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Examining the Writing Motivation and Achievement of At-Risk Elementary-Aged Students

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I am submitting herewith a dissertation written by Melissa Sue Martin entitled "Examining the Writing Motivation and Achievement of At-Risk Elementary-Aged Students." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Teacher Education.

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Examining the Writing Motivation and Achievement of At-Risk Elementary-Aged Students

A Dissertation Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Melissa Sue Martin
May 2016

Dedication

To the best people I have ever met and my best friends – Momma and Daddy.

And, to the students who taught me so much more than I ever taught them.

Acknowledgements

I would like to acknowledge the Boys & Girls Clubs of the Tennessee Valley, including the Director of Education and the staff at each participating Club. This research would not have been possible without extensive help and planning from each staff member. Additionally, Dr. Yuejong Park provided funding for materials and resources (e.g., copy paper, pencils, student incentives) in order to complete this project, and Pearson Education provided copies of the Test of Written Language –IV (TOWL-IV) student booklets and scoring forms free of charge.

I would also like to acknowledge my committee members: Drs. Sherry Bell, David Cihak, Yujeong Park, and Gary Skolits. Thank you for your help throughout this process.

Abstract

Writing achievement of students in the United States is weak. Approximately 75% of 12th graders are not proficient writers (National Center for Educational Statistics, 2012) and performance of students in poverty lags behind that of more affluent peers. Because writing is complex (Torrance & Galbraith, 2006) and often viewed as aversive to students (Boscolo & Gelati, 2013), motivation is an important consideration for teachers. However, little research exists examining writing motivation.

A correlational research design was employed to examine writing achievement and motivation (i.e., self-efficacy and attributions) of at-risk elementary-aged students ($N = 61$). Participants, who attended Title 1 schools (in grades 3-5), completed several measures of writing motivation and writing achievement (Narrative Writing Self-Efficacy Scale, Writing Skills Self-Efficacy Scale [Pajares, Hartley, & Valiante, 2001], Student Writing Attributions Scale, and Test of Written Language-IV [Hammill & Larsen, 2009]). Relations among motivation variables and writing achievement were examined, as well as differences in motivation and proficiency based on sex and grade-level.

Results indicate a significant relation between narrative writing self-efficacy and writing achievement ($p < .01$) as well as a significant relation between writing skills self-efficacy and writing achievement ($p < .01$) but a non-significant relation between ability and effort attributions with writing achievement ($p > .01$). However, ability attributions are significantly moderately negatively correlated and effort attributions are significantly moderately positively correlated with writing self-efficacy ($p < .01$).

In general, writing skills self-efficacy is significantly positively correlated with writing achievement for both sexes, but ability and effort attributions towards writing and writing achievement are not significantly correlated for either boys or girls. Moreover, narrative writing self-efficacy and writing achievement is significantly related for nine and 10 year olds, but not 11 year olds. Ability attributions are significantly negatively correlated and effort attributions are significantly positively correlated with writing achievement ($p < .01$) only for nine year olds.

This study expands current literature by exploring relations between writing and self-efficacy and attributions of at-risk students. Because motivation is critical to sustaining effort and, ultimately, to achievement, teachers should be aware of these constructs when planning instruction.

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Chapter 1

Introduction and General Information

Because motivation influences instruction, it is often an important consideration for teachers (Schunk, Meece, & Pintrich, 2014). Research related to the writing motivation of at-risk elementary students is limited. A correlational research design was used to examine writing self-efficacy, attributions towards writing, and writing achievement. Participants were third, fourth, and fifth graders who were enrolled in Title 1 schools in the Southeast part of the United States. All participants were members of local Boys and Girls Clubs. This study expands the current, limited, research available on writing motivation and achievement by including only students from disadvantaged homes and communities. Moreover, the self-efficacy of students was examined for two types of writing: writing skills and story writing.

Problem Statement

The writing achievement of students nationwide is dismal. The National Assessment of Educational Progress (NAEP; National Center for Education Statistics) evaluates student achievement in a variety of areas. In 2011, students in eighth and twelfth grades around the United States completed a writing assessment. According to the results, less than 25 percent of eighth graders were considered proficient or better writers (National Center for Educational Statistics, 2012). This percentage is even lower for children who came from disadvantaged homes and communities, and those who lived in a large city (National Center for Educational Statistics, 2012). Data, like the NAEP report, are collected in order to make informed decisions and to solve problems. It is clear that the writing achievement in this county is a problem.

Educators must determine the causal determinants and work to improve these lackluster achievement data.

To do this, educators need to examine the causes of this problem in order to propose effective solutions. Do teachers need to plan more effective writing lessons? Should teachers increase the frequency and duration of writing instruction? Do teachers need to create more welcoming, inviting writing environments? These are just some questions educators need to consider. Perhaps the most important consideration, however, is the motivation of students.

Writing is a very complex task that involves many different processes that need to work simultaneously (Torrance & Galbraith, 2006). Because of this, perseverance and resiliency may be lowered for students who find writing difficult or irrelevant. Motivation, which is a drive to complete a task, varies across domains (e.g., reading, writing) and can predict writing achievement (Schunk, et al., 2014; Troia, Shankland, & Wolbers, 2012; Pajares, Valiante, & Fai Cheong, 2007). Teachers may need to provide nurturing environments that facilitate increased motivation to write (Bruning & Horn, 2000).

Statement of Purpose

The aim of the present study is to examine the writing motivation of upper elementary-aged students. Specifically, this purpose of this study is to examine the relation among writing self-efficacy, attributions towards writing, and writing achievement. This study adds to the existing research because of its focus on examining these variables for at-risk students. Participants of this study attended Title 1 schools for the 2014-2015 school year. Schools with Title 1 status are located in disadvantaged communities and need extra support and assistance in order to provide adequate instruction and education to the students these schools serve.

Moreover, this study included only elementary school (ages 9 to 12) students. This is significant as this is the age range in which students begin to accurately evaluate their performances, ability, and effort (Schunk et al., 2014; Klassen & Welton, 2009; Stipek, 1981; Nicholls, 1978).

Research Question(s)

Research questions related to writing self-efficacy, attributions toward writing, and writing achievement of at-risk elementary-aged students guided this study. Specific research questions were as follows:

(1) Is there a significant relation between narrative writing self-efficacy and writing achievement [as measured by the Narrative Self-Efficacy Scale and the Test of Written Language-4 (Hammill & Larsen, 2009) Overall and Spontaneous Writing composites] of at-risk upper elementary-aged students?

(2) Is there a significant relation between writing skills self-efficacy and writing achievement [as measured by a Writing Skills Self-Efficacy Scale (Pajares, Hartley, & Valiante, 2001) and the Test of Written Language-4 Overall and Contrived Writing composites] of at-risk upper elementary-aged students?

(3a) Is there a significant relation between a student's ability attributions for success and failure towards writing and writing achievement (as measured by the Student Writing Attributions Scale and the Test of Written Language-4) of at-risk upper elementary-aged students?

(3b) Is there a significant relation between a student's effort attributions for failure towards writing and writing achievement (as measured by the Student Writing

Attributions Scale and the Test of Written Language-4) of at-risk upper elementary-aged students?

(4) Do the relations between writing and motivation factors differ as a function of sex and age (as measured by the Narrative Self-Efficacy Scale and Writing Skill Self-Efficacy Scale, Student Writing Attributions Scale, and the Test of Written Language-4) for at-risk elementary-aged students?

Overview of Methodology

A correlational research design was employed to examine the relation among study variables. Participants completed several measures including the Narrative Writing Self-Efficacy Scale, Writing Skills Self-Efficacy Scale (Pajares, Hartley, & Valiante, 2001), the Student Writing Attributions Scale, and the Test of Written Language-IV (TOWL-4; Hammill & Larsen, 2009). These scales were used to examine the self-efficacies of students related to both writing skills (e.g., punctuation, capitalization) and a specific writing task (e.g., story writing), attributions toward story writing, and writing achievement. A variety of statistical analyses were conducted in order to examine relations among variables.

Rationale and Significance

Research in the area of writing motivation is uncommon (Hidi & Boscolo, 2006; Pajares, David Miller, & Johnson, 1999). Existing research has focused on the self-efficacy of students in college and high school (Pajares et al., 1999). Little research has been conducted with younger students. Moreover, research related to the attributions toward writing is limited.

In this study, self-efficacy was examined in two ways: skill and task. Writing self-efficacy related to skills (e.g., punctuation, spelling, parts of speech) has been examined by

several researchers (Pajares 2007; Pajares, Hartley, & Valiante, 2001), but little research has been conducted for specific writing tasks. In this study, the self-efficacy of students related to story writing (a common narrative writing task in elementary classrooms) was also examined.

Another distinction of this study is the unique characteristics of the participants. At-risk elementary students from Title 1 schools were recruited to participate. Few research studies have been conducted with young students and a thorough literature review yielded no studies related to writing motivation for *only* at-risk students. Other studies may have included at-risk students implicitly (Shell, Colvin, & Bruning, 1995; Troia, Harbaugh, Shankland, Wolbers, & Lawrence, 2012), but it was not a major inclusion criterion. Examining at-risk students from disadvantaged homes, schools, and communities will yield conclusions related to the achievement of these students, as well as the motivation of these learners.

Role of the Researcher

As an experienced special education teacher (with experience providing writing instruction to students with disabilities), I served as researcher and principal investigator of this study. In this role, I was responsible for developing the research design, implementing the study, scoring and entering data, analyzing results, and determining the conclusions. Recruitment of participants and solicitation from the staff of the Boys and Girls Clubs of the Tennessee Valley organization, who provided access to participants, was also a part of my role.

Definition of Key Terminology

At-risk (sometimes referred to as *high needs students*) – "[s]tudents at risk of educational failure or otherwise in need of special assistance and support, such as students who are living in poverty, who attend high-minority schools…, who are far below grade level, who have left

school before receiving a regular high school diploma, who are at risk of not graduating with a diploma on time, who are homeless, who are in foster care, who have been incarcerated, who have disabilities, or who are English learners" (U.S. Department of Education, n.d.)

Motivation – "…the process whereby goal-directed activities are instigated and sustained" (Schunk, Meece, & Pintrich, 2014; p. 5)

Achievement motivation – "[d]esire to perform well in achievement situations" (Schunk, et al., 2014; p. 374)

Self-efficacy – "… beliefs in one's capabilities to organize and execute the course of action required to produce given attainment" (Bandura, 1997; p. 3).

Attributions – "[p]erceived causes of outcomes" (Schunk, et al., 2014; p. 374)

Social cognitive theory – "postulates that motivation processes influence both learning and performance…" (Schunk, et al., 2014; p. 123)

Attribution theory – "…cognitive theory of motivation based on the idea that individuals are conscious and rational decision makers" (Schunk, et. al., 2014; p. 82)

Organization of Dissertation

This dissertation is organized into five chapters. Chapter 1 serves as an introduction, providing the purpose, and rationale as well as specific research questions. Salient constructs, their definitions, and the instruments designed to assess them are introduced. In the second chapter, relevant literature is discussed. In chapter three, the research design and methods are presented, and results are presented in chapter four. The discussion and conclusions of the study are presented in chapter five.

Summary of Constructs

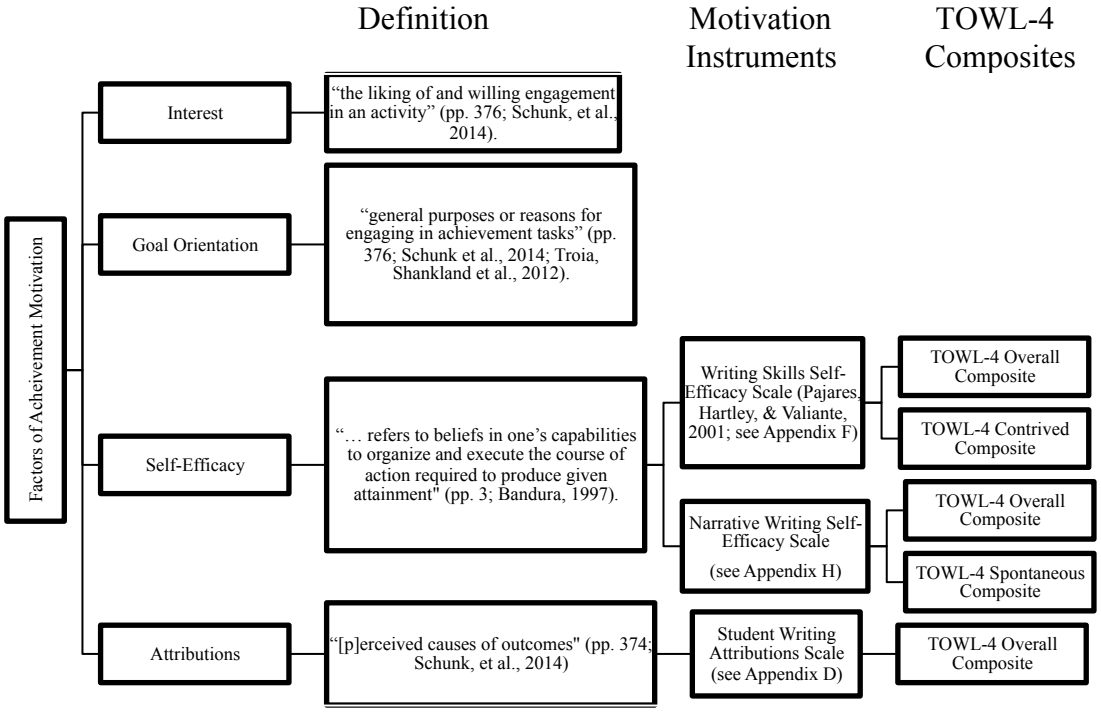

Figure 1

Summary of Constructs and Instruments

Note. The Test of Written Language-4 (TOWL-4) is comprised of seven subtests (the Overall Writing composite). The Contrived Writing composite is comprised of the Vocabulary, Spelling, Punctuation, Logical Sentences, and Sentence Combining subtests. The Spontaneous Writing composite is comprised of the Contextual Conventions and Story Composition subtests.

Chapter 2

Review of Literature

The National Assessment of Educational Progress (NAEP; National Center for Education Statistics) evaluates the performance of students in the United States in a variety of subject areas by categorizing students using various achievement levels that denote what students should know and be able to do for each grade level. These levels include basic, proficient, and advanced. Basic indicates "partial mastery of prerequisite knowledge and skills that are fundamental for proficient work…" and proficient indicates "solid academic performance" (p. 7, National Center for Education Statistics, 2012). Students scoring in the advanced range demonstrate "superior performance" (p. 7; National Center for Education Statistics).

One of the subject areas included in this periodic assessment is writing. For the purpose of this study, the results of two different reports are discussed. The results from the 2002 report included data for students from fourth, eighth, and 12th grades, while the 2011 report, which is the most recent, included data from only eighth and 12th graders. Although the 2011 report did not include data from fourth graders, it is important to note these data because they demonstrate a trend over time in the writing achievement of students in this nation.

According to the 2002 results, less than 30 percent of fourth graders and less than 25 percent of 12th graders nationally were considered proficient or better writers (see Table 1; Troia, 2009; U.S. Department of Education, 2003). Therefore, almost three-quarters of students potentially applying for post-secondary education or employment cannot write at an average or above level, and thus only demonstrate partial mastery (or less) of this subject.

According to *The Nation's Report Card: Writing 2002* data and report (U.S. Department of Education, 2003), fourth grade students living in large cities (144) scored below the national average (154). This discrepancy was even larger when examining scores for students who were eligible for the National School Lunch Program (NSLP), which is an initiative that provides free or reduced school lunches to students from low-income families (see Table 2; U.S. Department of Education, 2003). Students who were not eligible for this program averaged a scale score of 163, while students who were eligible had an average of 141. In large cities, this average was even lower. Students who were ineligible for the NSLP scored an average of 157, while eligible students scored 138. Race/ethnicity differences were also examined as part of this report and available data (see Table 3). White students scored an average of 161, Black students scored an average of 140, and Hispanic students scored 141 on the 2002 NAEP writing assessment.

The NAEP collected data about the writing achievement of U.S. students again in 2011, but this study evaluated only eighth and 12th grade achievement (National Center for Educational Statistics, 2012). According to this report, 24% of eighth graders were proficient writers, while 54% were considered basic writers and 20% scored in the below basic category (see Table 1). Three percent scored in the advanced range. The results were similar for 12th graders. Almost a quarter (24%) of students scored in the proficient category, and three percent scored in the advanced range. Over half of the students assessed were considered basic writers (52%), while 21% were considered below basic writers.

According to *The Nation's Report Card: Writing 2011* report, eighth and 12th grade students considered at-risk scored below than their same-aged peers (National Center for Educational Statistics, 2012). Eighth graders who were eligible for the NSLP averaged a lower

scale score (134) than students who were not eligible (161). Students living in cities scored lower (144) than peers who lived in all other locations (148-150) (see Table 2). Race/ethnicity were also examined by the NAEP (see Table 3). White students scored, on average, higher (158) than Black (132) and Hispanic (136) students in eighth grade. It should be noted that all of these averages are far below the expected scaled score of a proficient writer (173).

For 12th graders, race/ethnicity also appears to be factor in writing achievement (see Table 2; National Center for Statistics, 2012). White students scored, on average, higher (159) than Black (130) and Hispanic (134) students. Additionally, students who lived in a city scored lower (146) than peers who did not live a city (149-154). Data related to eligibility for the NSLP were not presented as part of this report for 12th graders (National Center for Statistics).

Table 1

Percentage of Students, by Writing Achievement Level on the National Assessment of Educational Progress Writing Assessment, for Grades 4, 8, and 12 (for 2002 and 2011)

		Advanced	Proficient	Basic	Below Basic
4th	2002	2	26	58	14
	2011	n/a	n/a	n/a	n/a
8th	2002	2	29	54	15
	2011	3	24	54	20
12th	2002	2	22	51	26
	2011	3	24	52	21

Table 2

Average Scale Scores on the National Assessment of Educational Progress Writing Assessment for Students Eligible and Not Eligible for the National School Lunch Plan

		Eligible	Not Eligible
4th	2002	141	163
	2011	n/a	n/a
8th	2002	132	162
	2011	134	161
12th	2002	133	152
	2011	n/a	n/a

Table 3

Average Scores on the National Assessment of Educational Progress Writing Assessment of Students based on Race/Ethnicity

		White	Black	Hispanic	Other
4th	2002	156	130	134	130-159
	2011	n/a	n/a	n/a	n/a
8th	2002	157	131	131	130-154
	2011	158	132	136	141-155
12th	2002	155	134	136	129-150
	2011	159	130	134	145-158

It is clear from nationally reported data, from multiple years, students are failing in the area of writing. Moreover, students who come from disadvantaged homes tend to score lower than their same-aged peers. In order to rectify and begin making progress in this area, educators must determine the reasons as to why students are not proficient writers. One answer may be the complex nature of this subject. Writing requires many cognitive processes to function simultaneously (Torrance & Galbraith, 2006). Students must employ a variety of skills including understanding the prompt, activating background knowledge about the topic, and using strategies related to the writing process and transcription skills to complete a writing task (Graham & Harris, 2013; Lienemann, Graham, Leader-Janssen, & Reid, 2006). Students must maintain and manage several interrelated cognitive processes. Unlike reading, tasks related to writing require students to produce, instead of consume, information (Hidi & Boscolo, 2006).

Another answer may be students' attitudes or views about writing. Instead of viewing writing as an important tool that can be used for a plethora of skills and outcomes, it is often viewed as an unattractive task (Boscolo & Gelati, 2013). It seems students do not understand the importance or many uses of writing (e.g., communication, acquiring knowledge) (Boscolo & Gelati, 2013). Because writing is complex and many students do not seem to value it or believe it can be a tool to aid in learning, motivation is often an important factor for students when completing writing tasks or skills (Boscolo & Gelati, 2013; Klassen & Welton, 2009). In this literature review, I discuss research about achievement and writing motivation, with specific emphasis on self-efficacy and attributions.

The purpose of this literature review is to define motivation and discuss the factors of achievement motivation including interest, goal orientation, self-efficacy, and attributions. Later,

literature related to writing motivation is synthesized.

Motivation

Motivation is defined as the "process whereby goal-directed activities are instigated and sustained" (Schunk, Meece, & Pinctrich, 2014; p. 5). Motivation is a drive that influences how we learn (Schunk et al.). Students who believe they can complete a skill or task are often more motivated to see it through. And, visa versa, students who feel they cannot complete a skill or task often lack motivation to persevere. For example, a student who does not value writing and views the tasks as just another assignment may not be motivated to finish the task or do his/her best work. The student may also avoid the task all together. Motivation is what keeps students going when faced with challenging or, sometimes, unattractive work. This is especially important for writing instruction, as students are often faced with complex tasks.

Schunk and colleagues (2014) noted that motivation might differ across subject areas and tasks. In fact, a student may be highly motivated to learn new skills related to science, but be unmotivated when learning new writing skills. Motivation, which is domain-specific, also changes as students advance through the grade levels (Troia, Shankland, & Wolbers, 2012; Klassen & Welton, 2009).

There are three main influences of motivation including expectancy, incentive, and motive (Atkinson, 1957). Expectancy is how the student believes s/he will perform on a given task. The attractiveness of the task is referred to as the incentive, and motive is related to the type of incentive the student will receive if successful. For example, students may believe they can earn an "A" grade (expectancy) on a writing assignment about a topic of interest (incentive or attractiveness) and thus are motivated to achieve (Atkinson, 1957).

Intrinsic Motivation

Motivation can be intrinsic or extrinsic (Schunk et al., 2014). Students who are intrinsically motivated tend to work hard on a task because they want to, not because they are expecting a reward. These students may find the task meaningful and/or may really like the work and believe the effort and ability expended for the task is worthwhile. Extrinsically motivated students work hard on a task because they do expect some kind of reward for their effort or performance (Schunk et al.). These students do not work on a task because they enjoy it or believe it is meaningful. Instead, they expect a reward or incentive (e.g., praise). It is important to note that a student can have high intrinsic and extrinsic motivation for the same task (Schunk et al.). For instance, a student may enjoying writing narrative essays and expects the teacher to post the best work on the classroom bulletin. This may enhance both types of motivation. On the other hand, a student may have low intrinsic motivation to complete argumentative writing (perhaps s/he does not find it meaningful and does not enjoy it) but have high extrinsic motivation to do well because the teacher has promised a free homework pass or other type of reward. These two types of motivation seem to work independently from each other.

A major component of intrinsic motivation is perceived control of outcomes, which is comprised, in part, of locus of control (Schunk et al., 2014). This term, which was coined by Julian Rotter, refers to the "extent to which behaviors influence outcomes" (Schunk et al., p. 246). Students can determine if outcomes were externally or internally controlled (Rotter & Mulray, 1965). If a student believes the outcome was, at least in part, determined based on chance, luck, fate, or others, the student will assign an external locus of control to that situation

(Grolnick, Gurland, Jacob, & Decourcey, 2001; Rotter, 1966). On the other hand, a student who believes the outcome was due to his/her own ability or effort will assign an internal locus of control to that situation (Rotter, 1966). These assignments of control can impact motivation and persistence (Schunk et al.). A student who believes s/he has little to no control over a situation may not find it worthwhile to work hard or persist through a challenging task. Conversely, a student who believes the outcome is controllable may study harder and be willing to expend some effort to achieve the outcome goal.

Achievement Motivation

Achievement motivation refers to one's desire to perform competently in academic settings (Schunk et al., 2014; Wigfield & Eccles, 2001). Much of the literature related to achievement motivation uses *achievement* and *competence* interchangeably (Elliot & Dweck, 2005). Although not exactly synonymous, in this literature review, I consider both terms in a similar manner. In other words, please consider similar meanings (IQ, aptitude, performance) for these two words.

Researchers in this field believe motivation impacts achievement and, in fact, believe these two phenomena have a reciprocal relation (Wigfield & Eccles, 2001). Competency beliefs relate strongly to achievement and predict effort and perseverance (Meece, Bower, Glienke, & Burg, 2006; Schunk et al., 2014). Performance outcomes, or achievement, are influenced by many factors including ability, effort, task difficulty, and how much help was provided (Li & Lee, 2004). Li and Lee (2004) indicated that ability and effort influence a student's achievement more than the other factors.

Student perceptions of ability and effort are important considerations when discussing achievement motivation (Dweck, 2001). Specifically, how students view their own abilities is an important determinant for achievement. Students may believe their achievement is due solely to effort, solely to capacity (competence), or a combination of the two (Nicholls & Miller, 1984). There are four levels of conceptions of ability and effort. Some believe that the students who work the hardest in the class are the smartest, while others believe that effort is the sole determinant of performance. Other students may believe both effort and ability play a role in outcomes, and some emphasize solely ability as the cause of an outcome (Nicholls & Miller, 1984). These perceptions can impact performance. Students who identify themselves as ability-only may quit and give up before even trying the task because they believe they are incapable. On the other hand, students who identify as effort-dependent may work much harder in order to receive the outcome they are expecting. These are important considerations for teachers because they have a direct role in deciding how motivated a student will be to complete a skill or task. Of course, these perceptions of ability and effort may differ across domains.

