I think I painted my family.” Therefore the use of the object then stimulated the student subject to write about a past experience with painting.

Only one student subject in the treatment group gave a universal response to the second writing prompt. The student explained how, “They have a fuzzy tip with a piece of wood for plastic on the end. All you [sic] imagination is coming out of that little thing and on to a paper or canvas...Maybe it could belong to a great artist that enjoys painting...the tool could make you a great artist one day.” The student subject’s first sentence describes any paintbrush without

referring directly to the paintbrush they were given, in order to respond to the writing prompt. The student then moves to a more universal response by expressing how a particular paintbrush may belong to an artist. Therefore, the student subject is removing themselves from the writing response and projecting a story onto another character separate from a person narrative. The student did not mention himself; instead, only showed how a paintbrush could make the reader become writing a famous artist. The ability of this student to remove himself from a descriptive writing prompt and instead refer to the reader is a very complicated writing task and displays a higher level of sophistication in writing abilities, when compared to students who only describe an object placed in front of them or students who write about a past experience in a narrative form.

Slightly more than half of the participants in the comparison group used personal experiences in order to describe a paintbrush. These descriptions included both personal narratives and narrative nonfiction responses. Several of the participants in this group wrote about painting in art class in order to describe a paintbrush.

Narrative nonfiction writing responses in the comparison group from the second writing prompt often involved the mixing of colors and different painting styles learned in art class which was similar to the writing responses in the treatment group.

The other group of students in the comparison group used concrete responses in order to describe a paintbrush. The participants in these groups only used concrete descriptive terms and did not include a personal experience or a universal experience in their written response to the writing prompt.

Response Three

The third writing prompt given to participants requested them to describe the effects of wind and any personal experience they had with wind. The participants in the treatment condition received a picture of cotton plants and grass tilted half-way over to the left due to wind. The picture was chosen because it did not show “storm” type weather, instead showing plants being moved by wind. The picture was intended to stimulate ideas for responding to the writing prompt. Participants in the comparison group did not receive a picture but were still given a similar writing prompt requesting them to describe the effects of wind and any personal experiences they had with wind.

Most participants in the treatment group wrote a personal narrative response about an experience they had had while the wind was blowing. Most participants did not refer to the picture provided when describing wind.

Only one student subject in the treatment condition used a concrete description according to the coded response themes criteria in their writing response. The student subject directly described what was happening in the picture by stating, “Wind blowing plants and grass... the picture seems cold...the green grass looks slanted a little but not much.” The student was directly relating what was happening in the provided image to describe wind on cold days. Because of the student’s direct description of only the picture and not providing their own personal experience, the response was coded as concrete.

The participants who described personal experiences with wind did so effectively. Several students used words other than wind or windy such as “breezy”, “gust”, “hurricane”, and “tornado” and the wind was: “strong”, “powerful”, “scary”, “invisible”, “blowing”, and “cool.”

The personal experiences written about in the treatment group were generally about large storms the participants experienced in their personal lives. One student wrote, “Once when I was little there was a hurricane in my hometown.” Another student discussed how the “wind was blowing wildly and it was raining cats and dogs...” during a storm at their house. Both of these participants were discussing wind in a storm situation.

Other participants in the treatment group wrote about wind taking something away. For example, one student stated, “I was flying a balloon and the wind swept it up rite [sic] out of my hands.” A different student wrote about wind in that it “carried away our papers we were going to hand out.” So these two participants described how wind could be an acting force in their descriptive responses.

But, a few other participants in the treatment group expressed wind with a more universal understanding separate from their own personal experiences. One child stated, “Wind can blow thing [sic] from place to place...Wind is everywhere, it is in the North, East, South, West.” The student was responding from a universal and nonfiction perspective by including important facts about wind movement. One student expressed how “wind can reduce the temperature, knock things over, and tear things apart.” The understanding of wind reducing the temperature is an abstract and invisible science concept which would require more scientific knowledge. Another student subject responded, “The effects (of) [sic] wind is it pushes and pulls objects soft and hard

or heavy and light.” The student understood how to express what wind does in the outside environment without directly quoting a personal experience.

The majority of the participants in the comparison group used their personal experiences to describe wind as well. Several of these participants in the comparison group wrote about large storm systems in order to describe wind through their personal experience. Through researcher observations, these students recently completed large research projects about hurricane safety. This activity’s relation to the writing prompt may have influenced the writing responses.

Some of the students in the comparison group did utilize two or more concrete responses in describing wind. One student stated how they “dislike wind because in the winter you can’t even wash the car...wind is not a good feeling because it is cold.” The student only was able to describe wind based on their likes and dislikes of wind. The student may have moved towards a more personal experience if they were able to elaborate on a personal experience of washing the car while it was windy in the wintertime. Another student said that “wind is soft and gentle, the wind is breezy.” There were only basic descriptions of how wind may feel, but the student subject did not expand by providing a personal experience on wind.

Two students in the comparison group used a universal experience when describing the effects of wind. One student subject wrote a very organized response about tornadoes. The student’s response began by describing a personal fear of tornados by stating, “I am terrified of tornadoes for many reasons. One reason is they look really scary and the second reason is they are black.” But, a more universal response was then stated, moving the student into the third progressive universal category. The student described how “tornadoes are columns of wind that spin in a circular motion and sound like a train. The winds from a tornado can reach very high speeds.” The content-driven understanding of tornadoes moved the student to a higher understanding of the effects of wind.

Response Four

The treatment and comparison groups responded to the same exact writing prompt without manipulatives to stimulate any writing ideas for either group. They were requested to describe equality. Several of the participants used the word in the incorrect usage when they responded to the writing prompt as will be shown in the following responses. The incorrect usage

of the word is an indication of the participants not understanding the meaning of the word in the writing prompt.

The incorrect usage of the word equality was very common and the following quotes are passages describing this confusion on the part of the students. Examples are as follows: “When my friend fell I had a lot of equality and I helped him up”, “(t)he equality between me and the class is different...”, “(m)y sister and I are have equality to each other”, and “(m)e and my friends have great equality.” These are just a few samples from the entire collection of the writing responses to the fourth writing prompt. They all display a misunderstanding of general usage of the word equality. This factor should be taken into consideration during analysis of the student responses to the fourth writing prompt.

In both the treatment and comparison condition, there was a tendency to respond to the writing prompt by providing a personal experience or universal experience to describe the word equality. There were few students who simply stated equality was similar to another word such as “fairness” or “equal”. The student responses which only contained a synonym for “equality” were coded as concrete responses due to the lack of an experience to further describe the given word. Other participants in both conditions wrote a universal response to the fourth writing prompt.

One student in the treatment condition provided a response which was deemed off topic. The researcher was not able to determine how the writing response related to equality. It was assumed the student was unsure about the definition of the word equality and therefore wrote a response unrelated to the writing prompt. The writing response was coded as “other” because it did not fit into any of the other coded description themes categories.

A few of the participants used synonyms to describe the word equality. If a student only used a synonym, it was considered a concrete response according to the coded description themes criteria due to the lack of a past personal experience incorporated into the writing response or a lack of a universal experience description in the writing response. One sample expressed, “Equality means to me like getting even...that’s what equality means to me.” The student explained how equality was similar to the idea of “getting even.” Another student stated, “Equality kinda means like fairness, I’m sorta new to this word.” The student subject did not understand the term and therefore only responded with a synonym which was already provided by the researcher. The student subject’s usage of the words “kinda” and “sorta” also display an

insecurity and lack of understanding when using this terminology. The participants who submitted a response similar to the previous samples were also coded as concrete due their usage of synonyms for “equality.”

Most of the students in the treatment group used a personal experience in order to describe equality. These students’ writing responses were coded as “personal/experiential” according to the coded description themes criteria. Several participants used examples from school and/or their home lives in order to explain how equality is present in their lives.

A weaker experiential response involved a student writing about a sister. The student stated, “When I think of equality I think of my sister because she thinks that what ever I have she has to have.” The student subject was able to relate the concept of equality between her sister having an equal amount of things. Another similar response took place at school for a student who explained, “When my friend fell I had a lot of equality and helped her up and then I took her to the clinic. She was brave enuh [sic] to ask for ice.” The student subject explained how equality is similar to helping others and taking care of them if necessary. These two samples were models for how writing responses may use an experiential response to describe equality.

Another student referred to an experience at an arcade with their mother. The child explained how the “coin thing took my money then I went to tell the manager...I told my mommy and she went to the manager.” The student subject never used the word “equality” in the response, but the experience response did meet the criteria for a personal/experiential response according to the coded description themes because the student subject provided a setting and other characters from a past personal experience.

