

2015

Learning Disability Status and Gender as Predictors of Self-Efficacy.

Irene Ekohamen Aikhomu
Walden University

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Irene Aikhomu

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2015

Abstract

Learning Disability Status and Gender as Predictors of Self-Efficacy

by

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Doctoral Study Submitted in Partial Fulfillment

of the Requirement for the Degree of

Doctor of Education

Walden University

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Abstract

In the school district under study, students with learning disabilities were underperforming when compared to students without disabilities. Research has indicated that improved self-efficacy can promote improved student outcomes and that self-efficacy can be taught. Despite this known association, the school district under study has not provided students with such support. The current study addressed ways in which that gap may be attenuated. Guided by the framework of Bandura's theory of self-efficacy and social cognitive theory, the purpose of this study was to explore (a) whether students' perceptions of self-efficacy differed depending on whether or not they had diagnosed learning disabilities and (b) whether learning disability status and gender were predictors of self-efficacy. Bandura's Children's Perceived Self-Efficacy scale was used to examine students' ($N = 394$) levels of self-efficacy in this causal-comparative study. Data were analyzed using both descriptive and inferential statistics (scale reliability analysis, multivariate analysis of variance, and multiple regression). Results indicated that students with learning disabilities had lower levels of perceived self-efficacy, whether measured using the 7 subscales or the 3 overall scales, and that these differences were independent of gender. These results indicate a need for administrators and teachers to implement strategies to improve levels of self-efficacy for students with learning disabilities. Ultimately, improving students' levels of self-efficacy could contribute to improved academic outcomes, thus promoting social change.

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Dedication

This study is dedicated to the loving memory of my ever encouraging parents—Chief Napoleon Itepu Aikhomu, who passed at the beginning of this doctoral journey, and my sweet mother, Chief (Mrs.) Etusi Aikhomu, who passed a few weeks before the end of the course work for this degree. I love you both dearly, and to the end of eternity, your presence and spirit will always be remembered. I will always carry the torch of your love for education.

This study is also dedicated to my four daughters, Atinuke, Olufunke, Bamidele and Simbiat, my granddaughter—Oluwateniola Fawziyyah Soyombo and my grandson – Obim Julian Oluwatamilore Diji. You were all there to encourage me through this great journey. I will never be able to express how blessed I am to have you all in my life.

This is also dedicated to my son-in-law, Oluwasegun Ojetayo, my late uncle, Mr. Patrick E. Aikhomu for bringing me up to be who I am educationally, my many siblings, and all my students with special needs. Thank you for knowing my strengths and weaknesses and for encouraging me through all the tough times during my journey. There were many times that I wanted to quit this journey, but your optimistic approaches encouraged me to stay on course and remain focused on my goals. Thank you all so much.

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Section 1: Introduction

Students with learning disabilities account for 5% of the total student population in the United States (National Center for Education Statistics, 2010). These students exhibit lower levels of academic success compared to students without learning disabilities (Friend, 2008, p. 141; Lackaye, Margalit, Ziv, & Ziman, 2006). This condition is evident despite mandates enacted through the No Child Left Behind Act of 2001 which called for the universal achievement of all students. It also persists despite the implementation of individualized education plans (IEPs) designed to help educators meet the unique needs of students in special education programs (National Joint Committee on Learning Disabilities [NJCLD], 2007).

Lower levels of academic success for students with disabilities are not only the result of limitations directly associated with students' disabilities (Friend, 2008; Lackaye et al., 2006) but of students' perspectives as well (Baird, Scott, Dearing, & Hamill, 2009; Pierangelo & Giuliani, 2008). Students with learning disabilities often think that achievement is linked to external influences that they cannot control (Pierangelo & Giuliani, 2008). For students with learning disabilities, the belief that the key to academic success resides in an external locus of control often leads to a lack of motivation to succeed, which results in continued failure. This continued failure often leads to the development of passive learning styles (Pierangelo & Giuliani, 2008). However, students' intellectual performance also can be impacted by internal factors (Bandura, 1977, 1986, 1993).

Bandura's (1977) theory of self-efficacy and Bandura's (1993) social cognitive theory depict a causal relationship between self-efficacy, process domains, and

performance outcomes. In these theories, Bandura (1986) indicated that people with “lower perceived self-efficacy ascribe their failures to deficient ability” (p. 395). However, Bandura (1993) suggested that this condition can be mitigated by improving levels of self-efficacy, which can influence behavior and performance outcomes through cognitive, motivational, affective, and selection domains (Bandura, 1993). In addition, performance outcomes, in a cyclical fashion, can reinforce perceptions of self-efficacy (Bandura, 1993). However, Kolb (2011) indicated that although students with disabilities could achieve improved levels of self-efficacy through skills training, typically these students do not receive this type of specialized training.

Statement of the Problem

In the school district in this study, students with learning disabilities were underperforming when compared to students without disabilities (see Table 1) despite (a) national mandates charging schools with the improvement of academic performance of students with disabilities and (b) the implementation of IEPs for these students with specific academic needs. Also, although differences in levels of perceived self-efficacy exist between students with disabilities and students without disabilities (Friend, 2008), this condition had not been explored at the school district in this study prior to this research. In addition, no research had been conducted to determine whether learning disability status or gender are predictors of levels of self-efficacy for students with learning disabilities.

Table 1

Criterion-Referenced Competency Test Scores for Students With and Without Learning Disabilities

| Disability status | % of students not meeting standards | % of students meeting standards | % of students exceeding standards |
|------------------------|-------------------------------------|---------------------------------|-----------------------------------|
| English language arts | | | |
| Learning disability | 37.4 | 54.3 | 8.3 |
| No learning disability | 13.4 | 56.1 | 30.5 |
| Mathematics | | | |
| Learning disability | 53.6 | 37.6 | 8.7 |
| No learning disability | 24.8 | 49.4 | 25.8 |
| Reading | | | |
| Learning disability | 22.9 | 63.3 | 13.8 |
| No learning disability | 7.8 | 54.0 | 38.2 |
| Science | | | |
| Learning disability | 67.6 | 25.2 | 7.3 |
| No learning disability | 32.4 | 42.6 | 25.0 |
| Social studies | | | |
| Learning disability | 65.9 | 26.9 | 7.2 |
| No learning disability | 29.2 | 44.8 | 26.0 |

Note. Georgia data adapted from “Report Card,” by Governor’s Office of Student Achievement.

Schunk (1989) found that students with deficits experience improved self-efficacy when they are provided with supplemental instruction and social influences that heighten their sense of academic self-efficacy. “Unless people believe they can produce desired results and forestall detrimental ones by their actions, they have little incentive to act or

to persevere in the face of difficulties” (Bandura, 2001, p. 10). Although students with learning disabilities inherently struggle to perform academically and often do not believe they have control of their performance outcomes (Bandura, 2001), they do not have to continue to be passive learners. They can be taught to become self-aware and self-empowered (Bandura, 2001). They can be taught concepts of self-efficacy and strategies to combat thoughts and behaviors that are detrimental to the development of advantageous levels of self-efficacy (Bandura, 2001). Self-efficacy is a critical component of life-learning (Kolb, 2011), and if improving self-efficacy for students with learning and other disabilities may help those students reach their highest academic capacity, the focus school district cannot ignore this potential. Therefore, I conducted research to determine the conditions associated with levels of perceived self-efficacy for students with learning disabilities at the focus school district—insight that could be used to determine the potential to improve outcomes for these students by empowering them to be more self-efficacious. This study represents a first step toward filling this knowledge gap.

Purpose of the Study

Researchers have explored the difference between the levels of self-efficacy of students with learning disabilities and those without learning disabilities (Friend, 2008), and identified factors that contribute to student success, including disability status (Cho & Kingston, 2011; Friend, 2008), level of self-efficacy (Bandura, 1993; Schunk, 1989), and gender (both biological and socio-culturally influenced (Zenbar & Blume, 2009)). However, at the focus school district in this study, no prior research had been conducted to (a) to identify the levels of self-efficacy among students in the schools, (b) explore the

difference between the levels of self-efficacy of students with learning disabilities and those without learning disabilities, or (c) determine whether or not learning disability status and gender are predictors of levels of perceived self-efficacy. For this reason, I identified the levels of perceived self-efficacy among students in Grades 3-5 in the focus schools and explored whether the levels of perceived self-efficacy of students with learning disabilities differed from those students without learning disabilities. I also determined whether learning disability status and gender were predictors of perceived self-efficacy. To guide this exploration, I developed one general research question and three specific sets of research questions.

Research Questions and Hypotheses

The general research question was: What are the levels of self-efficacy among all students in Grades 3-5 in the focus schools? I developed three distinct sets of research questions to explore whether the self-perceptions of students with learning disabilities differed from those of students without learning disabilities and to determine what impact learning disability and gender had on perceived self-efficacy.

Research Questions 1a-c: Is there a significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale (Self-Efficacy for Academic Achievement, Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extracurricular Activities, Self-Regulatory Efficacy to Resist Peer Pressure, Perceived Self-Efficacy to Meet Others' Expectations, Perceived Social Self-Efficacy, and Self-Assertive Efficacy), between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5?

H₀1a-c: There is no significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities (a) Grade 3, (b) Grade 4, and (c) Grade 5.

H_A1a-c: There is a significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5.

Research Question 2a-c. Is there a significant difference in the level of Overall Perceived Academic Efficacy, Overall Perceived Social Efficacy, and Overall Perceived Self-Regulatory Efficacy as measured by Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5?

H₀2a-c: There is no significant difference in the level of overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy, as measured by Bandura's Children's Perceived Self-Efficacy Scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5.

H_A2a-c: There is a significant difference in the level of overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy, as measured by Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5.

Research Question 3a: In Grades 3, 4, or 5, does learning disability status predict student perceived self-efficacy as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale (Self-Efficacy for Academic Achievement, Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extracurricular Activities, Self-Regulatory Efficacy to Resist Peer Pressure, Perceived Self-Efficacy to Meet Others' Expectations, Perceived Social Self-Efficacy, and Self-Assertive Efficacy) while controlling for gender?

H₀3a: In Grades 3, 4, or 5, learning disability status does not predict perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, while controlling for gender.

H_A3a: In Grades 3, 4, or 5, learning disability status does predict perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, while controlling for gender.

Research Question 3b: In Grades 3, 4, or 5, does learning disability status predict overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy while controlling for gender?

H₀3a: In Grades 3, 4, or 5, learning disability status does not predict overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy while controlling for gender.

H_A3a: In Grades 3, 4, or 5, learning disability status does predict overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy while controlling for gender.

Nature of the Study

In this causal-comparative study, I described the levels of self-efficacy among students in the focus schools and explored whether learning disability status and gender were predictors of perceived self-efficacy. However, I primarily sought to determine whether perceptions of self-efficacy of students with learning disabilities differed from those students without learning disabilities. For this reason, to complete my study, I used convenience sampling to invite to participate in my study 1,780 students from three schools in a relatively large school district in Georgia. As my data collection instrument, I used a survey: Bandura's Children's Perceived Self-Efficacy (CPSE) scale. To avoid stigmatizing students, all students in Grades 3-5 in the schools under study were invited to participate. However, in order to collect data critical to answering my research questions, I collected additional student data (grade level, gender, and learning disability status) from parents using a parent consent form.

To analyze my data, I conducted descriptive statistics on all data, scale reliability analyses on the three overall scales and seven subscales of my instrument, and inferential statistics to test the hypotheses (multivariate analysis of variance [MANOVA] for Research Question 1 and Research Question 2 and multiple regressions for Research Question 3). I discuss the study's methodology in more detail in Section 3.

Theoretical Framework

The theoretical framework I used in this study was Bandura's (1986) social cognitive theory. Because the foundation for social cognitive theory is the construct of self-efficacy, in this subsection, I discuss this construct first. Next, I discuss the social cognitive theory itself. Finally, I discuss the application of this theory to my study.

Self-Efficacy

Using concepts of social learning theory that suggested people learn by modeling behaviors of others, Bandura (1977) introduced the construct of self-efficacy to explain how people's behavior and performance are affected by their beliefs about their capability to accomplish specified tasks and influence outcomes in their lives and environments. Bandura explained that "people fear and tend to avoid threatening situations they believe exceed their coping skills, whereas they get involved in activities and behave assuredly when they judge themselves capable of handling situations that would otherwise be intimidating" (p. 194). Thus, self-efficacy influences behavior and performance outcomes (Bandura, 1977).

Bandura (1997) hypothesized that people develop their self-efficacy beliefs when they make sense out of information they experience from four principal internal and external sources:

enactive mastery experiences that serve as indicators of capability; vicarious experiences that alter efficacy beliefs through transmission of competencies and comparison with the attainments of others; verbal persuasion and allied types of social influences that one possesses certain capabilities; and physiological and affective states from which people partly judge their capableness, strength, and vulnerability to dysfunction. (Bandura, 1997, p. 79)

These concepts are depicted graphically in Figure 1).

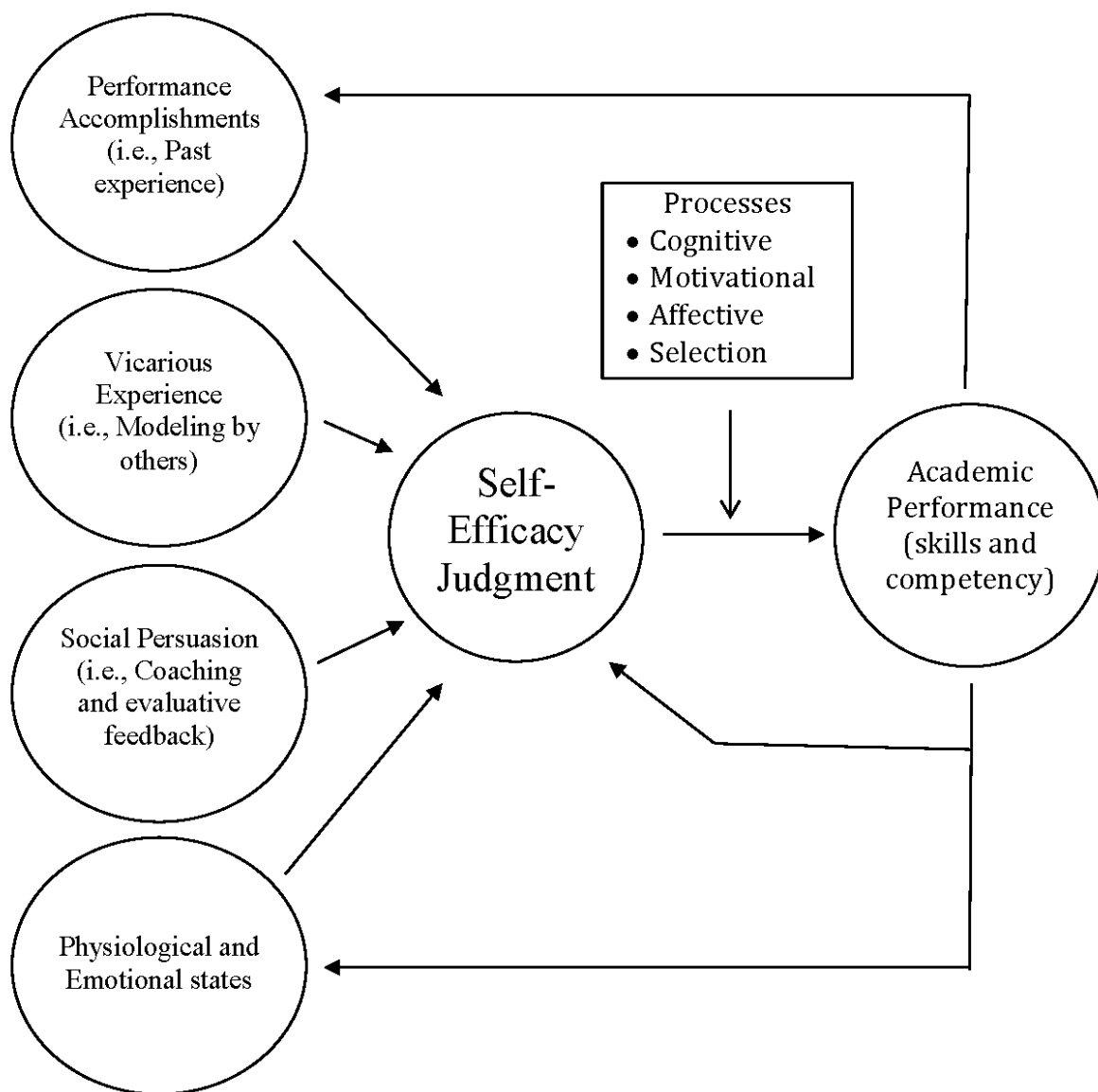


Figure 1. Conceptual model of the critical roles of instructional strategy and student self-efficacy in the influencing of student behavior and outcomes. Adapted from “Self-Efficacy Perspective on Achievement Behavior,” by D. H. Schunk, 1984, *Educational Psychologist*, 19, p. 51. Copyright 1984 by Taylor & Francis, Ltd. Reprinted with permission.

With regard to performance accomplishments (mastery experiences), Bandura (1977) suggested that once people complete a task, they evaluate the outcomes of the task and develop judgments about their competence, or amend previous judgments about their competence, according to these outcome evaluations. When outcome evaluations indicate a person has successfully accomplished task, the person's ability to accomplish another task similar or related in nature will improve. However, when outcome evaluations indicate a person has unsuccessfully accomplished a task, that person's confidence to accomplish another task similar or related in nature decreases (Bandura, 1977). However, failure does not have as much of an effect on self-efficacy if self-efficacy is already high (Bandura, 1986). Successful experiences provide tangible evidence that one successfully can accomplish a task (Bandura, 1982), and thus this source of self-efficacy is the strongest of the four sources (Bandura, 1977).

With regard to vicarious experience, Bandura (1977) suggested that people are most likely to model their beliefs after someone with whom they feel familiar. The degree to which they will model their beliefs after another person (parents, caregivers, family members, and community members) will reflect the level of familiarity the individual feels with that person (Bandura, 1977). According to Bandura (1977), social and verbal persuasion refers to the encouragement people receive from significant others, including parents, teachers, and peers whom they trust. Specifically, social and verbal persuasion works to convince the individual that he or she is capable of accomplishing a task. Bandura (1977) further suggested that "people who are socially persuaded that they possess the capabilities to master difficult situations and are provided with provisional aids for effective action are likely to mobilize greater effort than those who receive only

the performance aids” (p. 198). However, using social persuasion to promote unrealistic beliefs in one’s capacity to succeed likely only will result in failure, which will “discredit the persuaders and further undermine the recipients’ beliefs in their capabilities” (Bandura, 1997, p. 101). In other words, effective social and verbal persuasion is realistically founded (Bandura, 1997).