Self- perceptions of competence, or competency beliefs, change as students age and typically depend on a specific task (Dweck, 2001). Although researchers agree that these changes exist, the age when students begin to differentiate between ability and effort is debatable. Perhaps, this progression is different for each individual student as some learners mature faster than others.

Research indicates that students in primary grades often overestimate ability (Nicholls & Miller, 1984; Nicholls, 1978). Students begin to "differentiate between performance, effort, and ability around the age of 10" or in the fourth grade (Klassen & Welton, 2009; Stipek, 1981).

Nicholls (1978) noted that students begin to align their perceptions of their own abilities with how teachers rank them at age nine. Schunk and colleagues (2014) indicated that students in upper elementary school and middle school have more agreement with perception and reality than students in lower elementary school. In fact, students begin to differentiate between ability and effort around the ages of nine to 10. Dweck (2001) noted that student perceptions seem to begin becoming more accurate at around age seven, when students begin to compare their performances to their peers and begin to believe ability is domain-specific. At this age, students also begin to use feedback from teachers and peers to judge themselves (Dweck, 2001). By age 10 to 12, students begin to believe ability is differentiated from effort and view intelligence as capacity related. Students seem to continue this thinking throughout middle and high school because research indicates that students in these grade levels often have lowered ability beliefs and decreased achievement motivation (Wigfield & Eccles, 2001).

Task difficulty is an important consideration when students are differentiating between ability and effort. Weiner (1992) contended that tasks should be presented at a student's specific intermediate level (tasks that are not too easy or too difficult) as this provides the most relevant information when self-evaluating performances (Schunk et al., 2014; Weiner, 1992). Students can evaluate their own ability and effort and be able to make more accurate predictions of performance, efficacy, and attributions. Moreover, Schunk and colleagues noted that, based on Atkinson's achievement model, achievement motivation is the highest when tasks are completed at this level.

Troia, Shankland, and Wolbers (2012) identified four factors, or components, of achievement motivation, including interest, goal orientation, outcome attributions, and self-

efficacy (see Figure 2). These factors influence how students learn and can predict achievement (Schunk, et al., 2014; Pajares, Valiante, & Fai Cheong, 2007). Figure 3 outlines which of these constructs were examined in this study.

Interest

Interest refers to "the liking of and willing engagement in an activity" (Schunk, et al., 2014; p. 376). This factor has two components: personal and situational (Troia, Shankland, et al., 2012). Personal interest is developed for the domains students find appealing. For example, a student may believe history is fascinating and be more motivated to attend that class. Personal interest, which seems to be broader, refers to the attractiveness of a subject. Situational interest, on the other hand, refers to the attractiveness of a task or assignment. This type of interest is dependent on the characteristics of the specific tasks (Troia, Shankland, et al.). Students may have a personal interest in writing, and find narrative writing more appealing than argumentative writing (situational interest).

Value is related to interest, yet they sometimes work independently (Troia, Shankland, et al., 2012). Value is the importance of learning (Troia, Shankland, et al.). This motivational factor is comprised of four components: relevancy, intrinsic value, utility value, and cost (Troia, Shankland, et al.). Relevancy is an important part of value. Students who believe the task is relevant often work harder and accept the challenge to complete the task. Intrinsic value is also important as it can help students decide if the task is personally meaningful, while utility value refers to the students' self-assessed importance of the task. Students who believe the assigned task will benefit, or aid in their learning, in the future may find utility value in completing it.

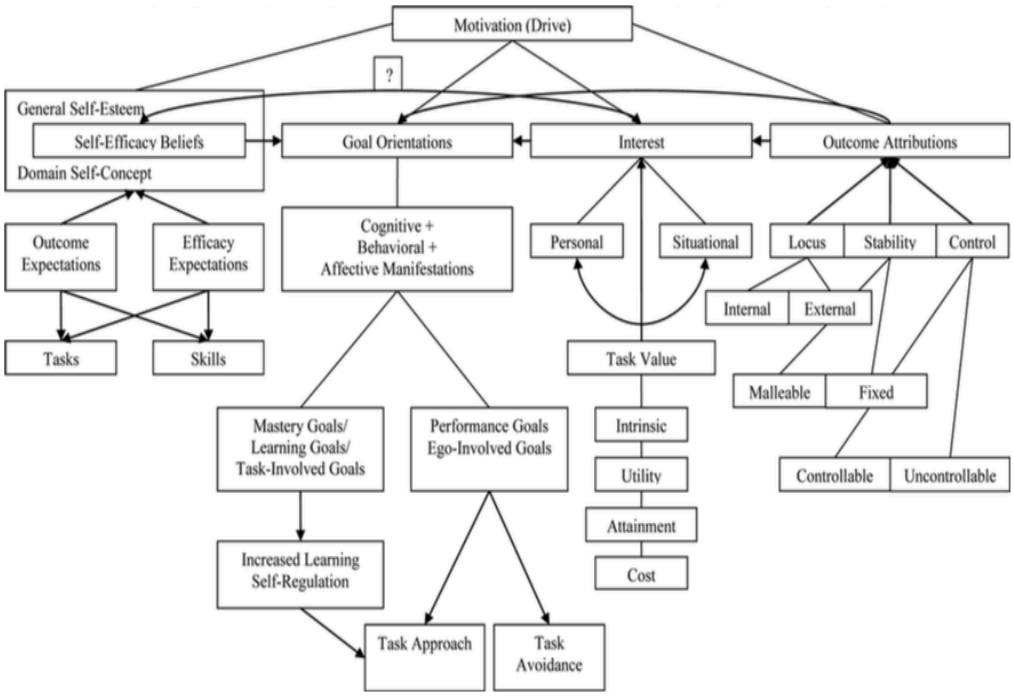

Figure 2

Factors of Motivation (as presented in Troia, Shankland, & Wolbers, 2012)

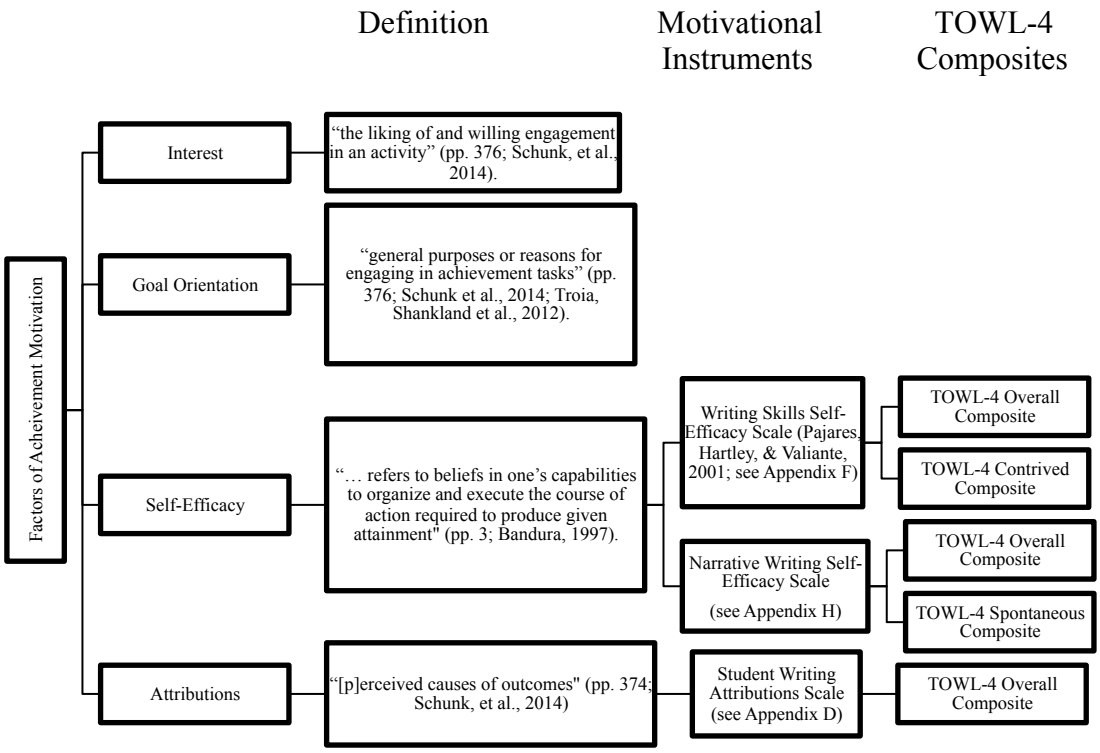

Figure 3

Summary of Constructs and Instruments

Note. The Test of Written Language-4 (TOWL-4) is comprised of seven subtests (the Overall Writing composite). The Contrived Writing composite is comprised of the Vocabulary, Spelling, Punctuation, Logical Sentences, and Sentence Combining subtests. The Spontaneous Writing composite is comprised of the Contextual Conventions and Story Composition subtests.

Finally, students assess the cost of the task when determining value. This refers to the amount of effort or anxiety that will be required in order to complete the task. Several variables seem to impact a student's assessment of the value and interest of a task.

Goal Orientation

Another achievement motivation factor is goal orientation, which refers to the "general purposes or reasons for engaging in achievement tasks" (Schunk et al., 2014, p. 376; Troia, Shankland et al., 2012). This factor refers to the expected or desired outcomes by students (Troia, Shankland, et al.). Achievement goals are a student's approach, or behavior, to produce the desired outcome (Ames, 1992). Ames (1992) noted that these goals are "represented by different ways of approaching, engaging in, and responding to achievement-type activities" (p. 261). Goal orientations impact the tasks students decide to avoid or try. Students who do not view ability as controllable may rate themselves low in the area of ability (Dweck, 2001) and avoid tasks in which they feel incapable. Students who believe ability is controllable may work harder on challenging tasks because they believe they can try hard to achieve. What makes students differ in the causes of success or failure, and thus differ in the tasks they choose? Dweck (2001) suggested there are two differing views of implicit intelligence that controls students' self-perceptions and goal orientations.

Performance and mastery goals are at the heart of Dweck's suggestions for goal orientations (Dweck & Leggett, 1988). These two types of goals, which are sometimes labeled as *mindsets*, often guide students in their perceptions of their capabilities and, thus, their goals. Performance goal orientation focuses on achieving success in order to receive positive praise and judgments from others. Students subscribing to this mindset have an entity view of intelligence

in which they believe they do not control their own competence. Rather, ability is fixed and uncontrollable (Dweck & Leggett, 1988). The learning goal orientation relies on the incremental view of intelligence in which students believe ability is controllable. Students with this mindset focus on increasing competence and mastering goals, and subscribe to an incremental view of implicit intelligence (Dweck & Leggett, 1988)

The mindsets of students impact motivation. Students who believe they cannot control ability may give up or avoid tasks they believe are too challenging. This sometimes can lead to helplessness, in which students attribute failures to lack of ability and do not believe they can accomplish the task. Mastery-oriented students, however, may believe they can accomplish challenging tasks by increasing their efforts (Dweck & Leggett, 1988). These students approach challenge as a way to increase capacity of intelligence, rather than as failure. Dweck and Leggett noted that these students produce a positive affect using self-regulation and self-monitoring strategies that they automatically employ when faced with a challenge.

Dweck and colleagues (see 1988 and 2001) have expanded the research related to goal orientation for students. A student's specific implicit theory of intelligence impacts student motivation. In fact, these researchers noted that these theories are "reliable predictors of goal choices" (pp. 263; Dweck & Leggett, 1988).

Outcome Attributions

A third factor of achievement motivation is outcome attributions (Troia, Shankland, et al., 2012). This factor impacts motivation because it requires students to determine the causes of an outcome (e.g., achievement), which can, in turn, influence goal orientation and how students expect to perform (Schunk et al., 2014). The attributional theory suggests that students want to

make sense of the world and develop causal determinants (Schunk et al., 2014). Weiner (2005), who is one of the leading researchers in this field, believes that students seek to determine why an outcome happened. During this search, students attribute successes and failures to a variety of antecedents (e.g., peer comparison) and causes (e.g., ability, effort, luck) (Schunk et al., 2014).

Antecedents of outcomes have two categories: environmental and personal. Environmental factors include specific information related to task difficulty and feedback from teachers or peers (Schunk et al., 2014). Students can use this information to determine causes of achievement. For example, a student may believe the task was far too difficult to perform well at the onset, and so, after failure, may attribute it to the difficulty of the task. Personal factors like attributional biases, prior knowledge, and individual beliefs may also play a critical role when determining causes.

After evaluating the antecedent, students assign a perceived cause (attribution) to the condition. Several possible perceived causes exist including ability, effort, luck, task difficulty, teacher, mood, and health and well-being. A student may attribute success to luck or to task difficulty (e.g., the teacher grading too easily). Another student may attribute effort if s/he spent several hours studying or practicing for the assignment. Failure attributions follow a similar pattern. Students may attribute failure to task difficulty or teacher bias. They may also attribute failure to lack of ability or effort, as well as their health. If a student was sick when completing the task, a failure outcome may be attributed to this factor.

One important note about perceived causes of an outcome is that these perceptions may or may not be *true* causes. Students' attributions for success or failure are determined by their

own perceptions. These perceptions may not be correct in reality. A student may attribute failure to lack of ability, but effort may really be the culprit. Moreover, these attributions may differ from the actor (student) to observer (teacher). For example, a student may attribute test failure to lack of ability, but a teacher may assume the student did not study for the test (effort). A teacher also may not have enough information to make accurate attributions (Weiner, 2005). For example, a teacher may just assume the student did not study when, in actuality, the student studied at home the night before the test.

Three dimensions influence attributions. The stability of the cause refers to how stable a cause is over time. This dimension helps students determine if the attribution, or cause of the outcome, is stable or unstable. Some students (especially those subscribing to the entity view of implicit intelligence) perceive ability as a stable cause. These students do not believe that ability can increase or decrease. Task difficulty is another example of a stable cause because the task was the same from the beginning to the end and did not change throughout the process.

Other students believe ability is malleable, and if they try hard (effort), ability can increase (Dweck & Leggett, 1988). Effort is typically considered unstable, as students can decide which tasks to expend effort on. Luck is also considered an unstable attribute, as that outcome may only occur once and the likelihood of it occurring again may be slim (Schunk et al., 2014).

The locus dimension of the attributional theory refers to whether the outcome was caused internally or externally (Schunk et al., 2014). Internally caused outcomes (e.g., ability, effort) are attributed solely to the learner. On the other hand, externally caused outcomes (e.g., luck, task difficulty) are attributed to forces outside the learner. Students who have developed external

attributions believe that no matter their abilities or efforts, the task may have been too difficult (for a failure outcome) or that they succeeded only, perhaps, because they got lucky. Students who have assigned an internal cause may attribute success or failure to high or low ability, or perhaps, high or low effort.

The control dimension refers to whether the student believes s/he has control over the cause (Schunk, et al., 2014). Causes can be controllable or uncontrollable. Students may believe they can control effort, but ability may be uncontrollable. Help from friends or parents may be controllable, but difficulty of the task may be uncontrollable.

Weiner's (1972) early work in this area focused on only four causes: ability, effort, luck, and task difficulty (Schunk et al., 2014). Recently, he has expanded his work to include more specific causes. In his later work, Weiner suggested viewing effort in two ways: temporal and long term. Effort that is long term is stable and controllable. This kind of effort is broader and the student may admittedly work very hard to achieve success. Temporal effort is the amount exerted on a specific task or situation. Perhaps the student did not study the night before a pop quiz. This would be controllable, but unstable. Although, the student's overall effort in the class or course may be high, the effort exerted for this specific task was low. This is not necessarily indicative of the student as a whole, but is more situational.

In Weiner's more recent work, ability is also viewed differently (Schunk et al., 2014). He divided this attribution into two categories: aptitude (overall intelligence) and skill/knowledge. He proposed that aptitude (think IQ) is an uncontrollable, stable cause that students cannot do much to change. Skills/knowledge refers to content the student is learning and needs to know to complete the task, a controllable, unstable cause. Thus, skills/knowledge can increase as

students age (so this type of ability does not remain the same, i.e., is unstable) and is controlled by the student.

This new way of viewing attribution theory aligns more closely to Dweck and Leggett's (1988) assertion that any cause can be controllable. These researchers argue that controllability is student specific, not outcome specific. Students believe certain attributions are controllable or uncontrollable based, primarily, on their individual theories of intelligence (performance versus mastery goal orientations). Ability, or aptitude, can also be considered controllable or uncontrollable. Similar to the definition of the two types of implicit theories, some students may believe ability is stagnant while others may believe it can increase with effort. This is a key difference between these researchers and Weiner's work related to this area. In summary, Dweck and Leggett (1988) believe student perceptions impact the controllability dimension.

Student attributions are shaped by many factors in the process of developing causal determinants. Ascribing attributions is an important factor of achievement motivation because attributions are a student's understanding of why an outcome happened. Students' attributions influence their perceptions of whether they can change an outcome in the future or if the cause is out of their control. The nature of students' attributions impact future expectancies, affects towards the specific task in the future, and the self-efficacy of students (Schunk et al., 2014).

Self-Efficacy

The fourth and final factor of achievement motivation identified by Troia, Shankland, and Wolbers (2012) is self-efficacy. "Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the course of action required to produce given attainment" (Bandura, 1997; p. 3). Similarly to expectancy, self-efficacy often shapes effort and affect related to a task or

skill (Pajares, 1996), and it influences perseverance and resiliency when approaching a challenging task (Pajares & Valiante, 2006; Bandura, 1989). This factor is related to outcomes as students typically use outcomes (or performances) to develop and create self-efficacy beliefs (Troia, Shankland, et al., 2012).

Self-efficacy is task or skill specific and is considered to be a predictor of performance (Troia, Shankland, et al., 2012). This factor is different from *self-concept*, which focuses on how students judge their overall competence related to a specific domain (Schunk & Pajares, 2001). Self-competence involves students comparing their performances (and possibly factors that influence performance like ability and effort) to peers. Self-efficacy does not involve this comparison (Schunk & Pajares, 2001). So, a student can have a positive self-concept related to writing overall. The same student can feel efficacious about writing a friendly letter, but may not feel efficacious about writing a compare/contrast essay.

Self-efficacy is formed by several factors including (1) mastery experiences, (2) vicarious experiences, (3) feedback, and (4) affect (Bandura, 1997; Klassen & Welton, 2009; Schunk et al., 2014). Mastery experiences are past performances that resulted in success or failure on a similar task, and vicarious experiences are observations of the behavior or skills needed to complete the task. Students who have failed at a task in the past may not feel efficacious and believe they cannot complete a similar task in the future. Students with low self-efficacy may avoid tasks they deem too difficult after receiving modeling from the teacher. Feedback from peers or teachers, which is sometimes referred to as *verbal persuasion*, also influences self-efficacy. Additionally, teacher belief in a student can influence self-efficacy (and thus, task choice). Grouping of students can also impact the development of self-efficacy beliefs (Schunk & Pajares, 2001).

Students who are continuously grouped with students they perceive are low-achievers, may develop low self-efficacy. Affect (e.g., stress, anxiety) is also impactful in relation to behavior and self-efficacy (Schunk et al.). Students with low self-efficacy in writing, for instance, may fret about a task related to writing essays.

In addition, students use various sources of information to form self-efficacy (Troia, Shankland, et al., 2012). Students typically consider the difficulty of the task. This relates to how much effort and/or anxiety must be expended to complete the task. Students self-assess the required cost. They also assess overall value of the task (relevancy, intrinsic value, utility value) (Troia, Shankland et al.).

Efficacy consists of two categories: outcome expectations and efficacy expectations. Efficacy expectations refer to the confidence the student has about completing a specific task (Troia, Shankland, et al., 2012). For example, a student may feel efficacious about writing a short narrative story based on a picture. So, this student has used various sources of information to create this expectation. Perhaps the student received an "A" grade on a similar assignment in the past. Or, perhaps the student received positive feedback about work related to this task in class. The student may have also observed the teacher complete a similar task and believes that the task is doable.

Outcome expectations refer to the anticipated consequences (praise, award, or approval) the student expects to receive after the performance (or outcome) (Troia, Shankland, et al., 2012; Schunk & Pajares, 2001). In the case about the student who feels efficacious about writing a short narrative story, this student may also have high outcome expectations. Perhaps this student is anticipating that the teacher will post the class's best work on the classroom bulletin board.

Thus, the reward would be recognition from the teacher, and possibly peers. Outcome and efficacy expectations are typically related. Students " who knew what behaviors would result in desired outcomes also possessed greater positive efficacy expectations" (p. 108; Meier, McCarthy, & Schmeck, 1984).

In another example, a student may feel highly efficacious about an upcoming test. Perhaps this student has positive self-perceptions about his/her ability and effort. This student has also evaluated the value and relevancy of the task. But, this student has low outcome expectations because s/he feels the teacher grades unfairly and displays biases towards specific students (Schunk & Pajares, 2001). This may impact the student's effort and perseverance. If the student believes it is useless to even try on the exam, s/he may not expend the needed effort and may try very little or avoid the task all together. Schunk and Pajares (2001) noted that students who believe the outcomes will be negative typically do not complete the task.

Similarly to the creation of attributions regarding a task, the development of self-efficacy becomes more accurate as students age (Troia, Shankland, et al., 2012). Young students seem to either overestimate their own abilities or underestimate the difficulty of the task. These students seem to believe that all tasks are easy (Schunk & Pajares, 2001). Older students can accurately determine and evaluate task difficulty (Schunk & Pajares, 2001). Perceptions, whether correct or not, influence self-efficacy. Unlike attributions, researchers have not noted the optimal age to begin assessing self-efficacy with students.

Summary

Achievement motivation, which is very intricate, influences how students learn. Four factors comprise this type of motivation including interest, goal orientation, outcome attributions,

and self-efficacy. Although each factor is independently related to achievement motivation, all four factors are intertwined and impact each other. In the next section I discuss achievement motivation in the area of writing. Much of the focus of this literature review is related to two of the factors outlined in this section: attributions and self-efficacy.

Writing Motivation

Hidi and Boscolo (2006) and Pajares and colleagues (1999) admitted that writing motivation research is sparse. Most of the research conducted in this area is related to self-efficacy. Early research focused on the self-efficacy of students in college and high school (Pajares, David Miller, & Johnson, 1999). Recently, some researchers have examined students in elementary and middle school. Some researchers have also examined expectancy and goal orientations. Attributions, although a critical component of motivation, has very limited research in the area of writing. In this literature review I focus on self-efficacy and attributional research in this area.

Because writing is a complex process that involves multiple steps (e.g., activating background knowledge, understanding the prompt) (Graham & Harris, 2013; Lienemann, Graham, Leader-Janssen, & Reid, 2006) and is viewed as an unattractive task (Boscolo & Gelati, 2013), motivation becomes an important consideration for teachers and students. Teachers must be actively aware of student self-perceptions in the area of writing. Moreover, teachers should nurture and support students by providing meaningful tasks and welcoming writing environments (Bruning & Horn, 2000). Additionally, teachers should provide focused feedback to students. Beach and Friedrich (2006) recommended that teachers outline specific strengths of the writing and areas that need improvement. Graham and colleagues (2011) suggested

providing very specific feedback regarding one of the following: overall quality or areas of improvement. Providing extensive feedback and noting every error within the writing is unneeded (Graham, Harris, & Hebert, 2011). As a major factor that influences self-efficacy, feedback should be an integral part of a writing classroom (Bandura, 1997; Klassen & Welton, 2009; Schunk et al., 2014).

Interest and value also play significant roles in writing motivation, as both factors are major components of achievement motivation (Troia, Shankland, et al., 2012). Students who are interested in a topic are more likely to want to write about it (Hidi & Boscolo, 2006). Researchers caution, however, that interest may be situational. Hidi and Boscolo (2006) noted that student interest in a topic does not necessarily indicate interest in writing about that specific topic. For example, a student may be very interested in Clemson football and can verbally express important information related to this topic. Verbally telling about a topic and writing about it are two very different tasks. This student may be completely unmotivated to write about Clemson football even though interest exists. Additionally, research suggests that interest in a topic does not equate to high performances or outcomes (Hidi & Boscolo). A student may be interested in the planets of the solar system, but may not have the background knowledge or writing skills to effectively plan, organize, and write about this interest.