Three students in the treatment condition provided a written response which was considered universal according to the coded description theme criteria. The first student response sample explains equality by referring to slavery. The student stated, “Equality is very important. Everyone should be treated with equality, but that doesn’t always happen. Take slavery for example. Slaves were not treated with equality...” The student subject was able to make a historical reference to explain equality which is a universal experience because the student subject did not personally experience slavery. Another example explains, “The civil rights, I learned about the civil rights how different color races are equal...it is so powerful nothing can break it.”

The last student subject who developed a universal response in the treatment group described the Declaration of Independence. The student subject explained, "...without it you wouldn't have the same friends you have right now...it allowed us to be equal to others." The student subject's understanding of social studies content is apparent in their writing response.

Participants who were members of the comparison group provided samples from all three coded description themes when responding to the fourth writing prompt. A few of the students in the group used a concrete response in order to respond to the writing prompt. One student subject explained, "Equality means the same amount." Another student stated, "I am always equality. Equality means fairness. I (am) [sic] equality because I am fair." Both of these student responses used words "same amount" and "fairness/fair" in order to express their understanding of the word equality and to the concept in a very fundamental and rudimentary way. Therefore, these students were coded as concrete, according to coded description themes criteria.

The participants in the comparison group received the personal/experiential code according to the criteria from the coded description themes. One student subject explained how they were "fair to everyone because when someone asks for something, I give it to them...They are fair to me to [sic]." The student subject initially used a synonym to explain equality but then was able to display the ability to use a personal experience in order to describe the abstract term from the writing prompt.

One student subject who provided a personal/experiential response explained how they received an equal share of cake at a friend's birthday. They stated, "One day I was at a birthday party at my friend [sic] house...the 'grown ups' said to divid [sic] the cake with equality. Once we got our equal share we dug in..." The student provided a setting and a few other characters in their response which met the criteria for the personal/experiential level of the coded description themes. The response also required more logical and mathematical thinking and understanding when compared to other student subject responses. Another student who used mathematics to describe equality stated, "Equality is like fairness but doing it in math was hard to do. We had to practice with inequalities in math...two months later we got it." This student subject related the concept of inequalities present in mathematics to describe equality in their writing response.

Only one student subject in the comparison group had a writing response coded as universal. The student subject explained, "Equality means everybody is equal. Martin Luther

King Jr. tried to tell the world that blacks and whites were equal even if your skin was darker than somebody else [sic].”

One student subject from the comparison group responded with a writing response which was determined to belong to the “other” category. There were not any other instances found in all of the writing responses which were coded as “other” according to the coded description themes criteria. The response stated, “I think that equality is a word for right...women and men have equality to vote and other things.” The writing response was the only writing sample in which a student used a synonym or concrete description at the first level of the coded response themes and then moved past the experiential level to the abstract level. Therefore, the researcher held this written response as a special case, because the student subject was able to transition from the lowest level to the highest level within one sentence without presenting evidence from the second level of the coded description themes.

Qualitative Analysis Involving Gender

The second section of the qualitative analysis attempts to address the fourth sub-question in this study: Does a participants’ gender affect in how he is able to respond use descriptions in short writing responses?

Three males and three females from the treatment group, and three males and three females from the comparison group for a total of twelve student participants were randomly selected. The researcher compiled all of their responses from the second, third, and fourth writing prompt and attempted to discover emerging themes from the writing responses.

Treatment Group

The second writing prompt requested the students to describe a paintbrush and any personal experience they had with a paintbrush. Theses participants were provided with a paintbrush to manipulate while they were responding to the writing prompt to assist in the stimulation of ideas for writing.

The females were more likely than the males to provide longer responses which resembled personal narratives with several characters and a setting. Whereas compared to the females, the males tended to describe series of actions which took place throughout their writing response. All of the females described a previous personal experience in their writing response

whether it was: Christmas, a shopping trip, or a birthday. But the males were more elaborate in describing the actual paintbrush in front of them or the one in their personal experience. The males described the paintbrush as: “brownish wooden color”, “very smooth” and “wider on the top than the bottom.”

As described, the third writing prompt, the students in the treatment group were provided with a picture of cotton flowers that were blowing in the wind. They were asked to describe the effects of wind and any personal experience they had with wind while they had the image to stimulate ideas for writing.

The selected males and females were the most similar in their writing response styles in the third writing prompt. All but one of the six students in the treatment group provided a personal experience in which the wind was very strong during a storm. The females were more likely to provide a setting description in their first sentence. For example the females stated: “On July 4th, we were at a park...”, “(o)ne breezy day I went to Wild Adventures...”, and “(o)ne day I went to play ball.” On the other hand, the males tended to begin their writing with an action oriented opening, such as: “The wind was blowing on the grass...” Only one male in the sample solely described the picture, but he also opened his descriptive writing with an action sequence.

As described previously, the fourth and final writing prompt provided to the treatment and comparison groups was written exactly the same for comparative purposes. The participants were asked to describe equality and any personal experience they had with equality.

The males overall wrote less than the females when responding to the fourth writing prompt. The males were more likely to bring in historical references in order to describe equality. Examples of the historical references include: “equality is like Civil Rights,” and “(w)e learned about equality by watching a video about Martin Luther King Jr.” The females were more likely to use personal experiences with friends when they were describing equality. But, overall most of the students in the sub-sample only used the words “fairness” or “fair” in order to describe equality.

Comparison Group

In the second writing prompt, the participants were requested to describe a paintbrush and any previous experience they had with a paintbrush. There were similar and dissimilar characteristics found between the males and females.

First, the females were more likely to open their paragraphs by setting a visual scene for the audience. For instance the females began, “One day at school, I was in art class”, “(o)ne day in art class, Mrs. P. had us do watercolors with the paintbrush...”, and “(a)t school one day in art...”. The males were more likely to begin their paragraph with an action sequence. For instance, “Once we had to paint my fence...”, “(p)aintbrushes help me paint”, and “I was painting with a paintbrush when I was seven.” The males followed this premise.

Second, the females in the comparison group were more likely to tell a narrative with their writing. The responses had a definite story sequence, opening with a beginning setting and then following action which took place between named characters. The males, on the other hand, were more likely to describe a paintbrush and what it is used for as a tool. The females all described art class; whereas all of the males from the comparison group in the small sample described using a paintbrush outside the school setting. The males were painting fences, boxcars, or their homes, and the females were painting in art class.

The third writing prompt which focused on describing the effects of wind and a personal experience with wind, presented differences between the males’ and females’ writing styles in the comparison group. The females in the comparison group wrote more about activities they were participating in while there was wind, whereas the males described wind as more of an “acting” character within their writing response. The females wrote about “the power going out on a windy day” and “waterskiing on a windy day.” On the other hand, the boys wrote “the wind slammed against the door”; “wind made sand fly in my eyes”; and “wind blew hair into my face.” Therefore, the males used wind for characterization in their stories, while the females viewed wind as an accessory in their overall writing responses. The females in the comparison group also wrote more words overall when compared to the boys.

The males and females, from the comparison group, presented a couple of stylistic differences in how they approached the fourth writing prompt which had requested the students to describe equality and any previous experience they had had with equality.

The females were more likely to write about personal and universal experiences with equality, whereas the males were more likely to use synonyms for the word equality for their descriptions. The females wrote “we were studying equality in mathematics”; “equality of soccer teams during recess”; and “(a)fter Martin Luther King Jr. Day we watched a movie about equality between blacks and whites.” But, the males wrote passages such as, “equality is like

fairness” and “my brother is not equality.” The females were more successful at using personal/experiential or universal descriptions while elaborating on equality when measured up to the males in the comparison group.

Similarities between both groups

The females in both groups also had several similarities. The females were more likely in general to begin their writing responses with a description of the setting before moving into a more narrative style of writing. The females also wrote more when compared to the males in both groups and in each writing response. The females were also more likely to describe personal experiences with several characters in their writing responses.

The males inside the sub-group selected from both the treatment and comparison group had several overarching similarities for all of the writing prompts. The males tended to open their writing responses with an action sequence which related to the provided topic. The males wrote less on the whole than the females for all of the writing prompts. Finally, the males tended to provide more nonfiction responses to the more abstract writing prompts when compared to the females.

Standardized Assessment

The teachers involved in the study provided the participants’ standardized writing assessment scores from the previous school year. All of the students involved in the study had a standardized writing score.

The standardized scores from a previous year’s summative writing assessment from both the treatment and comparison groups did not have a large span of scores. The students’ scores ranged from a 2.5 to a 5.0 overall, with the majority of the scores being a 3.0 across both groups. The highest score possible on this particular assessment was a 6.0. In order to establish a qualitative link between the students’ writing response style and the standardized test scores, these two data points were examined in relationship to one another.