With regard to emotional and physiological states, Bandura (1977) suggested that people consider their anxiety, stress, fatigue, and mood when judging their competence and capability to perform a task. As people experience various physiological and emotional states (e.g., health and affective states, physical stressors, taxing and environmental demands, and lack of control over one’s environment), they interpret those states as indications of personal efficacy and thus as cues to expected success or failure (Bandura, 1977).

Bandura (1977) underscored the degree of influence of self-efficacy on an individual’s behavior by distinguishing between self-efficacy expectations and outcome expectations. Bandura (1977) explained that outcome expectations refer to a person’s beliefs that specific behaviors or performances lead to specific outcomes. However, belief in those outcomes does not influence people’s behaviors if they do not believe themselves capable of accomplishing the task (Bandura, 1977, 1982). Thus self-efficacy is critical in the behavior and performance change processes.

Social Cognitive Theory

Bandura (1986) introduced the social cognitive theory of learning and behavior. This theory was based on his theory of self-efficacy that demonstrated the effect of various personal and environmental factors on self-efficacy and ultimately behavior or

performance. Unlike social learning theory which is focused only on environmental factors in the change process, Bandura suggested that behavior and performance outcomes are involved in a reciprocal triad with not only environmental factors but personal factors as well. In addition, Bandura (1989, 1993) suggested that self-efficacy influences behavior and performance through four types of processes: cognitive, motivational, affective, and selection.

Cognitive process. Self-efficacy may affect behavior and performance outcomes by influencing how people think and by shaping thought patterns that develop belief systems (cognitive process; Bandura, 1989). People who believe ability is an innate characteristic, for example, tend to avoid challenges that may end in failure and thus limit their opportunities to acquire new skills and experience changes in performance and/or behavior (Bandura, 1993). People who poorly evaluate social feedback or who judge their performance outcome based on the performance outcomes of others tend to be less satisfied with their performance or behavior and thus less likely to be motivated to continue to work toward that outcome (Bandura, 1993). People who believe they are unable to control outcomes also lack the motivation to persist in activities that could potentially promote change (Bandura, 1993).

Motivational process. Self-efficacy may affect behavior and performance outcomes by influencing motivational processes. Self-efficacy functions as a motivating force and promotes persistence in an activity, which then improves performance (Bandura, 1989). “People’s self-efficacy beliefs determine their level of motivation, as reflected in how much effort they will exert in an endeavor and how long they will persevere in the face of obstacles” (Bandura, 1989, p. 1176). Motivation is critical to

success because it is the mechanism by which people overcome self-doubt through persistence; the trouble is not that people experience self-doubt as they experience challenges, but that they lack the self-efficacy to be persistent and overcome those challenges (Bandura, 1989).

Affective process. Self-efficacy may affect behavior and performance outcomes by influencing affective processes. People's beliefs in their ability in dealing with threats and taxing situation such as sadness, depression, fear, and anger impact their levels of motivation, which in turn affect their feeling towards accomplishing a given task (Bandura, 1989). People who believe they are not able to cope with their deficiencies interpret their environment as fraught with danger, which evokes fear and anxiety in such a way that their ability to control intrusive self-doubt is diminished (Bandura, 1989). Improving perceived coping efficacy, on the other hand, decreases differential psychobiological reactions because previously intimidating tasks are then perceived as surmountable (Bandura, 1989).

Selective process. Self-efficacy may affect behavior and performance outcomes by influencing selective processes. Bandura (1989) indicated that people "avoid activities and situations they believe exceed their coping capabilities, but they readily undertake challenging activities and select social environments they judge themselves capable of handling" (Bandura, 1989, p. 1178). These choices can shape their lives; however, if people choose only tasks that result in immediate success, they will develop a tendency to expect such results, which could be detrimental to their self-efficacy and in the long-run lead to failure (Bandura, 1989). In the academic setting, self-efficacy may function in

selective processes by promoting educational choices that support a wide range of career options and occupational pursuits (Bandura, 1989).

Behavior and performance outcomes. Despite various means (change processes) by which self-efficacy can influence behavior and performance, the way in which self-efficacy influences behavior and performance (the type of change process exemplified) does not affect the influence of the outcome behavior or performance (Bandura, 1989). In other words, every performance outcome becomes an example of a performance accomplishment (past performance experience), which in turn again affects a person's self-efficacy, regardless of the type of process that motivated the behavioral change or performance outcome (Bandura, 1989). Behavior and performance outcomes also influence self-efficacy indirectly by contributing to affective reactions and directly by contributing to patterns of thought (cognitive process; Bandura, 1989).

In academic settings, Bandura (1993) suggested that although teacher and faculty self-efficacy may affect student self-efficacy, a student's self-efficacy in his or her own ability to perform a task is most influential on actual task achievement. This may be due in part to the strong role evaluative and comparative measures play in the interpretation of a student's self-efficacy (Bandura, 1993). The concept of evaluative and comparative measures underscores Bandura's (1977) earlier contention that performance accomplishments are the most influential source of self-efficacy information.

Application of the Theory in this Study

In his theory of self-efficacy and social cognitive theory, Bandura (1977, 1986; respectively) suggested that a student's self-efficacy plays a significant role in that student's academic performance. Because I focused on students' learning disability status

and their levels of self-efficacy, Bandura's theories provided insight that was useful when I examined the results of my data analysis. In particular, Bandura's theories provided a means for considering the possible ways in which students with learning disabilities may be affected by low levels of self-efficacy. For example, (a) performance accomplishments may be recognized through classroom evaluation for content knowledge and behavior, standardized test scores, and school-based recreational activities (sports teams, field day events); (b) vicarious experiences and social persuasion may be recognized through peers, teachers, and family members; and (c) physiological and emotional states may be recognized through health concerns, financial situations, living arrangements, and emotional stress. Additionally, Bandura's theories provided a platform for considering the potential predictive nature of learning disability and gender with regard to levels of perceived self-efficacy. Finally, Bandura's theories may help foster a better understanding of the ways in which learning and work environments can be improved to help students with learning disabilities learn more effectively and be more productive.

Definition of Terms

Disability status is a term used to describe students with regard to their physical, mental, and emotional capacities. According to the U. S. Census Bureau (n.d.), the American Community Survey includes questions by which disability status is determined and suggested that disability is characterized by

a long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from

being able to go outside the home alone or to work at a job or business.

(American Community Survey section, para. 1)

Learning disabilities, as identified in IDEA 2004 (U.S. Department of Education, 2004), refers to a disorder “in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations” (Sec. 602, 30, A). Disorders include “such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia” (Sec. 602, 30, B). IDEA 2004 specifies that certain disorders do not qualify as a learning disability and defines them as “problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage” (Sec. 602, 30, C).

Self-efficacy beliefs refer to the beliefs people hold about their ability to master certain tasks and handle intimidating situations (Bandura, 1977). Self-efficacy beliefs can influence people’s motivation to initiate action and persist in behaviors (Bandura, 1977). See Theoretical Framework section for a detailed discussion of this concept. In this study, self-efficacy beliefs refer to those beliefs students hold with regard to their capacity to achieve academically.

Special education refers to “education designed to meet the unique needs of students with disabilities . . . [which] may include (a) individual or small group instruction, (b) curriculum or teaching modifications, (c) assistive technology, (d) transition services, and (e) other specialized services such as physical, occupational, and speech therapy (National Resource Center on ADIHD, n.d.).

According to the Georgia Department of Education (GDOE; 2009), special education can be provided in a variety of settings both in and out of the traditional classroom (e.g., home, clinical settings, institutions). As mandated by No Child Left Behind (U.S. Department of Education, n.d.), special education should occur in the least restrictive environment—the most appropriate environment for a student with disabilities that most allows that student to be educated with his or her peers without disabilities. For the purposes of this study, special education refers to education services provided for students with disabilities in the school setting—in particular, students with learning disabilities in both general education and resource classrooms.

Assumptions and Limitations

While planning this study, I made assumptions and identified limitations with regard to the study's population, theoretical framework, and methodology. For example, because students with learning disabilities in the district must meet certain criteria for mental ability and achievement to be considered a student with a learning disability, I assumed that in terms of performance outcomes, students with learning disabilities are generally similar to all students with learning disabilities in the district regardless of the severity of their disability, the teaching format in which they participate, or the school site from which they were recruited. In other words, it was appropriate to group them and calculate the group mean for use in inferential statistical analysis. This assumption may be limiting because severity of disability, teaching format in which they participate, and location of instruction site may be underlying factors that affect students' academic outcomes. Additionally, I was unable to cross-reference student records to confirm learning disability status and I wished to limit the number of questions I needed to ask

parents on the parental assent form. For these reasons, it was necessary that I assume all study participants whom parents identified as having a disability were students who had IEPs and received services in a co-teaching educational setting.

I also assumed that the students honestly represented their beliefs about their abilities. Although the students did not know me and were told their answers would be kept confidential, they may have responded to questions in a manner they felt would please me as the researcher or as an adult figure of assumed authority. To avoid this condition, the survey directions indicated that I would not know the student's answers. The directions also indicated the importance of answering questions accurately and honestly.

The theoretical framework I used for this study was based on Bandura's theory of self-efficacy (1977) and his social cognitive theory (1993), both of which include an explanation of the reciprocal nature of self-efficacy and behavioral outcomes. Based on the extensive use of Bandura's theories in the literature, I have assumed that the theoretical framework is well-accepted in the field and accurately reflects the role of self-efficacy in shaping behavioral outcomes.

This study was limited by the absence of a strict random sampling procedure, which did not allow for the generalization of the study findings to all special education students as a whole or to all areas of special education within the school district. Therefore, any findings or conclusions drawn as a result of this study are applicable only to the study's participants and the relationship between learning disability status and gender and perceived self-efficacy.

In addition, this study may be limited by the possibility that students with disabilities may miscalibrate their capacity to perform tasks. In a review of 22 studies focused on self-efficacy beliefs of students with learning disabilities, Klassen (2002) found that students with learning disabilities may be more likely than students without learning disabilities to miscalibrate their capacity to perform tasks. In particular, students who suffer from dysgraphia may be more likely to overestimate their capacity to perform writing tasks (Klassen, 2002). However, because (a) it is unlikely that I had a preponderance of students with dysgraphia participate in my study, (b) only one question on the survey I used to collect data can reasonably be connected to the writing process (question about grammar), and (c) the survey I used to collect data was developed by Bandura, whose suggestions on instrument development Klassen cites as a model, it is unlikely that students' potential miscalibration of their capacity to perform tasks will affect the accuracy of data I collected in my study.

Although this study was limited in several capacities, it is important because through it, I was able to generate valuable information for the district with regard to the potential for improving students' levels of perceived self-efficacy, which may help improve student outcomes. The potential to improve student outcomes is especially important for students with learning disabilities, a population which struggles to achieve academic success when compared to students in the general education setting.

Scope and Delimitations

The scope of the study was confined to the effect of grade level, gender, and learning disability status on perceived levels of self-efficacy among students with learning disabilities and their normally achieving peers. For Research Question 1, the

independent variable was learning disability status, and the dependent variables were the seven self-efficacy subscales of the CPSE scale (self-efficacy for academic achievement, self-efficacy for self-regulated learning, self-efficacy for leisure and extracurricular activities, self-regulatory efficacy to resist peer pressure, perceived self-efficacy to meet others' expectations, perceived social self-efficacy, and self-assertive efficacy). For Research Question 2, the independent variable was learning disability status, and the dependent variables were the three overall scales (overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy). For Research Question 3a, the independent variable was learning disability status and the dependent variables were the seven self-efficacy subscales of the CPSE scale. For Research Question 3b, the independent variable was learning disability status and the dependent variables were the three overall scales.

To maintain the feasibility of this study, I delimited it to outcome measures in self-efficacy (the seven general subscales and the three overall scales). To maintain the integrity of the instrument, I included all the self-efficacy subscales indicated on the original instrument. Because literature on the effects of self-efficacy on students at the middle and high school levels is exhaustive, I delimited participating school sites to elementary schools in a metropolitan school district in Georgia and included only students in Grades 3-5. I invited students from three traditional elementary schools to participate—the number I determined to be necessary to recruit sufficient participants for statistical significance.

Although I excluded from inferential analyses data from students who have disabilities other than learning disabilities, I provide in my Results section descriptive

statistics for students with all types of learning disabilities and degrees of learning disability to provide classroom context. Potential learning disabilities may include dyscalculia (inhibited capacity to comprehend math concepts and solve math problems [Swanson & Jerman, 2009]); dyspraxia (inhibited motor skills [National Center for Learning Disabilities, 2013]); dyslexia (inhibited capacity comprehend written words [Skiba et al., 2008]); dysgraphia (inhibited capacity to produce written words [National Institutes of Health, 2010]); dysnomia (inhibited capacity for speech or writing due to diminished capacity for word retrieval from stored memory [Friend, 2008, p. 141]); and executive functioning (impaired ability to make connections between previous experiences and present actions [NCLD, 2013]).

Significance of the Study

This study is significant because results provided insight into the differences in levels of self-efficacy between students with learning disabilities and students without learning disabilities in Grades 3-5 as well as predictors of self-efficacy for these students. Special education teachers, regular education teachers, and support staff can use this insight when developing student IEPs. In particular, this insight can be used to initiate engagement in activities that support increased levels of self-efficacy in particular scale and subscale areas with demonstrated differences between students with learning disabilities and those without learning disabilities. In addition, school personnel can use insight regarding the predictive value of a student's learning disability when developing IEPs by developing IEPs that include strategies for teaching students with disabilities to be more self-efficacious, which ultimately can translate to improved student outcomes.

Because, as Bandura (1977) suggested, students are most influenced by performance accomplishments, and because students with disabilities struggle to perform academically, this population of students inherently will be more affected by the evaluative focus of the educational setting than their peers without disabilities. This is not to suggest that students with disabilities should be excused from evaluation but rather, according to Bandura's (1977) theory of self-efficacy and Bandura's (1986) social cognitive theory, that improving students' self-efficacy through a variety of processes can lead to improved performance outcomes, which can in turn further positively influence self-efficacy.

In particular, Bandura suggested that although social persuasion can affect self-efficacy, social persuasion in and of itself is ineffective for promoting significant changes in self-efficacy. However, when social persuasion is accompanied by the provision of tools needed to bring about action toward an outcome, self-efficacy could be noticeably improved. Through this aspect of his theory, Bandura suggested that student self-efficacy could be improved by teaching students strategies to cope with self-doubt that may impede their motivation to persist in activities and overcome challenges in order to achieve task success.

This concept is supported by Kolb (2011) who has suggested curriculum goals that promote social skills training. Such training might also be accomplished through an invitational approach to improving self-efficacy in which a person can initiate efforts to improve his or her own self-efficacy (Usher & Pajares, 2008). In addition to Bandura's (1977) four principal sources of self-efficacy, invitational theorists posit that "people can intentionally send uplifting and empowering messages to themselves and to others that

serve to improve their own functioning and well-being” (Usher & Pajares, 2008, p. 8). Application of the invitational theory to Bandura’s theory of self-efficacy suggests that self-efficacy can be improved through deliberate and conscious measures and that such measures could include personal coping strategies as tools of action. Ultimately, the implementation of instructional strategies that empower students with disabilities to have some control over (a) thought patterns associated with their feelings of self-efficacy (cognitive processes), (b) the degree of persistence applied to a task (motivational processes), and (c) emotional reactions to their environments (affective processes), may lead to improved performance outcomes for students with learning disabilities.

The potential to improve performance outcomes for students with learning disabilities by teaching them to be more self-efficacious is compelling in light of the negative outcomes for students who do not perform well in school and often, as a result, drop out before graduating. As indicated in the literature, dropping out of high school is associated with negative outcomes. For example, high school dropouts are more likely to suffer from illnesses and disease (Schiller, Lucas, Ward, & Peregoy, 2012) and, based on data compiled from the American Community Survey, dropouts also are disproportionately more likely to be institutionalized (Chapman, Laird, Ifill, & Kewal Ramani, 2011). This condition holds true when applied to the specific population of students with disabilities. Of this population, more than one third have “spent a night in jail, three times the rate of youth with disabilities who finished high school. . . . [and] dropouts are 10 percentage points more likely to have been arrested than youth with disabilities who finished high school” (Wagner, Newman, Cameto, Levine, & Garza, 2006, p. 11).

Extrapolating from national results of an earlier study, Chapman, Laird, Ifill, and Kewal Ramani (2011) suggested that over a lifetime, differences in mean income between those with high school diplomas and those without high school diplomas could translate “into a loss of approximately \$630,000 in income for a person who did not complete high school” (p. 1). In Georgia, a high school dropout earns approximately \$8,000 less than a graduate (Alliance for Excellent Education, 2011). Considering the number of dropouts in Georgia in 2011 (60,600), lost lifetime earnings could amount to \$7.8 billion for that class alone (Alliance for Excellent Education, 2011, p. 5). In addition, those without a high school diploma are less likely to be employed (U.S. Department of Labor, 2011), which may contribute to the \$240,000 estimated lifetime cost to the economy per average high school dropout for loss of tax contributions, higher engagement in criminal activity, and increased reliance of social services (Chapman et al., 2011).

The value of this study becomes more cogent when considering these negative outcomes in conjunction with high rates of dropout among students with disabilities in the nation. Results of the National Longitudinal Transition Study showed that students with disabilities in general drop out of school at approximately twice the rate as their general education peers (Blackorby & Wagner, 1996). More recent research has indicated similar outcomes (Chapman et al., 2011). Data from the National Longitudinal Transition Study-2 suggested that between 21% and 28% of students with learning disabilities (as a group of students distinct from those with disabilities in general) do not complete high school (Wagner et al., 2006). The GDOE (2011) estimated that at the state level, 5.8% of students requiring IEPs dropped out of high school in the 2010-2011 school year. At the

local district level, the dropout rate was 7% (The Governor's Office of Student Achievement, 2007).

The cost of high school dropout extends beyond the individual student. "The social and economic consequences of dropping out are a serious problem not only for young people who received special education services, but also for their families, schools, communities, and society as a whole" (Thurlow & Johnson, 2011, p. 15). Improved performance outcomes for students with learning disabilities may contribute to lower dropout rates. Therefore, positive social change may include not only increased employment and income, decreased engagement in activities resulting in incarceration, and improved overall quality of life for students with learning disabilities but also decreased economic strain at the local and national levels.