Writing apprehension has been examined by several researchers (Pajares & Valiante, 2006; Pajares et al., 2007; Pajares, et al., 1999; Daly & Miller, 1975). Apprehension is related to the anxiety or fear of completing writing tasks. Moreover, task avoidance and enjoyment are often investigated when measuring student apprehension. Daly and Miller (1975) developed a 63-item instrument to assess this construct. Specific categories examined include: anxiety about

writing, teacher evaluation, peer evaluation, professional evaluation, environmental writing, self-evaluation, and task worth (Daly & Miller, 1975). This scale utilized a five-point Likert-scale to assess each item. Results of this study provided evidence that the instrument was valid and reliable. Originally, this scale was used with undergraduate students. The scale developed by Daly and Miller has been used in more recent research with a variety of grade levels. Results of these studies indicated this aspect of motivation does not have a significant correlation with achievement when self-efficacy is controlled (Troia, Shankland, et al., 2012; Pajares & Valiante, 2006; Pajares et al., 2007; Pajares, et al., 1999).

Writing Self-Efficacy

Overall Conclusions

Of the four motivational factors, self-efficacy has been the most researched in the area of writing, yet there are still many gaps in the literature. Klassen and Welton (2009) noted that self-efficacy is one of strongest predictors of writing performance. Writing self-efficacy refers to a student's perceptions about his/her capability to produce different writing types (e.g., narrative, informational) (Hidi & Boscolo, 2006). Pajares and Valiante (2006) echoed these beliefs and noted "self-efficacy makes an independent contribution to the prediction of writing outcomes" (p. 162).

Moreover, writing self-efficacy can help predict strategy use (Hidi & Boscolo, 2006). Students who feel highly efficacious use strategies and can adapt these strategies to fit the specific criteria of a task. Students who do not feel as efficacious do not do either. It seems students who feel highly efficacious also automatically self-regulate and self-monitor while completing tasks (Hidi & Boscolo, 2006). Instruction related to self-regulated strategy

development (SRSD; Harris, Graham, Mason, & Friedlander, 2008) may be needed for students with low self-efficacy.

The self-efficacy of students in the area of writing is largely dependent on specific writing tasks, which aligns with the definition of this construct (self-efficacy is domain-specific). Hidi and colleagues (2002) conducted a study examining sixth grader's argumentative writing achievements and self-efficacies. These researchers concluded that students' self-efficacies were domain-specific. For instance, a student may enjoy writing narrative stories, yet fret and dislike writing informational texts.

In reviewing past studies, I adhered to the terminology used by the authors regarding gender, although this term is not the current term commonly used. More recent studies use the term *sex* instead of gender, but in this literature review and throughout this dissertation, these terms are used interchangeably. Gender differences among students have been examined by many researchers (Pajares et al., 2007; Pajares & Valiante, 2006; Schunk & Pajares, 2001), yet the results have been mixed. Pajares and Valiante (2006) noted that girls exhibit stronger confidences in the area of writing throughout elementary and middle school. In high school, however, this reverses and boys seem to have higher confidence levels. Schunk and Pajares (2001) indicated that boys and girls have equal self-efficacy. This is interesting because, according to their results, girls were higher achievers. Because of these discrepancies, Schunk and Pajares (2001) proposed that the gender differences related to self-efficacy might be grade specific. They suggested that little differences are known with students in elementary school, but this changes in late middle and early high school (Schunk & Pajares, 2001). Perhaps this change could be attributed to natural maturation of students and have little to do with writing

achievement. Additionally, other researchers believe gender differences are nullified when achievement is controlled (Pajares et al., 2007; Schunk & Pajares, 2001). More research is needed, especially for elementary-aged students, in order to truly identify potential gender differences.

The relation of self-efficacy and goal orientations also has been examined (Pajares, et al., 2007; Pajares & Valiante, 2006). Feedback, which is a contributor to the development of self-efficacy, should be linked to process goal (e.g., strategies). In fact, Pajares and Valiante (2006) noted "when process goals are linked with feedback, writing competence improves" (p. 163). Moreover, helping students form performance-approach writing goals (as opposed to performance-avoid goals) is valuable. Pajares et al. (2007) suggested that these goals are positively related to writing self-efficacy, specifically for boys. Performance-avoid goals are negatively related (Pajares et al., 2007).

Specific Studies about Writing Self-Efficacy

Although self-efficacy is the most heavily research area related to writing motivation, few studies exist. The work of Pajares and colleagues (2001 and 2007) is the most highly cited and, thus, form a basis for future research. The most relevant studies are discussed below.

Pajares and colleagues (2007) examined the writing motivation of students from middle-class homes in fourth through 11^{th} grades (N =1266) using a scale that measured the writing self-efficacy of students. Items were broad, and writing teachers identified the skills addressed on this scale. Results suggested that writing self-efficacy decreases as students age, and the perceived value of the task and achievement goals are positively correlated with writing self-efficacy.

Troia, Harbaugh, Shankland, Wolbers, and Lawrence (2012) examined several potential moderators of writing motivation for students ($N = 618$) in grades 4 through 10 (except 8th). Sex, grade, and writing achievement were examined. Students completed the Writing Activity and Motivation Scale, consisting of 30 items measuring self-efficacy, success attributions, task/interest, mastery and performance goals, and avoidance goals. Participants also completed a narrative writing prompt, which was scored using a rubric. Results indicated that a main effect for grade level was non-significant in terms of writing motivation. Sex and teacher judgment were significantly related to mastery goals, task/interest, and success attributions. When comparing average and below average writers, typical writers were more likely to adopt mastery goals and internal attributions for success, and have higher interest and perceived value for writing than struggling writers.

Pajares and Valiante (1996) examined the writing achievement, self-efficacy, apprehension, perceived usefulness, and aptitude of 218 fifth graders. Students completed a timed essay about a narrative prompt, which was scored using a five-point holistic rubric, as well as the Writing Skills Self-Efficacy Scale (consisting of 10 items related to writing skills such as punctuation and spelling). Students rated their confidences to complete each skill using a 0 to 100 scale, where 0 indicated *absolutely no chance* and 100 indicated *absolutely can do it*. A modified version of the Writing Apprehension Test developed by Daly and Miller (1975) and the Perceived Usefulness of Writing scale was also used. On this 10-item scale students rated the importance of writing in relation to several tasks (e.g., getting good grades, getting a job). Also, teachers ranked students' aptitudes in the area of writing using a five-point holistic scale. Self-efficacy beliefs significantly predicted the writing achievement of elementary students yet no

significant differences existed between the writing performance between boys and girls. Gender impacted two motivational constructs. Girls reported having higher self-efficacy and lower apprehension. Perceived usefulness was also higher for girls.

Assessing Self-Efficacy

The self-efficacy of students is dependent on specific tasks and is not a global perspective of ability. Because of this, assessments of this motivational factor should be very specific. Broad, overarching scales weaken the effects (Pajares, 1996). Pajares (see 1996 and 2003) contended that self-efficacy scales should correspond directly to the task researchers will use to compare (e.g., writing achievement assessment). Other researchers echoed this belief and asserted that the two different types of self-efficacy (e.g., skill and task) need to be examined separately (Troia, Harbaugh, Shankland, Wolbers, & Lawrence, 2012).

Moreover, self-efficacy scales should be administered immediately before the task in order to truly measure a student's perceptions of his/her own capability (Pajares & Valiante, 2006; Pajares, 2003). Schunk and colleagues (2014) noted that researchers often show students a sample task before administering a self-efficacy scale in order for students to truly understand what they will be performing.

Writing Attributions

Although attributions are a major component of achievement motivation and have been researched for decades, little research has been conducted about the attributions students make toward writing. In fact, in a thorough literature search, I found no studies that exclusively examined this motivational factor. Troia, Harbaugh et al. (2012) noted some conclusions and assumptions related to student attributions toward writing that were developed based on studies

that measured other types of motivational factors. But, studies that measured the attributions of students in this content area (or tasks related to this area) are rare.

Shell, Colvin, and Bruning (1995), examined the reading and writing achievement and motivation of students ($N = 364$) in fourth, seventh, and 10th grades, who were from middle-class homes and primarily white. A writing self-efficacy scale was developed, measuring tasks and skills. The tasks included letter, report, summary, and narrative writing. One item asked students about their efficacies to write the rules for a game. The skills addressed included punctuation, parts of speech, use of plurals, prefixes, and suffixes, and ability to identify the main idea in writing. Both scales utilized a five-point Likert scale. To assess writing achievement, researchers of this study examined the writing scores on the California Achievement Test, which assessed basic writing skills. An untimed writing prompt was also administered to assess writing quality based on a holistic writing rubric. Attributions towards writing were assessed using another instrument that asked students to rate the importance of different causes for being a good writer. These causes included effort, ability/IQ, enjoyment, luck, task difficulty, and teacher help. Students were asked to rate each item using a 5-point scale of increasing importance (1= not important at all; 5 = very important). Results of this study indicated that students in fourth grade demonstrated lower task self-efficacy and higher ratings of effort as an attribution for success in writing than the students in seventh and 10th grades. Fourth graders also selected luck as a cause for success more than the students in the higher grade levels. The only cause that correlated strongly and positively with successful writing, across all three grades examined, was effort.

Although little research exists exclusively for writing, some researchers have examined causal attributions related to general success and failure. Marsh (1984) and Whitley, Jr. and colleagues (1985) examined the relations between achievement and these attributions. Marsh (1984) examined the achievement and attributions of fifth graders (N =559) who attended one of seven participating Catholic private schools in Australia. Students completed the Sydney Attribution Scale (SAS), consisting of 72 items (6 scales of 12 items each) related to academic content (reading and math) and perceived cause (attributions). Additionally, students completed the Primary Reading Survey Test (Australian Council for Educational Research, 1976), consisting of various tasks related to reading and reading comprehension. Results suggested "students who attribute their academic success to their own ability and to their own effort tend to have better academic skills…" (pp. 1305). Moreover, failures attributed to lack of ability or lack of effort typically were made by students with lower academic skills. Marsh also contended that attributions are specific to a task or skill, especially for ability attributions.

Whitley, Jr. and colleagues (1985) conducted a meta-analysis about attributions for success and failure. These researchers identified 25 studies that assessed attributions (ability, effort, task, luck) and included students in elementary and middle school. Results suggested students deemed as higher achievers (or "successful children") made stronger attributions towards ability and effort than lower achievers (or "unsuccessful children").

Other researchers have examined causes of outcomes for subjects other than writing including Bell and colleagues (1994) who examined the attributions for academic success in the areas of reading and mathematics for fourth and fifth grade students (N = 237). Participants were administered the SAS (see Marsh 1984 above) and the Comprehensive Test of Basic Skills

(CTBS-4; CTB MacMillian/McGraw Hill, 1989) to measure overall reading and mathematics achievement. Results suggested higher achievers identified ability as the perceived cause of success in the area of reading, whereas lower achievers identified external factors as the perceived cause. In mathematics, higher achievers believed success was due to ability to a greater extent than lower achievers, and low achievers believed ability (or lack thereof) was the cause of failure to a greater extent than higher achievers. No sex differences related to ability attributions were found.

O'Sullivan and Howe (1996) summarized research related to attributions towards reading. Students deemed as high achievers ("good readers") more often associated reading success to ability and reading failure to (lack of) effort. Conversely, low achievers ("poor readers") more often associated reading success to luck or task difficulty (ease), while they attributed failure to (lack of) ability. Moreover, research suggests that students attribute reading success and failure to several perceived causes (including help from others and attitudes towards reading).

Carr and colleagues (1991) examined the motivation of achievers (n = 102) and underachievers (n =98) in the area of reading. Participants were in third, fourth, and fifth grades. Teachers ranked the students who were making "C" or "D" grades in the classes and students completed several measures including the Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 1981), Slossen Intelligence Test (Slossen, 1983), and the Krause Attributional Questionnaire (Krause, 1983). This questionnaire asked students why a series of situations occurred (e.g., luck, chance, ability, etc.). An important note is that this questionnaire was a very general, broad measure and not specific to certain skills or tasks. Results indicated that ability (or

achievement) did not predict student attributions. Carr et al., (2014) noted "[i]t is as if their knowledge and abilities were disassociated from their beliefs about instrumentality, a key characteristic of metacognition in achievers" (p. 113).

In summary, little research exists about student attributions towards writing. However, research in other areas (e.g., reading) suggests students who are high achievers tend to attribute success and failure to their own abilities and efforts, while students who are lower achievers do not.

Conceptual Framework

Three theoretical frameworks were considered when designing this study. The social cognitive theory (Bandura, 1997), attributional theory of motivation (Weiner, 2005), and Dweck's (see 1998 and 2001) work related to implicit theories of intelligence were all considered. This current study focused on student's self-efficacy of writing skills and a narrative writing task (story writing), and a student's attributions toward to writing.

Social cognitive theory "postulates that motivation processes influence both learning and performance…" (p. 123; Schunk, et al., 2014). This theory proposes that a student's motivation is dependent on several factors (Schunk & Pajares, 2001). Personal factors (e.g., interest, beliefs) and the environment (e.g., teacher feedback) play major roles in the development of student motivation (Schunk & Pajares, 2001). A hallmark feature of this theory is self-efficacy (Bandura, 1989; Bandura, 1997; Schunk & Pajares, 2001). Schunk and colleagues (2014) noted that self-efficacy influences achievement, effort, and task acceptance or avoidance.

Weiner's attributional theory also influenced this study's design. He proposed that students desire to determine why events occurred, i.e., causal determinants. Many causes can be

attributed to an outcome, but particularly ability, luck, effort, and task difficulty (in school, frequently, this means teacher idiosyncrasies). These attributions are formed using a series of dimensions: locus of control, stability, and controllability. In this study, the focus was on two causes: effort and ability. Both causes play an integral role in student motivation and task selection.

Dweck and Leggett (1988) proposed a continuation (and somewhat a deviation) of Weiner's work. These researchers postulated that students attribute causes of outcomes based on their personal implicit theories of intelligence (performance versus mastery goals). Moreover, their research suggested that students may believe all attributes are controllable, depending on their theories of intelligence. In this study, I did not explicitly examine the relation between mindsets and attributions, though endorsement of effort attributions is linked to an incremental mindset.

Summary

Although this is not a new area of research, many of the factors related to achievement motivation have been examined sparsely. In this study I aimed to examine the writing achievement and motivation of at-risk students in elementary school. I used three well regarded theories of motivation to design this research, and developed scales that measure research questions that have yet to be examined in the literature.

Chapter 3

Materials and Method

Introduction

In this study I examine the relation between writing self-efficacy and writing achievement, as well as the relation between attributions toward writing and writing achievement for at-risk students in elementary school. In this chapter I discuss the research design, setting, sample, data sources, methods for data collection and analysis, and possible limitations.

Rationale for Research Approach

In order to examine the relations between variables, a correlational research design was employed (Gall, Gall, & Borg, 2007; Thompson, Diamond, McWilliam, Snyder, & Snyder, 2005). This non-experimental design is appropriate for studies in which participants are not randomly assigned to groups (Thompson et al., 2005). Instead, correlational designs allow researchers to examine possible relations between or among variables in order to makes inferences (Gall et al., 2007). Schunk, Meece, and Pintrich (2014) noted that "[c]orrelational research helps clarify relations among variables (p. 9)" and can offer future directions for experimental research.

A correlational design was determined to be the most appropriate for this study for several reasons including the opportunity to include and analyze several variables (Gall et al., 2007). Motivation is multi-faceted, so multiple variables (i.e., different types of writing self-efficacy, attributions, and writing proficiency) are addressed in the research questions. Moreover, the needed sample size for this design was also a significant determinant. Gall, Gall, and Borg (2007) recommend a minimum of 30 participants for a correlational study. This is a

modest and reasonable sample size, given the inclusion criteria for the setting and participants, which are discussed in the next two sections.

Research Setting and Context

Because one of the main purposes of this study was to examine components of writing motivation and achievement of at-risk elementary-aged students, selection of an appropriate setting was critical. Consequently, I partnered with the Boys and Girls Clubs of the Tennessee Valley (BGCTNV), part of the Boys and Girls Clubs of America, which strives to provide services and educational and lifestyle opportunities to at-risk students (Boys & Girls Clubs of the CSRA, n.d.). Although not all student members are considered at risk (based on lunch status and/or family income), the Boys and Girls Clubs of America "[i]s the only nationwide, facility-based youth agency with a primary mission of service to girls and boys from disadvantaged circumstances (Boys & Girls Clubs of the CSRA, n.d.)." In fact, one of the main goals of this organization is to help children in urban communities who may not have the opportunity to live up to their full potential (Boys & Girls Clubs of the CSRA, n.d).

The Boys and Girls Clubs of America has numerous locations around the nation; for this study, students at the BGCTNV were recruited based on several criteria including enrollment in a Title 1 school and completion of third, fourth, or fifth grades. The BGCTNV aims to provide students a safe and caring environment that fosters responsible citizens (Boys & Girls Clubs of America, n.d.). This organization implements several initiatives to achieve this goal including programs related to education and career; character and leadership; health and life skill; art; sports, fitness and recreation; and specialized programs (Boys & Girls Clubs of America, n.d.). BGCTNV is comprised of 20 Clubs across three counties in East Tennessee.

Research Sample and Data Sources

For this study, Clubs were selected if they served elementary schools that qualified under Title 1 in a local school district. According to U.S. Department of Education's website, Title 1 aims to meet "the educational needs of low-achieving children in our Nation's highest-poverty schools, limited English proficient children, migratory children, children with disabilities, Indian children, neglected or delinquent children, and young children in need of reading assistance" (U.S. Department of Education, 2004). The writing motivation and achievement of at-risk students was the focus of this study. One of the conditions to be considered at-risk is the school and home environment, including the socioeconomic status of both (Kominski, Jamieson, & Martinez, 2011). Students who live and attend schools in high poverty areas, which is the heart of the definition and purpose of Title 1, qualify as at risk.

Information about which schools each Club served was gleaned from the Education Director of the BGCTNV and contact information for each eligible Club was provided. Nine Clubs met the required criteria. I contacted staff members at each of these Clubs to recruit participation; staff from six Clubs agreed to participate, based on their belief that parents and students would be willing participants for this study. Three Clubs did not participate. Staff members at two of these Clubs agreed, but were not able to recruit participants. One staff member at a third Club did not respond to the recruitment email.

Participating Clubs were located in a county in east Tennessee, and served 15 Title 1 schools across the county. The percent of poverty for these schools ranged from 61.41 to 96.38 for the 2014-2015 school year. The mean percentage of poverty was 83.4 across all participating

Clubs. One of the six Clubs was solicited to participate during a pilot phase, while the remaining five Clubs participated in the final data collection.

A targeted sampling methodology was employed; i.e., Boys and Girls Clubs were chosen because they serve at-risk students. The population for this study was recruited from familiar educational agencies that were close in proximity. Student participants at the six Clubs were recruited if they completed third, fourth, or fifth grade during the 2014-2015 school year. All students from these Clubs who were served by Title 1 schools and were in these grade levels were recruited.

Because some of the instruments used as part of this study have never been used, several scales were pilot tested at one of the Clubs. During a preliminary pilot study, conducted in mid-May 2015, researchers administered several scales (Student Writing Attributions Scale, Writing Self-Efficacy Scale [Pajares, Hartley, & Valiante, 2001], and Narrative Writing Self-Efficacy Scale) to at-risk elementary-aged students (N=40). The same inclusion criteria were used for the pilot and final data collection; therefore all participants attended Title 1 schools and were in third through fifth grades.

This study included students (N = 61) who completed third (n = 25), fourth (n = 23), and fifth (n = 13) grades for the 2014-2015 schools and who attended Title 1 schools (see Table 4). The majority of students were nine or 10 years old at the time of this study. Participants included 35 males (57.4%) and 26 females (42.6%). Because sufficient evidence indicated that risk was negligible for participants, the study was approved by the University's Institutional Review Board (IRB).

Data Collection Methods

The data collection methods, including recruitment and instruments are outlined in this section. Demographic information was gathered from the BGCTNV and parents or guardians of participants. The BGCTNV provided information from membership applications including sex, race, birthdate, zip code, school, and lunch status. To gain more demographic information, parents were asked to complete a Parent Questionnaire, which was attached to the parental consent form. The Parent Questionnaire (see Appendix A) asked for information related to the child's native language, parents' native languages, and disability status.

Table 4

Demographic Information (Age, Grade, Sex) about Participants

Characteristic	*n*	%
Age		
9	26	42.6
10	26	42.6
11	9	14.8
Grade		
3rd	25	41.0
4th	23	37.7
5th	13	21.3
Sex		
Female	26	42.6
Male	35	57.4

Instruments

All of the scales that were included in the pilot (Narrative Writing Self-Efficacy Scale, Writing Self-Efficacy Scale, and Student Writing Attributions Scale), as well as the Test of

Written Language-IV (TOWL-4; Hammill & Larsen, 2009) Form A were administered in this study and are described below. All instruments were administered using paper and pencil, and except for the TOWL-4, were administered in a clasp folder. A cover page (Appendix B) was attached to the front of each folder asking students for demographic information (e.g., name, grade, birthday, Club name).

To assess the self-efficacy of writing a story using a picture prompt, I created the Narrative Writing Self-Efficacy Scale (NES). This scale is designed to measure student self-efficacy to write a story after presented a picture prompt. Items were presented positively and addressed the skills needed to write a story. Skills were determined by reviewing the TOWL-4 scoring criteria for subtest 7 (Story Composition); the scoring form includes 11 items addressing various skills including writing style, use of story vocabulary, and the story beginning and ending. The NES addresses the same skills as the achievement measure. Pajares (2003) noted that self-efficacy measures should closely correspond to how student performance will be assessed. Moreover, the "criteria for scoring the essay should be based on the content of the items presented in the efficacy instrument and on which the students made their judgments" (p. 143).

Schunk, Meece, and Pintrich (2014) echoed Pajares and noted that students should be provided sample tasks before they rate their confience levels for completing that specific task. Because of this, an integral component of the NES was to show a sample picture for students to use while they completed the scale. The NES measures how students feel about writing a story based a picture. For this study, the sample picture used during the TOWL-4 administration (Subtests 6 and 7 administration notes) served as the sample picture for the NES, so students

could authentically rate their self-efficacy about this specific task. Moreover, it is recommended that instruments measuring self-efficacy should be administered in "as close temporal proximity as possible (p. 161)" (Pajares & Valiante, 2006; Pajares 2003). Therefore, this scale was administered immediately before the TOWL-4 administration.

The NES consisted of 13 items during the pilot. Students were asked to determine how certain they were they could complete each item well using a 0 to 100 scale. Students could write any number between 0 and 100 to represent their confidence for each skill. A score of 0 equaled no chance, definitely could not do it. A score or 20-40 indicated that the student probably could not do it. A score of 50 represented that the student felt that s/he maybe could it, while a score of 60-80 indicated that they student probably can do it. A 100 score equaled completely certain, definitely could do it. This format is consistent with the format recommended by Bandura (2006). Items were worded positively. Example items include:

(A) Write a beginning of a story that makes people want to read your story.

(B) Write a story that describes important characters.

The pilot version of the narrative writing efficacy measure consisted of 13 items (see Appendix C). After conducting reliability statistics (calculation of coefficient alpha, a common measure of internal consistency, and item-scale correlations), the overall coefficient alpha was .80. To increase internal consistency, one item was deleted (item 2) from the original scale. This item-scale correlation was below .2 (r = .185). All other items met the minimum correlation requirement of .3 or higher ($r \geq .303$). The final NES scale consisted of 12 items (see Appendix D and Table 5) and had an overall coefficient alpha of .80 based on data from the pilot sample (n = 40).

Table 5

Narrative Writing Self-Efficacy Scale (NES) Items

Code	Item
NES_1	Write a story about a picture.
NES_2	Write a story that makes sense and is not confusing.
NES_3	Write a story that describes important characters.
NES_4	Write a story that includes all important details.
NES_5	Write a story that includes details in the correct order.
NES_6	Write a story that is interesting.
NES_7	Describe your character's feelings or emotions.
NES_8	Describe the setting of your story including location, time of day, and time of year.
NES_9	Write a story that is unique or not like anyone else's story.
NES_10	Use vocabulary related to the picture.
NES_11	Write an ending that is interesting.
NES_12	Write a story that moves quickly and is not slow.

The Writing Skills Self-Efficacy Scale (SES; Pajares, Hartley, & Valiante, 2001) consisted of 10 questions related to writing skills. This scale has been used in previous research with students in elementary, middle, and high school. Pajares reported a coefficient alpha of .88 for students in fifth grade, and a coefficient alpha of .85 for students in third, fourth, and fifth grade (2007). The 10 items addressed writing skills (e.g., capitalization, punctuation). Students were asked to determine how certain they were that they could complete each item well using a 0 to 100 scale. Students could write any number between 0 and 100 to represent their confidence for each skill. A score of 0 equaled no chance, definitely could not do it. A score of 20-40 indicated that the student probably could not do it. A score of 50 represented that the student felt that s/he maybe could it, while a score of 60-80 indicated that the student probably can do it. A 100 score equaled completely certain, definitely could do it. Items were worded positively and two practice items were presented. Example scale items include:

(A) Correctly spell all words in a one page story or composition.