Upon analysis of the students’ scores in comparison to the coded description themes, a few trends emerged. First, those students who received the higher scores on the standardized assessments in all cases responded to the writing prompts with personal/experiential or universal writing response throughout the study. The students who were on the lowest end of the

standardized writing assessment were more likely to only use concrete descriptions for all of the writing prompts in the study.

Researcher Observations During Data Collection

During the writing process, none of the students in either classroom spoke out loud while they were responding to the prompts. The only instance of student talk took place when a child had a question for the researcher and raised a hand to be acknowledged. Student subject talk typically ceased after the distribution of writing prompts and objects/images if they were in the treatment group and commenced after all of the writing responses were collected by the researcher.

One instance in which there was a copious number of questions from both the treatment and comparison groups took place when several of the participants were unsure of the definition or the meaning of the word “equality” in their writing prompt. Most of the students in both classrooms raised their hands after the researcher finished reading the writing prompt. All of those who did raise their hands asked the researcher what the word “equality” meant. The researcher gave all the participants with this question the same response by explaining how “equality” was similar to “fairness”. This observation was important to note if there were several writing responses from the fourth writing prompt which directly quoted “fair” or “fairness” in order to describe equality.

The lack of student talk during data collection was an interesting observation to record. These students were clearly accustomed to the standard form of “no talking” during writing time, and if a student needed to speak, they must raise their hands. Further analysis of other classroom procedures and activities as led by the teacher participants could provide more insight to the classroom cultures.

After reminding the students of the amount of time left for writing, most participants were not finished writing at the ten minute mark based on researcher observation. But, participants were finished with writing once the researcher called time to finish writing. There was never a problem with collecting student subject response papers due to the lack of completion.

The treatment classroom was always set up to reflect a cooperative classroom environment (Woolfolk, 2007). The students were sitting in groups of four or five with their

desks pushed together and facing each other. According to teacher interviews, the students were typically encouraged to discuss lesson topics with their small groups throughout the school day. The comparison group had students sitting in larger groups with two cooperative groups of six and two outlying rows of students placed on the outward perimeter of the classroom. The students often moved to other tables in the classroom in order to have cooperative groups. The students in the comparison group were less likely to talk to each other during the data collection phase when compared to the treatment group, possibly because they were not facing each other.

Quantitative Analysis

Inferential Statistical Analysis: Treatment vs. Comparison Groups

The following section addresses the main question which guided and directed the study. The section also addresses the second sub-question. The main question was: If students were provided with manipulatives to help generate ideas for descriptive writing responses, how would the writing responses of the students provided with manipulatives differ from the students with similar prompts without manipulatives? The second sub-question was: As the provided manipulatives became more abstract in nature, would the participants become less descriptive about the object they were writing about?

The null-hypothesis for the second sub-question states: The participants who are provided with manipulatives for three out of the four writing prompts will have similar levels of description in their writing responses when compared to the participants who are not provided with manipulatives but respond to similar writing prompts.

The experimental hypothesis in this case is the following: The participants who are provided with manipulatives for three out of the four writing prompts will generate writing responses which are significantly more descriptive when compared to the participants who are not provided with manipulatives but responded to similar writing prompts.

Table 4.3 presents the descriptive statistics for the treatment and comparison groups with regards to the total word count, descriptive word/phrase count, and the descriptive word ratio. Then, Table 4.4 displays the statistical data which will be discussed in the subsequent paragraphs.

Table 4.3

Descriptive Statistics of Treatment and Comparison Groups' Responses

	Mean WC	Mean Des. W/P WC	Mean Desc. W/P Ratio	SD of Desc. W/P Ratio
2nd prompt Treatment	79.3	14.6	.19	.066
2nd prompt Comparison	66.3	9.2	.15	.044
3rd prompt Treatment	70.2	11.8	.18	.059
3rd Prompt Comparison	68.5	12	.17	.056
4th prompt Treatment	63.5	8.4	.15	.090
4th prompt Comparison	40.4	6.5	.15	.068

* The first writing prompt was omitted from quantitative analysis due to flaws in the writing prompt

- WC- word count; Desc. W/P- descriptive words/phrases

Table 4.4

Treatment vs. Descriptive word ratio

	Levene's test Sig. (p value)	Df	Sig. (2-tailed)
Second writing prompt (paintbrush)	.088	43	.002
Third writing prompt (wind)	.647	43	.474
Fourth writing prompt (equality)	.660	43	.899

* The first writing prompt was omitted from quantitative analysis due to flaws in the writing prompt

The second writing prompt involved the participants describing a paintbrush and any personal experience a student had with a paintbrush. The participants in the treatment group were provided with a paintbrush as part of the treatment for them to look at and manipulate while they were writing. The participants in the comparison group were not provided with the paintbrush. A two-tailed t-test was conducted for each prompt in order to determine if the two writing groups were similar or different which would lead to either the acceptance or rejection of the null-hypothesis.

The second writing prompt displayed significant findings when comparing the treatment group and comparison group in a two-tailed t-test and their descriptive word ratios. The two-tailed test displayed a significance of $p = .002$.

Due to the significance of $.002$ being greatly less than $.05$, there is a statistically significant difference between the descriptive word ratio between the treatment and comparison groups for the second writing prompt. Therefore, the experimental group was found to have a higher descriptive word ratio only for the second writing prompt. The t-tests for prompts three and four did not yield significant results see Table 4.2.

Descriptive Statistics: Holistic Scoring

This section attempts to answer the main question driving the study. The main question is: If students were provided with manipulatives to help generate ideas for descriptive writing responses, how would the writing responses of the students provided with manipulatives differ from the students with similar prompts without manipulatives?

Every student response was evaluated on a holistic scoring rubric that was developed by the researcher. The scoring rubric analyzed four writing traits (topic/content development, descriptions/word choice, organization, and sentence structure) on a progressive five-point scale. The holistic scores ranged from twenty down to five total points.

The holistic scores for each group were averaged and the standard deviation was included. The data are represented on Table 4.5

Table 4.5

Descriptive Statistics: Holistic Scores

	Treatment group mean	Treatment group SD	Comparison group mean	Comparison group SD
Second writing prompt (paintbrush)	14.42	2.13	13.17	2.57
Third writing prompt (wind)	11.04	3.14	10.9	4.03
Fourth writing prompt (equality)	8.53	2.41	8.04	2.2

The results from the descriptive statistical analysis display the holistic scores for both the treatment group and the comparison group. The results of the holistic scores are relatively similar. There is only a slightly higher mean for the treatment group for the third and fourth writing prompts when contrasted with the comparison group. There was a greater standard

deviation between the scores for the third writing prompt. The scores decreased significantly on average as the writing prompts became more abstract in nature.

Only one trend was found when taking into account the holistic scores from the writing responses. Those participants who wrote an overall universal response to the writing response tended to have higher scores on the holistic scoring rubric. This finding was compared to those participants that responded to the writing prompts with personal/experiential and concrete writing responses.

The results from the statistical analysis as displayed in table 4.4 of the holistic scores from both groups did not present any significant findings when comparing the groups' writing responses. The only previously stated trend was found when comparing the scores of those participants who wrote universal responses.

Table 4.6

Inferential Statistics: Holistic Scores

	Levene's test Sig. (p value)	df	Sig. (2-tailed)
Second writing prompt (paintbrush)	.157	43	.077
Third writing prompt (wind)	.092	43	.903
Fourth writing prompt (equality)	.874	43	.550

Descriptive Statistics: Gender

The following section attempts to answer the fourth sub-question in the study: Does a participants' gender affect in how he is able to respond use descriptions in short writing responses?

Statistics are presented in Tables 4.5 and 4.6. The participants' responses which were now grouped by gender and not treatment/comparison group were then analyzed to determine whether gender played a role in the total number of words and/or the number of descriptive words/phrases written. The data were broken down by writing prompts two through four and all of the writing prompts combined.

Table 4.5

Male Student Subject Descriptive Statistics

	WC Mean	WC Standard Deviation	Desc. W/P Mean	Desc. W/P Standard Deviation
Second writing prompt (paintbrush)	63.9	29.8	9.4	3.8
Third writing prompt (wind)	59	21.4	9.8	4.5
Fourth writing prompt (equality)	49.6	35.4	7.6	7.4
Overall (prompts 2-4)	57.6	29.6	8.9	5.4

- WC- word count
- Desc. W/P- descriptive words/phrases

Second writing prompt (paintbrush)	80.1	30.8	13.4	6.4
Third writing prompt (wind)	77.6	30	13.5	5.8
Fourth writing prompt (equality)	54.3	31.1	7.7	4.3
Overall (prompts 2-4)	70.7	32.4	11.6	6.1

Table 4.6

Female Student Subject Descriptive Statistics

- WC- word count
- Desc. W/P- descriptive words/phrases

The Tables 4.5 and 4.6 divide all of the subjects from the study (both the treatment and comparison groups) by gender. The displayed data present the means and standard deviations of the total word counts from the writing responses as well as the total descriptive word/phrase means and standard deviations. The table includes data from the second through fourth writing prompts and the all of the writing prompts combined.