Summary

People with low levels of self-efficacy tend to attribute their failures to lack of ability (Bandura, 1986), and students with learning disabilities tend to attribute their failures to external factors (Pierangelo, & Giuliani, 2008). The belief that academic success is out of one's control can lead to lack of motivation to succeed and learners who are passive in the learning process (Pierangelo, & Giuliani, 2008). On the other hand, in Bandura's (1977) theory of self-efficacy and Bandura's (1993) social cognitive theory, Bandura has suggested that students' intellectual performance also can be impacted by internal factors such as self-efficacy. However, although students with disabilities could achieve improved levels of self-efficacy through skills training, typically these students do not receive this type of specialized training (Kolb, 2011). This is the case at the focus school district in this study; thus, the purpose of this study was to determine the levels of

perceived self-efficacy among students in Grades 3-5 in the focus schools and explore whether the levels of perceived self-efficacy of students with learning disabilities differ from those students without learning disabilities and whether learning disability status and gender are predictors of perceived self-efficacy.

In an effort to uncover insightful data that may be used to rectify this problem, I used convenience sampling to conduct a causal-comparative study of 1,780 students from a relatively large school district in Georgia. To collect data on student self-efficacy, I used Bandura's CPSE scale. To collect additional student data (grade level, gender, and disability status), I asked parents four questions on the parent consent form. To analyze my data, I conducted both descriptive and inferential statistics.

While planning this study, I made assumptions and identified limitations with regard to the study's population, theoretical framework, and methodology. For example, I have assumed that in terms of performance outcomes, students with learning disabilities are generally similar to all students with disabilities in the district, that the students will honestly represent their beliefs about their abilities, and that the theoretical framework is well-accepted in the field and accurately reflects the role of self-efficacy in shaping behavioral outcomes. Limitations include lack of a randomly selected sample and lack of ability to generalize results of this study to larger populations. The scope of the study was confined to the effect of grade level, gender, and learning disability status on perceived levels of self-efficacy among students with learning disabilities and their normally achieving peers. This study was delimited to outcome measures in self-efficacy for students with learning disabilities in Grades 3-5 in three elementary schools in a metropolitan school district in Georgia.

Results of this study may lead to the implementation of instructional strategies that improve levels of self-efficacy for students with learning disabilities and empower them to have some level of control over their perceptions of academic potential. Such changes in student perceptions could lead to improvements in academic achievement, which could affect whether or not students persist to graduation. Ultimately, positive social change may be recognized in multiple ways.

The remainder of this study is dedicated to review of the literature, detailed discussion of the study's methodology, presentation of the study results, and discussion of those results. In particular, in Section 2, the review of the literature includes discussion of pertinent studies exploring the relationship between students with learning disabilities and self-efficacy. In Section 3, discussion of the study's methodology includes information about the study's research design and approach, the sample, instrumentation, data collection, data analysis, and protection of human participants. In Section 4, the presentation of results will include textual explanations and graphical representations of both the descriptive and inferential statistics. Section 5 will include a discussion of the findings, conclusions based on those findings, and recommendations for practice and future research.

Section 2: Literature Review

In the focus school district in this study, students with learning disabilities underperform when compared to students without learning disabilities despite efforts to improve this condition. In addition, although the literature has indicated a connection between levels of self-efficacy and disability status, the focus school district has not (a) identified levels of self-efficacy among students in the schools (b) explored whether differences in levels of self-efficacy exist between students with learning disabilities and students without learning disabilities, or (c) determined whether learning disability status or gender are predictors of perceived self-efficacy. For this reason, I (a) identified levels of self-efficacy among students in the schools (b) explored whether the perceptions of self-efficacy of students with learning disabilities differed from those students without learning disabilities, and (c) determined whether learning disability or gender were predictors of perceived self-efficacy.

To provide a foundation for this exploration, I conducted a literature review of relevant topics by searching multiple databases available through Galileo and EBSCOhost, including Education Resources Information Center (ERIC), PSYC Info, Academic Search Complete, and Education Search Complete. As a result of this search, I accessed and reviewed books, articles from peer-reviewed journals, doctoral dissertations, and reports and other informational sources from government and educational organization websites. I conducted my search using key terms and phrases consisting of variations of the terms: *self-efficacy*, *learning disabilities*, *socioeconomic status*, *parental incarceration*, *family dynamics*, and *academic achievement/outcomes*.

In this section, I first discuss two of my study variables: learning disability and self-efficacy. Then I discuss the potential for self-efficacy to contribute to improved academic achievement, a connection I introduced in Section 1 with the application of my theoretical framework and the potential for social change as a result of this study. I also discuss a third variable, gender, as it relates to the potential for improved academic achievement, a potential outcome of improved student self-efficacy. Because socioeconomic status and family dynamics were addressed in the literature, I also discuss these topics as they relate to the potential for improved academic achievement. Finally, I discuss the concept of academic achievement as it is measured by the school district using standards from the State of Georgia.

Although gender was an additional independent variable in my study, I was unable to locate any studies in which researchers explored the connection between gender and self-efficacy. For this reason, I discussed gender only with regard to the potential for academic achievement, a connection made explicit in the literature. Similarly, although grade level was an additional independent variable in my study, I was unable to locate any studies in which researchers explored grade level as a factor of self-efficacy or academic achievement. Therefore, I did not include a discussion of grade level in this literature review.

Learning Disability

Learning disabilities make up “a heterogeneous group of disorders of presumed neurological origin manifested differently and to varying degrees during the life span of an individual. These disorders are developmental in nature, occur prior to kindergarten, and continue into adult life” (NJCLD, 2007, p. 63). They are not related to lack of

intelligence or motivation to learn (NCLD, 2013). According to NCLD (2013), learning disabilities can “affect the brain’s ability to receive, process, store, and respond to information” (General LD Info section, para. 1). When these functions are affected, both academic and social skills may be impacted (NCLD, 2013). Many learning disabilities manifest simultaneously with other learning disabilities that affect not only cognitive functions but behavioral functions as well (Mathes & Fletcher, 2008). The International Dyslexia Association (IDA; 2013) stated that approximately 15-20% of people are affected by language-based learning disabilities, and Judge and Watson (2011) stated that over time, gaps in math performance increase between students with learning disabilities and those without learning disabilities.

Common learning disabilities include dyscalculia, dyspraxia, dyslexia, dysgraphia, and executive functioning. Dyscalculia has been described as a learning disability that affects a person’s capacity for acquiring arithmetical skills, which results in lower levels of student performance on achievement tests (Mazzocco, Feigenson, & Halberda, 2011; Price & Ansari, 2013). Mazzocco et al. (2011) suggested that dyscalculia may be evident in children at the kindergarten level and continue through their high school years. Researchers have indicated varying extents of this disorder among individuals in the United States. For instance, Prince and Ansari (2013) suggested that 3-6% of individuals are affected by dyscalculia, while Mazzocco et al., (2011) suggested a higher incidence of dyscalculia, with a range of 6-14%. According to Kroeger, Brown, and O’Brien (2012), some researchers posit that dyscalculia may not be solely neurological in origin. For example, Price and Ansari, suggested that dyscalculia may stem from lack of highly qualified teachers, good teaching strategies, and low

socioeconomic status of the individual as well as other developmental disorders such as ADHD.

NCLD (2013) identified dyspraxia is a disorder that inhibits the proper development of motor skills, which impacts an individual's ability to plan and complete motor tasks. Current estimates from NCLD indicated that 2% of the general population is affected by dyspraxia and that boys make up 70% of those who are affected. Often, individuals with dyspraxia are unable to perform simple daily activities (Dyspraxia Foundation, 2013). Affected gross motor skills may result in poor balance, posture, hand-eye coordination, and integration of both sides of the body as well as fatigue, lack of rhythm, exaggerated movements, clumsiness, and a tendency to trip and fall (Dyspraxia Foundation, 2013). Affected fine motor skills may result in lack of manual dexterity, manipulative skills, and poor grip, which may affect a person's ability to groom him or herself (Dyspraxia Foundation, 2013). Finally, dyspraxia may affect hand dominance; speech and language; eye movement; perception of sensory input; learning, thought, and memory; and emotion and behavior (Dyspraxia Foundation, 2013).

Dyslexia is a highly heritable (Peter, Matsushita, & Raskind, 2011), language-based (NCLD, 2013), and common learning disorder (Berninger & Wolf, 2012) that can affect spelling, reading, (O'Brien, Wolf, Miller, Lovett & Morris, 2011), writing, and sometimes speaking (NCLD, 2013) and can cause decreased student achievement (Mathes & Fletcher, 2008; Peter et al., 2011) at all levels of education (NCLD, 2013). Mathes and Fletcher (2008) stated that dyslexia might not be an irreparable neurologic disorder because associated deficiencies can be (a) exacerbated by low socioeconomic status, lack of parental education, and environment disadvantages, and (b) lessened with

“explicit and strategic instruction to ensure children develop high levels of phonemic awareness; [and] in-depth knowledge of letter sound correspondence” (p. 8). Mathes and Fletcher (2008) estimated that 6-17% of the school aged population is dyslexic.

Washburn, Joshi, and Binks-Cantrell (2011) suggested that “one-fifth of the United States population displays one or more symptoms of dyslexia” (p. 12).

NCLD (2013) identified dysgraphia is a learning disability that inhibits one’s ability to write. Because writing “requires a complex set of motor and information processing skills” (NCLD, 2013, Dysgraphia section, para.1), dysgraphia can consequently lead to challenges with handwriting and spelling as well as the expression of ideas on paper as the result of trouble organizing alphabetic and numeric symbols. Research has indicated that the effects of dysgraphia can be lessened by teaching handwriting, especially at lower grades (Berninger, 2012). Peachman (2010) indicated that 5-20% of people have some problem with handwriting and most of them have experienced some form of frustration at school at one point or another due to difficulties in writing, awkwardness in pencil grip, and/or being very tired when writing or drawing. Researchers have suggested that assistive technological tools can be effective supplements to instructional strategies for lessening the effects of dysgraphia (Retiz et al., 2013; Slattery, 2012).

Executive function disorder is a neurological disorder that impacts planning, organizational, study, and self-monitoring/checking skills (Denckla, 2010, p. 7) as well as one’s ability to manage time, remember details, and connect past experiences to present actions (NCLD, 2013). According to Wenzel and Gunnar (2013) executive function disorder in school-age children manifests as an inability to pay attention; follow school

rules, regulations, and instructions; and wait one's turns. Monn et al. (2013) stated that children who are most vulnerable to executive function disorder are those considered at risk: those who (a) are homelessness; (b) are being raised by single parent (potentially due to parental incarceration); (c) have parents with low levels of education; and (d) were born at a low birth weight. These factors increase the risk of a child failing to meet academic standards or of developing a mental, cognitive, or behavioral disorder (Monn et al., 2013). Also, children with executive function disorder likely may fail to acquire well-developed social and emotional skills (Monn et al., 2013).

Factors that Affect Self-Efficacy

Self-efficacy refers to the way by which people's behavior and performance are affected by their beliefs about their capability to accomplish specified tasks and influence outcomes in their lives and environments. Self-efficacy influences behavior and performance outcomes because people will avoid activities in which they believe they will fail and will engage in activities in which they believe they will be successful (Bandura, 1977). A person's self-efficacy can be influenced by past performance accomplishments, vicarious experiences, social persuasion, and physiological and emotional states (Bandura, 1997). Self-efficacy also can be influenced by motivation, power, and incentives, which may encourage a person to face challenging situations (Milligan & Mark, 2011).

Also, Weiser and Riggio (2010) found that family background also can affect self-efficacy. Specifically, the researchers found that parental involvement and the quality of the parent/child relationship can affect a child's self-efficacy. Parental involvement in this study is an example of a vicarious experience in Bandura's (1993) theory where

parents can model appropriate behavior and high expectations for students' academic performance, which can result in improved self-efficacy for the student. Both parental involvement and quality of relationships with parents exemplify aspects of social (verbal) persuasion in Bandura's model because parental involvement and positive relationships with parents can foster positive support and feedback for the student, which can result in improved self-efficacy for the student.

Baird et al. (2009) found that students who (a) believe that their intelligence is a fixed state, (b) prefer performance goals over learning goals, and (c) perceive increased levels of effort as demonstrative of limited levels of ability tend to have lower levels of self-efficacy. In addition, Baird et al. found that students with learning disabilities are more likely to demonstrate these characteristics and thus more likely to have lower levels of self-efficacy.

Effects of Self-Efficacy on Academic Achievement

Because self-efficacy has a strong influence on the goals people set for themselves, the level of commitment they demonstrate toward achieving those goals, and ultimately the outcomes of their efforts, it is strongly related to academic performance outcomes (Bandura, 1986, 1989). In addition, academic achievement is a secondary and potential outcome I address in my study with regard to social change. For this reason, I discuss the effects of self-efficacy on academic achievement in this section.

Researchers have found results that support Bandura's (1986, 1989) claim that self-efficacy is linked to academic achievement. For example, Weiser and Riggio (2010) investigated the relationships among self-efficacy, family background, and academic performance. Weiser and Riggio found that self-efficacy, both general and academic,

significantly predicted a student's grade point average as well as expectations of academic success. The researchers stated that these results were consistent with previous literature. Based on their findings, the researchers concluded that self-efficacy beliefs were strong positive predictors of school-based outcomes.

According to Baird et al. (2009), students with a learning disability are more likely to have low academic self-efficacy. However, the researchers suggested that low academic self-efficacy is not necessarily correlated to actual ability. Based on this understanding, Baird et al. suggested that students with learning disabilities might benefit from interventions and programs focused on increasing their academic self-efficacy. Improving students' academic self-efficacy could improve students' motivation to learn (Baird et al., 2009). Ultimately, students' academic self-efficacy might accurately reflect their actual ability and lead to improved student outcomes (Baird et al., 2009).

Other Factors that Affect Student Achievement

In addition to self-efficacy, student achievement may be affected by a variety of additional factors. Several factors noted in the literature that also may affect student outcomes include gender, socioeconomic status, and family dynamics. I discuss these factors briefly in this section.

Gender

Evidence in the literature demonstrates that academic outcomes may be influenced by gender. The research shows that in reading females consistently outperform males while in math and science males consistently outperform females. However, other evidence in the literature indicates no difference between genders.

The National Center for Education Statistics (NCES; 2012) reported that in 2011, female students scored higher in reading than their male counterparts. In Grade 4, female students scored higher than male students by an average of 7 points, and in Grade 8, female students scored higher than male students by an average of 9 points (NCES, 2012). The NCES (2013) also indicated that the trend of higher scores in reading for females has been evident since 1971. Between 1971 and 2012, the gap between females and males at ages 13 and 17 has not narrowed significantly (NCES, 2013).

Using data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999, Robinson and Lubienski (2011) found similar results for students at Grade 4, and on the National Assessment of Educational Progress test, the Institute of Education Sciences (2004) found that females consistently have outperformed males in reading in Grades 4, 8, and 12. Other researchers also have found similar results (see Hansen & Jones, 2011; Logan & Johnson, 2011; Lynn & Mikk, 2009).

Chang, Sandhofer, and Brown (2011) suggested that females remain underrepresented in mathematics. Using data from the Child Language Data Exchange System, Chang et al. analyzed children's early mathematical environments and found that as early as 22 months, male children paid more attention to math concepts than female children did. Robinson and Lubienski (2011) also investigated differences in math achievement between males and females. The researchers found that males outscored females in math at Grade 4. According to the NCES (2013), in 2012, 17-year-old male students scored higher in math than their 17-year-old female counterparts. Other researchers also have found that male students outperform female students in math

assessments (see Carr, Hettinger Steiner, Kyser, & Biddlecomb, 2008; Fryer & Levitt, 2009; Hansen & Jones, 2011; Logan & Johnson, 2011).

Researchers have suggested various explanations for the gender gap in math performance. Chang et al. (2011) suggested that male children may pay more attention to math concepts than female children because parents tend to make more numerically-based statements to male children than they do to female children. Cvencek, Meltzoff, and Greenwald (2011) suggested that discrepancies in performance may be related to differences in how males and females identify with math concepts. In particular, Cvencek et al. suggested that males in Grades 1-5 identified more strongly with math concepts than females in the same grades. This lower level of identification with math concepts was a negative predictor for females' performance on math tests (Cvencek et al., 2011).

Beilock, Gunderson, Ramirez, and Levine (2010) suggested that some of the inequity in math performance female students experience may be the result of their female teachers' anxieties. In addition, female teachers' anxieties about their own math ability translated to female students' endorsement of "the commonly held stereotype that 'boys are good at math, and girls are good at reading'" (Beilock et al., p. 1860). By endorsing this stereotype, Beilock et al. found females students' own performance was affected after 1 academic school year with the anxious female teachers. Carr et al. (2008) suggested that males may outperform females in math competency because males tend both to attempt to use cognitive strategies and to use cognitive strategies correctly, two predictors of math competency. Finally, Nosek et al. (2009) suggested that across nations, gender differences in math achievement are correlated to implicit gender-science stereotyping, exemplified by the assumption that male students have greater interest and

capacity for science than females. Although Fryer and Levitt (2009) did find that by the 5th grade males outperformed females in math, their results did not support previous research claims that this gap may be related to type of school attended, level of parents' education, and mother's occupation.

Despite evidence of gender gaps in student performance with regard to reading and math, other research has indicated that the gender gap between males and females either is decreasing or not evident at all. For instance, between 1971 and 2012, the reading gap between females and males at age 9 decreased by 8 points (NCES, 2013). In addition, in 2012, the NCES (2013) found no significant gender gaps in math scores for students ages 9 and 13 but also that between 1973 and 2012, the gender gap in math scores for students age 17 had narrowed.

Lindberg, Hyde, Petersen, and Linn (2010) investigated gender differences in math performance among U. S. youths by conducting a meta-analysis (242 studies published between 1990 and 2007, which accounted for test results for 1,286,350 youths) and analyzing four large data sets (the National Longitudinal Surveys of Youth, the National Education Longitudinal Study of 1988, the Longitudinal Study of American Youth, and the National Assessment of Educational Progress). Lindberg et al. found that when they considered results from both studies, the findings indicated there was no gender gap in mathematics. McGeown, Goodwin, Henderson, and Wright (2011) determined that although gender has an effect on reading motivation, it does not have effect on reading skill. Other researchers have found similar results (Else-Quest, Hyde, & Linn, 2010; Mcmillian, Frierson, & Campbell, 2011).

Socioeconomic Status

Typically, socioeconomic status is considered a combination of educational level, occupation, and income that determines an individual or group's standing in the society (American Psychological Association, 2013). According to the American Psychological Association (2013), low socioeconomic status is correlated to "lower education, poverty, and poor health" (para. 2). Some public programs, including the National School Lunch Program, use the federal poverty threshold to determine program eligibility; in 2013, the federal poverty threshold for a family of four was \$23,550 (U. S. Department of Health and Human Services, 2013).