(B) Structure paragraphs to support ideas in the topic sentences.

The pilot version consisted of 10 items (see Appendix E). After conducting reliability statistics (calculation of coefficient alpha) the overall coefficient alpha was .83. One item was deleted (item 8) from the original scale. This item-scale correlation was below .3 (r =.282). All other items met the minimum correlation requirement of .3 or higher ($r \geq .363$). The final SES scale consisted of 9 questions (see Appendix F and Table 6) and had an overall coefficient alpha of .84 based on data from the pilot sample (n = 40).

Table 6

Writing Skills Self-Efficacy Scale (SES) Items

Code	Item
SES_1	Correctly spelling all words in a one-page story or composition.
SES_2	Correctly punctuate a one-page story or composition.
SES_3	Correctly use all parts of speech in a written composition.
SES_4	Write simple sentences with good grammar.
SES_5	Correctly use singulars and plurals, conjunctions, and prepositions.
SES_6	Write a strong paragraph that has a good topic sentence and main idea.
SES_7	Structure paragraphs to support ideas in the topic sentences.
SES_8	Write a well-organized and sequenced paper with a good introduction, body, and conclusion.
SES_9	Get ideas across in a clear manner, by staying focused without getting off topic.

The Student Writing Attributions (AB) Scale was used to measure whether students attributed success and failure to ability or effort and was developed after the Student Reading Attributions Scale (SRAS) developed by Bell and McCallum (2016). The SWAS describes scenarios of success and failure related to writing and English Language Arts (ELA) classes. Each scenario gives students two options (one ability and one effort) that they circled as to why each scenario occurred. Example items include:

(A) My teacher asked me to help another student write a paragraph in a story. It is because (1) I am good at writing paragraphs, or (2) I work harder than other students in writing.

(B) The story I wrote did not make sense. It is because (1) I am not good at writing stories that make sense, or (2) I do not work hard enough.

Students were asked to circle (1) or (2) for each item, attributing the success or failure presented in the scenario to effort or ability. The AB scale also presented two practice items for students to complete at the beginning of administration.

The pilot version of the AB scale consisted of 10 items for success and 10 items for failure (see Appendix G). After conducting reliability statistics (calculation of coefficient alpha) the overall coefficient alpha was .76. To increase internal consistency, three items were deleted (items 5, 9, 10) from the original scale. The item-scale correlations were below .200 for these three items (r = -.002, .108, .141). All other items met the minimum correlation requirement of .25 or higher ($r \geq .273$). The final AB scale (see Appendix D and Table 7) consisted of 17 items (7 success, 10 failure), and the overall coefficient alpha was .78 based on data from the pilot sample (n =40).

The TOWL-4 is a norm-referenced assessment that measures writing achievement (Hammill & Larsen, 2009). It is appropriate for students aged 9-0 to 17-11 and can be administered individually or in small groups. The average administration time is 90 minutes, per the authors. The TOWL-4 is considered generally valid and reliable. Coefficient alphas and correlation coefficients providing evidence of validity and reliability of the TOWL-4 are presented in Table 8 (Hammill & Larsen, 2009).

Table 7

Writing Attributions (AB) Scale Items

Code	Item
AB_1	My teacher asked me to help another student write a paragraph in a story. It is because: 1 = I am good at writing paragraphs. 2 = I work harder than other students in writing.
AB_2	I enjoyed writing a story about what we learned in class. It is because: 1 = I am good at writing paragraphs. 2 = I work harder than most other students in writing.
AB_3	My teacher told my family that I am among the best writers in class. It is because: 1 = I am good at writing. 2 = I work harder than most others at writing.
AB_4	I was able to figure out how to spell all of the words in my story today. It is because: 1 = I am a good speller. 2 = I work harder than others to be a good speller.
AB_5	I finished my classroom writing work first today. It is because: 1 = I am good at writing. 2 = I am a hard worker in writing.
AB_6	I got a good grade on a story I wrote. It is because: 1 = I am good at writing assignments. 2 = I worked hard on the writing assignment.
AB_7	I understand how to write stories. It is because: 1 = I am naturally good at understanding how to write stories. 2 = I think and focus hard when I write.
AB_8	I am in the lowest writing group in my class. It is because: 1 = I am not good at writing. 2 = I need to work harder to be a good writer.
AB_9	I got a bad grade in writing/ELA on my report card. It is because: 1 = I am naturally a poor writer. 2 = I do not try hard enough to get good grades in writing.
AB_10	My teacher asked another student to help me write a story. It is because: 1 = I am not a smart writer. 2 = I do not work hard enough to be a good writer.
AB_11	The story I wrote did not make sense. It is because: 1 = I am not good at writing stories that make sense. 2 = I do not work hard enough.
AB_12	I was not able to write a lot of sentences in my story. It is because: 1 = I have trouble writing a lot of sentences in stories. 2 = I do not practice enough to write a lot of sentences that make sense.
AB_13	I heard my teacher telling my family member I have trouble writing stories. It is because: 1 = I am not good at writing stories. 2 = I do not practice enough to write good stories.
AB_14	My younger family member had to help me finish my writing homework. It is because: 1 = I am not good at doing my writing homework by myself. 2 = I need to work harder on my writing homework.
AB_15	I made many mistakes when I wrote my story today in class. It is because: 1 = I am not good at writing stories. 2 = I need to write more so that I can write better stories.
AB_16	I did not finish my writing work today. It is because: 1 = I am not very good at writing. 2 = I do not work hard on my writing work.
AB_17	I hated writing the story we were assigned in class. It is because: 1 = I am not very good at writing stories. 2 = I do not spend enough time writing to be good at it.

Table 8

Reliability and Validity Estimates of the Test of Written Language –IV (TOWL-4)

	Internal consistency	Alternate form	Test-retest	Different scorer/ interrater	Construct validity
Reliability/Validity Estimate	*a* =.71 - .97	*r* = .55- .96	*r* =.70 - .99	*r* =.72 - .99	*r* =.19 - .60

Note. These values were gathered from the TOWL-4 Examiner's Manual (Hammill & Larsen, 2009)

This assessment estimates a student's writing ability through the use of contrived and spontaneous formats. Contrived Writing requires students to complete subtests that utilize traditional formats, while spontaneous writing requires students to complete compositions. Contrived Writing focuses on evaluating the smallest unit of writing (e.g. spelling, punctuation) and requires students to complete a set of predetermined concrete items. Contrived Writing subtests include Vocabulary, Spelling, Punctuation, Logical Sentences, and Sentence Combining. Spontaneous Writing measures the student's functional writing ability by evaluating writing samples. Measures of Spontaneous Writing include the Contextual Conventions and Story Composition subtests. Table 9 outlines the TOWL-4 writing subtests.

The TOWL-4 also evaluates a student's writing using conventional, linguistic, and cognitive components (See Table 10). Convention refers to the arbitrary grammar and mechanics rules that students must use in order to be effective writers. Sometimes, however, violation of these rules does not impact the meaning of the sentence. The Spelling, Vocabulary, and Contextual Conventions subtests measure this construct. The grammatic and semantic content of writing is referred to as the linguistic component of the TOWL-4. This construct measures the

Table 9

Test of Written Language –IV (TOWL-4) Subtests

Subtest	Measures
Vocabulary (33 items)	Write a sentence that incorporates a stimulus word. Ex: for *sat*, a student writes, *The dog sat on the ground*
Spelling (26 items)	Write sentences from dictation, taking particular care to make proper use of spelling rules
Punctuation (26 items)	Write sentences from dictation, taking particular care to make proper use of punctuation and capitalization rules
Logical Sentences (22 items)	Edit an illogical sentence so that it makes better sense. Ex: The student changes *Tim rose to the ground* to *Tim fell to the ground*
Sentence Combining (23 items)	Integrate the meaning of several short sentences into one grammatically correct written sentence. Ex: The student combines *Amy has a big dog* and *Amy walks her dog* into a single sentence: *Amy walks her big dog*.
Contextual Conventions (21 items/rubric)	Write a story in response to a stimulus picture. Points are earned for satisfying specific arbitrary requirements relative to orthographic (e.g. punctuation, spelling) and grammatic (e.g. sentence construction, noun-verb agreement) conventions
Story Composition (11 items/rubric)	Write a story that is evaluated on the quality of its composition (e.g. vocabulary, plot, prose, development of characters, interest to reader)

Note. These descriptions and many of these examples were noted in the TOWL-4 Examiner's Manual.

Table 10

Component and Format Characteristics of the Test of Written Language –IV (TOWL- 4) Subtests (as presented in Hammill & Larsen, 2009)

	Format		Component		
Subtest	*Contrived*	*Spontaneous*	*Conventional*	*Linguistic*	*Cognitive*
Vocabulary	X			X	
Spelling	X		X		
Punctuation	X		X		
Logical Sentences	X				X
Sentence Combining	X			X	
Contextual Conventions		X	X	X	
Story Composition		X		X	X

use of vocabulary and appropriate word choice (e.g., verb tenses). The Vocabulary, Sentence Combining, Contextual Conventions, and Story Composition subtests are measures of this component. The cognitive component evaluates the student's ability to write logically. The organization and overall theme are measured in the Logical Sentences and Story Composition subtests of the TOWL-4.

Procedures

This study was conducted at five of the participating Clubs in late-May and early June 2015. Recruitment occurred two to three weeks before implementation of the study. The Education Director of each Club facilitated recruitment by passing out flyers (See Appendix I) to students who met the eligibility criteria (e.g., age, Title 1 status). Flyers were also posted at the entrance of the Club to help elicit participation. Students who returned the required signed parental consent (see Appendix J) earned free age-appropriate books. Books were funded by an institutional-level grant or were donated to the researcher from various sources (e.g., professor of literacy).

A team of researchers administered the measures included in this study (NES, SES, AB scale, and TOWL-4 Form A), as well as two other scales not included as part of this dissertation (Theories of Intelligence Scale and Writing Attitudes Scales) to participants. This team consisted of me, an advanced doctoral candidate in Special Education, and two other doctoral students in various programs (School Psychology and Elementary Education). Administrators used a script that was developed by the team to ensure standardized administration (see Appendix K). The administration occurred in small groups of students (ranging from about 8 to 15). At least one team member was present at each session, although most sessions included a

minimum of two team members. The number of team members at each session was determined based on the number of predicted participants for each specific session. The number of participants varied, yet sessions included fewer than 25 students. At least two team members attended sessions that included at least 12 or more students. Make-up assessments, which occurred within one week of the original assessment date, were conducted to assess students who were absent during the original testing time. Make-up assessments were conducted with one to two team members, depending on the size of the group (ranged from one to six).

Students signed Student Assent forms (see Appendix L) before completing any of the scales. All scales were read out loud to participants. Students were allowed to move ahead of the administrator, but were asked to not move to another scale before hearing the directions. All scales during this phase were color-coded to aid in administration.

Several measures were included as part of this study. Students were asked to complete the AB scale, SES, NES, and Form A of the TOWL-4. The order of scales (based on scale content) progressed from a more general view of intelligence to more specific perceptions about specific writing skills and tasks. The TOWL-4 Form A was administered last in order to curb any possible biased perceptions of ability and effort that students may feel after completing a writing achievement assessment. The order was determined to be the most likely to produce valid results for the AB scale, SES, and NES. The TOWL-4 may have impacted (either positively or negatively) student self-perceptions on these three scales. Moreover, the directions for the NES included the sample picture used during the TOWL-4 administration (per the TOWL-4 manual); therefore this scale needed to be administered immediately before the TOWL-4. The scales and directions became increasingly more specific during administration.

The same order of administration was maintained during the pilot phase (not including the TOWL-4, which was not administered during this phase).

Administration and the order of the dependent measures were consistent across sessions. The TOWL-4 was administered using the Administration's Manual provided with the assessment kit. The total administration time was about 120 minutes for each session. A small break was given after about 45-60 minutes.

After administration, assessments were scored. Researchers conducted an assessment of scoring fidelity for the TOWL-4 Form A. All Form As were scored by two of the team members, thus all raw, scale, and composite scores were evaluated twice. Each researcher scored half of the assessments. Then, the researchers swapped protocols and scored the remaining half. Scorers marked any disagreements. Finally, the scorers swapped one more time in order to resolve disagreements. The researchers reached 100% interrater agreement of scores before entering data into a database. Raw scores from the motivation scales were used in the analyses, so determining inter-rater agreement was not appropriate.

Scores from all dependent variables and demographic information were entered into a database using Microsoft Excel and SPSS. Data from the motivation scales were entered by two of the team members to ensure accuracy. Data from the TOWL-4 was spot checked by a team member to eliminate data entry errors. Participants were assigned a code to protect confidentiality and the database was stored on a password protected USB drive. Access to these data was only provided to the researcher and all paper data collected were stored in a locked cabinet on campus to reduce the risk for participants (per the IRB application).

Data Analysis Methods

Several methods of data analysis were employed for this study. Descriptive (e.g., mean, range, standard deviation) and reliability statistics were calculated to examine the relation between several motivational variables (attributions and self-efficacy) and writing achievement. Mean group differences analyses of variance were also conducted. The data analysis plan is outlined below.

The 12 steps of data cleaning were utilized (Morrow & Skolits, 2011). First, frequencies were generated for every variable to check for possible errors (e.g., data entry/coding error). Mean scores were calculated for each scale including the NES, SES, and AB scale, allowing for comparisons and an examination of the differences between variables. In order to examine the attributions towards writing, the AB scale was divided into two composites: ability and effort.

Next, z-scores were created for the Contrived Writing (pre_Con_CI), Spontaneous Writing (pre_Spo_CI), and Overall Writing (pre_Ove_CI) composite indexes of TOWL-4 to examine for possible outliers. All z-scores were below /3.29/ (contrived range -1.52 to 2.78; spontaneous range -2.81 to 2.69; overall range -1.99 to 2.80). Tabachick and Fidell (2013) suggest standardized scores above /3.29/ to be outliers. The Shapiro-Wilk test was conducted to assess the normality of the distribution of the three composite scores of the TOWL-4. Results indicated these data are normally distributed ($p \geq .001$). Moreover, the skewness and kurtosis values all fall within /2/, which is considered normal by Westfall and Henning (2013).

Then, missing data were analyzed for the dataset. Nine students were missing information related to lunch status. These students, however, attended Title 1 schools, so they were still eligible to be included per the inclusion criteria outlined above. Four students (codes

200, 205, 217, 222) indicated a different grade level than the BGC report. Communication with the BGC to clarify this issue was unsuccessful. The grade the student indicated was entered into the database. No data were missing for scores on the three motivational scales or TOWL-4.

Two internal consistency analyses were conducted for each motivational scale (NES, SES, and AB scale). Cronbach's alphas and Spearman-Brown's coefficient (split half) were both calculated (see Table 11). Even and odd numbered items were utilized for the split half analyses. The overall Cronbach's alpha for the NES was .92 and the Spearman-Brown coefficient (of equal length) was .97. The overall Cronbach's alpha for the SES was .88 and the Spearman-Brown coefficient (of unequal length) was .91. The overall Cronbach's alpha for the AB scale was .82, and the Spearman-Brown coefficient (of unequal length) was .72. All coefficients were greater than .70, which is deemed acceptable for evidence of internal consistency (Morrow & Skolits, 2011).

Table 11

Internal Consistency Coefficients of Motivational Scales

	Narrative Writing Self Efficacy Scale (NES)	Writing Skills Self Efficacy Scale (SES)	Writing Attributions (AB) scale
Cronbach's Alpha	.92	.88	.82
Spearman-Brown split half coefficient	.97	.91	.72

Note. The items were split (evens and odds) for the Spearman-Brown coefficient calculations.

The internal consistency of the AB scale was examined further. Two separate scales were created for ability and effort. Scores for the original AB scale were recoded. For the ability scale, scores that were originally scored as 2 were recoded to 0 (original scores of 1 remained 1) in order to capture the degree to which students attributed success and failure to ability. For the effort scale, scores that were originally scored as 1 were recoded as 0 and scores that were originally coded as 2 were coded as 1, in order to determine the degree to which participants attributed success and failure to effort. Cronbach's alphas were calculated for both the ability and effort scales. Both alphas were .82, which was the same for the original overall AB scale. Inter-item correlation among items for the ability scale ranged from .266 to .635 and .291 to .635 for the effort scale.

Internal consistency analyses including all items on both the NES and SES were also calculated to ensure each scale should remain separate and not be combined. The item-scale coefficients ranged from .089 to and .753. Based on visual analysis, the majority of coefficients between NES and SES items, however, ranged between .30 and .50. Because the majority of the inter-item correlations did not have a very large (.70) correlation, it was determined that the scales measured different constructs and should remain separate.

During data cleaning, the restriction of range phenomenon was investigated for the TOWL-4 composites because the participants were from low-income schools and hence at risk for underachievement. The means of these composites scores do not suggest restriction of range as they are near the normed mean (100). See Table 12 for descriptive statistics related to these composite scores.

Correlational analyses (Pearson correlation) were also conducted to examine the relation between writing achievement and (1) narrative writing self-efficacy, (2) writing skills self-efficacy, and (3) attributions towards writing, using data from the NES, SES, AB scale, and TOWL-4. According to Gravetter and Wallnau (2011), the Pearson correlation (*r*) measures "the degree and the direction of the linear relationship between variables" (p. 470). So, the analyses for this study determine possible relations between/among motivational variables and achievement variables. In order to analyze the relation between these variables, an average score for both the NES and SES was created. An ability composite and an effort composite were created for the AB scale in order to determine possible relations between variables.

Table 12

Descriptive Statistics for the Composites of the Test of Written Language-IV (TOWL-4)

	M	*SD*	Min	Max
Contrived Composite	97.97	16.61	73.0	144.0
Spontaneous Composite	104.97	16.84	58.0	150.0
Overall Composite	99.82	16.17	68.0	145.0

The relations between narrative writing self-efficacy (NES) and the Overall and Spontaneous Writing achievement were calculated to determine significance and nature of the relations between these variables. Additionally, the relations between writing skills self-efficacy (using the SES) and Overall and Contrived Writing achievement of the TOWL-4 were examined.

Writing achievement and ability attributions, as well as the relation between writing achievement and effort attributions were analyzed. A visual analysis of the scores on the AB scale also was conducted.

To examine the fourth research question, the relation between each motivational scale and the TOWL-4 composites were analyzed by age and sex. To do this, a series of Pearson correlational analyses were conducted (and the file was split by sex and then by age).

Next, two separate multivariate analyses of variances (MANOVAs) were conducted to examine differences between the dependent variables and sex. The first MANOVA was conducted to determine differences between the three TOWL-4 composite scores (DVs) based on sex (IV). The second MANOVA was conducted to determine the differences between the two self-efficacy scales (DVs) based on sex (IV). A subsequent univariate analysis of variance (ANOVA) was conducted for each DV and sex. Then, two ANOVAs were calculated to examine the differences between the AB Scale (Ability) and the AB Scale (Effort) based on sex.

An additional two MANOVAs were conducted to examine differences between the dependent variables based on age. The first MANOVA was conducted to determine any differences between the three TOWL-4 composites (DVs) based on age (IV). The second MANOVA was conducted to determine any differences between the two self-efficacy scales (DVs) based on age (IV). A subsequent univariate analysis of variance (ANOVA) was conducted for each DV based on age. Finally, two ANOVAs were calculated to examine the differences between the AB Scale (ability) and the AB Scale (effort) based on age.

Issues of Trustworthiness

Several steps were taken throughout this study to enhance trustworthiness of the results. First, scales that were created for this study (e.g., AB scale, NES) and the scale that had limited use in other research (e.g., NES) were piloted before the study was implemented. Reliability statistics were conducted during the pilot phase in order to determine internal consistency. Items that lowered internal consistency of the scales were deleted before the study phase began. The TOWL-4 was selected as the achievement measure for this study because it has demonstrated reliability and validity using a normed sample and it provides one of the most thorough assessments of writing achievement in school-age children available (Hammill & Larsen, 2009).

Conducting and assessing scoring fidelity for the TOWL-4 was also an important consideration for this study. Interrater agreement was calculated and both scorers agreed on all scores before proceeding with data analyses. The use of a script during administration was critical. This enhanced the standardization of administration during every session. Additionally, administration notes were kept for each session. These notes were used to determine students who were excluded from analyses. One student who refused to complete the scales and who exhibited very obvious resistance and was not engaged was not included in analyses or results.

Summary

This study, which employed a correlation research design, was implemented with students from Title 1 schools and who completed third, fourth, or fifth grades for the 2014-2015 school year. Participants were solicited from Clubs within the BGCTNV organization. Students completed several measures related to self-efficacy, attributions, and achievement. The relations between and among these variables are examined.

Chapter 4

Results

The purpose of this study was to examine the relations between several factors of writing motivation (e.g., self-efficacy, attributions towards writing) and writing achievement. Moreover, these relations as a function of sex and age were also examined.

Participant Information

This study included students ($N = 61$) who all attended Title 1 schools in a local school district. One of the inclusion criteria for participants was the completion of third ($n = 25$), fourth ($n = 23$), or fifth ($n = 13$) grades for the 2014-2015 school year (see Table 13). Moreover, all participants were nine, 10, or 11 years old at the time of this study. Thirty-five males (57.4%) and 26 females (42.6%) participated. Additionally, a little over half of the students were White (52.5%), while 34.4% were Black and 8.2% were Hispanic. Over half of the participants (68.9%) received free lunch for the 2014-2015 school year. Eight students had diagnosed disabilities, including specific learning disabilities (1.6%), emotional disturbance (4.9%), autism (1.6%), and speech/language impairments (4.9%).

Overview of Research Questions and Instruments

Research questions related to writing self-efficacy, attributions towards writing, and writing achievement of at-risk elementary-aged students guided this study. Three motivational scales were used to measure student self-efficacy (writing skills and story writing) and attributions toward writing (for both success and failure). The Narrative Writing Self-Efficacy Scale (NES) consisted of 12 items. Students were asked to rank how sure they were that they could perform each of the writing skills listed. Students could write any whole number between

0 (no chance, definitely cannot do it) and 100 (completely certain – definitely can do it) to represent this sureness. Average, or mean, scores were computed for each student's responses for the NES in order to examine possible relations between variables.

Table 13

Demographic Information (Age Sex, Ethnicity, Lunch Status) about Participants

Characteristic	*n*	%
Age		
9	26	42.6
10	26	42.6
11	9	14.8
Sex		
Female	26	42.6
Male	35	57.4
Ethnicity		
White	32	52.5
Black	21	34.4
Hispanic	5	8.2
Multi-racial	3	4.9
Lunch Status		
Not Free/Full Pay	7	11.5
Free	42	68.9
Reduced	3	4.9
Missing	9	14.8

The Writing Skills Self-Efficacy Scale (SES) consisted of nine items. Students were asked to rank how sure they were that they could perform each of the writing skills listed. Students could write any whole number between 0 (no chance, definitely cannot do it) and 100 (completely certain – definitely can do it) to represent this sureness. Mean scores were

computed for each student's responses for the SES in order to examine possible relations between variables.

The Writing Attributions (AB) scale consisted of 17 items. Students were asked to circle the number (1 or 2) that best described them for each item. Students who selected a 1 for an item attributed success or failure to ability (or lack of), while students who selected a 2 for an item attributed success or failure to effort (or lack of). The number of times a student attributed success and failure to ability was calculated to create a new variable and the number of times a student attributed success and failure to effort was also calculated to create a new variable.

The Test of Written Language-IV (TOWL-4) writing achievement assessment was also administered to participants. This norm-referenced assessment consisted of seven subtests. Five of the subtests (Vocabulary, Spelling, Punctuation, Logical Sentences, and Sentence Combining) were used to compute a Contrived Writing composite index. Two subtests (Contextual Conventions and Story Composition) were used to compute a Spontaneous Writing composite. The Overall Writing composite index was calculated using all seven subtests. According to the examiner's manual, the composite indexes (standard scores) have a population mean set to 100 and a standard deviation of 15 (Hammill & Larsen, 2009). Scores within 90 to 110 are deemed "average."

Means, standard deviations, and minimum and maximum scores were calculated for the NES, SES, and the AB scale, as well as the TOWL-4 composites. Table 14 displays these results.