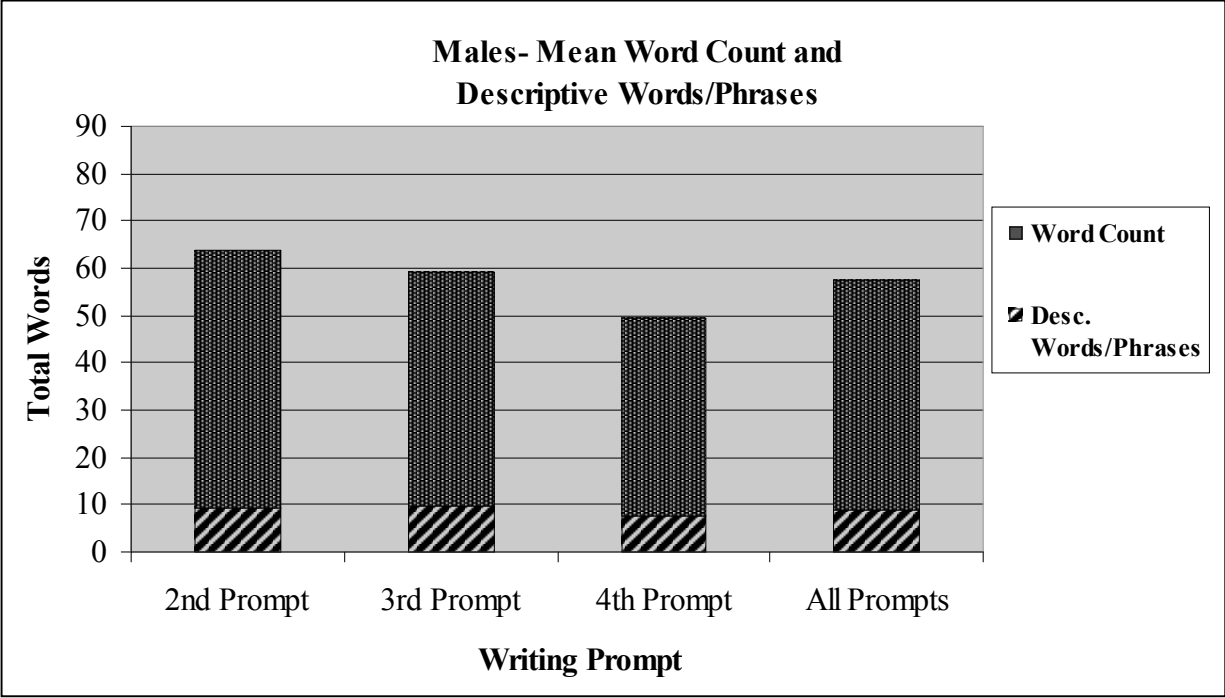


Figure 4.1 Male Word Count/ Descriptive Word Ratio

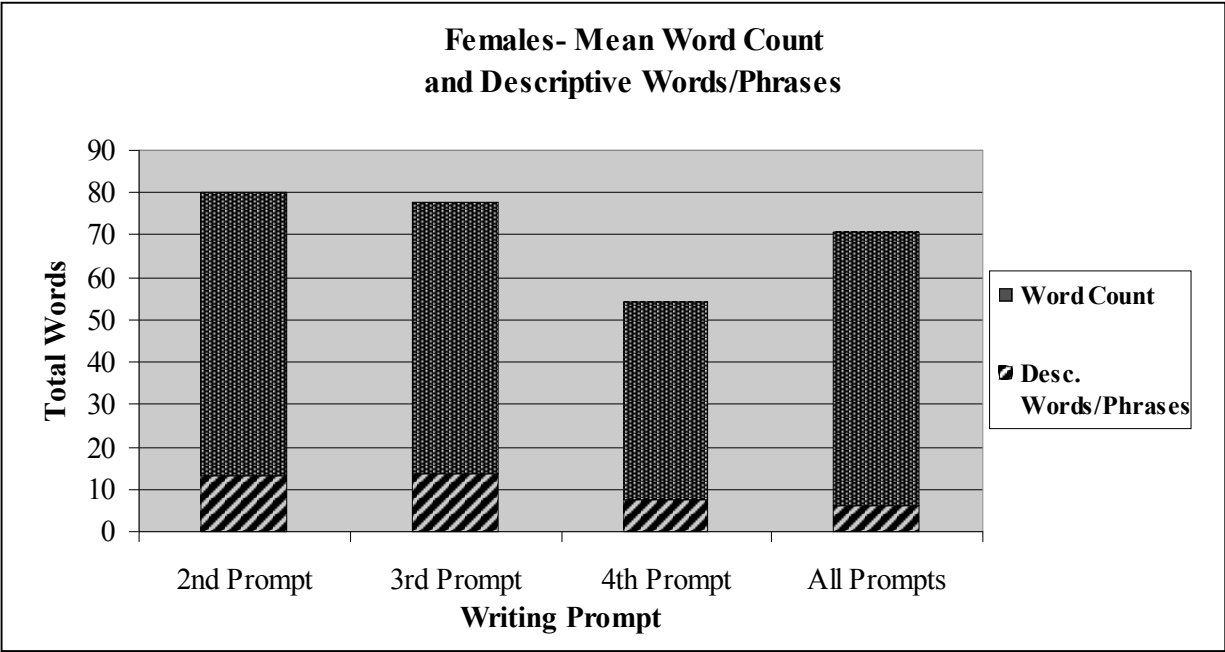


Figure 4.2 Female Word Count/ Descriptive Word Ratio

Females wrote significantly more words than males in all of the writing responses and overall. For the first writing prompt the females wrote 25% more words than the males. In the third and fourth writing prompt the females wrote 24% and 9% more words than the males, respectively. Finally, overall the females wrote 18.5% more words than the males with all of the writing responses taken into consideration. One interesting finding was how the males and females somewhat converged on total word count for the fourth writing prompt.

The total number of words for each writing prompts did decrease with both the males and the females as the writing prompts became more abstract in nature. The males decreased on average of thirteen words from the second writing prompt to the fourth writing prompt. Whereas, the females decreased by twenty-six words from the second writing prompt to the fourth writing prompt. The females doubled the males in the total word decrease, but the females started with a higher average from the second writing prompt.

One particular trend is the spread (as denoted by the standard deviation) in the total number of descriptive words between the males and females when the writing prompts became more abstract in nature. The spread as displayed in Table 4.6 between the females from the second to the fourth writing prompt increased. Whereas, the spreads in the male group decreased as the writing prompts became more abstract. Overall, there was a greater spread in the total number of descriptive words/phrases in the female group compared to the male group.

Upon analysis, the descriptive words/phrases according to gender clearly displays the females as including more descriptive words than the males in their writing responses. The total number of descriptive words included in the writing responses decreased as the writing prompts also as they became more abstract in nature for both the males and females. The trend was visible in both the treatment and comparison group. There was a slight increase in the average number of descriptive words written by both the males and females when they were responding to the third writing prompt. But, both the males and females on average decreased the total number of descriptive words/phrases in the third writing prompt. Overall, the females wrote more descriptive words than the males in all of the writing prompts.

Inferential Statistical Analysis: Gender

The following section attempts to address the fourth sub-question: Does gender play a role in how participants are able to respond using descriptions in short writing responses?

The null-hypothesis for the fourth sub-question asks does gender does play a significant role in the total number of descriptive words/phrases when compared to the total word count generated by the participants?

The experimental hypothesis for the fourth sub-question states that: gender does play a significant role in the total number of descriptive words/phrases when compared to the total word count generated by the participants.

The participants' gender and their descriptive word ratio were compared utilizing a two-tailed t-test. The t-test determined if males or females responded with significantly more descriptive writing responses based on the student subject' total word count divided by their total number of descriptive words/phrases.

The Table 4.7 displays the statistical findings when comparing gender and the descriptive word ratio which are further discussed.

Table 4.7

Gender vs. Descriptive Word Ratio

	Levene's test Sig. (p value)	df	Sig. (2-tailed)
Second writing prompt (paintbrush)	.963	43	.962
Third writing prompt (wind)	.884	43	.469
Fourth writing prompt (equality)	.875	43	.981
Overall gender comparison (prompts 2-4)	.789	133	.474

*the first writing prompt was omitted from quantitative analysis due to flaws in the writing prompt

Overall, the two-tailed t-test found that a participants' gender was insignificant when analyzing their descriptive word ratio. Therefore, the experimental hypothesis for the fourth sub-question is rejected and the null-hypothesis stands.