Students with backgrounds indicating low socioeconomic status experience many barriers that prevent them from achieving academically (Ratcliffe & McKernan, 2012). "Poverty status at birth and persistent childhood poverty are related to negative outcomes and early childhood poverty is related to lower educational achievement" (Ratcliffe & McKernan, 2012, p.14) and the increased chance of dropping out of school (Raudenbush, 2009). Ratcliffe and McKernan (2012) indicated that children who are economically challenged during their earliest years of life (age 0-2) are less likely (30%) to graduate from high school, which in turn may affect their ability to earn gainful employment as adult (Ratcliffe & McKernan, 2012).

Ready (2010) found that children's social class also affects early cognitive development and thus academic growth. Using data from the Early Childhood Longitudinal Study, Kindergarten Cohort, Ready explored data for approximately 24 children from each of 1,000 public and private schools within the United States. Ready reported that school absences are related to literacy learning and that levels of

socioeconomic status impact this relationship. “Specifically, the negative impact of a similar increase in kindergarten absences is 75 percent larger for a low SES compared to an average SES child” (Ready, 2010, p. 279).

Morgan, Farkas, Hillemeier, and Maczuga (2009) found that children from low socioeconomic backgrounds developed academic skills more slowly than their peers from high socioeconomic backgrounds. The researchers suggested that this condition was likely the result of inequity of resources both in the children’s homes and the schools they attend. Morgan et al. noted that differences between groups were more evident when educational and racial backgrounds were considered. Specifically, the researchers found that of the children with low socioeconomic backgrounds, those raised by less well-educated parents and those considered racial and ethnic minorities were more likely to demonstrate academic behavior problems before the age of 2.

Morgan et al. (2009) also suggested that children from low socioeconomic backgrounds and communities are likely to live in areas that are of poor quality. In a review of studies, Murry, Berkel, Gaylord-Harden, and Copeland-Linder (2011) found that neighborhood poverty, separate from low socioeconomic status of individual families, was related to students’ academic outcomes. In particular, “characteristics of disadvantaged neighborhoods, including proportion of low-income neighbors, unemployment rate, and residential instability, predicted academic outcomes such as time spent on homework, math and reading test scores, and dropping out of school” (Murry et al., 2011, p. 117). The researchers underscored the importance of this finding considering statistical evidence that the rate of childhood poverty has increased 21% between 2000 and 2008.

Maternal education also may affect academic outcomes for students. Sektnan, McClelland, Acock, and Morrison (2010) investigated the relationship among family risk factors and performance outcomes of children in Grade 1. To explore these relationships, the researchers used data from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development, a prospective longitudinal study of 1,298 children and their families in the United States. Sektnan et al. found that maternal education and income were significantly correlated with students' reading, math, and vocabulary outcomes in first grade. More specifically, at the preschool and kindergarten levels, these variables were negatively related (directly and indirectly) to achievement through the child's behavioral regulation.

Family Dynamics

Although not variables in this study, researchers have indicated that family dynamics other than parental education and income, discussed in the socioeconomic status section, may affect student outcomes. According to Beilock et al. (2010), students with different family backgrounds experience different barriers to effective and efficient academic performances. Somers et al. (2011) suggested that Black adolescent students were likely to do better academically if their parents were married, the result of higher levels of parental involvement, and if the children experienced strong paternal involvement in their lives. Similarly, Al-Yagon (2011) discovered that children whose parents are present in their lives tend to perform better and have more positive academic outcomes than their counterparts whose parents are absent in their lives.

Also, researchers have indicated that children whose parents are incarcerated tend to have poorer academic outcomes than those students who do not have parents who are

incarcerated. For instance, Hagan and Foster (2012) determined that when multiple “individual level independent variables [are] taken into account, the children of fathers who spent time in jail or prison have significantly lower GPAs” (p. 267) and that students who attend school in populations with high levels of parental incarceration are affected as collateral damage, experiencing decreased academic outcomes similar to students with parents who are incarcerated. Cho (2011) estimated that adolescents whose mothers were incarcerated have dropout rates 1.23 times higher than adolescents whose mothers are not incarcerated. Cho found boys to demonstrate more dropout behaviors than girls.

Travis, McBride, and Solomon (2005) suggested that poor school performance is an immediate effect of parental incarceration, but other researchers have offered varying explanations connecting parental incarceration to students’ academic outcomes. For instance, Nichols and Loper (2012) suggested that the effects of incarceration on academic outcomes may be the result of instability in the students’ home lives. Similarly, Carson and Golinelli (2013) suggested that parental incarceration was related to sub-standard living arrangements and quality and consistency of care incompatible with the level of care needed to support students’ academic achievement. Cho (2011) suggested that adolescents whose mothers were incarcerated were more likely to be bullied at school and lack social support, factors that could negatively impact academic achievement. Wilderman and Turney (2012) reported that children whose parents were incarcerated had more behavioral, cognitive, and social problems than children with parents who are not incarcerated and that these problems could impact students’ academic performance. Similarly, Dallaire, Ciccone, and Wilson (2010) found that children with incarcerated parents were more likely to be emotionally disturbed and

exhibit both internalizing and externalizing behaviors, which in turn, affected their academic outcomes. Murray, Farrington, and Sekol (2012) identified resulting antisocial behavior as the cause of poor academic outcomes.

Academic Achievement as Measured by the Focus School

Academic achievement refers to the knowledge students attain and the skills they develop in school subjects, which is generally indicated by scores they obtain on evaluative tests (Georgia Department of Education [GDOE], 2012). In the focus school, academic achievement primarily has been determined by scores in the areas of reading comprehension and basic mathematics on the Georgia Criterion-Referenced Competency Test (CRCT). As a measure of student learning and understanding of the skills, knowledge, and concepts described in the GDOE's curriculum standards, at the time of this study, all Georgia students in Grades 3-8 take the reading comprehension (GDOE, 2013b) and basics mathematics (GDOE, 2013a) CRCTs. Because of funding issues, students in Grades 1 and 2 no longer participate in CRCT assessments as part of state mandates (GDOE, 2013a, 2013b); however, if individual school budgets allow for testing at these grades, students may continue to participate in these assessments. The focus school in this study stopped CRCT testing for Grades 1 and 2 in 2009.

According to the GDOE (2013c), student scores on CRCT assessments generally range from 650 to 900; "however, the mean score, standard deviation, and standard error of measurement are unique to each content area and grade because scale scores are based on the standards set independently for each content area and grade" (p. 4). Generally, scores over 900 demonstrate exceptional student performance, scores over 850 demonstrate performance that exceeds the standards, scores between 800 and 849

demonstrate performance that meets the standards, and scores lower than 800

demonstrate performance that does not meet the standards (GDOE, 2013c).

Each of the reading comprehension CRCTs for Grades 3, 4, and 5 is made up of three basic domains: (a) reading skills and vocabulary acquisition; (b) literary comprehension; and (c) reading for information (Grade 3) and media literacy (Grades 4 and 5; GDOE, 2013b). The reading skills and vocabulary acquisition domain is used to assess student's vocabulary acquisition and use. "The vocabulary standards focus on understanding words and phrases, their relationships, and their nuances, and on acquiring new vocabulary, particularly general academic and domain-specific words and phrases" (GDOE, 2013b, p. 7). The literary comprehension domain is used to assess students' ability to understand conceptual and literary elements within literary texts as well as their ability to make connections among ideas and between texts (GDOE, 2013b). Skill level is measured commensurate to the level of difficulty of the texts. Texts for Grade 3 may include "short story, fairy tale, fable, folktale, and poetry" (GDOE, 2013b, p. 5); texts for Grade 4 do not include fairy tales but may include legends, dramas, and narratives; and texts for Grade 5 do not include fairy tales (Grade 3) or legends (Grade 4) but may include myths. The reading for information (Grade 3) and media literacy (Grades 4 and 5) domains are used to assess students' ability to understand conceptual elements within informational texts as well as their ability to make connections among ideas and between texts (GDOE, 2013b). Skill level is measured commensurate to the level of difficulty of the texts. Texts for Grade 3 may include "nonfiction articles, biographies, subject-area texts, reference sources, web pages, journal entries, letters, recipes, maps, and posters" (GDOE, 2013b, p. 6). Texts for Grade 4 also may include essays (GDOE, 2013b).

The basic mathematics portion of the CRCT is made up of four domains: (a) numbers and operations, (b) algebra, (c) measurement and data analysis, and (d) geometry. The numbers and operations domain is used to assess

students' skills in representing and solving problems involving multiplication and division; understanding properties of multiplication and the relationship between multiplication and division; multiplying and dividing within 100; solving problems involving the four operations; using place value understanding and properties of operations to perform multi-digit arithmetic; developing an understanding of fractions as numbers. (GDOE, 2013a, p. 6).

The algebra domain is used to assess students' skills in illustrating and solving addition, subtraction, division, and multiplication problems as well as distinguish arithmetic patterns (GDOE, 2013a). The measurement and data analysis domain is used to assess students' skills in estimating time, volume, and mass as well as their ability to use those estimates to solve problems (GDOE, 2013a). In addition, the measurement and data analysis domain is used to assess students' skills in "understanding concepts of area and relating area to multiplication and to addition; recognizing perimeter as an attribute of plane figures and distinguishing between linear and area measures" (GDOE, 2013a, p. 9). The geometry domain is used to assess students' ability to understand the various categories of shape and to use the attributes of those shapes in reasoning activities (GDOE, 2013a).

Summary

Learning disabilities, including dyscalculia, dyspraxia, dyslexia, dysgraphia, and executive functioning, affect how people understand and manage the information to

which they are exposed. For these reasons, learning disabilities can affect students both academically and socially. In addition, students with learning disabilities are more likely to have lower levels of self-efficacy than students without learning disabilities.

Bandura (1977) initially presented the construct of self-efficacy to explain how people's behavior and performance may be affected by their beliefs about their capability to accomplish specified tasks and influence outcomes in their lives and environments. Since that time, researchers have identified numerous factors they posit contribute to those beliefs. Bandura (1997) himself suggested four factors that contribute to self-efficacy: past performance accomplishments, vicarious experiences, social persuasion, and physiological and emotional states. Self-efficacy also can be influenced by motivation; power; incentives; family background; and perspectives about intelligence, levels of effort, and learning. Self-efficacy can affect students' academic achievement. Other factors that can affect students' academic achievement include gender, socioeconomic status, and family dynamics.

According to the GDOE (2012), academic achievement refers to the knowledge students attain and the skills they develop in school subjects. In the focus school district, academic achievement, in part, has been measured using CRCT scores in reading comprehension and basic mathematics. The reading comprehension CRCTs for Grades 3, 4, and 5 are made up of three basic domains: (a) reading skills and vocabulary acquisition; (b) literary comprehension; and (c) reading for information (Grade 3) and media literacy (Grades 4 and 5). The basic mathematics portion of the CRCT is made up of four domains: (a) numbers and operations, (b) algebra, (c) measurement and data analysis, and (d) geometry.

Section 3: Research Method

The purpose of this study was to (a) identify the levels of self-efficacy among students in the focus schools, (b) explore whether the perceptions of self-efficacy of students with learning disabilities differ from those students without learning disabilities, and (c) determine whether learning disability or gender are predictors of perceived self-efficacy. To identify student levels of self-efficacy and explore the predictive nature of learning disabilities and gender, I used a quantitative research design and causal-comparative research approach. This section includes a thorough discussion of the study's (a) research and design approach, including research questions; (b) setting and sample; (c) instrument; (d) data collection procedure; (e) data analysis procedure, as it applies to specific research questions; and (f) ethical considerations for the protection of human participants.

Study Design and Approach

According to Creswell (2009), a quantitative study design is appropriate when a researcher plans to collect and analyze data to test, support, and/or refute theories and hypotheses (Creswell, 2009). Because I explored whether the self-perceptions of students with learning disabilities differed from those of students without learning disabilities and determined whether learning disability or gender were predictors of perceived self-efficacy by testing hypotheses, a quantitative research design was appropriate for this study. Quantitative research can be experimental, quasi-experimental, or nonexperimental.

Experimental research involves manipulation of some or all of a randomly selected study sample via a treatment of some type and is useful when researchers want

to determine the effects of a treatment or when the random assignment of subjects for treatments is critical for determining the validity, reliability, or significance of the study findings (Creswell, 2009). Quasi-experimental research involves an experiment in which random assignment is not used to determine groups of participants (Creswell, 2009, p. 233). Because this type of research cannot control for extraneous variables, quasi-experimental research is most useful when demonstrating relationships between variables as opposed to cause and effect relationships (Brewer & Headlee, 2010). Nonexperimental research does not involve manipulation of the study sample and is useful when (a) researchers want to study a sample as it exists or existed naturally, (b) the focus of study is a social construct or personal characteristic, such as socioeconomic status or attitude, that cannot be manipulated, or (c) when using a random sampling design would be unethical (Belli, 2008). Because the sample in this study was a naturally existing group (students in Grades 3-5) and the focus of this study was social constructs and personal characteristics that cannot be manipulated (e.g., self-efficacy, disability status, gender, and grade level), a nonexperimental research design was appropriate for this study.

Lohmeier (2010) identified six types of nonexperimental research designs: comparative, causal-comparative, correlational, developmental, one-group pretest-posttest, and nonequivalent group posttest only (para. 5). In my study, I used correlations to explore what impact disability status and gender have on self-efficacy. However, because I primarily sought to determine whether the self-perceptions of students with learning disabilities differed from those of students without learning disabilities, my study was causal-comparative in nature.

A quantitative study design and causal-comparative approach allowed for the exploration of this study's research questions. There was one general research question: What are the levels of self-efficacy among all students in Grades 3-5 in the focus schools? I used three distinct sets of research questions to explore whether the self-perceptions of students with learning disabilities differed from those of students without learning disabilities and whether learning disability or gender were predictors of self-efficacy:

Research Questions 1a-c. Is there a significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale (self-efficacy for academic achievement, self-efficacy for self-regulated learning, self-efficacy for leisure and extracurricular activities, self-regulatory efficacy to resist peer pressure, perceived self-efficacy to meet others' expectations, perceived social self-efficacy, and self-assertive efficacy), between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5?

H₀1a-c: There is no significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities (a) Grade 3, (b) Grade 4, and (c) Grade 5.

H_A1a-c: There is a significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5.

Research Question 2a-c. Is there a significant difference in the level of overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy as measured by Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5?

H₀2a-c: There is no significant difference in the level of overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy, as measured by Bandura's Children's Perceived Self-Efficacy Scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5.

H_A2a-c: There is a significant difference in the level of overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy, as measured by Bandura's Children's Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in (a) Grade 3, (b) Grade 4, and (c) Grade 5.

Research Question 3a: In Grades 3, 4, or 5, does learning disability status predict student perceived self-efficacy as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale (self-efficacy for academic achievement, self-efficacy for self-regulated learning, self-efficacy for leisure and extracurricular activities, self-regulatory efficacy to resist peer pressure, perceived self-efficacy to meet others' expectations, perceived social self-efficacy, and self-assertive efficacy) while controlling for gender?

*H*₀3a: In Grades 3, 4, or 5, learning disability status does not predict perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, while controlling for gender.

*H*_A3a: In Grades 3, 4, or 5, learning disability status does predict perceived self-efficacy, as measured by the seven subscales of Bandura's Children's Perceived Self-Efficacy scale, while controlling for gender.

Research Question 3b: In Grades 3, 4, or 5, does learning disability status predict overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy while controlling for gender?

*H*₀3a: In Grades 3, 4, or 5, learning disability status does not predict overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy while controlling for gender.

*H*_A3a: In Grades 3, 4, or 5, learning disability status does predict overall perceived academic efficacy, overall perceived social efficacy, and overall perceived self-regulatory efficacy while controlling for gender.

Setting

To gather diverse data for this study, I recruited participants from three elementary schools in a large school district in Georgia. At the time of this study, the district's 97 elementary schools supported approximately 95,481 students—8% of whom were enrolled in K-12 special education programs. There were three types of educational structures within the district: traditional elementary schools (77), charter schools (7), and special education/alternative centers (13). The traditional elementary schools and charter schools offered gifted programs for advanced students and compensatory programs for

remedial education, including programs for speakers of other languages and special education programs. The special education centers, available only to students who qualify for services under IDEA 2004 (U.S. Department of Education, 2004), offered special, alternative, and vocational education programs for profoundly disabled students.

Student demographics for the district as well as comparative values for Georgia are presented in Table 2. As indicated in Table 2, students in the district were predominantly Black—at a rate almost 2 times that of the average in Georgia—and the majority met the requirements for receiving free or reduced-price lunch. Teacher demographics for the district as well as comparative values for Georgia are presented in Table 3. As indicated in Table 3, teacher demographics for the district were similar to teachers in other districts in Georgia with the exception of ethnicity. The teachers in the district were predominantly Black—at a rate almost 3 times that of the average in Georgia.

Sample

So that I could answer the general research question for this study (What are the levels of self-efficacy among all students in Grades 3-5 in the focus schools?), only those students who officially were enrolled in Grades 3-5 in the focus schools were allowed to participate in this study. In addition, to be sure that students understood the questions on the CPSE and to avoid stigmatizing students, on the parent consent form, I asked each parent to share the CPSE with his or her child only if the parent believed the child capable of understanding the survey questions (with parental help if applicable). All students from the focus schools were asked to participate regardless of their disability status or gender.

Table 2

Student Demographic Data for District and State

| Characteristic | District ^a | | Georgia ^b | |
|--------------------------------------|-----------------------|------|----------------------|----|
| | <i>n</i> | % | <i>n</i> | % |
| Students with disabilities | 7,638 | 8 | 163,425 | 10 |
| Ethnicity | | | | |
| Asian | 2,864 | 3 | 81,713 | 5 |
| Black | 67,791 | 71 | 604,673 | 37 |
| Hispanic | 11,457 | 12 | 196,110 | 12 |
| Native American/Alaskan Native | 0 | 0 | 0 | 0 |
| White | 10,502 | 11 | 719,070 | 44 |
| Multiracial | 1,909 | 2 | 49,028 | 3 |
| Free/reduced-price lunch eligibility | 66,836 | 70 | 931,523 | 57 |
| Gender | | | | |
| Male | 47,985 | 51.7 | 852,689 | 51 |
| Female | 50,103 | 49 | 814,996 | 49 |

^aDistrict data (2010-2011) for students with disabilities, ethnicity, and free and reduced-price lunch eligibility adapted from "Report Card," by Governor's Office of Student Achievement and based on a total estimated enrollment of 95,481. District data (2010-2011) for student gender adapted from "Enrollment by Gender, Race/Ethnicity and Grade" by Georgia Department of Education and based on a total estimated enrollment of 98,088. ^bGeorgia data (2010-2011) for students with disabilities, ethnicity, and free and reduced-price lunch eligibility adapted from "Report Card," by Governor's Office of Student Achievement and based on a total estimated enrollment of 1,634,251. Georgia data (2009-2010) for student gender adapted from "Georgia State Snapshot," by U.S. Department of Education and based on a total estimated enrollment of 1,667,685.