The results of several analyses are described below. First, the relations between the motivational variables and the writing achievement variables are presented. Then, the relations

Table 14

Descriptive Statistics for the Contrived, Spontaneous, and Overall Composite Indexes of the Test of Written Language-IV (TOWL-4); the Narrative Writing Self-Efficacy Scale (NES), Writing Skills Self-Efficacy Scale (SES), and the Writing Attributions (AB) Scale

	M	*SD*	Min	Max
TOWL-4 Contrived Writing Composite	97.97	16.61	73.00	144.00
TOWL-4 Spontaneous Writing Composite	104.97	16.84	58.00	150.00
TOWL-4 Overall Writing Composite	99.82	16.17	68.00	145.00
Narrative Writing Self-Efficacy Scale Average	67.65	23.91	24.56	100.00
Writing Skills Self-Efficacy Scale Average	68.50	22.54	0.00	100.00
Writing Attributions Scale Ability	6.64	4.12	0.00	17.00
Writing Attributions Scale Effort	10.36	4.12	0.00	17.00

by age and sex are presented. The reported *p* values for all correlational analyses are two-tailed. The interpretation of the magnitude or size of each relation was determined based on Cohen (1992 and 1988) and Hopkins (2002). Cohen suggests correlational coefficients of .10 are small, .30 are medium, and .50 are large. Hopkins expanded Cohen's work and developed a new scale for interpretation. Hopkins suggests a correlational coefficient of .10 is small, .30 is moderate, .50 is large, .70 is very large, and .90 is nearly perfect. This interpretation is used throughout this dissertation to describe results. Partial eta squared (η_p^2) is used to report effect sizes for group difference analyses (e.g., ANOVA). For interpretation, please consider .01 a small effect, .06 a medium effect, and .14 a large effect (Cohen, 1988; Miles & Shevlin, 2001)

Relation between Narrative Writing Self-Efficacy and Writing Achievement

The first research question addresses the relation between the self-efficacy of students about writing a story based on a picture prompt and writing achievement: (1) Is there a significant relation between narrative writing self-efficacy and writing achievement [as measured by the Narrative Self-Efficacy Scale and the Test of Written Language-4 Overall and Spontaneous Writing composites] of at-risk upper elementary-aged students?

A Pearson correlation was utilized to examine the relation between the NES average and TOWL-4 Overall Writing composite. Results indicate a significant moderate positive correlation between these two variables, $r(59) = .488$, $p < .000$. Figure 4 presents a visual representation of this relation.

A Pearson correlation was also utilized to examine the relation between the NES average and Spontaneous Writing composite index on the TOWL-4. Results indicate a non-significant

small correlation between these two variables, $r(59) = .222$, $p = .086$. Figure 5 is a visual representation of this relation.

Results of these two analyses indicate a significant relation between the NES and the Overall Writing composite index on the TOWL-4. This suggests as the student's self-efficacy related to story writing increases, the student's writing achievement also moderately increases. However, the relation between the average score on the NES and Spontaneous Writing composite is not significant.

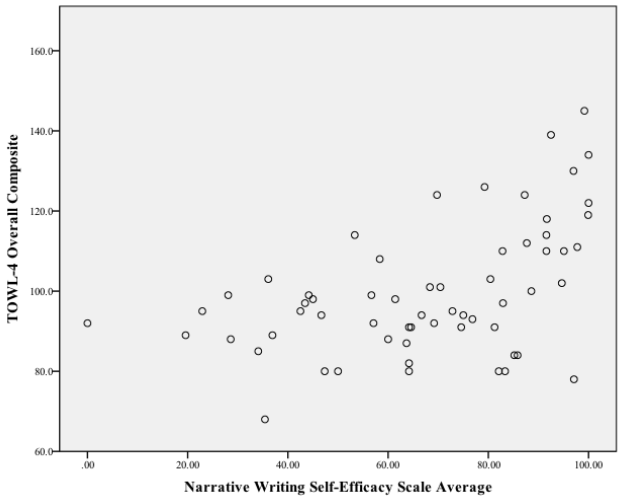

Figure 4

Scatterplot of Correlations between the Narrative Writing Self-Efficacy Scale Average and the Overall Writing Composite Index of the Test of Written Language-IV (TOWL-4)

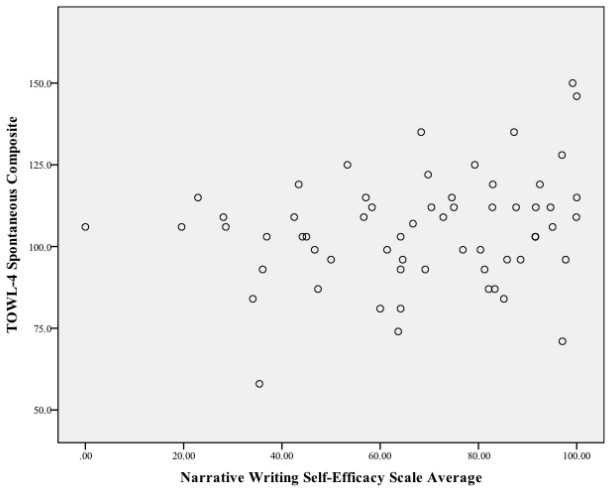

Figure 5

Scatterplot of Correlations Between the Narrative Writing Self-Efficacy Scale Average and the Spontaneous Writing Composite Index of the Test of Written Language-IV (TOWL-4)

Relation between Writing Skills Self-Efficacy and Writing Achievement

The second research question addresses the relation between the self-efficacy of writing skills and writing achievement: (2) Is there a significant relation between writing skills self-efficacy and writing achievement [as measured by a Writing Skills Self-Efficacy Scale (Pajares, Hartley, & Valiante, 2001) and the Test of Written Language-4 Overall Writing and Contrived Writing composite indexes] of at-risk upper elementary-aged students?

To address this research question, a Pearson correlation coefficient was computed using the SES average and TOWL-4 Overall Writing composite index. Results indicate a significant large positive correlation between these two variables, $r(59) = .511$, $p < .000$. Figure 6 presents these findings visually.

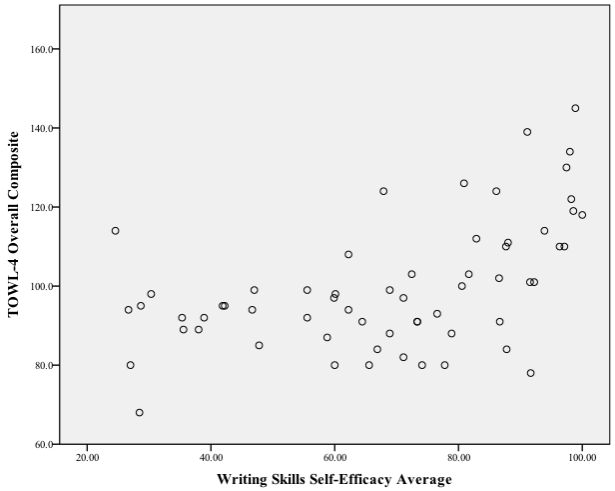

Figure 6

Scatterplot of Correlations between the Writing Skills Self-Efficacy Scale Average and the Overall Composite Index of the Test of Written Language-IV (TOWL-4)

The relation between the SES average and the TOWL-4 Contrived Writing composite was also examined. Results indicate a significant large positive correlation between these two variables, $r(59) = .548$, $p < .001$. Figure 7 presents these findings visually.

Results of these analyses indicate a moderate positive relation between the SES average and both the Contrived and Overall Writing Composites on the TOWL-4. This suggests as students' self-efficacy regarding writing skills increases, general writing achievement and writing skills also increase moderately.

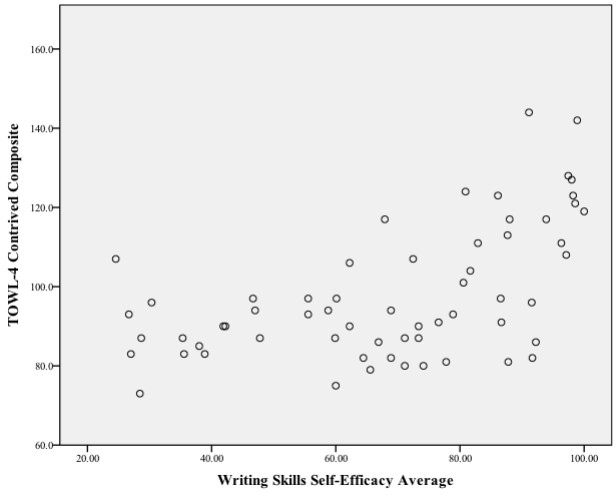

Figure 7

Scatterplot of Correlations between the Writing Skills Self-Efficacy Scale Average and the Contrived Composite Index of the Test of Written Language-IV (TOWL-4)

Relation between Attributions toward Writing and Writing Achievement

The third research question addresses the relation between student attributions towards writing success and failure and writing achievement: (3a) Is there a significant relation between a student's ability attributions for success and failure towards writing and writing achievement (as

measured by the Student Writing Attributions Scale and the Test of Written Language-4) of at-risk upper elementary-aged students?

To address this research question, a Pearson correlation coefficient was computed using the AB Scale (Ability composite) and the three TOWL-4 composite indexes. Results indicate a non-significant small negative relation between scores on the AB Scale (Ability) and the TOWL-4 Contrived Writing composite index, $r(59) = -.176$, $p = .175$. Similarly, for the AB Scale (Ability) and the Spontaneous Writing composite index, results yielded a non-significant small negative relation, $r(59) = -.135$, $p = .299$. And, similar results were found for the AB Scale (Ability) and the Overall Writing composite index, $r(59) = -.181$, $p = .164$. Figure 8 presents the relation between the AB Scale (Ability) and the TOWL-4 Overall Writing composite visually.

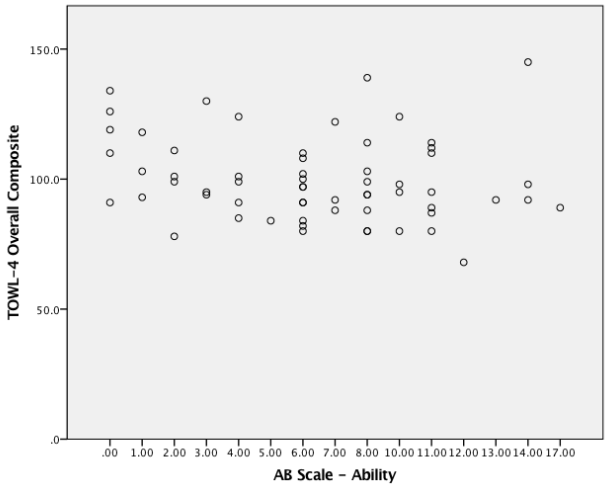

Figure 8

Scatterplot of Correlations between the Writing Attributions Scale (Ability) and the Overall Writing Composite of the Test of Written Language-IV (TOWL-4)

The third research question also addresses possible relations between students' effort attributions and writing achievement: (3b) Is there a significant relation between students' effort attributions for success and failure towards writing and writing achievement (as measured by the Student Writing Attributions Scale and the Test of Written Language-4) of at-risk upper elementary-aged students?

To address this question, a Pearson correlation coefficient was computed using the AB Scale (Effort composite) and the three TOWL-4 composite indexes. Results indicate a non-significant small positive relation between scores on the AB Scale (Effort) and the TOWL-4 Contrived Writing composite index, $r(59) = .176$, $p = .175$. For the AB Scale (Effort) and the Spontaneous Writing composite index, a non-significant small positive relation exists, $r(59) = .135$, $p = .299$. Similar results were found between the AB Scale (Effort) and the Overall Writing composite index, $r(59) = .181$, $p = .164$. Figure 9 presents the findings between the AB Scale (Effort) and the TOWL-4 Overall Writing composite visually.

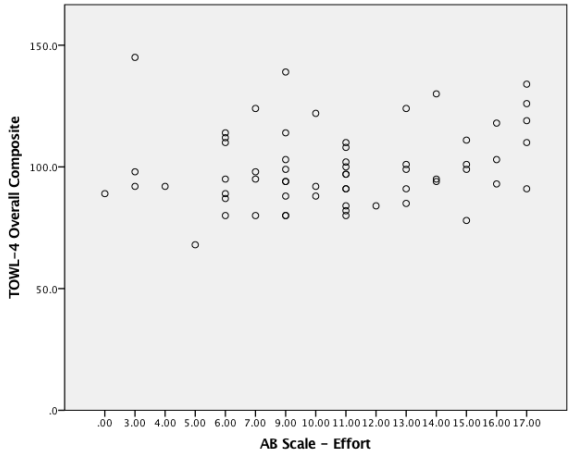

Figure 9

Scatterplot of Correlations between the Writing Attributions Scale (Effort) and the Overall Writing Composite Index of the Test of Written Language-IV (TOWL-4)

Conclusions about Relations among Variables

Results of these correlational and visual analyses indicate that self-efficacy related to writing skills is significantly correlated with both the Contrived and Overall Writing composite indexes of the TOWL-4, while self-efficacy related to story writing is only significantly correlated with the Overall Writing composite of the TOWL-4. Ability and effort attributions towards writing success and failure are not significant with any of the related TOWL-4 composites. Table 15 presents the correlations between scales and assessments.

The correlations presented in Table 15 also demonstrate convergent validity among constructs related to self-efficacy and ability and effort attributions. The NES and SES are significantly very largely positively correlated (r = .788). The NES and AB Scale (Ability) are significantly moderately negatively correlated (r = -.373), while the NES and AB Scale (Effort) are significantly moderately positively correlated (r = .373). Similar results were found between the SES and AB scales (r = -.463 for Ability and r = .463 for Effort). These results indicate there is some overlap in what the scales measure, but the constructs they measure are not exactly the same.

Moreover, Table 15 outlines the correlations between and among TOWL-4 composite indexes. The Contrived Writing composite index is significantly and nearly perfectly correlated with the Overall Writing composite index (r = .963). The Spontaneous Writing composite index is significantly highly correlated with the Overall Writing composite index (r = .780). The Spontaneous Writing composite index and the Contrived Writing composite index are also very largely related (r = .593). The Spontaneous and Contrived Writing composites measure writing skills and achievement differently (story writing and isolated subtests), but there is some overlap.

Table 15

Correlations (r) Among Motivational Scales and Test of Written Language-IV (TOWL-4) Composites

	NES Mean	SES Mean	AB- Ability Sum	AB-Effort Sum	Contrived Composite	Spontaneous Composite	Overall Composite
NES Mean	__	.788**	-.373**	.373**	.545**	.222	.488**
SES Mean	.788**	__	-.463**	.463**	.548**	.244	.511**
AB-Ability Sum	-.373**	-.463**	__	-1.00**	-.176	-.135	-.181
AB-Effort Sum	.373**	.463**	-1.00**	__	.176	.135	.181
Contrived Composite	.545**	.548**	-.176	.176	__	.593**	.963**
Spontaneous Composite	.222	.244	-.135	.135	.593**	__	.780**
Overall Composite	.488**	.511**	-.181	.181	.963**	.780**	__

Note. AB-Ability = Attributions Scale- Ability; AB-Effort = Attributions Scale-Effort;
* Correlation is significant at 0.05 level (two-tailed); ** Correlation is significant at 0.01 level (two-tailed).

Both composites account for writing skills related to conventions (e.g., spelling, punctuation, vocabulary) and both contribute to the Overall Writing composite score.

Group Differences for the TOWL-4 Composite Indexes and Writing Motivation

To address the fourth research question, numerous analyses were conducted. First, possible group differences for the TOWL-4 composite indexes and writing motivation scales were examined. Descriptive statistics were computed. Table 16 presents the means and standard deviations (categorized by females and males) for the motivational variables and writing achievement scores.

A multivariate analysis of variance (MANOVA) was utilized to determine any differences between females and males on writing achievement (Contrived, Spontaneous, and Overall Writing Composites). The Box's Test of Equality of Covariance was not violated (20.652, $p = .003$), indicating no significant differences in the covariances between groups. Therefore, the Wilk's Lambda statistic was calculated. Results indicate there is not a significant difference in writing achievement based on sex, $F(3, 57) = 1.301$, $p = .283$; $\eta_p^2 = .064$.

Subsequent analyses of variance (ANOVAs) were conducted to determine differences for each individual composite of the TOWL-4 and sex. The Levene's Test of Equality statistic was not significant for any of the composites, so we can assume homogeneity of variance among composites. Results suggest boys and girls do not differ as groups on the Contrived Writing composite, $F(1, 59) = 2.915$, $p = .093$; $\eta_p^2 = .047$, the Spontaneous Writing Composite, $F(1, 59) = .816$, $p = .370$; $\eta_p^2 = .014$, or on the Overall Writing composite, $F(1, 59) = 2.351$, $p = .131$; $\eta_p^2 = .038$.

Table 16

Descriptives of the Test of Written Language-IV (TOWL-4) Composite Indexes, the Narrative Writing Self-Efficacy Scale (NES), and the Writing Skills Self-Efficacy Scale (SES) by Sex

		M	*SD*	Min	Max
TOWL-4 Contrived Composite	Sex				
	Female	102.12	16.81	81.00	142.00
	Male	94.89	16.01	73.00	144.00
TOWL-4 Spontaneous Composite	Sex				
	Female	107.23	18.05	74.00	150.00
	Male	103.29	15.95	58.00	135.00
TOWL-4 Overall Composite	Sex				
	Female	103.46	17.17	80.00	145.00
	Male	97.11	15.06	68.00	139.00
Narrative Writing Self-Efficacy Scale (NES) Average	Sex				
	Female	71.15	22.29	28.08	100.00
	Male	65.04	25.04	00.00	99.92
Writing Skills Self-Efficacy Scale (SES) Average	Sex				
	Female	68.57	22.99	24.56	98.89
	Male	68.44	22.54	27.00	100.00

A MANOVA was conducted to examine any differences between males and females on self-efficacy measures. The Box's Test of Equality of Covariance was not violated (2.473, p = .498), hence the Wilk's Lambda statistic was computed. Results indicate there is not a significant difference in writing self-efficacy based on sex, $F(2, 58) = 1.251$, p =.294; η_p^2 = .041.

Subsequent ANOVAs were conducted to determine differences for each self-efficacy scale based on sex. The Levene's Test of Equality statistic was not significant for either self-efficacy scale, so we can assume homogeneity of variance among composites. Results indicate there is not a significant difference based on sex on the NES, $F(1, 59) = 0.974$, p = .328; η_p^2 = .016 or the SES, $F(1, 59) = .000$, p = .983; η_p^2 = .000.

Two ANOVAs were also conducted to examine any differences for the AB scale (for Ability and Effort) based on sex. The Levene's Test of Equality statistic was not significant for either scale (ability or effort), so we can assume homogeneity of variance among the scales. Results indicate there is no significant difference based on sex on the AB Scale (Ability), $F(1, 59) = .083$, $p = .774$; $\eta_p^2 = .001$ nor the AB Scale (effort), $F(1, 59) = .083$, $p = .774$; $\eta_p^2 = .001$.

Possible group differences by age were examined for the TOWL-4 Composites and the self-efficacy and attributions towards writing scales. A MANOVA was utilized to test for differences between nine, 10, and 11 year olds on writing achievement (Contrived, Spontaneous, and Writing Overall Composites). The Box's Test of Equality of Covariance was violated (59.44, $p = .000$), hence the Pillai's Trace statistic was computed. Results indicate there is not a significant difference in writing achievement based on age, $F(6, 114) = .791$, $p = .578$; $\eta_p^2 = .040$.

Subsequent ANOVAs were conducted to determine differences for each individual composite of the TOWL-4 and age. The Levene's Test of Equality statistic was not significant for any of the composites, so we can assume homogeneity of variance among composites. Results indicate there is not a significant difference based on age on the Contrived Writing composite, $F(2, 58) = .435$, $p = .649$; $\eta_p^2 = .015$, the Spontaneous Writing composite, $F(2, 58) = 1.337$, $p = .271$; $\eta_p^2 = .044$, or for the Overall Writing composite, $F(2, 58) = .663$, $p = .535$; $\eta_p^2 = .021$.

A MANOVA was utilized to examine any differences between 9, 10, and 11 year olds on writing self-efficacy. The Box's Test of Equality of Covariance was not violated (1.617, $p = .959$), hence the Wilk's Lambda statistic was computed. Results indicate there is not a significant difference in writing self-efficacy based on age, $F(4, 114) = .505$, $p = .732$; $\eta_p^2 = .017$.

Subsequent ANOVAs were conducted to determine differences for each self-efficacy scale based on age. The Levene's Test of Equality statistic was not significant for any of the three composites, so we can assume homogeneity of variance among composites. Results indicate there is not a significant difference based on age on the NES, $F(2, 58) = .687$, $p = .507$; $\eta_p^2 = .023$ nor the SES, $F(2, 58) = .256$, $p = .775$; $\eta_p^2 = .009$.

Two ANOVAs were also conducted to determine the differences for the AB scale based on age. The Levene's Test of Equality statistic was not significant for either scale (Ability or Effort), so we can assume homogeneity of variance among the scales. Results indicate there is not a significant difference based on age on the AB Scale (Ability), $F(2, 58) = .351$, $p = .706$; $\eta_p^2 = .012$ nor the AB Scale (Effort), $F(2, 58) = .351$, $p = .706$; $\eta_p^2 = .012$.

In summary, there are not any significant group differences based on sex and age for each of the TOWL-4 composites nor on any of the motivational scales.

Relations of Motivational Scales and Writing Achievement as a Function of Sex and Age

Having ruled out group differences on the various constructs addressed in this study, relations between variables based on sex and age were addressed. The fourth research question addresses the relations of the motivational variables and writing achievement by sex and age: (4) Do the relations between writing and motivation factors differ as a function of sex and age (as measured by the Narrative Self-Efficacy Scale and Writing Skill Self-Efficacy Scale, Student Writing Attributions Scale, and the Test of Written Language-4) for at-risk elementary-aged students?

A Pearson correlation was conducted to examine the relations between the NES average and TOWL-4 Overall Writing composite by sex. Results indicate there is a significant large

positive correlation between these two variables for females (n = 26), r(24) = .572, p = .002 as well as a significant moderate positive correlation for males (n = 35), r(33) = .411, p = .014.

A Pearson correlation was conducted to examine the relations between the NES average and TOWL-4 Spontaneous Writing composite by sex. Results indicate there is a non-significant moderate positive correlation between these two variables for females, r(24) = .368, p = .064, as well as a non-significant very small positive correlation for males, r(33) = .096, p = .583.

In order to examine the relations of the SES and the Overall Composite of the TOWL-4 by sex, a Pearson correlation was calculated. Results indicate a significant large positive correlation between these two variables for females, r(24) = .545, p = .004, as well as a significant large positive correlation for males, r(33) = .502, p = .002.

Additionally, a Pearson correlation coefficient was also calculated to examine the SES average and Contrived Writing composite of the TOWL-4. Results suggest a significant large positive correlation between these two variable for females, r(24) = .596, p = .001, as well as a significant large positive correlation for males, r(33) = .534, p = .001.

In summary, the relations among the self-efficacy scales and the composites of the TOWL-4 by sex are mixed (see Table 17). The relations between the NES average and the Overall Writing composite, SES average and the Overall Composite, and the SES average and the Contrived Writing composite are all significant (at the .05 level) for females. The same relations are significant (at the .05 level) for males. Moreover, the relations among the variables for males and females are similar to those for the entire sample (e.g., the NES scale is not significantly correlated with the Spontaneous Writing Composite of the TOWL-4 for the entire sample or for males or females).

The correlation between the AB scale and writing achievement was also examined using several Pearson correlations analyses (see Tables 18 and 19). For the AB Ability scale and the Overall Writing composite of the TOWL-4, results indicate a non-significant very small negative correlation for females, $r(24) = -.083$, $p = .688$. Similar results were found for the AB Ability scale and the Contrived Writing composite, $r(24) = -.064$, $p = .755$, as well as the AB Ability scale and the Spontaneous Writing composite, $r(24) = -.128$, $p = .533$.

Table 17

Relations of the Self-Efficacy Scales and the Test of Written Language-IV (TOWL-4) Composite Indexes by Sex

	r	*p*	*r*	*p*
	Female		Male	
NES Average + Overall Composite	.572	.002*	.411	.014*
NES Average + Spontaneous Composite	.368	.064	.096	.583
SES Average + Overall Composite	.545	.004**	.502	.002*
SES Average + Contrived Composite	.596	.001**	.534	.001**

Note. NES = Narrative Self-Efficacy Scale; SES = Writing Skills Self-Efficacy Scale; *Correlation is significant at 0.05 level (two-tailed); ** Correlation is significant at 0.01 level (two-tailed).

Table 18

Descriptives Statistics of the Writing Attributions (AB) Scale by Sex

		M	*SD*	Min	Max
AB Scale – Ability	Sex				
	Female	6.46	4.04	0.00	14.00
	Male	6.77	4.23	0.00	17.00
AB Scale- Effort	Sex				
	Female	10.54	4.04	3.00	17.00
	Male	10.23	4.23	0.00	17.00

Table 19

Relations of the Writing Attributions (AB) Scale and the Test of Written Language-IV (TOWL-4) Composite Indexes by Sex

	r	*p*	*r*	*p*
	Female		Male	
AB Scale (Ability) + Overall Writing Composite	-.083	.688	-.254	.142
AB Scale (Ability) + Contrived Writing Composite	-.064	.755	-.252	.144
AB Scale (Ability) + Spontaneous Writing Composite	-.128	.533	-.136	.438
AB Scale (Effort) + Overall Writing Composite	.083	.688	.254	.142
AB Scale (Effort) + Contrived Writing Composite	.064	.755	.252	.136
AB Scale (Effort) + Spontaneous Writing Composite	.128	.533	.136	.438

Note. * Correlation is significant at 0.05 level (two-tailed); ** Correlation is significant at 0.01 level (two-tailed).