When comparing the descriptive and inferential statistics findings regarding gender, interesting assumptions may be drawn. While the females wrote more words when compared to the males, they did not have a higher level of descriptive words. Therefore, the females may have written more total words but were lacking in descriptions. Males were less verbose when compared to the females, but the males were more descriptive relative to their total number of words.

CHAPTER V

DISCUSSION

The final chapter comprises a discussion of both the quantitative and qualitative findings. Implications for both classroom practice and educational research are also discussed. Finally, limitations to the study are examined.

Qualitative Findings

One main trend within the qualitative findings was drawn out from comparing the two different groups who participated in the research project. The student participants in the treatment group were more likely to move from a concrete level response to a personal/experiential or universal response within the coded description themes, or their scores were more likely to stay level when contrasted with the comparison group. The comparison group did have a few students increased their level within the coded description themes, but more participants in the comparison group stayed within their original coded level, or their level decreased as the writing prompts centered on more abstract concepts or ideas.

The treatment group was more likely to provide an experiential response to the writing prompt after they moved to the second writing prompt involving the paintbrush. While most of participants in the treatment group focused on the apples in front of them for the first writing prompt, more of these participants gave experiential and universal responses overall for the third and fourth writing prompts.

Another trend within the qualitative data revealed how the participants would respond to writing prompts as they progressed from more concrete to abstract topics. As the writing prompts moved from describing more concrete objects such as the paintbrush to more abstract concepts/ideas such as equality, the students' responses became more abstract as well. The participants were more likely to either gravitate towards writing concrete responses as the writing topics became more abstract in nature. Or the participants would become more abstract in their descriptions as the topics in the writing prompts became more abstract. It may be easily displayed by viewing the trends for individual student writers that those who were able to respond with personal/experiential descriptive responses for the first writing prompts were more likely to continue this style of writing when responding to the final writing prompt. Whereas, those participants who were generally responding with only concrete or very limited personal responses would gravitate towards only giving concrete descriptions in the final writing prompt.

In totality, in both of the student groups involved in the study, the responses became more experiential and universal as the writing topics became more abstract. The trend may be due to participants having more experience with responding to this type of writing prompt over the duration of the study and therefore they were more able to use their experiences to expand and elaborate upon their ideas. Or, the trend may have been due to the students' needs to use personal experiences to describe a concept or idea they could not explicitly see or touch. The latter finding may be an interesting phenomenon in student writing that should be analyzed further.

Unexpected Outcomes

One of the unexpected outcomes, which perhaps should have been assumed by the researcher going into the study, was in the area of content knowledge. Those students who either possessed more content knowledge or were able to articulate different content area understandings had their writing coded as experiential or universal more often than those students who were not able to incorporate content area knowledge into their writing responses. The writing prompts in which content area knowledge was almost essential in receiving a universal score were the third and fourth prompts involving the descriptions of wind and equality, respectively. Participants were often able to explain tornadoes, hurricanes, and climate for the third writing prompt, and Civil Rights or independence with the fourth prompt. Previous research has shown that students with more content area knowledge are more successful in the reading classroom (Cooksey et al., 2007; Woolfolk, 2007), but this study has also shown how students with more content area knowledge may be more successful in the writing classroom as well. Further research in this area may provide more insights.

It may also be argued that participants in the treatment group might have been hindered from developing a more abstract or experiential writing response because there was an object in front of them to stimulate writing ideas. The participants in the treatment group might have only taken the time to focus on the object or picture to write their descriptions. Whereas, the comparison group was required to think about previous experiences without the object in order to write.

On the other hand, it should be noted, having an object to describe may benefit students by having an object to help stimulate writing ideas. As found when students were asked to

describe a paintbrush or even the apple with the treatment group, they were able to include very rich details in their writing by using all of their senses while responding to the writing prompt.

Also, if students were provided with more time in order to formulate their ideas for a writing response with a pre-writing time, they might have been more successful in the writing task by including both descriptions about the object or concept and a personal or universal experience. The participants may have needed a separate paper from the writing response sheet provided by the researcher in order to organize their thoughts rather than just to have space to “free write”. But, if pre-writing time and space were provided, the student responses may have not presented as much of a spread based on the students’ abilities to organize metacognitive ideas.

Quantitative Findings

The numerical analysis of the student writing displayed interesting findings as well. Those students who had lower scores on their state standardized assessments were more likely to use concrete level responses to the writing prompts. The participants with higher scores on the state writing assessments were more likely to use experiential and universal responses when describing the object or concept.

Treatment vs. Comparison group

Unfortunately, the first writing prompt which involved the most concrete topic and manipulative for the students was thrown out due to initial flaws in the composition of the writing prompt. Future research may determine even more significant findings when comparing the differences between the descriptions in student writing when some are provided with a very concrete manipulative (one that may be experienced using all five senses), with that of students who are not provided a manipulative for writing.

Disregarding the flaw in the initial writing prompt, there were some findings from the analyses which did prove to be significant. The participants from the treatment group displayed statistically significant differences in the descriptive word ratio when contrasted to the comparison group. When the participants from the treatment group were provided with the paintbrush as a tangible object to support the stimulation of ideas, they were more successful at composing more descriptive writing responses when compared to the comparison group. But, the

two groups began to converge after they were requested to respond to a writing prompt involving wind, a more abstract concept. The treatment group and comparison group did not display a significant difference in the descriptive word ratios from the writing responses. On the final, and most abstract, writing prompt the two groups displayed virtually identical results on their descriptive word ratios. The two groups were generally indistinguishable according to statistical analysis.

Based on these findings, it is important to discuss the significance a tangible object may play when students are instructed to compose a writing response requiring descriptions of objects. But, as concepts presented in the writing prompt become more abstract, the use of manipulatives seems to become less irrelevant in the total amount of student descriptions present in the writing responses.

Through the statistical analysis, it was found that the use of manipulatives for short writing responses may impact the number of descriptive words/phrases in a student's overall writing response. But, as the objects provided became less concrete with fewer attributes to describe, the students were more likely to converge and write responses similar to those students who were not provided with objects.

Students from differing academic writing levels will also be more successful in providing descriptive responses to short writing prompts if they are provided with a tangible object to stimulate ideas for writing.

Gender

It may be assumed, as displayed in Figures 4.5 and 4.6, that male and female subjects write the same number of descriptive words/phrases when compared to a total word count. But, because the female participants were found to have higher total word counts when compared to the male participants, the females tended to be more verbose. The females were more likely to use several words/phrases including descriptors, nouns, articles, and prepositions in their writing. Whereas, the males were more "direct" in their language usage. Further study of this finding may be elaborated through future research.

But, in the end, the male and female groups converged in total word count as the writing prompts became more abstract in nature.

Gender Overall

Females in general were more descriptive than males, but there are some limitations when drawing this conclusion. First, the females included a higher word count than the males, but their word count ratio was even with the males. So, relative to the total number of words, the males and females were similar in their total number of descriptive words/phrases found in their writing responses. The findings involving gender characteristics highlight the necessity of teaching both males and females to incorporate more details in their writing responses, even as writing prompts become more abstract in nature.

All Inclusive

Overall analysis of all of the quantitative and qualitative analysis may lead to attention-grabbing conclusions. Through the use of concrete objects to stimulate ideas for students writing, there may be some conclusions drawn considering the student's writing abilities.