Table 3

PK-12 Teacher Demographic Data for District and State: 2010-2011

| Characteristic | District ^a | | Georgia ^b | |
|----------------------------|-----------------------|------|----------------------|------|
| | <i>n</i> | % | <i>n</i> | % |
| Position | | | | |
| Full-time | 6,136 | 92.7 | 109,236 | 96.5 |
| Part-time | 484 | 7.3 | 3,916 | 3.5 |
| Gender | | | | |
| Female | 5,113 | 77.2 | 90,925 | 80.4 |
| Male | 1,507 | 2.8 | 22,227 | 19.6 |
| Race/ethnicity | | | | |
| Black | 4,327 | 65.0 | 25,786 | 22.8 |
| White | 1,989 | 30.0 | 82,848 | 73.2 |
| Hispanic | 112 | 2.0 | 2,019 | 1.8 |
| Asian | 126 | 2.0 | 985 | 0.9 |
| Native American | 12 | 0.2 | 226 | 0.2 |
| Multiracial | 54 | 0.8 | 1,288 | 1.1 |
| Certificate level | | | | |
| 4 year bachelor's | 2,322 | 35.1 | 38,436 | 34.0 |
| 5 year master's | 3,271 | 49.4 | 51,747 | 46.0 |
| 6 year specialist's | 810 | 12.2 | 20,375 | 18.0 |
| 7 year doctoral | 190 | 2.9 | 2,132 | 1.9 |
| Other | 27 | 0.4 | 462 | 0.1 |
| Years of experience | | | | |
| < 1 | 304 | 4.6 | 3,769 | 3.3 |
| 1-10 | 2,816 | 42.5 | 47,763 | 42.2 |
| 11-20 | 2,168 | 32.8 | 37,430 | 33.1 |
| 21-30 | 1,008 | 15.2 | 18,829 | 16.6 |
| >30 | 324 | 4.9 | 5,361 | 4.8 |

Note. Georgia data adapted from "Report Card," by Governor's Office of Student Achievement.

^aTotal teachers = 6,547. ^bTotal teachers = 113,152.

To recruit students who meet these inclusion criteria, I used convenience sampling. Convenience sampling is the “selection of a sample of participants from a population based on how convenient and readily available that group of participants is. It is a type of nonprobability sampling that focuses on a sample that is easy to access and readily available” (Salkind, 2010, para. 1). In addition to the ready availability of a sample, convenience sampling also is beneficial to researchers because use of the method requires less time, money, and personnel than other sampling methods (Daniel, 2012). One drawback of convenience sampling is that study data generated using this method are not strongly generalizable to other populations (Salkind, 2010).

To determine from which schools I would recruit students, I downloaded from the focus school district website the list of all schools in the district. After checking with a district administrator to ensure the accuracy of the list, I added school names the administrator indicated had been left off the list inadvertently. Next, I cut up the list of names, isolated the traditional elementary schools, and discarded the rest. Then, I put the names of the traditional elementary schools into a basket and chose schools until I reached the number of schools (three) with total populations sufficient to meet my needs for sample size. Based on this process, I invited to participate in my study only students in Grades 3-5 from the three schools I identified.

Choosing an adequate sample size for a study is important because greater sample sizes result in lower standard error and a sample that more accurately represents the larger population of interest (Gravetter & Wallnau, 2005). One option for determining the appropriate sample size for a study is to determine it using a predetermined level of statistical power (Howell, 2011). I conducted an a priori power analysis to determine the

number of participants required to detect a medium effect size ($f^2 = .25$) with power = .80 for a MANOVA with the following parameters: (a) one dichotomous between subjects independent variable, (b) seven dependent variables, and (c) tested at $\alpha = .05$. The power analysis indicated that 66 individuals would be needed for the global multivariate effect. However, when I conducted subsequent tests for MANOVA (Research Questions 2a-c) and multiple regressions (for Research Questions 3a-b), I found the statistical analysis requiring the largest sample size was the multiple regression for Research Question 3a-b, which required 68 individuals to achieve a power of .80 given the testing parameters. I conducted the power analysis using G*Power 3.1.0 statistical software. The analyses for Research Questions 1-3 required that 34 of the 68 students have learning disabilities.

The literature has indicated that response rates for surveys have dropped; Dey (1997) indicated that rates dropped noticeably between 1960 and 1980, while Baruch (1999) indicated that rates dropped noticeably between the 1970s and the 1990s. It is possible that this trend has continued over the last decade as well. In addition, response rates for mail surveys that are not supported by incentives to participate and follow up recruitment efforts can be low (Hager, Wilson, Pollak, & Rooney, 2003; Porter, 2004; Schirmer, 2009). In particular, Baruch indicated that survey response rates in academic studies can range from an average of 60% to as low as 10-15%.

Because I used a similar delivery method for the survey and did not offer an incentive to participate, it was possible that I might experience a low response rate to my study invitation. It also was possible that the personal nature of two of the demographic questions related to learning disability (on the parent consent form) might discourage

parents from allowing their children to participate. Thus, to ensure that I would collect responses from enough students with learning disabilities to determine significance of the data for Research Questions 1-3 (at least 34 students with learning disabilities divided across the three grades based on the number of students with learning disabilities in each grade at each participating school and calculated based on a conservative response rate of 15%), I invited 227 students with learning disabilities. The total number of students with learning disabilities in the three traditional schools I selected for this study was 254. However, because I also planned to describe the levels of self-efficacy of students with other disabilities and students with no disabilities, I needed to invite to participate in my study all the students in Grades 3-5 in the three schools, a total of 1,780 students.

Instrumentation

To collect data for this study, I used Bandura's CPSE. In Appendix A, I present a version of the instrument I used to collect data from the participants. (I provide the permission to use the instrument in Appendix B.) In the version I provide here, I have identified the textual descriptions for the scale only once at the beginning of the survey to conserve space. Also, I have added subheaders to identify with which of the subscales the questionnaire items are associated.

According to Pastorelli et al. (2001), Bandura originally created the Children's Perceived Self-Efficacy (CPSE) scale in 1990 as a means of measuring various life aspects associated with preadolescents. The unpublished scale was a multidimensional, 37-item instrument made up of seven subscales: (a) self-efficacy for academic achievement (Questions 1-7), (b) self-efficacy for self-regulated learning (Questions 8-18), (c) self-efficacy for leisure and extracurricular activities (Questions 19-21), (d) self-

regulatory efficacy to resist peer pressure (Questions 22-26), (e) perceived self-efficacy to meet others' expectations (Questions 27-30), (f) perceived social self-efficacy (Questions 31-35), and (g) self-assertive efficacy (Questions 35-37; Pastorelli et al., 2001). Each subscale comprised items rated on a 5-point Likert-type scale: 1 (*cannot do at all*), 3 (*moderately can do*), 5 (*certainly can do*; Pastorelli et al., 2001).

Validity

Validity refers to an instrument's value with regard to a researcher's ability to make productive deductions based on the data collected using that instrument (Creswell, 2009). In other words, it can be used to answer the question; does the instrument measure what it claims to measure (Kimberlin & Winterstein, 2008)? Markus and Smith (2010) defined construct validity as the accuracy of a test's actual measurements, which can be determined using factor analysis to identify the internal relationships among the instruments' items. Because Bandura's original CPSE was an unpublished scale (Pastorelli et al., 2001), no documentation of factor analysis associated with the scale's development is available from the time of the instrument's development. However, subsequent factor analyses confirmed the three factor structure: academic efficacy, social efficacy, and self-regulatory efficacy (see Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Carroll et al., 2009 [using 26 of the 37 original items]; Pastorelli et al., 2001).

Reliability

For the same reason that there is no documentation about the validity of the CPSE from the time of its development, there also is no documentation about the scales reliability. However, results from subsequent studies have demonstrated the reliability of the CPSE. When Bandura et al. (1996) conducted scale reliability analysis with a sample

of Italian students, the researchers found coefficient alphas of .87, .75, and .80 for academic efficacy, social efficacy, and self-regulatory efficacy, respectively. When Pastorelli et al. (2001) conducted a study of students in Italy, Hungary, and Poland to investigate the replicability of the factor structure that Bandura et al. found in 1996, the researchers discovered high reliability coefficients for Italy and Poland and high coefficients for two of the three factors for Hungary: “Academic Efficacy: .87 for Italy, .86 for Hungary, .89 for Poland; Social Efficacy: .81 for Italy, .72 for Hungary, and .86 for Poland; Self-Regulatory Efficacy: .74 for Italy, .57 for Hungary, .78 for Poland” (p. 90). When Carroll et al. (2009) conducted scale reliability testing using 26 items of the 37-items on the CPSE, the researchers found coefficient alphas of .89, .81, and .82 for academic efficacy, social efficacy, and self-regulatory efficacy, respectively.

To determine the internal consistency of the variables and thus the reliability of the instrument with this study’s population, I conducted scale reliability analysis (i.e., Cronbach’s alpha). Internal consistency refers to how adequately a survey represents the concept being explored (Barchard, 2010). One way to determine the consistency of survey items is to perform scale reliability analysis to determine the Cronbach’s alpha (Multon & Coleman, 2005). According to Multon and Coleman (2005), Cronbach’s alpha coefficient represents the strength of the relationship between an observed score (actual measurement from a survey) and the true score (the expected measurement with no random error; Multon & Coleman, 2005). The higher the Cronbach’s alpha, the lower the variance between the two scores and thus lower the percentage of random error, whereas “typically, a ‘high’ reliability coefficient is considered to be .90 or above, ‘very good’ is .80 to .89, and ‘good’ or ‘adequate’ is .70 to .79” (Multon & Coleman, 2010, Interpreting

Cronbach's Alpha Coefficient section, para. 1). In this study, items that do not meet the minimum score of reliability .70 as suggested by Multon and Coleman were omitted from additional data analysis.

Data Collection

Prior to developing this proposal, I sought and received permission to use and reprint Bandura's CPSE scale in my study. In addition, I procured a letter of cooperation from the district to collect data in the three focus schools (see Appendix C). As a courtesy, I sent letters to the principals of the three schools and to the teachers who will distribute recruitment packets on my behalf at the data collection sites (see Appendix D and E). Also, I provided each potential participant's parent or guardian with a consent form (see Appendix F) and each potential participant with an assent form (see Appendix G). Students returned the signed parental consent form and the completed student survey in a sealed envelope to a secure drop box in the main office of their respective schools. In lieu of signed assent from students, return of the completed survey demonstrated student assent to participate in the study. The consent/assent forms included explanations of my role as the researcher as well as the (a) purpose of the research study, (b) details of participant selection, (c) data collection process, (d) nature of the study including compensation, (e) risks and benefits of participation, and (f) measures taken to ensure confidentiality. In addition, the consent/assent forms included contact information should the participants or parents have questions after the data collection was complete. Prior to collecting any data for this study, however, I sought and procured permission to conduct the study from Walden University's Institutional Review Board (IRB).

To collect data for my study, I distributed via teachers in the participating schools recruitment packets, which were addressed to the parent or guardian of each student. In this way, I did not have contact with either the parents or students who may have participated in my study. Although I did have contact with the teachers who distributed the recruitment packets on my behalf, the teachers were not considered research assistants in this study because they were not be involved directly in the actual collection of data in my study.

The packets included the letter of invitation to participate in the study (see Appendix H), two copies of the parent consent form (one to sign and one to keep), one copy of the student assent form, the CPSE survey, and a return envelope the participants may use to return the parent consent forms and completed surveys to the main office of their respective schools. To encourage participation in the study, I sent a reminder notice to parents 1 week after distributing the recruitment packets (Appendix I). I did not redistribute entire recruitment packets at that time.

To avoid stigmatizing students, I collected data about students' grade, gender, and disability status through parents using the parent consent form and only collected from students data about their levels of self-efficacy. I planned to collect data for approximately 2 school weeks. On the invitation to participate in the study, the parent consent form, the participation reminder, and the CPSE survey, I indicated a return-by date, to encourage the timely return of completed surveys.

Data Analysis

After I collected my data, I entered the data into SPSS (Version 19.0). I analyzed my data in two stages. In Stage 1, I calculated descriptive statistics on all research

variables. Specifically, I calculated means and standard deviations for variables on a ratio or interval scale, as appropriate. Then I calculated frequencies and percentages for nominal or ordinal scaled variables.

In Stage 2 of data analysis, I tested the research hypotheses for Research Questions 1-3 using inferential statistics. In order to test these hypotheses, it was necessary to isolate learning disability as a distinct variable. Therefore, any students who were identified as having disorders or disabilities other than those labeled as learning disabilities outlined in IDEA 2004 (U.S. Department of Education, 2004) were excluded from data analysis for Research Questions 1-3. According to IDEA 2004 (U.S. Department of Education, 2004), “problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage” (Sec. 602, 30, C) are not considered learning disabilities. Examples of such disorders would include (a) attention deficit disorder, (b) attention deficit hyperactivity disorder, and (c) passive-aggressive personality disorder, (d) social anxiety disorder, (e) post-traumatic stress disorder, (f) REM sleep behavior disorder, (g) borderline personality disorder, (h) oppositional defiant disorder, (i) intermittent explosive disorder, and (j) reactive attachment disorder.

Prior to hypothesis testing, I conducted scale reliability analysis to calculate Cronbach’s alphas on each self-efficacy subscale as well as the three overall self-efficacy scales to determine the level of internal consistency or reliability. I removed from my inferential analysis any subscales that did not demonstrate at least an adequate level of reliability (i.e., .70 or above, as suggested by Multon and Coleman [2005]). I conducted all statistical tests at $\alpha = .05$.

For Research Questions 1a-c, disability status was the between subjects independent variable, and the seven self-efficacy subscales were the dependent variables. To determine whether levels of self-efficacy differed significantly between students with learning disabilities and students without learning disabilities, I conducted a MANOVA for each grade using self-efficacy subscales as dependent variables and learning disability status as the independent variable. MANOVA tests have the “capability to examine group differences on linear combinations of quantitative variables” (Grice, 2006, para. 2) and thus can be used in situations where there is more than one dependent variable (Fields, 2009). If a significant multivariate main effect was found, I consulted the between-subjects test to determine the statistical significance of each subscale, and post hoc tests were unnecessary. This process was appropriate for additional analysis because the learning disability status variable had only two groups.

For Research Questions 2a-c, disability status was the between subjects independent variable, and the three overall self-efficacy scales were the dependent variables. To determine whether the levels of self-efficacy differed significantly between students with learning disabilities and students without learning disabilities, I followed the same procedure as for Research Questions 1a-c. I conducted MANOVA tests, one for each grade (Grades 3-5) and consulted the between-subjects test to determine the statistical significance of each subscale as necessary.

To assess Null Hypotheses 3a and 3b, I conducted multiple regressions. Disability status was the predictor, the seven subscales of self-efficacy were the criterion variables, and gender was a covariate. I dummy coded the predictor for entry into the regression model and ran separate regressions for each grade level. I used the following dummy

coding schemes for the dichotomous nominal scaled predictor and covariate, respectively: disability status, 0 (*disabled*), 1 (*not disabled*); gender, 0 (*female*), 1 (*male*).

I reviewed the variance inflation factors and tolerance levels to assess the potential of multicollinearity on the model. I present a table of descriptive statistics, coefficients, and a model summary table in the Results section. The significance of ΔR^2 from Model 1 to Model 2 was the main focus for these hypotheses.

Protection of Human Participants

At all times during this study, I maintained the highest standards of ethical research practices. Prior to undertaking work on this project, I (a) completed the National Institutes of Health (NIH) online course *Protecting Human Research Participants* (NIH #924987, 5/24/2012) and (b) sought appropriate approval to conduct my study from both Walden University's institutional review board (IRB) and the school district under study.

In addition, I ensured participant confidentiality by immediately separating the parent consent form (which contained the participant's name) from both the student data provided by the parent and the CPSE survey. I was able to do this by collecting student information from parents on a sheet of paper separate from the signed parent consent form so that as I received responses, I quickly and easily could separate the signed parent consent from the student information. Then I stapled the student information sheet from the parent consent form to the CPSE for each student in preparation for entry into SPSS. In this way, I was able to keep all student data confidential.

As the researcher in this study, I directed, implemented, collected, and analyzed the data for this study. Although I am a special education teacher in one of the schools in the focus school district in this study, I did not collect data from students in my school. I

clearly indicated this on the parent consent and student assent forms. Therefore, because I did not hold any power over the potential participants in this study or their parents, it was reasonable to assume that no students felt pressured to participate and no parents felt pressured to allow their children to participate. Thus, I did not deem my position as a teacher in the school district as a concern in this study.

Summary

In order to (a) identify the levels of self-efficacy among students in the focus schools, (b) explore whether the self-perceptions of students with learning disabilities differed from those of students without learning disabilities, and (c) determine whether disability status or gender were predictors of perceived self-efficacy, I conducted a causal-comparative study using student data I collected from three elementary schools in a large school district in Georgia. I collected data from all students in Grades 3-5 in the focus schools. To collect personal student data (grade level, gender, and disability status) without stigmatizing students, I asked parents to provide this information as part of the parental consent form. To collect data on students' levels of self-efficacy, I used Bandura's CPSE. To analyze the data, I conducted both descriptive and inferential statistics. As appropriate for each set of research questions, I conducted MANOVAs and multiple regression analyses.

To protect the human participants in my study, I participated in NIH training. Moreover, I sought appropriate approval from Walden IRB and provided parents with informed consent and students with informed assent forms. In addition, I maintained participant confidentiality at all times and will safely store the collected data until it is destroyed.

Section 4: Results

The purpose of this quantitative study was to (a) measure the difference between the levels of self-efficacy of students with learning disabilities and those without learning disabilities (Research Questions 1 and 2) and (b) identify factors that contribute to students' levels of self-efficacy, including disability status and gender (Research Question 3). To measure these variables, I used Bandura's CPSE scale. Although originally I intended to collect data for approximately 2 weeks, due to a low response rate I extended the data collection period for an additional week. In this section, I present results of the data analyses I conducted to answer my research questions. First, however, I present the results of my descriptive analyses.