The relation between these variables was also examined for males. For the AB Ability scale and the Overall Composite of the TOWL-4, results indicate a non-significant small negative correlation for males, $r(33) = -.254$, $p = .142$. Similar results were found for the AB Ability scale and the Contrived Writing composite, $r(33) = -.252$, $p = .144$, as well as the AB Ability scale and the Spontaneous Writing composite, $r(33) = -.136$, $p = .438$.

The exact opposite results were found between the AB Effort scale and TOWL-4 composites when calculated based on sex. For the AB Effort scale and the Overall Composite of the TOWL-4, results indicate a non-significant very small positive correlation for females, $r(24) = .083$, $p = .688$. Similar results were found for the AB Effort scale and the Contrived Writing composite, $r(24) = .064$, $p = .755$, as well as the AB Effort scale and the Spontaneous Writing composite, $r(24) = .128$, $p = .533$.

The relation between these variables was also examined for males. For the AB Effort scale and the Overall Composite of the TOWL-4, results indicate a non-significant small positive correlation for males, $r(33) = .254$, $p = .142$. Similar results were found for the AB Effort scale and the Contrived Writing composite, $r(33) = .252$, $p = .144$, as well as the AB Effort scale and the Spontaneous Writing composite, $r(33) = .136$, $p = .438$.

In summary, generally scores on the AB scales and the TOWL-4 Overall Composite are not significantly related. These weak correlations are not significant for females or for males. These relations are similar to the results of the correlation between the attributions and achievement for the overall sample (i.e., with both females and males combined).

To examine correlations by age, a series of Pearson correlational analyses were conducted. In Table 20 the means and standard deviations (categorized by participant age) for the motivational variables and writing achievement scores are presented.

A Pearson correlation was conducted to examine the relations between the NES average and TOWL-4 overall composite by age. Results indicate a significant moderate positive correlation between these two variables for nine year olds (n = 26), $r(24) = .432$, $p = .028$, as well as a significant large positive correlation for 10 year olds (n = 26), $r(24) = .520$, $p = .006$. However, the relation for 11 year olds is non-significant (n = 9), $r(7) = .553$, $p = .123$.

Table 20

Descriptive Statistics of the Test of Written Language-IV (TOWL-4) Composite Indexes, the Narrative Writing Self-Efficacy Scale (NES), and the Writing Skills Self-Efficacy Scale (SES) by Age

		M	*SD*	Min	Max
TOWL-4 Contrived Composite	Age				
	9	97.23	14.75	79.00	128.00
	10	97.04	15.51	73.00	142.00
	11	102.78	22.55	75.00	144.00
TOWL-4 Spontaneous Composite	Age				
	9	102.00	15.68	74.00	146.00
	10	105.31	19.57	58.00	150.00
	11	112.56	8.29	96.00	122.00
TOWL-4 Overall Composite	Age				
	9	98.35	14.95	80.00	134.00
	10	99.36	16.63	68.00	145.00
	11	105.33	18.89	80.00	139.00
Narrative Writing Self-Efficacy Scale (NES) Average	Age				
	9	67.33	25.73	00.00	100.00
	10	65.09	23.64	19.58	99.17
	11	75.95	19.29	44.17	100.00
Writing Skills Self-Efficacy Scale (SES) Average	Age				
	9	67.01	23.54	24.56	100.00
	10	68.32	23.50	26.67	98.89
	11	73.31	17.90	46.67	98.22

A Pearson correlation was conducted to examine the relations between the NES average and TOWL-4 spontaneous composite based on sex. Results indicate a non-significant small positive correlation between these two variables for nine year olds, $r(24) = .150$, $p = .464$, as well as a non-significant small positive correlation for 10 year olds,, $r(24) = .208$, $p = .308$. However, a significant positive large correlation exists for 11 year olds, $r(7) = .681$, $p = .043$.

In order to examine the relations of the SES and the Overall Writing composite of the TOWL-4 by age, a Pearson correlation was calculated. Results indicate a significant large positive correlation between these two variables for nine year olds, $r(24) = .521$, $p = .006$, as well as a significant moderate positive correlation for 10 year olds, $r(24) = .430$, $p = .028$. A significant very large positive correlation exists for 11 year olds, $r(7) = .779$, $p = .013$.

Additionally, a Pearson correlation coefficient was also calculated to examine the SES average and Contrived Writing composite of the TOWL-4. Results suggest a significant large positive correlation between these two variable for nine year olds, $r(24) = .603$, $p = .001$, as well as a significant moderate positive correlation for 10 year olds, $r(24) = .473$, $p = .015$. Additionally, a significant very large positive correlation exists for 11 year olds, $r(7) = .701$, $p = .035$.

In summary, the relations among the self-efficacy scales and the composites of the TOWL-4 by age are mixed (see Table 20). The relations between NES average and the Overall Writing composite are all significant for nine and 10 year olds, but not for 11 year olds. The relation between the NES average and the Spontaneous Writing composite is significant only for 11 year olds, but not for nine or 10 year olds. Additionally, the relations between the SES

average and the Overall Writing composite is significant for all ages. And, the relations between the SES average and Contrived Writing composite is also significant for all ages.

Table 21

Relations of the Self-Efficacy Scales and the Test of Written Language-IV (TOWL-4) Composite Indexes by Age

	r	*p*	*r*	*p*	*r*	*p*
	9 year olds		10 year olds		11 year olds	
NES Average + Overall Composite	.432	.028*	.520	.006**	.553	.123
NES Average + Spontaneous Composite	.150	.464	.208	.308	.681	.043*
SES Average + Overall Composite	.521	.006**	.430	.028*	.779	.013*
SES Average + Contrived Composite	.603	.001**	.471	.015*	.701	.035*

Note. * Correlation is significant at 0.05 level (two-tailed); ** Correlation is significant at 0.01 level (two-tailed).

The correlation between the AB scale and writing achievement was examined for age using several Pearson correlations analyses. Table 22 outlines the means, standard deviations, and minimum and maximum scores for the ability and effort scales by age.

For the AB Scale (Ability) and the Overall Writing composite of the TOWL-4, results indicate a significant large negative correlation for nine year olds, $r(24) = -.544$, $p = .004$ (see Table 23). The relation between the AB Scale (Ability) and the Contrived Writing composite is

significant, too, $r(24) = -.622$, $p = .001$, but not between the AB Scale (ability) and the Spontaneous Writing composite, $r(24) = -.228$, $p = .263$.

Table 22

Descriptive Statistics of the Writing Attributions (AB) Scale by Age

		M	*SD*	Min	Max
AB Scale – Ability	Age				
	9	6.50	4.07	0.00	14.00
	10	7.08	4.66	0.00	17.00
	11	5.78	2.49	2.00	10.00
AB Scale - Effort	Age				
	9	10.50	4.07	3.00	17.00
	10	9.92	4.66	0.00	17.00
	11	11.22	2.49	7.00	15.00

For 10 year olds, the relation between the AB Scale (Ability) and the TOWL-4 composites are not significant. Results indicate negative very small correlation for the Overall Writing composite, $r(24) = -.051$, $p = .804$, for the Contrived Writing composite, $r(24) = -.055$, $p = .982$, and for the Spontaneous Writing composite $r(24) = -.107$, $p = .605$.

The relation between the AB Scale (Ability) and the TOWL-4 composites was also examined for 11 year olds. Results indicate a non-significant large positive relation for the Overall Writing composite, $r(7) = .656$, $p = .055$, for the Contrived Writing composite,, $r(7) = .591$, $p = .094$; $r^2 = .35$, and for the Spontaneous Writing composite, $r(7) = .534$, $p = .139$.

For the AB Scale (Effort) and the Overall Writing composite of the TOWL-4, results indicate a significant positive large correlation for nine year olds, $r(24) = .544$, $p = .004$. The relation between the AB Scale (Effort) and the Contrived Writing composite is significant, too,

$r(24) = .622$, $p = .001$, but not between the AB Scale (Effort) and the Spontaneous Writing composite, $r(24) = .228$, $p = .263$.

For 10 year olds, the relation between the AB Scale (Effort) and the TOWL-4 composites is not significant. Results indicate positive very small positive correlation for the Overall Writing composite, $r(24) = .051$, $p = .804$, and for the Contrived Writing composite, $r(24) = .055$, $p = .982$, and the Spontaneous Writing composite, $r(24) = .107$, $p = .605$.

The relation between the AB Scale (Effort) and the TOWL-4 composites was also examined for 11 year olds. Results suggest non-significant large negative relation for the Overall Writing composite, $r(7) = -.656$, $p = .055$, and for the Contrived Writing composite, $r(7) = .-591$, $p = .094$, as well as the Spontaneous Writing composite, $r(7) = -.534$, $p = .139$.

In summary, the results of the relation among the AB scales (Ability and Effort) and the TOWL-4 composites are mixed for age (see Table 23). The AB Scale (Ability) scale is only significantly correlated with the TOWL-4 Overall Writing composite index for nine year olds, however these two measures were not significantly related for 10 or 11 year olds. Additionally, AB Scale (Ability) and the TOWL-4 Contrived Writing composite index was only significant for nine year olds, as well as the relation between AB Scale (Effort) and TOWL-4 Overall Writing composite. No relations were significant between the AB Scale and the TOWL-4 composites for 10 or 11 year olds.

Table 23

Relations of the Writing Attributions (AB) Scale and the Test of Written Language-IV (TOWL-4) Composite Indexes by Age

	r	*p*	*r*	*p*	r	*p*
	9 year olds		10 year olds		11 year olds	
AB Scale (Ability) + Overall Writing Composite	-.544**	.004	-.051	.804	.656	.055
AB Scale (Ability) + Contrived Writing Composite	-.622**	.001	-.055	.982	.591	.094
AB Scale (Ability) + Spontaneous Writing Composite	-.228	.263	-.107	.605	.534	.139
AB Scale (Effort) + Overall Writing Composite	.544**	.004	.051	.804	-.656	.055
AB Scale (Effort) + Contrived Writing Composite	.622**	.001	.055	.982	-.591	.094
AB Scale (Effort) + Spontaneous Writing Composite	.228	.263	.107	.605	-.534	.139

Note. * Correlation is significant at 0.05 level (two-tailed); ** Correlation is significant at 0.01 level (two-tailed).

Chapter 5

Discussion

The goal of this study was to examine the writing achievement and two factors of writing motivation of upper elementary-aged students who all attended Title 1 schools for the 2014-2015 school year. Specifically, the purpose of this study was to examine (1) the relation between narrative writing self-efficacy and achievement, (2) the relation between writing skill self-efficacy and achievement, (3) attributions towards success and failure in writing, and (4) the relations among achievement and motivational variables as a function of sex and age. Broadly, a significant correlation exists between narrative writing self-efficacy and global writing achievement, as well as between writing skills self-efficacy and general writing achievement and writing achievement involving conventions and mechanics. No significant relations exist between ability or effort attributions towards writing success and failure and writing achievement, though attributions are significantly related to writing self-efficacy. See Appendix M for a summary of all results presented as part of this study.

According to the National Assessment of Educational Progress (NAEP) data from 2002 and 2012, the writing achievement among students in the U.S. is, on average, below proficient for fourth, eighth, and 12th graders (National Center for Educational Statistics, 2012; U.S. Department of Education, 2003). These data are representative for the 2002 and 2012 reports, thus suggesting a trend of lack of proficiency among writers across grade levels. A goal of this study was to examine a possible factor in this nationwide problem – motivation (or lack of) for students in regards to writing, and its relation to writing achievement.

According to various researchers, motivation impacts and can predict writing achievement (Schunk, et al., 2014; Troia, Shankland, & Wolbers, 2012; Pajares, Valiante, & Fai Cheong, 2007). Yet, little research exists about the complexity and inter-connectedness of these constructs in relation to writing. Many writing researchers acknowledge motivation as a factor to consider when planning writing instruction (Boscolo & Gelati, 2013), but few studies exist actually analyzing this construct.

Sixty-one participants were included in this study. All students completed third, fourth, or fifth grades, and were considered at-risk due to their attendance and enrollment in a Title 1 school for the 2014-2015 school year. The majority of students (73.8%), also, received free or reduced lunch status through the National School Lunch Program (NSLP). Participants completed several motivational scales (e.g., NES, SES, AB scale) and a writing achievement measure (e.g., TOWL-4) in order to examine the various research questions.

In this chapter, results and conclusions regarding the four research questions are presented. Additionally, implications for teachers and future research are discussed.

Test of Written Language-IV (TOWL-4) Composites

Because the Spontaneous Writing composite mean was seven points higher (about half a standard deviation) than the Contrived Writing composite mean for this sample, two independent samples *t*-tests were conducted to examine possible differences between scores from this sample and scores from the norm sample. Significant differences were not found for the Contrived Writing composite ($M = 97.97$, $SD = 16.61$), $t(60) = -.956$, $p = .343$. However, significant differences were found between the norm sample mean on the Spontaneous Writing composite ($M = 104.97$, $SD = 16.84$), $t(60) = 2.303$, $p = .025$. That is, the sample mean for Contrived

Writing is similar to that of the norm sample of the TOWL-4 but the Spontaneous Writing mean is significantly higher, about one-half a standard deviation. Further, a paired samples *t*-test was conducted to determine differences between these two composites for participants of this study. Results indicate a significant difference, $t(60) = -3.620$, $p = .001$. Not surprisingly, given that the Spontaneous Writing composite mean is higher for this sample than for the norm group, it is also higher than the sample Contrived Writing composite mean, almost half a standard deviation. This suggests there are some differences in scores that may have impacted the results. Results of this study indicate students view two types of writing self-efficacy (narrative and writing skills) similarly, yet they scored higher on the Spontaneous Writing composite. This may be due to the uniqueness of this sample or, perhaps, characteristics of at-risk students. More research is needed.

Writing Self-Efficacy and Writing Achievement

Because self-efficacy is considered to be one of the strongest correlates of writing performance (Klassen & Welton, 2009), the purpose of the first two research questions was to examine skill and task self-efficacy in relation to writing achievement. The first research question focused on the relation between narrative writing self-efficacy and writing achievement as measured by the NES and TOWL-4 (Spontaneous and Overall Writing composite indexes). Results yielded a significant moderate to large correlation between these two variables for the TOWL-4 Overall Writing composite, but not for the Spontaneous Writing composite. Therefore the narrative writing self-efficacy of upper elementary-aged students is more closely related to a student's overall writing achievement, and not the achievement specific to narrative writing.

These results are somewhat surprising, as the NES was developed based on the story writing rubric used to score part of the TOWL-4. Additionally, the NES was developed using the Story Composition rubric used to score that subtest. Items from the NES primarily address how sure students are that they could (1) write a story using a picture, (2) include the necessary components of a story, and (3) write a story that includes setting, characters, and appropriate vocabulary. Yet, the Spontaneous Writing composite, which consists of two subtests (Contextual Conventions and Story Composition), and narrative self-efficacy were not significantly related in this study. Logically, if the raw score from only the Story Composition (and not the full Composite which includes the student's Contextual Convention score) subtest was used in the correlational analyses, a significant relation would exist. Post-hoc analyses using the NES (M = 67.65; SD = 23.91) and the z-scores of the Story Composition subtest indicate a non-significant small positive correlation between these two variables, $r(59) = .179$, $p = .168$. Perhaps this lack of relation suggests that students do not judge their own abilities correctly in relation to including important elements when writing stories. Based on TOWL-4 scores, their narrative writing skills were stronger than their writing mechanics skills. The relation between these two variables by sex was also examined. The relation between the NES and the z-scores of the Story Composition subtest indicate a non-significant moderate positive correlation for females, $r(59) = .338$, $p = .091$ and a non-significant very small positive correlation for males, $r(59) = .065$, $p = .712$. Although neither is significant, it is interesting to note the discrepancy between the significance levels for females and males.

Narrative writing self-efficacy and overall writing achievement are significantly positively related, suggesting as students' writing achievement increases, so does their self-

efficacy about story writing. Perhaps, this finding indicates students are more aware of their global writing capabilities and do not differentiate narrative writing versus mechanics. Overall Writing includes both conventional and story writing skills. So, broadly, it seems, students can accurately predict performance. Yet, they struggle accurately predicting or judging performance specifically for including story elements.

The second research question focused on the relation between writing skills self-efficacy and writing achievement as measured by the SES and TOWL-4 (Contrived and Overall Writing composites). Results suggest writing skill self-efficacy and overall writing achievement are significantly positively related, as are the writing skills self-efficacy and the TOWL-4 Contrived Writing composite. This suggests that as students' self-efficacy related to writing skills (e.g., punctuation, capitalization) increases, so do their writing achievement scores. Moreover, it implies students can evaluate their capabilities related to basic writing skills effectively.

Neither the NES nor the SES address how students formed efficacy beliefs; that is, these scales do not address if students formed these beliefs based on outcome or efficacy expectations (or a combination of both). Troia, Shankland, and Wolbers (2012) indicated that oftentimes a student might use former performances to create self-efficacy judgments (efficacy expectations). Perhaps students used former experiences to evaluate their own capabilities. In this study, perhaps, they used other factors to make these judgments including vicarious experiences, feedback (from students or teacher), or affect (Bandura, 1997; Klassen & Welton, 2009; Schunk et al., 2014). The two self-efficacy scales used in this study did not address why or how students made self-efficacy judgments, as they only required students to write a number between 0 and 100 for each item. Students may have, also, used outcome expectations to form efficacy beliefs.

These are the anticipated consequences (e.g., reward, approval) for success or failure (Troia, Shankland, et al., 2012; Schunk & Pajares, 2001).

We also do not know how students judge good writing. Both of the self-efficacy scales asked students to indicate how sure they could preform each task well. But each student may have a different understanding of what doing well means for him/her. Some students may believe writing a story about a picture is easy because they rate the quality of the writing lower than other students (i.e., they set lower expectations compared to students who rate the quality of their writing higher). Or, perhaps, students do not receive as much feedback from teachers or peers about the inclusion of quality story elements. Instead, maybe they receive a lot of feedback related to conventions, so they can use former mastery experiences to predict their own performances in this area, and not specific to narrative writing (and the Spontaneous Writing composite index). Also, previous research has not indicated the optimal age to begin assessing efficacy beliefs of students. Troia, Shankland, and Wolbers (2012) suggested students' beliefs become increasingly more accurate with age. However, no specific age or age range has been identified from the literature in this area.

To expand on current literature, one of the purposes of this study was to measure writing self-efficacy for a specific task, which is lacking in reviewed studies. Troia, Shankland, and Wolbers (2012) noted that self-efficacy is task specific and Hidi and colleagues (2002) indicated self-efficacy is domain specific for sixth graders. So, research is needed for self-efficacy related to each specific type of writing (e.g., narrative, informational, argumentative).

Additionally, the means of both self-efficacy scales were very similar (NES = 67.65; SES = 68.50). This is an interesting finding that suggests students view their capabilities related to

story writing and writing skills similarly. However, the means of the corresponding TOWL-4 composite indexes were not similar (Spontaneous = 104.97; Contrived = 97.97). This suggests students can better predict their writing achievement related to conventions and mechanics better than they can predict achievement related to how they compose a story.

Attributions towards Writing and Writing Achievement

The third research question focused on the relation between ability and effort attributions towards writing (success and failure) and writing achievement as measured by the AB scale and TOWL-4. Results indicate a non-significant relation between ability and effort attributions and writing achievement. Although not significant, the results of the relation between the AB Scale (effort) and the TOWL-4 composites are noteworthy. The effect sizes (*r*) of these relations all exceed .50, suggesting there is significant overlap between these two variables.

Therefore, it seems, students generally do not decidedly attribute writing success or failure to either ability or effort. A more sophisticated attributions measure (that allows students to rate each possible cause rather than a forced choice format) and/or one that includes additional attributions (e.g., luck, teacher characteristics) could have yielded different results.

The interpretation of the results of the relation between the AB scale and writing achievement is somewhat tricky. Students were forced to select between one of two choices (ability or effort) as the cause of success or failure, and both of these options are considered internally determined outcomes (unlike externally caused outcomes like task difficulty). Because these are the two factors that most influence a student's performance (or outcomes) (Li & Lee, 2004), it seemed appropriate to limit responses to these two options. Moreover, research indicates a student begins to differentiate between ability and effort when self-evaluating

performance around the age of nine or 10 (Dweck, 2001), the same age as the majority of the participants included in this study. However, this restriction also limits findings. A student may attribute success or failure to *both* ability and effort, or to a cause that was not even an option (e.g., task difficulty, teacher bias). This scale required students to select one and only one response, so they could not elect ability *and* effort as the cause together.

Moreover, it is important to note that students identified *perceived* causes of success or failure using the AB scale. These causes may, in fact, not be valid for some students. Weiner (2005) discussed how students can assign a perceived cause to an outcome, but the actual cause may be different. So, these results need careful interpretation. Additionally, according to Weiner's more recent work (Schunk et al, 2014), ability and effort can have different interpretations. A student may believe ability is strictly intelligence-related (IQ), while others may view ability in terms only related to the task at hand. These different views would impact a student's response. Similarly, effort can be viewed as long term or temporal. Perhaps a student believes s/he has adequate long-term effort, but may have sporadic temporal effort about specific writing tasks or assignments (maybe tasks disliked by the student). This would also, perhaps, impact how a student responds to the items on the AB scale.

Only a few previous studies have examined this relation, limiting these findings. The work of Shell, Colvin, and Bruning (1995) indicated fourth, seventh, and 10th graders attributed successful writing to effort (and they were strongly positively correlated). Carr et al. (1991) examined the motivation of achievers and underachievers in the area of reading, as well as student attributions towards reading. Students were in upper elementary school, and were asked to complete several measures of ability and an attributional questionnaire, which asked students

broad questions about reading (not specific reading tasks or skills). Their work indicated that achievement did not predict attributions towards reading.

Because scant research exists related to attributions towards writing and achievement, these results add to the literature base. However, more research is needed to investigate how students attribute causes for both success and failure in writing. Perhaps a more detailed scale with more options (i.e., causes), and the ability to select more than one cause would provide more information. Researchers need to be cautious, however, as more advanced scales need to be age-appropriate for the students. Younger students may need a simpler scale because considering multiple causes simultaneously for an outcome can be cognitively taxing. Likely a contributing reason for the lack of research in this area is the difficulty in measuring or capturing this construct.

Relations among Variables as a Function of Sex and Age

The fourth research question focused on the relation of the motivational variables (NES, SES, and AB scale) and the achievement measure (TOWL-4) as a function of sex and age. Because the results from previous studies regarding gender/sex were mixed, an additional purpose of this study was to examine possible sex differences among participants. Previously, Schunk and Pajares (2001) indicated little differences exist between females and males in elementary school. Later, in 2006, Pajares and Valiante's work suggested girls have stronger confidence (i.e., self-efficacy) in elementary school.

This study included 26 females (42.6%) and 35 males (57.4%). Results of the current study suggest that narrative writing self-efficacy and writing achievement (overall) is significantly, moderately correlated for both females and males. But, a non-significant moderate

positive correlation was found between narrative writing self-efficacy and writing achievement (Spontaneous Writing composite) for females and males. Thus, overall achievement and narrative writing self-efficacy are positively correlated regardless of sex. The mean narrative writing self-efficacy score and the TOWL-4 Spontaneous composite are not significantly related, so it is not surprising that this relation is not significant for either sex.

Results yielded a significant positive correlation for both females and males between writing skills self-efficacy and overall and contrived writing achievement. Therefore, as students' self-efficacies related to writing skills increases, so does their achievement, regardless of sex.

The AB ability scale and overall writing achievement was examined by sex, as well. Results suggest a non-significant correlation for both females and males for both the AB ability and AB effort scales.

Self-efficacy and achievement as a function of age was also examined. This study included nine (n = 26), 10 (n = 26), and 11 (n = 9) year olds. The relations among the self-efficacy scales and overall TOWL-4 composites were all significant for nine and 10 year olds. No significant was found between/among these variables for 11 year olds. Conversely, the relation between the NES and Spontaneous composite was only significant for 11 year olds and not for nine or 10 year olds. This is somewhat interesting as there were only nine participants (out of 61) who were 11 years old at the time of this study. Perhaps a larger sample size would better represent differences among ages for this relation.