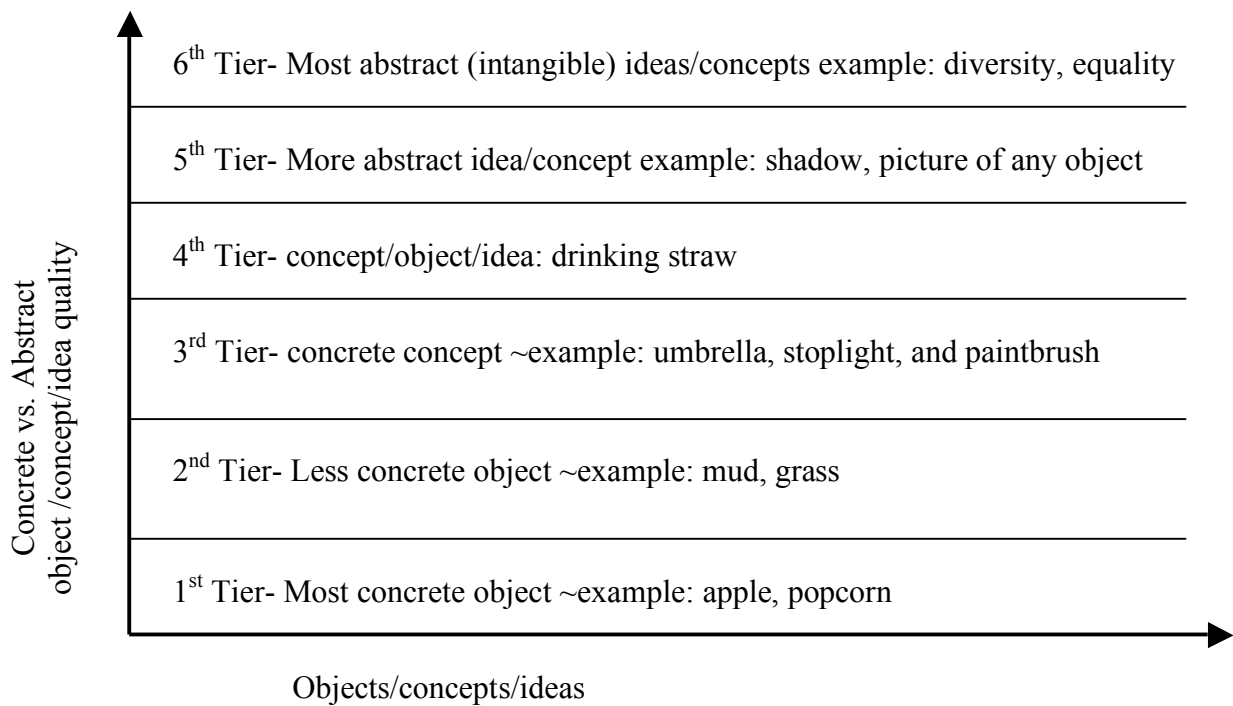
A view of objects as a support or form of scaffolding for the stimulation of ideas in descriptive writing is significant, due to students' positive writing experiences and text generation. The participants were successful with incorporating significant attributes of the objects they were describing in their writing responses. But, as the objects became more abstract in nature, the participants were less successful at describing the objects with regard to any personal or universal experiences. Instead, the participants tended to regress to more concrete forms of description and analysis when they were writing about the given topic.

As the objects become more abstract in nature, or they lose more tangible attributes, the students will then be required to use a higher level of thinking in order to respond to a given writing prompt. The students who are not able to extend their own personal experiences to the writing prompt will regress to a more concrete idea level of descriptions when elaborating on the objects' attributes. Whereas, the students who are already at a higher developmental level will still be able to write more personal and universal experiences involving the more abstract object.

Finally, when students are asked to describe a topic which has very few or no tangible qualities, they are being required to use the most abstract form of thinking. The students are being required to formulate their ideas in only an abstract form and are required to translate these ideas into more personal or universal experiences in order to convey higher levels of descriptions. But, those students who have are developing an abstract sense of thinking without

the support of an educator or other professional will then have to fall back upon their more concrete level of thinking and will attempt to relate one abstract idea with another word or idea which possesses a similar meaning to the given topic and that is familiar to them.

These findings generally display a view of writing instruction with both vertical and horizontal characteristics which are revealed by the level of difficulty of any writing prompt and each student's individual developmental writing stage. Below is a graphic displaying the difficulty of the writing prompt (taking into consideration the tangible qualities of an object) relative to a student's individual developmental writing stage.



**Within these tiers, a student may respond to any given prompt with concrete, experiential, or universal descriptions.*

Figure 5.1 Object qualities vs. object/concept/idea

First, the diagram displays objects/concepts/ideas on a horizontal plane and concrete vs. abstract qualities of any particular object/concept/idea on a vertical plane. Within the vertical plane, there are definite tiers in which objects/concepts/ideas may be differentiated according to their different levels of abstract qualities. The less tangible (meaning the fewer qualities which can be taken in by any of the five senses) any particular object/concept/idea is, the higher it is placed on a tier. There are a total of six tiers. In the lowest tier, an object may be “experienced” and therefore described with all five human senses. In the second tier, one of the senses is removed and the object may only be experienced by four of the five human senses. The trend of these tiers continues until the sixth tier in which only a concept or idea is described which may not be experienced through any of the human senses. Therefore, the sixth tier is the most abstract, because it lacks all concrete qualities for a person to describe.

An apple is on the first tier because it can be experienced using all five senses (smell, taste, touch, sight, and hearing). But, mud and grass are placed on the second tier because they typically are not tasted but still may be smelled, touched, heard, and seen. A paintbrush is on the third tier because it cannot be tasted, or smelled, so it only has three qualities which may be described through the five human senses.

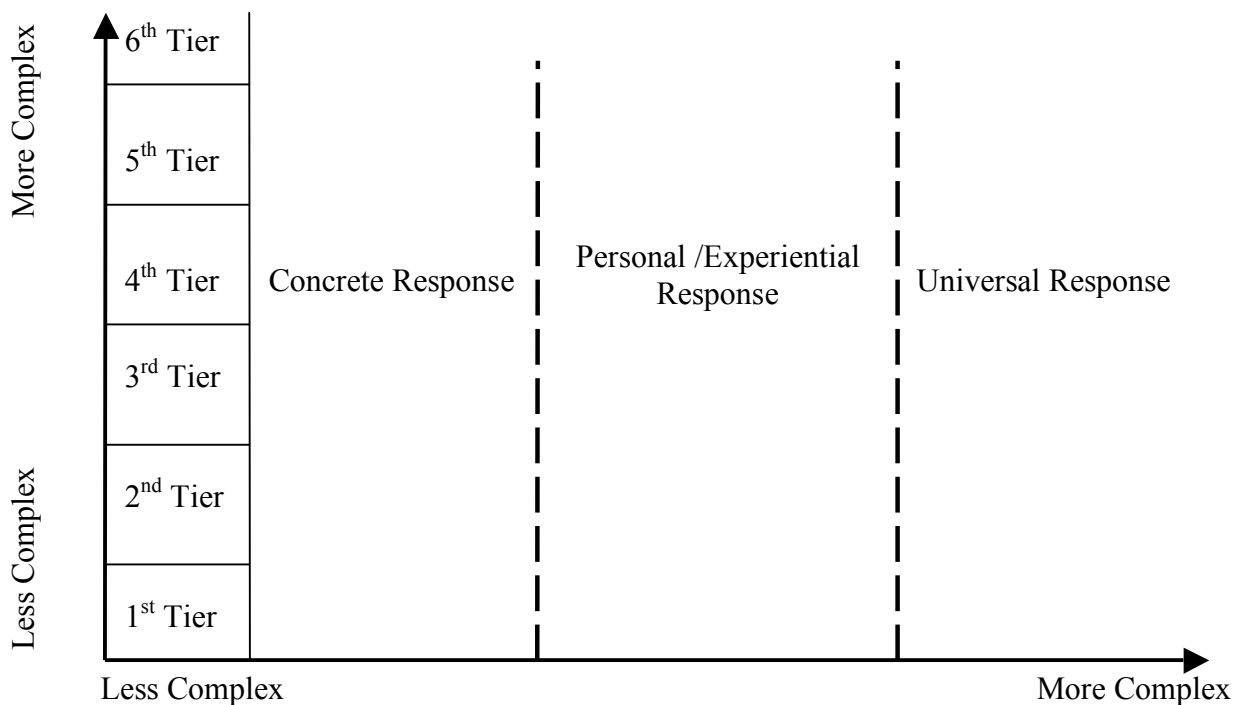
Next, it is important to note that the theory suggests an infinite number of objects/concepts/ideas to describe on each tier. Within each tier, any student may respond to a writing prompt requesting a description of an object in three different ways according to their level of cognitive and writing development.

As students move higher in the tiered levels, it becomes more difficult to describe any object/concept/idea in a universal or personal sense. Therefore, if a student is having difficulty describing any given object/concept/idea at a higher tier than their developmental writing and cognitive level, they will be more likely to regress and describe the object/concept/idea in more concrete terms. The premise here is that cognition has specific levels of understanding which are displayed in a student’s descriptive writing based on the individual’s developmental level. Therefore, with varied instruction which promotes cognitive growth in the writing content area, students will be better able to describe objects/concepts/ideas on higher tiers in more universal and personal/experiential modes.

The diagram suggests several points. First, the horizontal arrow alludes to the fact that there are a plethora of objects/concepts/ideas which may be described by students in every tier.

Second, the vertical arrow suggests that there is a progression describing the level of difficulty in describing an object/concept/idea based on the decreasing number of senses a person may use in order to describe the given topic. Third, as a student moves up in the diagram to higher tiers, the level of writing development and cognitive development as factors in how well a student is able to describe any given object/concept/idea. Therefore, students at higher levels of writing and cognitive development will be more successful at responding to writing prompts at higher tiers of abstract thought when compared to students who are at lower levels of writing and cognitive development.