Descriptive Statistics

Of the students who received an invitation to participate in the study ($n = 1,780$), 407 students responded. This number represents a 23% response rate. However, 13 students did not complete all the items on the questionnaire. Because this number represented only a small portion of the total sample (3.3%) and would not noticeably impact the value of the resulting analyses, those questionnaires were discarded. According to El-Masri and Fox-Wasylyshyn (2005), this process is called listwise deletion and typically is the default method for handling data using statistical analysis software. Ultimately, data from 394 students were included in the data analysis.

As displayed in Table 4, a majority (53.1%) of the sample obtained were female students, and the modal grade level of respondents was Grade 5 (38.1%) followed by Grade 4 (33.0%), and Grade 3 (28.9%). Dyscalculia, dyslexia, and dyspraxia were the most common forms of learning disabilities represented; each made up 21.8% of the

sample. Somewhat less prevalent, although only minimally so, were dysgraphia (20.8%) and executive functioning disabilities (13.7%).

Table 4

Grade, Gender, and Learning Disability Characteristics as a Percentage of the Sample

| Characteristic | <i>n</i> | % |
|----------------------------------|----------|------|
| Grade | | |
| 3 | 114 | 28.9 |
| 4 | 130 | 33.0 |
| 5 | 150 | 38.1 |
| Gender | | |
| Male | 185 | 47.0 |
| Female | 209 | 53.1 |
| Disability status | | |
| No learning disability | 301 | 76.4 |
| Learning disability ^a | 93 | 23.6 |
| Dyscalculia | 86 | 21.8 |
| Dyslexia | 86 | 21.8 |
| Dyspraxia | 86 | 21.8 |
| Dysgraphia | 82 | 20.8 |
| Executive Functioning | 54 | 13.7 |

^aThe numbers of students indicated for the various disabilities do not add up to the total number of students with disabilities ($n = 93$) because many students with disabilities reported multiple disabilities.

Inferential Statistics

To answer the research questions developed for this study, I conducted inferential statistics. Specifically, I conducted MANOVAs for Research Questions 1 and 2 and multiple regression for Research Question 3. First, however, I conducted analysis of reliability for the seven subscales and three scales of the CPSE scale. I present results of these analyses in this section.

Analysis of Reliability of the Children's Perceived Self-Efficacy Scale Subscales and Factors

Before conducting the analyses required to address my research questions, I tested the internal consistency (or reliability) of the seven subscales and the three overall scales. The Cronbach's alpha scores for the subscales and scales ranged from .77 to .92. Thus, all Cronbach's alpha coefficients obtained for the seven CPSE subscales (see Table 5) and the three CPSE scales (see Table 6) were at least good or adequate according to Multon and Coleman (2010) as described in Section 3. Of the seven scales, one was considered to have high reliability, four were considered to have very good reliability, and two were considered to have good reliability. The magnitude of the alpha coefficients indicated that it was appropriate to combine questionnaire items into subscales and scales. The summation method of constructing the scales/subscales was used because Pastorelli et al. (2001), who used Bandura's Perceived Self-Efficacy Scale (similar in content to the CPSE), used this method to construct the scales in their study (Bandura was a member of this research team).

Table 5

Cronbach's Alpha Coefficients Obtained for Each Children's Perceived Self-Efficacy Subscale

| Subscale | Questionnaire item numbers | α |
|---|----------------------------|----------|
| Self-Efficacy for Academic Achievement | 1-7 | .87 |
| Self-Efficacy for Self-regulated Learning | 8-18 | .90 |
| Self-Efficacy for Leisure and Extra-Curricular Activities | 19-21 | .77 |
| Self-Regulatory Efficacy to Resist Peer Pressure | 22-26 | .81 |
| Perceived Self-Efficacy to Meet Others' Expectations | 27-30 | .80 |
| Perceived Social Self-Efficacy | 31-34 | .80 |
| Self-Assertive Efficacy | 35-37 | .79 |

Table 6

Cronbach's Alpha Coefficients Obtained for Each Children's Perceived Self-Efficacy Scale

| Scale | Questionnaire item numbers | α |
|--|----------------------------|----------|
| Overall Perceived Academic Efficacy | 1-17, 27-28 | .92 |
| Overall Perceived Social Efficacy | 18-21, 29-37 | .87 |
| Overall Perceived Self-Regulatory Efficacy | 22-26 | .81 |

Research Question 1a: Self-Efficacy Grade 3

Research Question 1a was, “Is there a significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura’s Children’s Perceived Self-Efficacy scale (Self-Efficacy for Academic Achievement, Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extracurricular Activities, Self-Regulatory Efficacy to Resist Peer Pressure, Perceived Self-Efficacy to Meet Others’ Expectations, Perceived Social Self-Efficacy, and Self-Assertive Efficacy), between students with learning disabilities and students without learning disabilities in Grade 3?” To answer Research Question 1, I conducted a MANOVA to examine the effect of disability status across the full set of CPSE subscales. For the Grade 3 group, a significant multivariate F was obtained, $F(7, 106) = 7.13, p < .001$. This finding indicated that among students in this grade, a significant difference in perceived self-efficacy between students with and without learning disabilities was obtained across the full set of CPSE subscales. As a result, I consulted the between-subjects test to determine the statistical significance of each subscale. Significant differences in perceived self-efficacy were found between students with learning disabilities and students without disabilities for all the subscales except for the Self-Regulatory Efficacy to Resist Peer Pressure and Perceived Self-efficacy to Meet Others’ Expectations subscales. Results of the MANOVA for the overall main effect and the seven subscales are presented in Table 7.

Table 7

Perceived Self-Efficacy Scale Subscale Score Contrast between Grade 3 Students With and Without Learning Disabilities

| Grade | <i>df1</i> | <i>df2</i> | <i>F</i> | <i>p</i> | Subscale | Comparisons | | | |
|-------|------------|------------|----------|----------|---|-------------------------------------|----------|--|------|
| | | | | | | Students with learning disabilities | | Students without learning disabilities | |
| | | | | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 3 | 7 | 106 | 7.19 | <.001 | | | | | |
| | | | <.001 | | Self-Efficacy for Academic Achievement | 19.59 | 5.23 | 25.98 | 5.85 |
| | | | <.001 | | Self-Efficacy for Self-Regulated Learning | 32.89 | 7.99 | 42.67 | 8.49 |
| | | | .014 | | Self-Efficacy for Leisure and Extra-Curricular Activities | 10.26 | 3.12 | 11.89 | 2.91 |
| | | | .052 | | Self-Regulatory Efficacy to Resist Peer Pressure | 18.04 | 5.50 | 20.15 | 4.68 |
| | | | .083 | | Perceived Self-efficacy to Meet Others' Expectations | 14.89 | 4.13 | 16.17 | 3.04 |
| | | | <.001 | | Perceived Social Self-Efficacy | 13.85 | 4.27 | 16.74 | 3.09 |
| | | | <.001 | | Self-Assertive Efficacy | 9.96 | 2.78 | 12.49 | 2.47 |

Research Question 1b: Self-Efficacy Grade 4

Research Question 1b was, “Is there a significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura’s Children’s Perceived Self-Efficacy scale (Self-Efficacy for Academic Achievement, Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extracurricular Activities, Self-Regulatory Efficacy to Resist Peer Pressure, Perceived Self-Efficacy to Meet Others’ Expectations, Perceived Social Self-Efficacy, and Self-Assertive Efficacy), between students with learning disabilities and students without learning disabilities in Grade 4?” Consistent with the Grade 3 results, a significant multivariate F was obtained for the difference in perceived self-efficacy across the full set of CPSE subscales between students with and without learning disabilities, $F(7, 130) = 3.87, p = .001$. As a result, I consulted the between-subjects test to determine the statistical significance of each subscale. Significant differences in perceived self-efficacy were found between students with learning disabilities and students without disabilities for all seven subscales. Results of the MANOVA for the overall main effect and the seven subscales are presented in Table 8.

Table 8

Perceived Self-Efficacy Scale Subscale Score Contrast between Grade 4 Students With and Without Learning Disabilities

| Grade | <i>df1</i> | <i>df2</i> | <i>F</i> | <i>p</i> | Subscale | Comparisons | | | |
|-------|------------|------------|----------|----------|---|-------------------------------------|----------|--|------|
| | | | | | | Students with learning disabilities | | Students without learning disabilities | |
| | | | | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 4 | 7 | 130 | 3.87 | = .001 | | | | | |
| | | | <.001 | | Self-Efficacy for Academic Achievement | 19.19 | 5.16 | 23.70 | 6.28 |
| | | | <.001 | | Self-Efficacy for Self-Regulated Learning | 32.67 | 7.37 | 40.10 | 8.69 |
| | | | .015 | | Self-Efficacy for Leisure and Extra-Curricular Activities | 9.97 | 2.60 | 11.36 | 3.00 |
| | | | .021 | | Self-Regulatory Efficacy to Resist Peer Pressure | 16.53 | 5.14 | 18.72 | 4.73 |
| | | | <.001 | | Perceived Self-Efficacy to Meet Others' Expectations | 13.14 | 3.26 | 15.61 | 3.35 |
| | | | .001 | | Perceived Social Self-Efficacy | 13.94 | 3.56 | 16.01 | 3.00 |
| | | | .013 | | Self-Assertive Efficacy | 10.97 | 2.80 | 12.30 | 2.70 |

Research Question 1c: Self-Efficacy Grade 5

Research Question 1c was, “Is there a significant difference in the level of perceived self-efficacy, as measured by the seven subscales of Bandura’s Children’s Perceived Self-Efficacy scale (Self-Efficacy for Academic Achievement, Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extracurricular Activities, Self-Regulatory Efficacy to Resist Peer Pressure, Perceived Self-Efficacy to Meet Others’ Expectations, Perceived Social Self-Efficacy, and Self-Assertive Efficacy), between students with learning disabilities and students without learning disabilities in Grade 5?” For Grade 5, the multivariate F testing for differences in perceived self-efficacy across the set of CPSE subscales between the learning disabled and non-learning disabled groups was not statistically significant, $F(7, 134) = 1.71, p = .113$. However, significant differences in perceived self-efficacy were found between students with learning disabilities and students without disabilities for all the subscales except for the Perceived Self-Efficacy to Meet Others’ Expectations and Perceived Social Self-Efficacy. Results of the MANOVA for the overall main effect and the seven subscales are presented in Table 9.

Table 9

Perceived Self-Efficacy Scale Subscale Score Contrast between Grade 5 Students With and Without Learning Disabilities

| Grade | <i>df1</i> | <i>df2</i> | <i>F</i> | <i>p</i> | Subscale | Comparisons | | | |
|-------|------------|------------|----------|----------|---|-------------------------------------|----------|--|------|
| | | | | | | Students with learning disabilities | | Students without learning disabilities | |
| | | | | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | |
| 5 | 7 | 134 | 1.71 | .113 | | | | | |
| | | | .077 | | Self-Efficacy for Academic Achievement | 21.97 | 7.74 | 24.55 | 6.88 |
| | | | .015 | | Self-Efficacy for Self-Regulated Learning | 35.80 | 9.79 | 40.73 | 9.68 |
| | | | .004 | | Self-Efficacy for Leisure and Extra-Curricular Activities | 9.70 | 3.30 | 11.46 | 2.78 |
| | | | .009 | | Self-Regulatory Efficacy to Resist Peer Pressure | 16.67 | 5.20 | 19.12 | 4.32 |
| | | | .160 | | Perceived Self-Efficacy to Meet Others' Expectations | 14.33 | 4.48 | 15.45 | 3.65 |
| | | | .105 | | Perceived Social Self-Efficacy | 14.30 | 4.82 | 15.63 | 3.70 |
| | | | .014 | | Self-Assertive Efficacy | 10.47 | 3.36 | 11.99 | 2.87 |

Research Question 2a: Overall Self-Efficacy Grade 3

Research Question 2a was, “Is there a significant difference in the level of Overall Perceived Academic Efficacy, Overall Perceived Social Efficacy, and Overall Perceived Self-Regulatory efficacy as measured by Bandura’s Children’s Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in Grade 3?” To address this research question, I conducted a MANOVA to examine the effect of disability status across the set of three CPSE scales. For the Grade 3 group, a significant multivariate F was obtained, $F(3, 110) = 11.34, p < .001$. This finding indicated that among students in Grade 3, there was a significant difference in perceived self-efficacy between students with and without learning disabilities across the three scales. As a result, I consulted the between-subjects test to determine the statistical significance of each scale individually. Significant differences in perceived self-efficacy were found between students with learning disabilities and students without disabilities for the Overall Perceived Academic Efficacy and Overall Perceived Social Efficacy scales but not for the Overall Perceived Self-Regulatory Efficacy scale. Results of the MANOVA for the overall main effect and the three overall scales are presented in Table 10.

Table 10

Perceived Self-Efficacy Scale Score Contrast Between Grade 3 Students With and Without Learning Disabilities

| Grade | df1 | df2 | F | p | Scale | Comparisons | | | |
|-------|-----|-----|-------|-------|--|-------------------------------------|-------|--|-------|
| | | | | | | Students with learning disabilities | | Students without learning disabilities | |
| | | | | | | M | SD | M | SD |
| 3 | 3 | 110 | 11.34 | <.001 | | | | | |
| | | | | <.001 | Overall Perceived Academic Efficacy | 57.19 | 11.00 | 72.90 | 13.23 |
| | | | | <.001 | Overall Perceived Social Efficacy | 44.26 | 9.65 | 53.03 | 8.03 |
| | | | | .052 | Overall Perceived Self-Regulatory Efficacy | 20.15 | 4.68 | 19.65 | 4.94 |

Research Question 2b: Overall Self-Efficacy Grade 4

Research Question 2b was, “Is there a significant difference in the level of Overall Perceived Academic Efficacy, Overall Perceived Social Efficacy, and Overall Perceived Self-Regulatory Efficacy as measured by Bandura’s Children’s Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in Grade 4?” For the Grade 4 group, a significant multivariate F was obtained, $F(3, 134) = 8.51, p < .001$. Thus, among students in Grade 4, a significant difference in perceived self-efficacy existed between students with and without learning disabilities across the three scales. As a result, I consulted the between-subjects test to determine the statistical significance of each scale individually. Significant differences in perceived self-efficacy were found between students with learning disabilities and students without disabilities for all three of the scales. Results of the MANOVA for the overall main effect and the three overall scales are presented in Table 11.

Table 11

Perceived Self-Efficacy Scale Score Contrast Between Grade 4 Students With and Without Learning Disabilities

| Grade | df1 | df2 | F | p | Scale | Comparisons | | | |
|-------|-----|-----|------|-------|--|-------------------------------------|-------|--|-------|
| | | | | | | Students with learning disabilities | | Students without learning disabilities | |
| | | | | | | M | SD | M | SD |
| 4 | 3 | 134 | 1180 | <.001 | | | | | |
| | | | | <.001 | Overall Perceived Academic Efficacy | 55.31 | 11.04 | 67.91 | 13.81 |
| | | | | <.001 | Overall Perceived Social Efficacy | 44.58 | 8.91 | 51.17 | 8.45 |
| | | | | .021 | Overall Perceived Self-Regulatory Efficacy | 16.53 | 5.14 | 18.72 | 4.73 |

Research Question 2c: Overall Self-Efficacy Grade 5

Research Question 2c was, “Is there a significant difference in the level of Overall Perceived Academic Efficacy, Overall Perceived Social Efficacy, and Overall Perceived Self-Regulatory Efficacy as measured by Bandura’s Children’s Perceived Self-Efficacy scale, between students with learning disabilities and students without learning disabilities in Grade 5?” For the Grade 5 group, a significant multivariate F was obtained, $F(3, 138) = 2.83, p = .041$). Thus, among students in Grade 5, a significant difference in perceived self-efficacy existed between students with and without learning disabilities across the three scales. As a result, I consulted the between-subjects test to determine the statistical significance of each scale individually. Significant differences in perceived self-efficacy were found between students with learning disabilities and students without disabilities for all three of the scales. Results of the MANOVA for the overall main effect and the three overall scales are presented in Table 12.

Table 12

Self-Efficacy Scale Score Contrast Between Grade 5 Students With and Without Learning Disabilities

| Grade | <i>df1</i> | <i>df2</i> | <i>F</i> | <i>p</i> | Scale | Comparisons | | | |
|-------|------------|------------|----------|----------|--|-------------------------------------|-----------|--|-----------|
| | | | | | | Students with learning disabilities | | Students without learning disabilities | |
| | | | | | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| 5 | 3 | 138 | 732 | <.001 | | | | | |
| | | | | .021 | Overall Perceived Academic Efficacy | 61.87 | 16.11 | 69.38 | 15.60 |
| | | | | .007 | Overall Perceived Social Efficacy | 44.70 | 12.83 | 50.42 | 9.42 |
| | | | | .009 | Overall Perceived Self-Regulatory Efficacy | 16.67 | 5.20 | 19.12 | 4.32 |

Research Question 3a: Predicting Self-Efficacy Grades 3, 4, or 5

Research Question 3a was “In Grades 3, 4, or 5, does learning disability status predict student perceived self-efficacy as measured by the seven subscales of Bandura’s Children’s Perceived Self-Efficacy scale (Self-Efficacy for Academic Achievement, Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extracurricular Activities, Self-Regulatory Efficacy to Resist Peer Pressure, Perceived Self-Efficacy to Meet Others’ Expectations, Perceived Social Self-Efficacy, and Self-Assertive Efficacy) while controlling for gender?” To answer Research Question 3a, I conducted multiple regression analysis to determine which independent variables, disability status or gender, were predictors of perceived self-efficacy subscales for Grades 3, 4 and 5. For each grade, the block enter method of multiple regression analysis was used. In each case, disability status was entered first followed by gender.

Grade 3 findings. Results of the multiple regression analyses conducted for the Grade 3 group are summarized in Table 13. With the exception of the Perceived Self-Efficacy to Meet Others’ Expectations subscale, significant portions of the variance of each of the subscales was accounted for by disability status independent of the effect of gender. Based on Cohen’s (1992) thresholds for correlation effect size (small, .10 ; medium, .30; large, .50 and higher), medium-to-large effect sizes were obtained for Self-Efficacy for Self-Regulated Learning ($R = .45, p < .001$), Self-Efficacy for Academic Achievement ($R = .44, p < .001$), Self-Assertive Efficacy ($R = .40, p < .001$), and Perceived Social Self-Efficacy ($R = .37, p < .001$). Effect sizes for all of the remaining scales were in the small (to negligible) effect size range. Gender did not independently account for a significant portion of the variance of any of the subscales.