For the SES scale and Overall (and Contrived) Writing achievement, a significant positive correlation exists for all three ages. A significant negative relation was found for nine

year olds between the AB Scale (Ability) and the Overall Writing composite index, as well as between the AB Scale (Ability) and the Contrived Writing composite index. No significant relation was found for the Spontaneous Writing composite for nine year olds. The same results were found between the AB Scale (effort) and Overall Writing and Spontaneous Writing composite indexes (significant). No significant relations were found for 10 or 11 year olds. Again, the sample size for each age is small, especially for 11 year olds (n = 9). This may have impacted results.

Limitations and Delimitations

As with much of educational research, several limitations and delimitations apply. One of the major limitations was the research design. Correlational research is not experimental and can only provide inferences about the relation between or among variables. Grand generalizations cannot be determined, but results can be used to provide more information to students and teachers. Though less robust than findings from a cause and effect study, results can provide a platform for future research.

The order of administration for the scales and TOWL-4 may be considered a limitation. The TOWL-4 was presented last to curb any possible biased perceptions of ability and effort that students may feel after completing a writing achievement assessment. A counter-balance was not used, and, instead, scales were administered from general to very specific (Narrative Writing Self-Efficacy).

The TOWL-4, a norm-referenced assessment for writing achievement, was used as the writing measure for the study. As part of this assessment, students were asked to complete one narrative composition based on a picture. Although this assessment is considered reliable and

valid (Hammill & Larsen, 2009), it should be noted that this test is just a snapshot of a student's ability. Requiring only one writing sample may be considered a limitation.

The sample size is also another limitation, yet it was adequate. Although this research reached the minimum number of participants suggested to complete a correlational study (Gall, Gall, & Borg, 2007), more research is needed with additional participants to gain a clearer understanding of the writing attributions and self-efficacy of at-risk elementary students.

The sampling methodology is a delimitation of this study. Participants were recruited from specific Clubs as part of the BGCTNV. Although these Clubs serve at-risk students from Title 1 schools, which were components of the inclusion criteria, the entire sample of at-risk students in the local school district was not sought. Moreover, this study was limited to students in specific grade levels, also limiting its findings.

Although self-reporting is often used in motivational research (Pajares & Valiante, 2006; Pajares, David Miller, & Johnson, 1999), it poses some limitations. Students must understand several ideas: (1) the scale for which they rank their performances (e.g., 0 to 100), (2) the items on the scale, (3) how to determine good writing. Students, perhaps, may have differing views of good writing. This would certainly impact results.

Implications for Practice

Because writing is a complex task (Torrance & Galbraith, 2006), it is often viewed as unattractive or not appealing to students (Boscolo & Gelati, 2013). Students must be motivated in various ways when completing writing activities or assignments. For example, during the revising stage, a student must check spelling, grammar, flow, organization, focus, and other major components of their drafts. If a student does not feel efficacious about his/her spelling

ability, the student may not even attempt revisions in this area. The student may give up all together or skip this important revision and focus on other revisions s/he feels confident in completing. Students who do feel efficaciously about spelling, on the other hand, may revise spelling without hesitation and understand its importance in their writing. Because writing often contains so many steps and components (and students are producing instead of consuming), it may be difficult to maintain motivation throughout the entire process.

Bruning and Horn (2000) outlined several factors for teachers to consider in order to develop writing motivation. These factors seem similar to the recommendations for effective writing instruction in classrooms. According to these researchers, teachers should create an inviting writing environment where everyone is considered a writer and the relevancy of writing tasks are discussed with students. Many different genres should be included throughout the school year. Because self-efficacy is domain-specific, a student may feel efficaciously about writing a personal narrative but not feel efficaciously about writing argumentative papers. Bruning and Horn (2000) encourage teachers to give students some tasks that will result in student success. Because writing performance and self-efficacy are related, it is important for teachers to consider the genre or type of writing that students feel the most confident completing when selecting writing assignments.

In addition to exposure to different genres, teachers should provide feedback to students. This is important for many reasons, but, regarding motivation, it may help students identify appropriate attributes for success and failure. Perhaps a student did not score as high as expected on a piece of writing. The feedback provided by the teacher (or peer) indicated the student made careless mistakes. The student can then attribute failure to lack of effort. This can have various

consequences. The student could feel badly and realize that s/he made careless mistakes and use that to perform at a higher level next time. The student could feel the teacher is biased and only knit-picking, so s/he may give up because, in his/her mind, no amount of ability or effort will counteract this bias. Regardless, feedback helps shape causal attributions for success and failure in writing (Dweck, 1975).

Self-regulation is often an integral component of motivation. Writing is often laborious and full of complicated steps. Because of this, teachers should chunk information into manageable parts (Bruning & Horn, 2000). This will help students be motivated to achieve short-term goals instead of become overwhelmed with the entire writing task. It can also help students who may be good at some steps but not so good at others. For example, a student may excel at brainstorming and have little difficulty maintaining motivation to complete that small chunk. However, the student finds the revision step difficult. Chunking each step will help ameliorate (or reduce) potential loss of motivation at the onset of the assignment.

Teachers should consider both causal attributions and self-efficacy when planning writing instruction. Both are factors of motivation, and thus impact (or are correlated with) writing achievement.

Significance of Study

This study expands current, sparse literature related to writing motivation, especially self-efficacy. In fact, the creation of the Narrative Writing Self-Efficacy Scale (NES) represents a potentially important contribution to the field. Many researchers have advocated for separate scales, measuring self-efficacy by domain (Pajares 2003; Pajares 1996; Troia, Harbaugh, et al., 2012). Because of this suggestion, I developed the NES with criteria outlined by the rubric to

measure one of the TOWL-4 subtests, thus connecting the measure to the specific task (or domain). Additionally, I created the Student Writing Attributions (AB) scale to assess causal attributions students select when prompted with scenarios about writing success and failure. Although the AB scale used in this study addressed only ability and effort, the results provide a foundation for a future research to explore external causes of success and failure, as well. Although writing achievement was not significantly correlated with the AB scale, it was significantly related to the two writing self-efficacy measures (NES, SES). This suggests these constructs are related but are not exactly similar. More research is needed in this area to develop a scale that adequately captures the construct of writing attributions.

Future Research

The results of this study yield important information that raise additional questions for further research. Yet, further research in this area is needed. The NES needs to be validated with the population used in this study, and other populations in order to assess validity across participants. Moreover, more work is needed in the area of causal attributions. Although it is difficult to measure, this motivational factor is intertwined with others and may provide teachers with important information about student writing motivation. A comparison of high and low achievers is also needed for elementary students. Some work related to the attributional theory has suggested that high achievers tend to attribute success and failure to ability, whereas lower achievers tend to attribute success and failure to effort. These generalizations cannot (and have not) been made for writing specific tasks, so more research is needed.

Additionally, more research is needed to examine possible covariates related to writing motivation and achievement. The educational level of parents and other demographic

information (e.g., employment, salary) should be considered, as well as factors related to lunch status. A larger sample of students who receive free lunch and students who are ineligible for this program should be examined in order to compare these two populations. These covariates are important considerations for future research.

Conclusions

The purpose of this study was to analyze the relations and group differences (between sex and age) among writing motivation variables and writing achievement. Results from this study add to current literature by expanding the work related to writing self-efficacy by creating a specific measure for this type or genre of writing. This scale needs further validation in future studies, but it provides researchers with a basis for further developing this line of inquiry. Moreover, I aimed to expand the current research base regarding the measurement of ability and effort attributions towards writing success and failure. Although the results are non significant, they provide important information related to ability and effort attributions.

Writing motivation, although not widely researched, is an important consideration for teachers. Four factors influence this type of motivation including interest, goal orientations, outcome attributions, and self-efficacy. Because all four factors are intertwined and somewhat related, these constructs are often difficult to measure and capture completely. The goal of this study was to analyze two of these factors: self-efficacy and causal attributions. Although the results are mixed, they expand this small literature base.

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Appendices

Appendix A

Parent Questionnaire

Parent Questionnaire

UTK/Boys & Girls Club Summer Projects

Dear Parents/Guardians,

We are pleased that your child is part of the UT Project this summer. If selecting to participate, please return this form with your signed parental consent.

What are some of your child's favorite books?
How often does your child read at home?
What does your child like to write about?
How often does your child write at home?
List 2 or 3 things your child likes to do.

Child	Full Name:	**Language**		
		Child Language (Circle in the box below)		
	Date of Birth:	English Only	Bilingual	Primary Language not English
Mother/ Female Guardian	Full Name:	**Mother/Female Guardian Language (Circle in the box below)**		
	Phone:	English Only	Bilingual	Primary Language not English
	Email:			
Father/Male Guardian	Full Name:	**Father/Male Guardian Language (Circle in the box below)**		
	Phone:	English Only	Bilingual	Primary Language not English
	Email:			

Does your child receive special education services at school? YES NO

If YES, please circle the term(s) that best describes the category your child receives services.

Deaf-Blindness	Orthopedic impairment
Deafness	Other health impairment
Emotional Disturbance	Specific learning disability
Hearing impairment	Speech or language disability
Intellectual disability	Visual impairment (including blindness)
Multiple disabilities	Autism
Traumatic brain injury	
Other: Please describe _____	

Appendix B

Cover Page

Study Student ID _____

Today's Date _____

First Name _____ Last Name _____

Male [ ] Female [ ]

School _____ Grade _____

Birthday_____ Age_____

Name of Boys and Girls Club _____

Appendix C

Narrative Writing Self-Efficacy Scale – Pilot

Pilot Student ID _____

NARRATIVE WRITING SELF-EFFICACY SCALE

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No Chance - Definitely cannot do it		Probably cannot do it			Maybe	Probably can do it				Completely Certain - Definitely can do it

	Statement	Write your number in the box.
1.	Write a story about a picture.	
2.	Write a beginning of a story that makes people want to read your story.	
3.	Write a story that makes sense and is not confusing.	
4.	Write a story that describes important characters.	
5.	Write a story that includes all important details.	
6.	Write a story that includes details in the correct order.	
7.	Write a story that is interesting.	
8.	Describe your character's feelings or emotions.	
9.	Describe the setting of your story including the location, time of day, and time of year.	
10.	Write a story that is unique or not like anyone else's story.	
11.	Use vocabulary related to the picture.	
12.	Write an ending that is interesting.	
13.	Write a story that moves quickly and is not slow.	

Appendix D

Narrative Writing Self-Efficacy Scale – Study

Study

Student ID _____

NARRATIVE WRITING SELF-EFFICACY SCALE

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No Chance - Definitely cannot do it		Probably cannot do it			Maybe	Probably can do it				Completely Certain - Definitely can do it

	Statement	Write your number in the box.
1.	Write a story about a picture.	
2.	Write a story that makes sense and is not confusing.	
3.	Write a story that describes important characters.	
4.	Write a story that includes all important details.	
5.	Write a story that includes details in the correct order.	
6.	Write a story that is interesting.	
7.	Describe your character's feelings or emotions.	
8.	Describe the setting of your story including the location, time of day, and time of year.	
9.	Write a story that is unique or not like anyone else's story.	
10.	Use vocabulary related to the picture.	
11.	Write an ending that is interesting.	
12.	Write a story that moves quickly and is not slow.	

12

Appendix E

Writing Skills Self-Efficacy Scale – Pilot

Pilot Student ID _____

WRITING SKILLS SELF-EFFICACY SCALE

On a scale from 0 (no chance) to 100 (completely certain), how sure are you that you can perform each of the writing skills below? Remember that you may use any number between 0 and 100.

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No Chance - Definitely cannot do it		Probably cannot do it			Maybe	Probably can do it				Completely Certain - Definitely can do it

Let's practice.

	Statement	Write your number in the box.
A.	Write a funny letter to a friend.	
B.	Write a newspaper article.	
C.	Write about an important event in my life.	

Pilot

Student ID _____

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No Chance - Definitely cannot do it		Probably cannot do it			Maybe	Probably can do it				Completely Certain - Definitely can do it

	Statement	Write your number in the box.
1.	Correctly spell all words in a one-page story or composition.	
2.	Correctly punctuate a one-page story or composition.	
3.	Correctly use all parts of speech in a written composition.	
4.	Write simple sentences with good grammar.	
5.	Correctly use singulars and plurals, conjunctions, and prepositions.	
6.	Write a strong paragraph that has a good topic sentence or main idea.	
7.	Structure paragraphs to support ideas in the topic sentences.	
8.	End paragraphs with proper conclusions.	
9.	Write a well-organized and sequenced paper with good introduction, body, and conclusion.	
10.	Get ideas across in a clear manner by staying focused without getting off topic.	

Appendix F

Writing Skills Self-Efficacy Scale

Study Student ID _____

WRITING SKILLS SELF-EFFICACY SCALE

On a scale from 0 (no chance) to 100 (completely certain), how sure are you that you can perform each of the writing skills below? Remember that you may use any number between 0 and 100.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

No Chance - Definitely cannot do it

Probably cannot do it

Maybe

Probably can do it

Completely Certain - Definitely can do it

Let's practice.

	Statement	Write your number in the box.
A.	Write a funny letter to a friend.	
B.	Write a newspaper article.	
C.	Write about an important event in my life.	

Study

Student ID _____

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No Chance - Definitely cannot do it		Probably cannot do it			Maybe	Probably can do it				Completely Certain - Definitely can do it

	Statement	Write your number in the box.
1.	Correctly spell all words in a one-page story or composition.	
2.	Correctly punctuate a one-page story or composition.	
3.	Correctly use all parts of speech in a written composition.	
4.	Write simple sentences with good grammar.	
5.	Correctly use singulars and plurals, conjunctions, and prepositions.	
6.	Write a strong paragraph that has a good topic sentence or main idea.	
7.	Structure paragraphs to support ideas in the topic sentences.	
8.	Write a well-organized and sequenced paper with a good introduction, body, and conclusion.	
9.	Get ideas across in a clear manner by staying focused without getting off topic.	

Appendix G

Student Writing Attribution Scale – Pilot

Pilot Student ID _____

STUDENT WRITING ATTRIBUTION SCALE (SWAS)

Circle the number that is more like you, either 1 or 2. Be sure to circle only one number for each situation.

A.	I got a good grade on my writing project. It is because:	**Like Me 1** I am a good writer.	**Like Me 2** I work hard to make good grades in writing.
B.	I had trouble spelling words. It is because:	**Like Me 1** I am naturally a bad speller.	**Like Me 2** I do not practice enough to be a good speller.

8

Pilot

Student ID _____

The situations below are about when you do well in writing. Remember to circle the number that is more like you for each reason, either a 1 or 2. Read each situation and reason.

1.	My teacher asked me to help another student write a paragraph. It is because:	**Like Me 1** I am good at writing paragraphs.	**Like Me 2** I work harder than other students in writing.
2.	I enjoyed writing a paragraph about what we learned in class. It is because:	**Like Me 1** I am good at writing paragraphs.	**Like Me 2** I work harder than most other students in writing.
3.	My teacher told my mom that I am among the best writers in class. It is because:	**Like Me 1** I am good at writing.	**Like Me 2** I work harder than most others at writing.
4.	I was able to figure out how to spell all of the words in my paragraph today. It is because:	**Like Me 1** I am a good speller.	**Like Me 2** I work harder than others to be a good speller.
5.	My mom asked me to help my older brother complete a writing assignment. It is because:	**Like Me 1** I am a smart writer.	**Like Me 2** I spend time writing so I am good at it.

Pilot

Student ID _____

6.	I finished my classroom writing work first today. It is because:	**Like Me 1** I am good at writing.	**Like Me 2** I am a hard worker in writing.
7.	I got a good grade on a writing assignment. It is because:	**Like Me 1** I am good at writing assignments.	**Like Me 2** I worked hard on the writing assignment.
8.	I understand how to write stories. It is because:	**Like Me 1** I am naturally good at understanding how to write stories.	**Like Me 2** I think and focus hard when I write.
9.	My teacher asked me to share my story aloud to the class. It is because:	**Like Me 1** I am good at writing stories.	**Like Me 2** I spend time on writing stories.
10.	My teacher told me I am good at writing stories. It is because:	**Like Me 1** I am just good at writing stories.	**Like Me 2** I practice writing stories.

Pilot Student ID _____

The situations below are about when you do NOT do well in writing. Remember to circle the number that is most like you for each reason, either a 1 or 2. Read each situation and reason.

11.	I am in the lowest writing group in my class. It is because:	**Like Me 1** I am not good at writing.	**Like Me 2** I need to work harder to be a good writer.
12.	I got a bad grade in writing/ELA on my report card. It is because:	**Like Me 1** I am naturally a poor writer.	**Like Me 2** I do not try hard enough to get good grades in writing.
13.	My teacher asked another student to help me write a story. It is because:	**Like Me 1** I am not a smart writer.	**Like Me 2** I do not work hard enough to be a smart writer.
14.	The story I wrote did not make sense. It is because:	**Like Me 1** I am not good at writing stories that make sense.	**Like Me 2** I do not work hard enough.
15.	I was not able to write a lot of sentences in my story. It is because:	**Like Me 1** I have trouble writing a lot of sentences in stories.	**Like Me 2** I do not practice enough to write a lot of sentences that make sense.

Pilot

Student ID _____

16.	I heard my teacher telling my mom I have trouble writing stories. It is because:	**Like Me 1** I am not good at writing stories.	**Like Me 2** I do not try practice enough to write good stories.
17.	My younger sister had to help me finish my writing homework. It is because:	**Like Me 1** I am not good at doing my writing homework by myself.	**Like Me 2** I need to work harder on my writing homework.
18.	I made many mistakes when I wrote my story today in class. It is because:	**Like Me 1** I am not good at writing stories.	**Like Me 2** I need to write more so that I can write better stories.
19.	I did not finish my writing work today. It is because:	**Like Me 1** I am not very good at writing.	**Like Me 2** I do not work hard on my writing work.
20.	I hated writing the story we were assigned in class. It is because:	**Like Me 1** I am not very good at writing stories.	**Like Me 2** I do not spend enough time writing to be good at it.

Appendix H

Writing Attributions Scale

Study Student ID _____

WRITING ATTRIBUTIONS SCALE

Circle the number that is (or would be) more like you, either 1 or 2. Be sure to circle only one number for each situation.

A.	I got a good grade on my writing project. It is because:	**Like Me 1** I am a good writer.	**Like Me 2** I work hard to make good grades in writing.

B.	I had trouble spelling words. It is because:	**Like Me 1** I am naturally a bad speller.	**Like Me 2** I do not practice enough to be a good speller.

5

Study Student ID _____

The situations below are about when you do well in writing. Remember to circle the number that is (or would be) more like you for each reason, either a 1 or 2. Read each situation and reason.

1.	My teacher asked me to help another student write a paragraph in a story. It is because:	**Like Me 1** I am good at writing paragraphs.	**Like Me 2** I work harder than other students in writing.
2.	I enjoyed writing a story about what we learned in class. It is because:	**Like Me 1** I am good at writing paragraphs.	**Like Me 2** I work harder than most other students in writing.
3.	My teacher told my family that I am among the best writers in class. It is because:	**Like Me 1** I am good at writing.	**Like Me 2** I work harder than most others at writing.
4.	I was able to figure out how to spell all of the words in my story today. It is because:	**Like Me 1** I am a good speller.	**Like Me 2** I work harder than others to be a good speller.
5.	I finished my classroom writing work first today. It is because:	**Like Me 1** I am good at writing.	**Like Me 2** I am a hard worker in writing.

Study Student ID _____

6.	I got a good grade on a story I wrote. It is because:	**Like Me 1** I am good at writing assignments.	**Like Me 2** I worked hard on the writing assignment.

7.	I understand how to write stories. It is because:	**Like Me 1** I am naturally good at understanding how to write stories.	**Like Me 2** I think and focus hard when I write.

Study Student ID _____

The situations below are about when you do NOT do well in writing. Remember to circle the number that is (or would be) most like you for each reason, either a 1 or 2. Read each situation and reason.

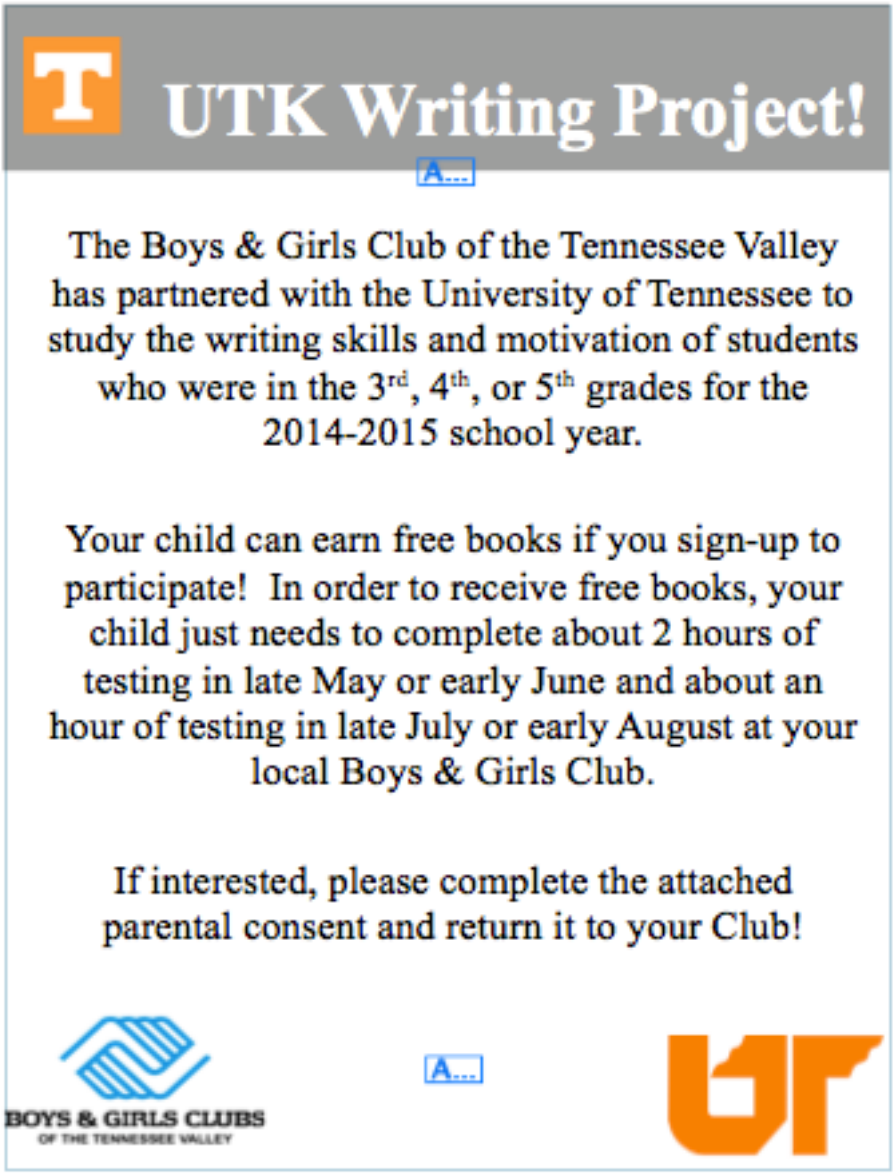
8.	I am in the lowest writing group in my class. It is because:	**Like Me 1** I am not good at writing.	**Like Me 2** I need to work harder to be a good writer.
9.	I got a bad grade in writing/ELA on my report card. It is because:	**Like Me 1** I am naturally a poor writer.	**Like Me 2** I do not try hard enough to get good grades in writing.
10.	My teacher asked another student to help me write a story. It is because:	**Like Me 1** I am not a smart writer.	**Like Me 2** I do not work hard enough to be a smart writer.
11.	The story I wrote did not make sense. It is because:	**Like Me 1** I am not good at writing stories that make sense.	**Like Me 2** I do not work hard enough.
12.	I was not able to write a lot of sentences in my story. It is because:	**Like Me 1** I have trouble writing a lot of sentences in stories.	**Like Me 2** I do not practice enough to write a lot of sentences that make sense.

Study Student ID _____

13.	I heard my teacher telling my family member I have trouble writing stories. It is because:	**Like Me 1** I am not good at writing stories.	**Like Me 2** I do not practice enough to write good stories.
14.	My younger family member had to help me finish my writing homework. It is because:	**Like Me 1** I am not good at doing my writing homework by myself.	**Like Me 2** I need to work harder on my writing homework.
15.	I made many mistakes when I wrote my story today in class. It is because:	**Like Me 1** I am not good at writing stories.	**Like Me 2** I need to write more so that I can write better stories.
16.	I did not finish my writing work today. It is because:	**Like Me 1** I am not very good at writing.	**Like Me 2** I do not work hard on my writing work.
17.	I hated writing the story we were assigned in class. It is because:	**Like Me 1** I am not very good at writing stories.	**Like Me 2** I do not spend enough time writing to be good at it.

Appendix I

Recruitment Flyer



Appendix J

Parental Consent

Parental Consent Form for Participation in a Research Study
Phase II

Title: Examining the Writing Achievement and Motivation of Upper Elementary-Aged Students

Researchers: Melissa Martin and Beau Whitsett

In this research project, we will study the relation between motivation and writing achievement for students in third, fourth, and fifth grades. The purpose of this project is to examine the relationship between various aspects of writing motivation and writing achievement.