The following diagram is formatted to display the complexity of the task when responding to a writing prompt on one of the six tiers when compared to the coded descriptive themes. The diagram shows two ranges of complexity extending outward as the level of cognitive task becomes more difficult for students. It may also be suggested that students at higher developmental levels of writing and cognition may be more successful as the tiers become more complex.



**Tier one represents any object which may be experienced with all five senses progressing up to tier six which merely is comprised of abstract concepts. Therefore, each tier contains a plethora of writing topics possessing fewer qualities which may be perceived and described by human senses.*

Figure 5.2 Object Qualities vs. Types of Student Writing Responses

The most significant conclusion to be drawn from the previous diagram is that every student may respond to a given writing prompt within each tier, but each student will respond at their developmental writing and cognitive level. Students will respond in one of three ways concrete, personal/experiential, or universal. These three levels are progressive as displayed by the diagram in the sense that it is more difficult for students to respond to a writing prompt with universal descriptions than concrete descriptions.

Students may also use any of the three types of descriptive writing responses in any and all of the tiers of writing. But the arrow with the diagram displays the rising difficulty level for students to provide a personal/experiential or universal descriptive writing response as the writing prompts become more abstract in nature.

Study Limitations

There were several limitations throughout in this pilot study. Limitations involving the subjects (both the student and the teacher), experimental design, school environment, and sample selection were present in the study.

There were a relatively limited number of subjects involved in the study. Only forty-three total students participated in all of the writing activities. All students who did not have a complete data set were excluded from the study. Or, if the participants did not provided both a consent and assent form before the delivery of the final writing prompt, they were also excluded from the study. A total of five students out of both classes were excluded from the study due the previously stated factors. *The removal of these subjects reduces the level of validity.* The total number of participants was also divided in half in order to create two different groups.

The participants were also all in fifth grade. Students from other grade levels were not able to participate in the study, and their writing responses may add more insight into how the use of manipulatives in writing may be beneficial or detrimental.

These participants were also members of intact classrooms. The participants were not randomly selected and divided within their classrooms either. The different teaching styles,

classroom experiences, and/or level of writing instruction from the teachers may have impacted the level of responses given by the participants.

The fifth grade classrooms were located in the same developmental research school. By the nature of the school's philosophy of supporting action research and experimental research, the students involved were very familiar with the research process compared to students who do not attend experimental schools. Therefore, the students involved in the study may be more aware of the "right answer" expected in experimental and research situations if compared to students who attend public schools. These participants in the experimental school may feel more apt to participate in research projects because they are more comfortable than the average student.

The two teachers involved in the study were chosen for their similarities in number of years in the elementary classroom, but their teaching styles for writing did vary. Teacher A was more likely to include writing experiences as a way to reinforce content knowledge in other subject areas by integrating the writing curriculum into science and social studies activities. Therefore, her students may have more experience with writing creatively. Whereas, Teacher B was less forthcoming in how she incorporated writing in the other subject areas, she tended to departmentalize writing and language arts in her classroom practice. Teacher A was also more enthusiastic about teaching writing. She frequently attends writing workshops and is pursuing a Ph. D. in English education. While these teachers are different, they did actively choose to teach writing in their classrooms in a way with which they were most comfortable.

The classrooms were not randomly selected, instead they were chosen by the researcher due to the similarities in the two different teachers' level of teaching experience and educational backgrounds. A random selection of the intact classrooms from the entire fifth grade in this school, or all schools in the school district, would have been more ideal when compared to a convenience sample selection process.

The quasi-experimental design only involved four prompts for the students to respond, but the first writing prompt was excluded from the data analysis. As noted, the purpose for the exclusion for the first prompt was the flawed level of directions recognized by the researcher after the first written responses were collected from the students. Subsequently, the researcher redesigned the writing prompts for the last three responses. The first data set from the initial

writing prompts then served as a base line to understand the students' writing levels so they might be compared to the final three writing prompts.

The quasi-experimental design also only allowed for one type of writing response from the participants. The only response prompted and therefore desired by the researcher was a descriptive response and a possible narrative response from the participants based on the wording of the writing prompts. If the student subject submitted a response which was deemed off topic by the researcher, it was placed into an "other" category and was not analyzed qualitatively. The participants may have been able to excel at other genres of writing which were not analyzed in this particular study.

The study did not allow time specifically for a pre-writing activity for the participants. The participants were not directed to plan their response before they composed their message. Some participants did take longer while they were beginning their writing responses based on the observations of the researcher. But, this observation does not necessarily conclude that the participants were taking the time to plan their writing. A future study may include pre-writing time for participants who are responding to the writing prompts.

The data might have shown more of a spread and developmental range if there were more than three writing responses analyzed for each student subject. With more writing prompts, the participants may have written longer responses with different objects and manipulatives. There may have also have been more of difference within the different analyses, between the treatment and comparison groups if more writing responses were available.

The final writing prompt involving the word "equality" was confusing for several students. Most of the participants were unsure of the definition of the word equality and raised their hands for assistance from the researcher after the initial reading of the prompt. The researcher individually answered the students' questions about the word's definition or meaning. The researcher responded to the students' questions about the definition of equality by stating, "Equality is similar to 'fairness'." If there was further confusion the researcher prompted the student to look at the word "equality" and see if there are any familiar words that will help them to understand the definition of "equality". Students in both the treatment and comparison group struggled with this particular word, therefore it was not an issue in just one of the classes. In the future, the final writing prompt should possibly use another word to represent an abstract idea for students to describe.

Implications for classroom practice

The findings of the research should not be assumed to be transferable or generalizable in any classroom situation other than in the classrooms involved in the study due to the small sample size and other threats to internal validity. Only further replication of the study would provide more information to create a more transferable finding.

But the overall findings of the study may provide a few classroom applications involving developing creative writing tasks in the classroom, composing personal narrative and narrative nonfiction, and assisting students who may benefit from having a physical object in order to stimulate ideas for writing.

When students are prompted to write about their experiences involving common objects, there was a tendency for students to write personal stories which involved the objects as a minor character and themselves as a major character in action. Students in this setting are practicing the art of writing personal narratives about atypical topics such as apples or paintbrushes. The creative writing endeavor may be useful in the classroom because teachers are able to provide objects for students writing short responses. But, students are receiving the added benefit of bringing a familiar personal experience into their writing. With further development of the short responses, students may have the opportunity to create longer and more meaningful personal narratives while practicing and refining essential writing skills.

A more complicated task which may be developed through the response to short writing prompts is a creation of a narrative nonfiction essay based on the object(s) provided for the students as stimuli for writing. If students are able to generate a narrative nonfiction style of writing in responses to the given prompt, it may be addressed and extended by the classroom teacher. Those students whom are capable of elaborating on their writing piece may be encouraged to do further research and write longer narrative nonfiction essays.

Another implication involves supporting those students who are at the lower developmental levels of writing. Giving a student an object and writing prompt requesting the student to describe the object placed in front of them may be beneficial. These students will be guided in *how* to use all of the information they know about a particular object to incorporate them into their descriptions.

A final application for classroom practice is highlighted in the overall theory developed through the study. Teachers need to be aware of their students' writing abilities and their developmental levels when assigning writing tasks. From this knowledge, teachers may scaffold students' writing abilities by providing objects to support and stimulate ideas for writing. Teachers should recognize that students who are at different writing levels will be able to approach a writing prompt from a different conceptual level. Therefore, the higher ability writers will still benefit from responding to a conceptually concrete writing prompt, because the students will be able to draw upon their previous experiences and universal knowledge to compose a well written descriptive piece. At the same time, students who are still developing their writing skills will have the opportunity to develop their own writing skills through the scaffolding provided by a tactile manipulative. The higher level writers also did not display any writing losses when they were provided with manipulatives, therefore manipulatives are not detrimental or are negative influences on these students.

Implications for Educational Research

Implications for educational research are vast in the area of writing development and the use of manipulatives in support of student idea generation in descriptive writing. The findings from this study have added to the writing development literature specifically about the importance of creating a developmental sequence for student writing. Further research may determine more about how writing, separate from reading, in a developmental sequence is an essential body of research to expand. The research needs to involve more samples of student writing from various socioeconomic backgrounds and age levels in order for this study to become more valid and transferable for larger and more diverse student populations.

The findings have also supported a slight but not significant difference in how the use of manipulatives in the form of objects or visuals might affect how fifth grade students respond to given writing prompts. Students who are provided manipulatives in order to stimulate writing ideas may be more successful if they near towards the middle or lower levels of writing when compared to students in their own age group. The treatment group which was provided objects and pictures throughout the entire treatment did move to higher levels of the coded description themes at a faster rate when contrasted to the comparison group.