Table 13

Multiple Regression Analysis for Grade 3: Effect of a Learning Disability Diagnosis on Perceived Self-Efficacy Subscales When Controlling for Gender

| Subscale / Predictor variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> |
|--|----------|-------------|---------|----------|----------|
| Self-Efficacy for Academic Achievement^a | | | | | |
| Gender | -0.84 | 1.08 | -.07 | -0.78 | .436 |
| Learning disability | 6.36 | 1.26 | .43 | 5.04 | <.001 |
| Self-Efficacy for Self-Regulated Learning^b | | | | | |
| Gender | 0.46 | 1.58 | .03 | 0.29 | .772 |
| Learning disability | 9.79 | 1.85 | .45 | 5.28 | <.001 |
| Self-Efficacy for Leisure and Extra-Curricular Activities^c | | | | | |
| Gender | -0.83 | 0.55 | -.14 | -1.51 | .135 |
| Learning disability | 1.60 | 0.65 | .23 | 2.47 | .015 |
| Self-Regulatory Efficacy to Resist Peer Pressure^d | | | | | |
| Gender | 0.34 | .920 | .03 | 0.37 | .714 |
| Learning disability | 2.12 | 1.08 | .18 | 1.97 | .052 |
| Perceived Self-Efficacy to Meet Others' Expectations^e | | | | | |
| Gender | 0.56 | 0.63 | .08 | 0.89 | .377 |
| Learning disability | 1.30 | 0.73 | .17 | 1.77 | .079 |
| Perceived Social Self-efficacy^f | | | | | |
| Gender | 0.97 | 0.64 | .13 | 1.52 | 0.131 |
| Learning disability | 2.91 | 0.75 | .35 | 3.91 | <.001 |
| Self-Assertive Efficacy^g | | | | | |
| Gender | -0.36 | 0.48 | -.07 | -0.75 | .455 |
| Learning disability | 2.52 | 0.56 | .39 | 4.49 | <.001 |

^a $R = .44$, $R^2 = .191$, adjusted $R^2 = .18$, $F(2, 111) = 13.12$, $p < .001$.

^b $R = .45$, $R^2 = .201$, adjusted $R^2 = .19$, $F(2, 111) = 13.98$, $p < .001$.

^c $R = .27$, $R^2 = .072$, adjusted $R^2 = .06$, $F(2, 111) = 4.27$, $p = .016$.

^d $R = .19$, $R^2 = .034$, adjusted $R^2 = .02$, $F(2, 111) = 1.98$, $p = .143$.

^e $R = .18$, $R^2 = .034$, adjusted $R^2 = .02$, $F(2, 111) = 1.93$, $p = .151$.

^f $R = .37$, $R^2 = .135$, adjusted $R^2 = .12$, $F(2, 111) = 8.66$, $p < .001$.

^g $R = .40$, $R^2 = .158$, adjusted $R^2 = .14$, $F(2, 111) = 10.44$, $p < .001$.

Grade 4 findings. Results of the multiple regression analyses conducted for the Grade 4 group are summarized in Table 14. As summarized in Table 14, independent of gender, disability status accounted for significant portions of the variance in all seven subscales. Medium effect sizes were obtained for Self-Efficacy for Self-Regulated Learning ($R = .37, p < .001$), Self-Efficacy for Academic Achievement ($R = .35, p < .001$), and Perceived Self-Efficacy to Meet Others' Expectations ($R = .32, p = .001$). Small effect sizes were obtained for all of the remaining subscales. As was the case for the Grade 3 group, gender did not independently account for significant portions of the variance of any of the subscales.

Grade 5 findings. Results of the multiple regression analyses conducted for the Grade 5 group are summarized in Table 15. For this grade, disability status independently accounted for significant portions of the variance of all subscales except Self-Efficacy for Academic Achievement, Perceived Self-Efficacy to Meet Others' Expectations, and Perceived Social Self-Efficacy. Small but significant disability status effect sizes were obtained for the remaining subscales. Unlike the other grade groups, gender accounted for a small but significant portion of the variance of Self-Efficacy for Self-Regulated Learning ($p = .033$). Female students ($M = 41.26, SD = 10.37$) scored higher on this subscale than did male students ($M = 37.61, SD = 8.84$).

Table 14

Multiple Regression Analysis for Grade 4: Effect of a Learning Disability Diagnosis on Perceived Self-Efficacy Subscales When Controlling for Gender

| Subscale / Predictor variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> |
|--|----------|-------------|---------|----------|----------|
| Self-Efficacy for Academic Achievement^a | | | | | |
| Gender | 1.93 | 1.01 | .15 | 1.91 | .059 |
| Learning disability | 4.52 | 1.15 | .32 | 3.92 | <.001 |
| Self-Efficacy for Self-Regulated Learning^b | | | | | |
| Gender | 0.82 | 1.43 | .05 | 0.57 | .569 |
| Learning disability | 7.44 | 1.63 | .37 | 4.58 | <.001 |
| Self-Efficacy for Leisure and Extra-Curricular Activities^c | | | | | |
| Gender | 0.33 | 0.50 | .06 | 0.66 | .508 |
| Learning disability | 1.40 | 0.57 | .21 | 2.47 | .015 |
| Self-Regulatory Efficacy to Resist Peer Pressure^d | | | | | |
| Gender | 1.82 | 0.81 | .19 | 2.24 | .027 |
| Learning disability | 2.21 | 0.93 | .20 | 2.39 | .018 |
| Perceived Self-Efficacy to Meet Others' Expectations^e | | | | | |
| Gender | -0.61 | 0.57 | -.09 | -1.07 | .286 |
| Learning disability | 2.46 | 0.64 | .31 | 3.82 | <.001 |
| Perceived Social Self-efficacy^f | | | | | |
| Gender | -0.42 | 0.54 | -.06 | -0.78 | .436 |
| Learning disability | 2.06 | 0.61 | .28 | 3.37 | .001 |
| Self-Assertive Efficacy^g | | | | | |
| Gender | 0.73 | 0.46 | .13 | 1.56 | .114 |
| Learning disability | 1.34 | 0.53 | .21 | 2.55 | .012 |

^a $R = .35$, $R^2 = .123$, adjusted $R^2 = .11$, $F(2, 135) = 9.42$, $p < .001$.

^b $R = .37$, $R^2 = .136$, adjusted $R^2 = .12$, $F(2, 135) = 10.61$, $p < .001$.

^c $R = .21$, $R^2 = .046$, adjusted $R^2 = .03$, $F(2, 135) = 3.25$, $p = .042$.

^d $R = .27$, $R^2 = .073$, adjusted $R^2 = .06$, $F(2, 135) = 5.31$, $p = .006$.

^e $R = .32$, $R^2 = .105$, adjusted $R^2 = .09$, $F(2, 135) = 7.92$, $p = .001$.

^f $R = .29$, $R^2 = .082$, adjusted $R^2 = .07$, $F(2, 135) = 5.99$, $p = .003$.

^g $R = .25$, $R^2 = .062$, adjusted $R^2 = .05$, $F(2, 135) = 4.48$, $p = .013$.

Table 15

Multiple Regression Analysis for Grade 5: Effect of a Learning Disability Diagnosis on Perceived Self-Efficacy Subscales When Controlling for Gender

| Subscale / Predictor variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> |
|--|----------|-------------|---------|----------|----------|
| Self-Efficacy for Academic Achievement^a | | | | | |
| Gender | 2.12 | 1.19 | .15 | 1.78 | .077 |
| Learning disability | 2.49 | 1.44 | .14 | 1.73 | .087 |
| Self-Efficacy for Self-Regulated Learning^b | | | | | |
| Gender | 3.50 | 1.63 | .18 | 2.15 | .033 |
| Learning disability | 4.77 | 1.97 | .20 | 2.42 | .017 |
| Self-Efficacy for Leisure and Extra-Curricular Activities^c | | | | | |
| Gender | 0.58 | 0.49 | .10 | 1.19 | .238 |
| Learning disability | 1.73 | 0.59 | 0.24 | 2.91 | .004 |
| Self-Regulatory Efficacy to Resist Peer Pressure^d | | | | | |
| Gender | 0.80 | 0.77 | .09 | 1.04 | .298 |
| Learning disability | 2.41 | 0.93 | .21 | 2.60 | .010 |
| Perceived Self-Efficacy to Meet Others' Expectations^e | | | | | |
| Gender | 0.45 | 0.65 | .06 | .69 | .491 |
| Learning disability | 1.09 | 0.79 | .12 | 1.38 | .169 |
| Perceived Social Self-efficacy^f | | | | | |
| Gender | 0.88 | 0.67 | .11 | 1.32 | .190 |
| Learning disability | 1.28 | 0.81 | .13 | 1.58 | .116 |
| Self-Assertive Efficacy^g | | | | | |
| Gender | 0.70 | 0.50 | .11 | 1.38 | .171 |
| Learning disability | 1.50 | 0.61 | .20 | 2.44 | .016 |

^a $R = .210$, $R^2 = .04$, adjusted $R^2 = .03$, $F(2, 139) = 9.42$, $p = .044$.

^b $R = .270$, $R^2 = .07$, adjusted $R^2 = .06$, $F(2, 139) = 5.46$, $p = .005$.

^c $R = .261$, $R^2 = .07$, adjusted $R^2 = .06$, $F(2, 139) = 5.07$, $p = .007$.

^d $R = .234$, $R^2 = .06$, adjusted $R^2 = .04$, $F(2, 139) = 4.03$, $p = .020$.

^e $R = .132$, $R^2 = .01$, adjusted $R^2 = .00$, $F(2, 139) = 1.23$, $p = .295$.

^f $R = .175$, $R^2 = .03$, adjusted $R^2 = .02$, $F(2, 139) = 2.21$, $p = .114$.

^g $R = .235$, $R^2 = .06$, adjusted $R^2 = .04$, $F(2, 139) = 4.07$, $p = .019$.

Research Question 3b: Predicting Overall Self-Efficacy Grades 3, 4, or 5

Research Question 3b was, “In Grades 3, 4, or 5, does learning disability status predict Overall Perceived Academic Efficacy, Overall Perceived Social Efficacy, and Overall Perceived Self-Regulatory Efficacy while controlling for gender?” To answer Research Question 3b, I conducted multiple regression analysis to determine which independent variables, disability status or gender, were predictors of perceived self-efficacy subscales for Grades 3, 4 and 5. Results of the analyses for all three grades are presented in Table 16.

For Grade 3, disability status accounted for significant portions of the variance of Overall Perceived Academic Efficacy and Overall Perceived Social Self-Efficacy. Medium-to-large effect sizes were obtained for both scales: Overall Perceived Academic Efficacy ($R = .47, p < .001$) and Overall Perceived Social Self-efficacy ($R = .41, p < .001$). Gender did not independently account for a significant portion of the variance of any of the factors.

For Grade 4, significant portions of the variance of each of the three scales were accounted for by disability status independent of the effect of gender. Consistent with Grade 3, a medium-to-large effect size was obtained for Overall Perceived Academic Efficacy ($R = .40, p < .001$). A medium effect size was obtained for Overall Perceived Social Efficacy ($R = .32, p = .001$). A small but significant effect size was obtained for the third scale. Gender independently accounted for a small but significant portion of the variance of Overall Perceived Self-Regulatory Efficacy ($p = .027$). Female students ($M = 19.06, SD = 5.12$) scored higher on this scale than did male students ($M = 17.26, SD = 5.12$).

Table 16

Multiple Regression Analysis for Grades 3, 4, and 5: Effect of a Learning Disability Diagnosis on Perceived Self-Efficacy Scales When Controlling for Gender

| Self-efficacy scale / Predictor variable | <i>B</i> | <i>SE B</i> | β | <i>t</i> | <i>p</i> |
|---|----------|-------------|---------|----------|----------|
| Grade 3 | | | | | |
| Overall Perceived Academic Efficacy ^a | | | | | |
| Gender | -.32 | 2.41 | -.01 | -0.13 | .895 |
| Learning disability | 15.70 | 2.82 | .47 | 5.57 | < .001 |
| Overall Perceived Social Efficacy ^b | | | | | |
| Gender | 0.27 | 1.60 | .01 | 0.17 | .868 |
| Learning disability | 8.79 | 1.87 | .41 | 4.71 | <.001 |
| Overall Perceived Self-Regulatory Efficacy ^c | | | | | |
| Gender | 0.34 | 0.92 | .03 | 0.37 | .714 |
| Learning disability | 2.12 | 1.08 | .18 | 2.00 | .052 |
| Grade 4 | | | | | |
| Overall Perceived Academic Efficacy ^d | | | | | |
| Gender | 2.40 | 2.24 | .09 | 1.07 | .285 |
| Learning disability | 12.63 | 2.59 | .39 | 4.96 | <.001 |
| Overall Perceived Social Efficacy ^e | | | | | |
| Gender | 0.38 | 1.46 | .02 | 0.26 | .795 |
| Learning disability | 6.59 | 1.67 | .32 | 3.96 | <.001 |
| Overall Perceived Self-Regulatory Efficacy ^f | | | | | |
| Gender | 1.82 | 0.81 | .19 | 2.24 | .027 |
| Learning disability | 2.21 | 0.93 | .20 | 2.39 | .018 |
| Grade 5 | | | | | |
| Overall Perceived Academic Efficacy ^g | | | | | |
| Gender | 5.82 | 2.63 | .18 | 2.21 | .028 |
| Learning disability | 7.24 | 3.19 | .19 | 2.23 | .025 |
| Overall Perceived Social Efficacy ^h | | | | | |
| Gender | 2.40 | 1.73 | .11 | 1.39 | .166 |
| Learning disability | 5.61 | 2.10 | .22 | 2.68 | .008 |
| Overall Perceived Self-Regulatory Efficacy ⁱ | | | | | |
| Gender | 0.80 | 0.77 | .09 | 1.04 | .298 |
| Learning disability | 2.41 | 0.93 | .21 | 2.60 | .010 |

^a $R = .47$, $R^2 = .218$, adjusted $R^2 = .20$, $F(2, 111) = 15.52$, $p < .001$.

^b $R = .41$, $R^2 = .166$, adjusted $R^2 = .15$, $F(2, 111) = 11.07$, $p < .001$.

^c $R = .19$, $R^2 = .034$, adjusted $R^2 = .02$, $F(2, 111) = 1.98$, $p = .143$.

^d $R = .40$, $R^2 = .160$, adjusted $R^2 = .15$, $F(2, 135) = 12.81$, $p < .001$.

^e $R = .32$, $R^2 = .104$, adjusted $R^2 = .09$, $F(2, 135) = 7.83$, $p = .001$.

^f $R = .27$, $R^2 = .073$, adjusted $R^2 = .06$, $F(2, 135) = 5.31$, $p = .006$.

^g $R = .27$, $R^2 = .070$, adjusted $R^2 = .06$, $F(2, 139) = 5.24$, $p = .006$.

^h $R = .25$, $R^2 = .063$, adjusted $R^2 = .05$, $F(2, 139) = 4.70$, $p = .011$.

ⁱ $R = .23$, $R^2 = .055$, adjusted $R^2 = .04$, $F(2, 139) = 4.03$, $p = .020$.

For Grade 5, disability status independently accounted for small but statistically significant portions of the variance for all three scale scores. Gender accounted for small but significant portion of the variance of Overall Perceived Academic Efficacy ($p = .028$). Once again, a higher mean was obtained by female students ($M = 70.40, SD = 16.44$) than by male students ($M = 64.44, SD = 14.71$).

Summary

Across the full set of findings obtained for the study's three research questions, a consistent pattern emerged. Students with learning disabilities were found to have lower levels of perceived self-efficacy, whether measured using the seven subscales or the three overall scales. Moreover, the effect of disability status on self-efficacy was independent of gender, which did not account for significant portions of the variance of any of the subscales or overall scales. However, this general pattern was not obtained consistently across the three grade levels. As summarized in Table 17, significant multivariate F values were not obtained for the Grade 5 group for the seven subscales, but significant multivariate F values were obtained across all three grades when the three overall scale scores were used as dependent variables. Among the tests conducted for individual subscale scores, a pattern of significantly higher scores for nondisabled students was obtained across all three grade levels for Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extra-Curricular Activities, Self-Assertive Efficacy, Overall Perceived Academic Efficacy, and Overall Perceived Social Efficacy.

Table 17

Summary of Outcomes of all Disability Status Multivariate and Between-Group Statistical Tests Conducted for All Grade Groups

| Between-group difference examined | <i>p</i> value of difference | | |
|---|------------------------------|---------|---------|
| | Grade 3 | Grade 4 | Grade 5 |
| Multivariate subscale <i>F</i> | <.001 | .001 | .113 |
| Self-Efficacy for Academic Achievement | <.001 | <.001 | .077 |
| Self-Efficacy for Self-Regulated Learning | <.001 | <.001 | .015 |
| Self-Efficacy for Leisure and Extra-Curricular Activities | .014 | .015 | .004 |
| Self-Regulatory Efficacy to Resist Peer Pressure | .052 | .021 | .009 |
| Perceived Self-Efficacy to Meet Others' Expectations | .083 | <.001 | .160 |
| Perceived Social Self-Efficacy | <.001 | .001 | .105 |
| Self-Assertive Efficacy | <.001 | .013 | .014 |
| Multivariate scale <i>F</i> | <.001 | <.001 | .041 |
| Overall Perceived Academic Efficacy | <.001 | <.001 | .021 |
| Overall Perceived Social Efficacy | <.001 | <.001 | .007 |
| Overall Perceived Self-Regulatory Efficacy | .052 | .021 | .009 |

Similarly, disability status did not independently account for significant portions of all overall scale scores across all grades. As summarized in Table 17, disability status accounted for significant portions of scale variance across all three grades but only for Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extra-Curricular Activities, Self-Assertive Efficacy, Overall Perceived Academic Efficacy, and Overall Perceived Social Efficacy.

Gender independently accounted for significant portions of two scales each in Grades 4 and 5. As indicated in Table 18, for Grade 4, significant gender effects were obtained for Self-Regulatory Efficacy to Resist Peer Pressure and Overall Perceived Self-Regulatory Efficacy. For Grade 5, gender accounted for significant portions of Self-Efficacy for Self-Regulated Learning, Overall Perceived Academic Efficacy. In all cases higher scores were obtained by female students than by males.