We will collect information about your child's writing achievement and motivation to write in a variety of ways at the beginning and end of the summer. At the beginning of the summer (for approximately 2 hours), we will ask your child to complete the Test of Written Language-4, a writing attitude survey, two writing self-efficacy scales, a theories of intelligence scale, and an attribution scale. At the end of the summer (for approximately 1.5 hours) we will ask your child to complete the Test of Written Language-4 and a questionnaire related to how often your child reads and writes. We will also collect demographic information from the Boys & Girls Clubs of the TN Valley (e.g. gender, grade). Your student's name, school, class, or school district will not be shared with anyone. We will share group results with other people when we report the results of the study in an education publication or presentation. We will report the results from all the students in your child's Club to the Boys & Girls Club of the TN Valley, but they will **not** receive information specific to your child. That is, only a group summary of performance will be shared with the Club. Private information that could identify your student will be maintained under the participant's number in a locked cabinet and office.

We are asking that you give permission for your child to participate in this project. Your participation in this study is voluntary. Your child can discontinue participation at any time and that is okay.

If you have any questions you can contact:

- The researchers can be contacted for any further questions about the research, now or during the course of the project at:
  - Ms. Melissa Martin, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: mmarti86@vols.utk.edu
  - Mr. Beau Whitsett, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: bwhitse1@vols.utk.edu
  - Dr. Sherry Bell, faculty advisor, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: sbell1@vols.utk.edu
- If you have any questions about your rights as a research participant, you may contact the UT Office of Research Compliance Officer at (865) 974-7697.

If you are willing for your child to participate in this study, please sign below. If you agree, you may stop participating at anytime. We will give you a copy of this consent form to keep.

Student's Name

Parent's Signature Date

Appendix K

Study Script

Script for Administration of Scales & TOWL-4

Hand out folders.

You have a folder. This folder will ask you questions about how you feel about writing and how well you write. But, first, we need some information from you.

Hold up a sample folder.

Look at the front page of your folder.

Please write today's date on the line labeled as " Today's Date."

Point to the line.

Today's date is {**Say the date**}.

Now, write your first name. Then, write your last name.

Mark whether you are male or female. Male means boy. Female means girl.

Next, write the name of the school you go to and the grade you were just in for the 2014-15 school year. This is the grade you just finished.

Then, write your birthday and your age. Age is how old you are.

Finally, write the name of this Club. This Club is {**say the name of the Club**}.

Put your pencil down when you are finished to let us know we can move on.

Thank you for helping us get this information.

Now open your folder.

Hold up the folder with the Student Assent form visible.

I am going to read this form aloud to you. Follow along as I read. After, I have finished reading, I want you to write and sign your first and last name to the bottom of the paper. Put your pencil down when you are finished to let us know we can move on.

Point to the location where students should write and sign their names on the assent form and say: *You'll sign your name here when I am finished reading.*

Read the Assent Form aloud.

Student Assent Form for Participation in a Research Study
Phase II

Title: Examining the Writing Achievement and Motivation of Upper Elementary-Aged Students

Researchers: Melissa Martin and Beau Whitsett

You are invited to participate in helping teachers learn about writing and your motivation to write. We want to find out if there is a relationship between the way you feel about writing and how you perform on different writing tasks.

We will collect information about your grade level, age, and other important information. We will also collect information about how well you write, how often you like to write, and your beliefs about how well you write. We will ask you to work with us for about 1 ½ to 2 hours at the beginning of the summer and about 1 hour at the end of the summer. We will share how you do with other people when we find out if your motivation to write impacts the way you write. However, no one will know your name, class, or school. We will give you a student number.

We are asking that you be a member of this group of students. Your participation in this study is voluntary. If you agree, you can also stop at any time and that is okay too.

If you have any questions you can contact:

- The researchers can be contacted for any further questions about the research, now or during the course of the project at:
    - Ms. Melissa Martin, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: mmarti86@vols.utk.edu
    - Mr. Beau Whitsett, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: bwhitse1@vols.utk.edu
    - Dr. Sherry Bell, faculty advisor, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: sbell1@vols.utk.edu
- If you have any questions about your rights as a research participant, you may contact the UT Office of Research Compliance Officer at (865) 974-7697.

If you are willing to participate in this study, please sign below. If you agree, you may stop participating at any time. We will give you a copy of this assent form to keep.

Student's Name

Student's Signature Date

Walk around to be sure students are signing their names in the correct locations.

Thank you for signing your name.

Today we are going to be completing several activities to look at how you feel about writing and how well you write. We want you to be honest and to do your own work. We are here to help if you have any questions. All of the items in your folder will be read aloud to you. If reading ahead and answering by yourself works better for you, then move at your own pace. If you move at your own pace, please be sure to wait until you hear and understand all of the directions. Also, be sure not to jump to another activity. Stay on the same color as everyone else.

Do you have any questions?

Respond to any questions.

Turn to page 01, the grey paper.

Hold up Page 01.

Now we are going to ask questions about your view of intelligence. Intelligence can be thought of how smart a person is. We are not asking about how smart you think you are, but your views of becoming or staying smart. I am going to read each sentence below. I want you to circle the one number that shows how much you agree with it. There are no right or wrong answers.

Hold up the <u>Theory of Intelligence Scale</u>.

Remember, I want you to circle the number that shows how much you agree or disagree with it. Remember, I will read each item out loud. You can move ahead, but stay on this activity. Put your pencil down when you are finished to let us know we can move on.

Begin reading item 1.

Read it a second time while the children are thinking about their answers.

Be sure to read the item number and to remind students of where they should be as to not let anyone fall behind in the process.

After reading the final item say: *Put your pencil down when you are finished to let us know we can move on.*

I appreciate how hard you are working. Now, we are going to ask some questions about how you feel about writing. Flip to the next page in your folder.

Hold up the Writing Attitudes Scale.

This survey is about how you truly feel about writing. So while you read the questions, do your best to pick the answer that most closely matches how you really feel! I want you to circle the smiley face that best describes how you feel about each situation. You can choose "Very Unhappy," "Unhappy," "Happy," or "Very Happy." Your answers need to be how you truly feel, not how you think someone else feels or how you think you should feel. If you have questions as we go, raise your hand and we will help.

Do you have any questions?

Respond to any questions.

Remember, I will read each item out loud. You can move ahead, but stay on this activity. Put your pencil down when you are finished to let us know we can move on.

Read each item, slowly and clearly.

Be sure to read the item number and to remind students of where they should be as to not let anyone fall behind in the process.

I appreciate how hard you are working today. We have one more activity before we take a break.

Now, I want you to think about how well you write. Let's look at the next activity in your folder.

Hold up the Writing Attributions Scale

Doing well in writing is important to many students. There are different reasons for how well you write. Listed below are some situations about doing well or not so well in writing. Imagine yourself to be in each situation. Imagine means to pretend you are in each situation. Read each statement and each reason and tell whether or not the reason is "like you." Let's try some examples.

Look at item A. It says: I got a good grade on my writing project. It is because: You can choose "I am a good writer" OR "I work hard to make good grades in writing." Decide which of these options best describes you. Circle the reason that is most like you.

Make sure students circle a response.

Now, look at item B. It says: I had trouble spelling words. It is because: You can choose "I am naturally a bad speller" OR "I do not practice enough to be a good speller." Decide which of these options best describes you. Circle the reason that is most like you.

Now, we are going to read some more situations. Imagine yourself to be in each situation. Remember, I want you to circle the reason that is more like you for each item.

Do you have any questions?

Read each situation carefully.

Put your pencil down when you are finished to let us know we can move on.

Thank you for working hard. Close your packets. We are going to take a 10-minute break.

BREAK – restroom, candy, etc.

Now, we are going to do two more activities in your folder. Open your folder to this page.

Hold up the Writing Skills Self-Efficacy Scale.

I am going to read some statements. I want you to decide how sure you are that you can perform each writing skill. You can choose any number between 0 and 100. Look at how I want you to choose your numbers.

Point to the number scale.

After I read each statement, think about how sure you are that you can do that skill. If you think that you definitely cannot do it, you would write a number around 0. If you think you cannot do it, you would write a number around 10. If you think you probably cannot do it, you would pick a number around 20 to 40. If you think you could maybe do that writing skill, you would pick a number around 50. If you think you probably can do it, write a number between 60 and 80. If you think that you could do it, you would pick a number around 90. And, if you think you can definitely do it – no doubt about – pick 100.

Let's try some examples. Look at practice item A. It says: Write a funny letter to a friend. How sure are you that you can complete that? Choose a number between 0 and 100 and write it in the box.

Let's try some examples. Look at practice item B. It says: Write a newspaper article. How sure are you that you can complete that? Choose a number between 0 and 100 and write it in the box.

Let's try some examples. Look at practice item C. It says: about an important event in my life. How sure are you that you can complete that? Choose a number between 0 and 100 and write it in the box.

Turn to the next page in your folder. I will read each statement. Remember to write a number that best describes how sure you feel that you could do that skill. You can pick a number between 0 and 100. Do you have any questions?

Respond to questions.

Read each item. Remind students to pick a number between 0 and 100, if needed.

Put your pencil down when you are finished to let us know we can move on.

After everyone has finished with the Skills Scale, say:

In a few moments I am going to ask you to write a story. Before you write your story, I am going to ask you about how sure you are about writing it.

Hold up the <u>Narrative Writing Self-Efficacy Scale</u>.

Look at this picture. **Show the picture titled "The Surprise Party" of the TOWL-4.**

I want you to think about how you feel about writing a story about this picture. On a scale of 0 to 100, how sure are you about each of these statements. You can write any number you want between 0 and 100.

Read each item. Remind students to pick a number between 0 and 100, if needed.

Now, we are going to write a story about this picture. Before you write your story, I want to give you an idea of what a good story is. I will read you an example of a good story that was written by another student. Look at the picture I am holding. Refer to the sample picture. This story is titled "The Surprise Party."

> *Sara and her brother, Joe, decided to throw a fabulous surprise party for their mother's birthday. Sara told Joe to make some food while she decorated the living room. He didn't know much about cooking, but he figured he would just make it up as he went along. While Joe was cooking, he dropped some eggs on the floor. Before he could*

clean them up, he noticed the spaghetti was boiling over! Joe panicked and hollered for his sister.

Before Sara could get to the kitchen, she heard Joe screaming, "Help me, Sara!" Water overflowed from the sink, smoke poured from the stovetop, and the place was a mess. Joe pointed at the clock and yelled that it was after 6:00. Mom and Dad would be home any second! As they hurried to clean up the disaster, Mom and Dad walked in the front door. When she saw the huge mess, Mom was so angry, she looked like a thunderstorm.

Dad joked that the kitchen looked like a hurricane had hit it. Sara explained that she and Joe had wanted to do something nice for their mother on her birthday. Joe gave Mom a big hug and told her how much he loved her.

Mom replied, "I love you, too. You meant well, and that's what matters."

"What really matters is that you clean up the kitchen," Dad joked. This time, everyone laughed, and then they all cleaned up the mess together.

The story I just told you has a clear beginning, middle, and an ending. The story has a title, the people in the story have names and emotions, and their actions are interesting. Now, I want you to write a story about another picture that I am going to show you. Try to make your story as interesting as you can.

Hold up the Picture Card. The Picture Card should correspond to the picture on page 2 of the Student Response Book.

Get out the lined paper in the back of your packet.

Hold up the lined paper.

I want you to write a story about this picture. Before you start, take time to plan your story. Make an outline on the scratch paper I have given you. This will help you plan and write your story. You will have 5 minutes to plan before you start writing your actual story. Begin your outline now.

After 5 minutes have elapsed, say: *Now, get out the Student Response Booklet and a piece of (lined) scratch paper, and open up your booklet to page 2.*

Hold up page 2 of Student Response Booklet.

You will have 15 minutes to write your story. Use your imagination to make your story as interesting as you can. Also, use paragraphs, good spelling, and the right punctuation to make your story the best it can be. Remember to write neatly. **Pause, then say**: *Begin writing now.*

When 12 minutes have lapsed, say: *You have 3 minutes to finish writing your story. At the end of 15 minutes, say: Stop writing. Put your scratch paper inside your booklet*. **Proceed with the first subtest, Vocabulary**.

Refer to TOWL-4 manual, page 14 for the remaining subtests scripts.

Appendix L

Study Student Assent

Student Assent Form for Participation in a Research Study
Phase II

Title: Examining the Writing Achievement and Motivation of Upper Elementary-Aged Students

Researchers: Melissa Martin and Beau Whitsett

You are invited to participate in helping teachers learn about writing and your motivation to write. We want to find out if there is a relationship between the way you feel about writing and how you perform on different writing tasks.

We will collect information about your grade level, age, and other important information. We will also collect information about how well you write, how often you like to write, and your beliefs about how well you write. We will ask you to work with us for about 1 ½ to 2 hours at the beginning of the summer and about 1 hour at the end of the summer. We will share how you do with other people when we find out if your motivation to write impacts the way you write. However, no one will know your name, class, or school. We will give you a student number.

We are asking that you be a member of this group of students. Your participation in this study is voluntary. If you agree, you can also stop at any time and that is okay too.

If you have any questions you can contact:

- The researchers can be contacted for any further questions about the research, now or during the course of the project at:
    - Ms. Melissa Martin, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: mmarti86@vols.utk.edu
    - Mr. Beau Whitsett, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: bwhitse1@vols.utk.edu
    - Dr. Sherry Bell, faculty advisor, University of Tennessee, A204 Bailey Education Complex, Knoxville, TN 37996-3442; Phone: (865) 974-6228; Email: sbell1@vols.utk.edu
- If you have any questions about your rights as a research participant, you may contact the UT Office of Research Compliance Officer at (865) 974-7697.

If you are willing to participate in this study, please sign below. If you agree, you may stop participating at any time. We will give you a copy of this assent form to keep.

Student's Name

Student's Signature Date

Appendix M

Summary of Results

Examining the Writing Motivation and Achievement of At-Risk Elementary-Aged Students

Summary of Results

Research Question	Analysis	Result	Page(s)
(1) Is there a significant relation between **narrative writing self-efficacy** and writing **achievement** [as measured by the Narrative Self-Efficacy Scale and the Test of Written Language-4 (Hammill & Larsen, 2009) Overall and Spontaneous Writing composites] of at-risk upper elementary-aged students?	Pearson correlation	NES & Overall: **significant** moderate positive correlation between these two variables, $r(59) = .488$, $p < .000$ NES & Spontaneous: non-significant small correlation between these two variables, $r(59) = .222$, $p = .086$	68-69
(2) Is there a significant relation between **writing skills self-efficacy** and writing **achievement** [as measured by a Writing Skills Self-Efficacy Scale (Pajares, Hartley, & Valiante, 2001) and the Test of Written Language-4 Overall and Contrived Writing composites] of at-risk upper elementary-aged students?	Pearson correlation	SES & Overall: **significant** large positive correlation between these two variables, $r(59) = .511$, $p < .000$ SES & Contrived: **significant** large positive correlation between these two variables, $r(59) = .548$, $p < .001$	70-72
(3a) Is there a significant relation between a student's **ability attributions for success and failure** towards writing and writing **achievement** (as measured by the Student Writing Attributions Scale and the Test of Written Language-4) of at-risk upper elementary-aged students?	Pearson correlation	AB (Ability) & Contrived: non-significant small negative relation, $r(59) = -.176$, $p = .175$ AB (Ability) & Spontaneous: non-significant small negative relation, $r(59) = -.135$, $p = .299$ AB (Ability) & Overall: non-significant small negative relation, $r(59) = -.181$, $p = .164$	72-73

Research Question	Analysis	Result	Page(s)
(3b) Is there a significant relation between a student's **effort attributions for success and failure** towards writing and writing **achievement** (as measured by the Student Writing Attributions Scale and the Test of Written Language-4) of at-risk upper elementary-aged students?	Pearson Correlation	AB (Effort) & Contrived: non-significant small positive relation, $r(59) = .176$, $p = .175$ AB (Effort) & Spontaneous: non-significant small positive relation, $r(59) = .135$, $p = .299$ AB (Effort) & Overall: non-significant small positive relation, $r(59) = .181$, $p = .164$	74
Group Differences – sex (achievement)	MANOVA ANOVAs	There is not a significant difference in writing achievement based on sex, $F(3, 57) = 1.301$, $p = .283$; $\eta_p^2 = .064$. Boys and girls do not differ as groups on the Contrived Writing composite, $F(1, 59) = 2.915$, $p = .093$; $\eta_p^2 = .047$, the Spontaneous Composite, $F(1, 59) = .816$, $p = .370$; $\eta_p^2 = .014$, or on the Overall Writing composite, $F(1, 59) = 2.351$, $p = .131$; $\eta_p^2 = .038$.	77
Group Differences – sex (self-efficacy)	MANOVA ANOVAs	Results indicate there is not a significant difference in writing self-efficacy based on sex, $F(2, 58) = 1.251$, $p = .294$; $\eta_p^2 = .041$ There is not a significant difference based on sex on the NES, $F(1, 59) = 0.974$, $p = .328$; $\eta_p^2 = .016$ or the SES, $F(1, 59) = .000$, $p = .983$; $\eta_p^2 = .000$.	78
Group Differences – sex (AB scale)	ANOVAs	There is no significant difference based on sex on the AB Scale (Ability), $F(1, 59) = .083$, $p = .774$; $\eta_p^2 = .001$ nor the AB Scale (effort), $F(1, 59) = .083$, $p = .774$; $\eta_p^2 = .001$	79
Group Differences – age (achievement)	MANOVA ANOVAs	There is not a significant difference in writing achievement based on age, $F(6, 114) = .791$, $p = .578$; $\eta_p^2 = .040$. There is not a significant difference based on age on the Contrived Writing composite, $F(2, 58) = .435$, $p = .649$; $\eta_p^2 = .015$, the Spontaneous Writing composite, $F(2, 58) = 1.337$, $p = .271$; $\eta_p^2 = .044$, or for the Overall Writing composite, $F(2, 58) = .663$, $p = .535$; $\eta_p^2 = .021$.	79
Group Differences – age (self-efficacy)	MANOVA	Results indicate there is not a significant difference in writing achievement based on age, $F(4, 114) = .505$, $p = .732$; $\eta_p^2 = .017$.	79-80

Research Question	Analysis	Result	Page(s)
	ANOVAs	Results indicate there is not a significant difference based on age on the NES, $F(2, 58) = .687$, $p = .507$; $\eta_p^2 = .023$ nor the SES, $F(2, 58) = .256$, $p = .775$; $\eta_p^2 = .009$.	
Group Differences – age (AB scale)	ANOVAs	Results indicate there is not a significant difference based on age on the AB Scale (Ability), $F(2, 58) = .351$, $p = .706$; $\eta_p^2 = .012$ nor the AB Scale (Effort), $F(2, 58) = .351$, $p = .706$; $\eta_p^2 = .012$.	80
(4) Do the relations between writing and motivation factors differ as a function of **sex and age** (as measured by the Narrative Self-Efficacy Scale and Writing Skill Self-Efficacy Scale, Student Writing Attributions Scale, and the Test of Written Language-4) for at-risk elementary-aged students?	Pearson correlation	**SEX** **Females: *n* = 26 Males: *n* = 35** NES & Overall: Females: **significant** large positive correlation, $r(24) = .572$, $p = .002$ Males: **significant** moderate positive correlation, $r(33) = .411$, $p = .014$ NES & Spontaneous: Females: non-significant moderate positive relation $r(24) = .368$, $p = .064$ Males: non-significant very small positive correlation, $r(33) = .096$, $p = .583$ SES & Overall: Females: **significant** large positive correlation, $r(24) = .545$, $p = .004$ Males: **significant** large positive correlation, $r(33) = .502$, $p = .002$ SES & Contrived: Females: **significant** large positive correlation, $r(24) = .596$, $p = .001$ Males: **significant** large positive relation, $r(33) = .534$, $p = .001$ AB (Ability) Scale & Contrived: Females: non-significant very small negative relation, $r(24) = -.064$, $p = .755$ Males: non-significant, small negative relation, $r(33) = -.252$, $p = .144$ AB (Ability) Scale & Spontaneous: Females: non-significant, very small negative relation, $r(24) = -.128$, $p = .533$ Males: non-significant, very small negative relation, $r(33) = -.136$, $p = .438$ AB (Ability) Scale & Overall:	80-90

Research Question	Analysis	Result	Page(s)
		Females: non-significant very small negative correlation, $r(24) = -.083$, $p = .688$ Males: non-significant small negative correlation, $r(33) = -.254$, $p = .142$ AB (Effort) Scale & Contrived: Females: non-significant very small positive relation, $r(24) = .064$, $p = .755$ Males: non-significant small positive relation, $r(33) = .252$, $p = .144$ AB (Effort) Scale & Spontaneous: Females: non-significant small positive relation, $r(24) = .128$, $p = .533$ Males: non-significant small positive relation, $r(33) = .136$, $p = .438$ AB (Effort) Scale & Overall: Females: non-significant very small positive correlation, $r(24) = .083$, $p = .688$ Males: non-significant small positive correlation, $r(33) = .254$, $p = .142$ **AGE** **9 yo: $n = 26$ 10 yo: $n = 26$ 11yo: $n = 9$** NES & Overall: 9yo: **significant** moderate positive relation, $r(24) = .432$, $p = .028$ 10yo: **significant** large positive relation, $r(24) = .520$, $p = .006$ 11yo: non-significant positive moderate relation, $r(7) = .553$, $p = .123$ NES & Spontaneous: 9yo: non-significant small positive correlation, $r(24) = .150$, $p = .464$ 10yo: non-significant small positive correlation, $r(24) = .208$, $p = .308$ 11yo: **significant** positive large correlation, $r(7) = .681$, $p = .043$ SES & Overall: 9yo: **significant** large positive correlation, $r(24) = .521$, $p = .006$ 10yo: **significant** moderate positive correlation,	

Research Question	Analysis	Result	Page(s)
		$r(24) = .430$, $p = .028$ 11yo: **significant** very large positive correlation, $r(7) = .779$, $p = .013$ <u>SES & Contrived</u>: 9yo: **significant** large positive correlation, $r(24) = .603$, $p = .001$ 10yo: **significant** moderate positive correlation, $r(24) = .473$, $p = .015$ 11yo: **significant** very large positive correlation, $r(7) = .701$, $p = .035$ <u>AB (Ability) & Contrived</u>: 9yo: **significant** large negative relation, $r(24) = -.622$, $p = .001$ 10yo: non-significant very small negative relation, $r(24) = -.055$, $p = .982$ 11yo: non-significant large positive, $r(7) = .591$, $p = .094$ <u>AB (Ability) & Spontaneous</u>: 9yo: non-significant small negative relation, $r(24) = -.228$, $p = .263$ 10yo: non-significant small negative relation, $r(24) = -.107$, $p = .605$ 11yo: non-significant large positive relation, $r(7) = .534$, $p = .139$ <u>AB (Ability) & Overall</u>: 9yo: **significant** large negative correlation, $r(24) = -.544$, $p = .004$ 10yo: non-significant negative very small correlation, $r(24) = -.051$, $p = .804$ 11yo: non-significant large positive relation, $r(7) = .656$, $p = .055$ <u>AB (Effort) & Contrived</u>: 9yo: **significant** large positive relation, $r(24) = .622$, $p = .001$ 10yo: non-significant very small positive relation, $r(24) = .055$, $p = .982$ 11yo: non-significant large negative relation, $r(7) = .-591$, $p = .094$	

Research Question	Analysis	Result	Page(s)
		AB (Effort) & Spontaneous: 9yo: non-significant small positive relation, $r(24) = .228$, $p = .263$ 10yo: non-significant small positive relation, $r(24) = .107$, $p = .605$ 11yo: non-significant large negative relation, $r(7) = -.534$, $p = .139$ AB (Effort) & Overall: 9yo: **significant** positive large correlation, $r(24) = .544$, $p = .004$ 10yo: non-significant very small positive correlation, $r(24) = .051$, $p = .804$ 11yo: non-significant large negative relation, $r(7) = -.656$, $p = .055$	

Vita

Melissa Sue Martin is a doctoral candidate in Special Education. She received a Bachelor's degree in Special Education from Clemson University and a Master's degree in Special Education (Learning Disabilities) from Furman University. She was a self-contained special education teacher at an elementary school in South Carolina for several years before enrolling at the University of Tennessee-Knoxville to pursue her doctoral work. Her research interests include writing instruction for students with and without disabilities and collaboration and co-teaching in higher education. She independently developed a peer assisted writing intervention that has been piloted in rural and urban settings for students with learning disabilities. Additionally, she has worked at a local Boys and Girls Club to help facilitate free academic tutoring to at-risk students from preservice teachers.