Manipulatives in the writing classroom do have a positive impact on descriptive writing for fifth grade students. Further research of this concept and how students develop their writing abilities through the usage of manipulative will provide more insights in this field of study.

A replication of the study would be necessary to create more valid and reliable results. The replication would include more than one individual scoring of the student responses and performing the word counts for the descriptive word analysis. There should also be a larger and more diverse student population involved in the study including students from different grade levels and various schools, to create a more representative sample of student writing responses.

A replicated study with a larger sample size may provide more data which may be statistically analyzed. The statistical analysis may provide more significant results.

APPENDIX A

FLORIDA STATE UNIVERSITY HUMAN SUBJECTS IN RESEARCH

COMMITTEE INSTITUTIONAL REVIEW BOARD APPROVAL FORM

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 1/7/2010

To: Emily Schaeffer

Address: 2611 North Point Circle Apt. D Tallahassee, FL 32308
Dept.: EDUCATION

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Moving from concrete to abstract, analyzing the writing process.

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 12/09/2009. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 12/8/2010 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request

renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Diana Rice, Advisor
HSC No. 2009.3424

APPENDIX B

INFORMED CONSENT FORM FOR (TITLE OF PROJECT)

Dear Parents,

My name is Emily Schaeffer and I am a graduate student in the School of Teacher Education, at Florida State University. Your child is invited to participate in a study about writing development which will involve writing with and without objects and pictures. I am asking that your child take part because your child is in the age group we want to study. I ask that you read this form and ask any questions you may have before agreeing to allow your child to take part in this study.

The study: The purpose of this study is to find out whether writing with the use of given related objects and images assist children with their writing practice. The study also involves including details and basic writing skills in writing with different objects and pictures. It is designed to show growth in writing skills with a progression of more abstract objects given to the students. If you agree to allow your child to take part, your child will be asked to respond to six short writing prompts. Your child will be asked to respond to these short writing prompts by creating a very detailed response. The writing responses will take about twenty minutes to complete.

Risks and benefits: The risk in this study is that your child may feel a little frustrated at first with this writing technique. The benefits of this study are: your child will be exposed to more writing practice in the classroom, and they will have more practice with responding to abstract writing prompts present in standardized state-wide writing tests.

Compensation: There is no compensation for this study.

Confidentiality: The records of this study will be kept confidential, to the extent permitted by law. Your child's name and personal information will not be associated with their writing response. The writing responses will be kept locked away in a cabinet in an office during the analysis phase of the research. After all analysis, the written responses will be destroyed.

Voluntary Participation: Your child's participation in this study is completely voluntary. Your decision whether or not to allow your child to take part will not affect your current or future relationship with Florida State University or with your child's school. If you decide to allow your child to take part, your child is free to not do the writing assignment, or stop at any time. You are free to withdraw your child at any time without affecting your relationship with the University or your child's school.

The researcher for this study is Emily Schaeffer. You may reach her at (850)545-6693, or eas05j@fsu.edu. Please feel free to ask any questions you have now, or at any point in the future. If you have any questions or concerns about your child's rights as a research subject, you may contact the FSU Institutional Review Board (IRB) at 850-644-8633 or you may access their website at <http://www.fsu.research.edu>. You will be given a copy of this consent form for your records.

Please enter your child's name and sign below if you give consent for your child to participate in this study.

Your child's name: _____

Your signature _____ Date _____

Child assent form for (title of thesis)

Dear Student,

My name is Emily Schaeffer. I am a student researcher from Florida State University. I am asking if you would like to take part in a research study called “Development of Writing Skills in Youth”, which is about short writing activities with different objects.

If you agree to be in this study, you will write six short responses to a given prompt. The writing prompt may come with different objects or pictures to help your writing. Or, you may not receive these objects. It will take about 20 minutes to respond to each writing prompt.

Writing may make you feel frustrated. You may not be able to come up with something to write about. This study may help teachers learn better ways to help students with their writing skills.

Please talk this over with your parents before you decide whether or not to participate. We have asked your parents to give their permission for you to take part in this study. But even if your parents said “yes” to this study, you can still decide to not take part in the study, and that will be fine.

If you do not want to be in this study, then you do not have to participate. This study is voluntary, which means that you decide whether or not to take part in the study. Being in this study is up to you, and no one will be upset in any way if you do not want to participate or even if you change your mind later and want to stop.

You can ask any questions that you have about this study. If you have a question later that you did not think of now, you can call me at 850-545-6693, or ask me next time you see me.

Signing your name at the bottom means that you agree to be in this study. You and your parents will be given a copy of this form after you have signed it.

Name _____ (please print)

Signature _____

Date _____

4 A

Name _____

Teacher's Name _____

Directions:

On this sheet of paper you will have the opportunity to express yourself through descriptive writing by responding to the following prompt. After completing your paragraph, answer the questions on the back of your paper. Use as many details as possible in your paragraph, and write to the best of your ability.

Prompt:

Close your eyes and think about the word equality. Now, write to describe equality any real-life experience you've had with equality.

APPENDIX D
LIKERT SCALE

Directions:

Circle the word that best answers the questions.

1. I enjoyed writing about the topic:

Strongly agree Agree Disagree Strongly Disagree

2. I felt comfortable describing the topic:

Strongly agree Agree Disagree Strongly Disagree

3. I had many ideas about the topic:

Strongly agree Agree Disagree Strongly Disagree

APPENDIX E

HOLISTIC RUBRIC

	1 Point	2 Points	3 Points	4 Points	5 Points
Topic/ content development	<ul style="list-style-type: none"> - Lack of a central idea - Varied focus - Lack of details 	<ul style="list-style-type: none"> - Unclear central idea - Shift in focus - Few details 	<ul style="list-style-type: none"> - Central idea - Slight shift in focus - General details 	<ul style="list-style-type: none"> - Clear central idea - Sustains focus - Specific details about topic 	<ul style="list-style-type: none"> - Very narrow idea/focus -No shift in focus - Accurate and relevant details
Descriptions/ word choice	<ul style="list-style-type: none"> - Uses simple vocabulary - Very few details and facts 	<ul style="list-style-type: none"> - Uses few vivid or precise words - General vocabulary is predictable 	<ul style="list-style-type: none"> - Uses some precise or vivid vocabulary - a single usage of figurative language/ use of senses for descriptions 	<ul style="list-style-type: none"> - Precise/ vivid word usage - Used senses for description - Word choice was appropriate for topic 	<ul style="list-style-type: none"> - Engaging word usage -Frequently includes figurative language -Describes using several senses
Organization	<ul style="list-style-type: none"> - Introduction and conclusion are absent - Presented information is random and/or illogical 	<ul style="list-style-type: none"> - Either the introduction or conclusion is absent - Repetitive or random idea progression 	<ul style="list-style-type: none"> - Has an introduction and conclusion - Logical progression of ideas 	<ul style="list-style-type: none"> - Clear introduction and conclusion - Smooth progression and transition in writing 	<ul style="list-style-type: none"> - Inviting introduction and effective conclusion - Effective sequencing - Showcases a central idea
Sentence Structure	<ul style="list-style-type: none"> - Sentences were very predictable - Few sentences contained a complete thought 	<ul style="list-style-type: none"> - Some sentences contained a complete thought - Predictable sentence structure with some variance 	<ul style="list-style-type: none"> - Predictable phrasing -Somewhat varies sentence structure 	<ul style="list-style-type: none"> - Varies sentence structure -Phrasing is effective and not predictable 	<ul style="list-style-type: none"> - Great variance in sentence structure - Effective phrasing, varied beginning, middle, and end of sentences

Total Score _____

of Descriptive words about object _____

of Descriptive words about experience _____

of Descriptive words used (adjectives/adverbs/phrases) _____

Total word count _____

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BIOGRAPHICAL SKETCH

Emily A. Schaeffer was born in London, England to two parents in the military and lived in Great Britain the first five years of her life. She spent her elementary years and most of her middle school years in Virginia. She moved to Florida to finish middle school and eventually to complete high school as well.

Emily completed her undergraduate degree at Florida State University in 2005 with a Bachelor of Science in Elementary Education. She then began working as a teacher's assistant at Florida State University school while starting her master's degree program. She then moved towards completing her master's degree as a full time student taking on a thesis track degree program. Emily participated in the Florida State University Writing Project Summer Institute in the summer of 2009. She later presented her work from the summer institute at the Writing Project fall summit.

Emily has begun work as a research assistant at the Florida Center for Reading Research in the summer of 2010. She hopes to find a teaching position in the coming fall. Emily also plans on pursuing a Ph.D. in the coming years.

Emily enjoys playing music, cooking, and baking in her spare time.