Table 18

Summary of p Values for Grades 3-5 of Proportions of Variance in All Scale Scores Independently Accounted for by Disability Status and Gender

| Subscale / Predictor variable | <i>p</i> value of independent effect of disability status | | |
|---|---|---------|---------|
| | Grade 3 | Grade 4 | Grade 5 |
| Self-Efficacy for Academic Achievement | | | |
| Gender | .436 | .059 | .077 |
| Learning disability | <.001 | <.001 | .087 |
| Self-Efficacy for Self-Regulated Learning | | | |
| Gender | .772 | .569 | .033 |
| Learning disability | <.001 | <.001 | .017 |
| Self-Efficacy for Leisure and Extra-Curricular Activities | | | |
| Gender | .135 | .508 | .238 |
| Learning disability | .015 | .015 | .004 |
| Self-Regulatory Efficacy to Resist Peer Pressure | | | |
| Gender | .714 | .027 | .298 |
| Learning disability | .052 | .018 | .010 |
| Perceived Self-Efficacy to Meet Others' Expectations | | | |
| Gender | .377 | .286 | .491 |
| Learning disability | .079 | <.001 | .169 |
| Perceived Social Self-efficacy | | | |
| Gender | .131 | .436 | .190 |
| Learning disability | <.001 | .001 | .120 |
| Self-Assertive Efficacy | | | |
| Gender | .455 | .114 | .171 |
| Learning disability | <.001 | .012 | .016 |
| Overall Perceived Academic Efficacy | | | |
| Gender | .895 | .285 | .028 |
| Learning disability | <.001 | <.001 | .025 |
| Overall Perceived Social Efficacy | | | |
| Gender | .868 | .795 | .166 |
| Learning disability | <.001 | <.001 | .008 |
| Overall Perceived Self-Regulatory Efficacy | | | |
| Gender | .714 | .027 | .298 |
| Learning disability | .052 | .018 | .010 |

Section 5: Discussion, Conclusions, and Recommendations

This study was conducted to (a) identify the levels of perceived self-efficacy among students in Grades 3-5 in the focus schools, (b) explore whether the levels of perceived self-efficacy of students with learning disabilities differed from those students without learning disabilities, and (c) determine whether learning disability status and gender were predictors of perceived self-efficacy. In order to achieve these outcomes, I conducted a quantitative study that was causal-comparative in nature. Using Bandura's CPSE scale, I collected data from a convenience sample of 394 students from three schools in a relatively large school district in Georgia. This number represents a 23% response rate to the original 1,780 invitations sent to students. To analyze my data, I conducted descriptive statistics on all data, scale reliability analyses on the three overall scales and seven subscales of my instrument, and inferential statistics to test the hypotheses (MANOVA for Research Question 1 and Research Question 2 and multiple regression for Research Question 3). Overall, the results indicated that students with learning disabilities had lower levels of perceived self-efficacy, whether measured using the seven subscales or the three overall scales, and that these differences were independent of gender.

Interpretation of Findings

In this section, I discuss my findings, which I have organized by research question. For each question, I provide a short summary of the results. Then, I discuss the significant and relevant findings, providing possible explanations for findings when feasible.

Research Question 1a-c

Initial analyses of the data for this research question showed significant differences in perceived self-efficacy between students with and without learning disabilities across the full set of CPSE subscales for students in Grades 3 and 4. Specifically, students with learning disabilities demonstrated lower levels of self-efficacy than students without learning disabilities. These results are supported by study results from Friend (2008), who also found differences in levels of perceived self-efficacy between students with disabilities and students without disabilities. This general outcome may be due to inappropriate attribution of factors of success, where students with learning disabilities often do not perceive themselves to be the sources of success but rather outside sources over which they have no control (Pierangelo & Giuliani, 2008). In other words, students with learning disabilities may have low self-efficacy because they do not believe there is any way to overcome those outside sources and achieve success. In contrast, Klassen and Lynch (2007) found that some students with learning disabilities did believe in their own capacity to achieve success, especially with regard to the effect of student effort on achievement. Moreover, researchers found evidence that students with learning disabilities may overestimate their capability and thus report higher levels of self-efficacy with regard to academic capacity (Klassen & Lynch, 2007; Pierangelo & Giuliani, 2008), but this finding was not observed in my research.

That no significant differences in perceived self-efficacy were found between students with learning disabilities and students without learning disabilities in Grade 5 is difficult to explain. Based on the literature indicating that students with disabilities generally have low levels of self-efficacy and that those self-efficacy beliefs are, in part,

dependent on the perspective that they do not have control over their success, one would expect that the factors contributing to that condition would have the same impact on students regardless of their age (i.e., grade level). However, it is possible that as students mature and their cognitive capacities increase, they become more self-efficacious, in which case one would expect students with learning disabilities in Grade 5 to be more efficacious than students with learning disabilities in lower grades.

When the individual subscales were considered, results varied between the grades with regard to differences in perceived self-efficacy between students with and without learning disabilities. For Grade 3, significant differences were found between students with learning disabilities and students without disabilities for all the subscales except for the Self-Regulatory Efficacy to Resist Peer Pressure and Perceived Self-efficacy to Meet Others' Expectations subscales. For Grade 4, significant differences were found between students with learning disabilities and students without disabilities for all seven subscales. For Grade 5, significant differences were found between students with learning disabilities and students without disabilities for all the subscales except for the Perceived Self-Efficacy to Meet Others' Expectations and Perceived Social Self-Efficacy.

The reason that significant differences in levels of perceived self-efficacy were found for some subscales but not others is unclear. However, it is possible that these differences are related to how students develop their self-efficacy. For example, in Klassen and Lynch's (2007) study, students reported being appreciative of verbal persuasion and indicated that it helped improve their levels of confidence. If this is the case, the receipt of varying degrees of verbal praise from different teachers, by different

students, in different grade levels, and for different types of activities may have contributed to the inconsistent results for the individual subscales for the three grades.

That students with learning disabilities may demonstrate low perceived levels of academic self-efficacy in particular is supported by previous literature. In Klassen and Lynch's (2007) qualitative study of 28 students in Grades 8 and 9, the researchers explored student perceptions regarding levels of self-efficacy among students with learning disabilities. A trend emerged among the student responses that indicated the student participants, who themselves had learning disabilities, perceived that all students with learning disabilities had low levels of self-efficacy with regard to academics (Klassen & Lynch, 2007). However, when asked about their own levels of self-efficacy in particular, students reported that their levels of self-efficacy varied based on subject and/or task (Klassen & Lynch, 2007). Specifically, whereas students reported having lower levels of self-efficacy in core subjects such as English and for tasks related to those subjects (in this case a writing assignment for example), they reported higher levels of self-efficacy in subjects they found appealing, especially their elective classes and/or those that include hands-on tasks such as in a metalworking class (Klassen & Lynch, 2007).

Baird et al. (2009) also found that when compared to students without learning disabilities, students with learning disabilities tended to have lower levels of academic self-efficacy. In the study of 1,518 sixth through twelfth grade students from two rural U.S. school districts, students demonstrated maladaptive cognitive self-regulatory characteristics known to influence learning motivation and performance (Baird et al., 2009). Compared to Pierangelo and Giuliani (2008) who found that students with

disabilities attribute success in general to sources out of their control, Baird et al. found that students with learning disabilities attribute academic success in particular to sources out of their control. That is, students with learning disabilities were not likely to perceive that intelligence is malleable and can be increased through effort (“less of an incremental view of intelligence” [Baird et al., 2009, p. 11]). In addition, students were less likely to set goals for learning and to invest appropriate levels of effort to complete tasks and achieve the goals (Baird et al., 2009).

Like Baird et al. (2009), Hen and Goroshit (2014) found that students with learning disabilities had lower levels of academic self-efficacy when compared to students without learning disabilities. In their study of 287 learning disabled and non-learning disabled undergraduate students, the researchers suggested that students’ procrastination with regard to academic endeavors may be related to levels of self-efficacy. In addition, Hen and Goroshit found that students with learning disabilities had lower levels of emotional intelligence. This finding appears to conflict with results I found in my study, in particular with regard to the lack of significant differences in perceived self-efficacy between students in Grade 3 for the Self-Regulatory Efficacy to Resist Peer Pressure and Perceived Self-efficacy to Meet Others’ Expectations subscales and students in Grade 5 for the Perceived Self-Efficacy to Meet Others’ Expectations and Perceived Social Self-Efficacy subscales. If students with learning disabilities have lower levels of emotional intelligence, one might assume that they would feel less self-efficacious in situations that could be considered emotionally relevant, such as those involving the expectations of others or social interactions with others, and, therefore, that I would have found significant differences in perceived self-efficacy between the two

groups of students for the three nonsignificant subscales (Self-Regulatory Efficacy to Resist Peer Pressure and Perceived Self-efficacy to Meet Others' Expectations subscales for Grade 3 and Perceived Self-Efficacy to Meet Others' Expectations and Perceived Social Self-Efficacy for Grade 5). It is possible that the results from the Hen and Goroshit study do not support my results because of the age difference between the two populations (elementary vs. college).

Research Question 2a-c

Initial analyses of the data for this research question showed significant differences in perceived overall self-efficacy between students with and without learning disabilities across the three CPSE scales for students in Grades 3, 4, and 5. As with Research Question 1, the literature supports differences in overall levels of self-efficacy between students with learning disabilities and students without learning disabilities (see Friend, 2008). When the individual scales were considered, however, no significant difference in perceived self-efficacy was found for the Overall Perceived Self-Regulatory Efficacy scale for students in Grade 3. This anomalous results is difficult to explain. However, as was suggested for the anomalous results found for Research Question 1, it is possible that other factors may have contributed to this anomaly, including inappropriate attribution of factors of success (Baird et al., 2009; Pierangelo & Giuliani, 2008), various degrees of verbal persuasion received by students, type of activities/tasks in which the students are engaged (Klassen & Lynch, 2007), academic procrastination, and low levels of emotional intelligence (Hen & Goroshit, 2014).

Research Question 3a-b

With regard for the capacity of learning disability status to predict student perceived self-efficacy for the seven CPSE subscales (Self-Efficacy for Academic Achievement, Self-Efficacy for Self-Regulated Learning, Self-Efficacy for Leisure and Extracurricular Activities, Self-Regulatory Efficacy to Resist Peer Pressure, Perceived Self-Efficacy to Meet Others' Expectations, Perceived Social Self-Efficacy, and Self-Assertive Efficacy) while controlling for gender, results varied. For Grade 3, with the exception of the Perceived Self-Efficacy to Meet Others' Expectations subscale, significant portions of the variance of each of the subscales were accounted for by disability status. For Grade 4, disability status accounted for significant portions of the variance in all seven subscales. For Grade 5, with the exception of the Self-Efficacy for Academic Achievement, Perceived Self-Efficacy to Meet Others' Expectations, and the Perceived Social Self-Efficacy subscales, significant portions of the variance of each of the subscales were accounted for by disability status. Results also varied with regard to the capacity of learning disability status to predict student perceived self-efficacy for the three overall CPSE scales (Overall Perceived Academic Efficacy, Overall Perceived Social Efficacy, and Overall Perceived Self-Regulatory Efficacy). For Grade 3, disability status accounted for significant portions of the variance of Overall Perceived Academic Efficacy and Overall Perceived Social Self-Efficacy. For Grade 4, significant portions of the variance of each of the three scales were accounted for by disability status independent of the effect of gender. For Grade 5, disability status independently accounted for small but statistically significant portions of the variance for all three scale scores.

Although little research is available on the capacity of disability status to predict levels of self-efficacy, it is likely that these varied outcomes are the result of a variety of factors associated with levels of self-efficacy in students with learning disabilities, including inappropriate attribution of factors of success (Baird et al., 2009; Pierangelo & Giuliani, 2008), various degrees of verbal persuasion received by students, type of activities/tasks in which the students are engaged (Klassen & Lynch, 2007), academic procrastination, and low levels of emotional intelligence (Hen & Goroshit, 2014). In addition, although the effect size was small ($r = .20$), Baird et al. (2009) did find that learning disability predicted academic self-efficacy among sixth through twelfth graders.

For all three grades, gender did not independently account for significant portions of the variance of any of the subscales; however, it did account for a small but significant portion of the variance of Overall Perceived Self-Regulatory Efficacy for Grade 4 and a small but significant portion of the variance of Overall Perceived Academic Efficacy for Grade 5. Although the literature has indicated that gender may be related to academic outcomes (Carr et al., 2008; Fryer & Levitt, 2009; Hansen & Jones, 2011; Logan & Johnson, 2011; Lynn & Mikk, 2009; NCES, 2012, 2013; Robinson & Lubienski, 2011), no research was available regarding the relationship between gender and the capacity of disability status to predict levels of self-efficacy. However, Klassen and Lynch (2007) did find that among students with learning disabilities, male students tended to express higher levels of confidence in nonacademic activities, while female students tended to express higher levels of confidence with regard to academic activities. Why the relationships between gender and self-efficacy in this predictive model were inconsistent across grades and with regard to the various subscales and scales is inexplicable.

Implications for Social Change

Results of this study indicated that, in general, when compared to students without learning disabilities, students with learning disabilities had lower levels of self-efficacy than students without learning disabilities. In addition, overall, student disability status was a predictor of self-efficacy. These results have implications for social change through their potential to prompt both general and special education teachers to *engage* students with learning disabilities in activities and promote student behaviors that can improve these students' levels of self-efficacy in a variety of subjects and extra-curricular activities. Also, general and special education teachers (as well as parents and members of the community) might *interact* with students in new ways that promote improved levels of student self-efficacy. I provide suggestions for new approaches to engage and interact with students to promote greater self-efficacy of students under Recommendations for Action.

The literature has shown that self-efficacy is related to student outcomes (Weiser & Riggio, 2010), which can have far-reaching social and economic consequences for students, their families, schools, communities, and society as a whole” (Thurlow & Johnson, 2011, p. 15). Positive social outcomes of improved levels of student self-efficacy and academic outcomes may result in (a) increased employment and income, decreased engagement in activities resulting in incarceration, and improved overall quality of life for students with learning disabilities and (b) decreased economic strain at the local and national levels.

Recommendations for Action

Based on the results of this study, I recommend that immediate action be taken to implement strategies to improve levels of student self-efficacy for students with learning disabilities in particular, although it is likely that all students might benefit from these implemented strategies. First, teachers could provide more opportunities for students to be successful in the classroom with assignments or class activities. Because students tend to be more self-efficacious in subjects and activities that interest them (Baird et al., 2009), teachers should consider each students' unique needs in this regard. Achieving success would serve as mastery experiences for students, thereby contributing to improved levels of self-efficacy. Second teachers should increase the amount of verbal praise they give students and avoid calling undue attention to students with learning disabilities. According to Baird et al. (2009), students with learning disabilities felt more confident when they received praise but felt self-conscious when teachers made a point of asking them if they needed help. Understanding how students feel with regard to student/teacher interactions and acting in a manner that will promote levels of self-efficacy for students with learning disabilities may in fact lead to improved levels of self-efficacy for these students with learning disabilities. Third, school administrators should arrange a time for students with learning disabilities to meet with one another and share their success stories. This opportunity might provide students with the chance to encounter positive vicarious experiences upon which students may reflect, thereby improving their own levels of self-efficacy. Fourth, school administrators should develop a program to reach out to parents and the community to raise awareness about the importance of student self-efficacy to their academic and social outcomes. By involving

parents and the community, students will receive support from various sources and, potentially, at various times throughout the day. The increase in exposure to positive support systems throughout a student's day likely would increase the chances that students' levels of self-efficacy could be improved.

Recommendations for Further Study

Based on the results of this study, I have recommendations for further study. First, because the sample population was relatively small and cannot be generalized to the larger population, I suggest that a study on self-efficacy among students with learning disabilities be conducted with a larger sample that might be representative of all students with disabilities in the state in which the focus school is located. Additionally, it would be beneficial to conduct a study at the national level as well. Second, I suggest further studies be conducted with students of various ages. My study was delimited to students in Grades 3-5. However, because cognitive and emotional maturity may play a part in levels of student self-efficacy and because cognitive and emotional maturity is age dependent, students of different ages may demonstrate different levels of self-efficacy and thus require varied levels of interventions to support improvements in their levels of self-efficacy. Second, because socioeconomic factors and family dynamics may contribute to student achievement, I recommend that the variables be considered with regard to the relationship between student disability status and levels of self-efficacy. Understanding how these factors contribute to students' levels of self-efficacy could be helpful to teachers and administrators implementing interventions to promote self-efficacy among students with learning disabilities. Finally, it would be beneficial to understand what strategies for increasing students' levels of self-efficacy are effective. By doing so,

teachers and administrators could make informed decisions about how best to approach the challenge of improving levels of self-efficacy for students with disabilities.

Conclusion

Results of this study indicated that, overall, students with learning disabilities were less self-efficacious than their peers without learning disabilities. Research has indicated that students who are more self-efficacious fair better academically and socially in comparison to students who are less self-efficacious. Students who are more successful academically and socially, are more likely to become productive members of society who may enjoy a quality of life associated with academic and social achievement. For these reasons, it is critical that teachers and administrators recognize the potential they hold to improve levels of self-efficacy for students with learning disabilities and that they take immediate action to do so.

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Appendix A: Bandura's Children's Perceived Self-Efficacy (CPSE) scale

This questionnaire is designed to help me understand the kinds of things that students find difficult to do. Please circle the number on the scale that best matches how certain you are that you can do each of the things described below. Your answers will be kept strictly confidential and you will not be identified by name. It is important that you answer the questions honestly.

| Self-Efficacy for Academic Achievement | | | Cannot do at all | | | Moderately can do | | | Highly certain can do |
|--|---|---|------------------|---|---|-------------------|---|--|-----------------------|
| 1. How well can you learn general mathematics? | 1 | 2 | | 3 | 4 | | 5 | | |
| 2. How well can you learn geography? | 1 | 2 | | 3 | 4 | | 5 | | |
| 3. How well can you learn science? | 1 | 2 | | 3 | 4 | | 5 | | |
| 4. How well can you learn English literature? | 1 | 2 | | 3 | 4 | | 5 | | |
| 5. How well can you learn English grammar? | 1 | 2 | | 3 | 4 | | 5 | | |
| 6. How well can you learn history? | 1 | 2 | | 3 | 4 | | 5 | | |
| 7. How well can you learn foreign languages? | 1 | 2 | | 3 | 4 | | 5 | | |
| Self-Efficacy for Self-Regulated Learning | | | | | | | | | |
| 8. How well can you finish homework assignments by deadlines? | 1 | 2 | | 3 | 4 | | 5 | | |
| 9. How well can you study when there are other interesting things to do? | 1 | 2 | | 3 | 4 | | 5 | | |
| 10. How well can you concentrate on school subjects? | 1 | 2 | | 3 | 4 | | 5 | | |

| | | | | | |
|--|---|---|---|---|---|
| 11. How well can you take class notes of class instruction? | 1 | 2 | 3 | 4 | 5 |
| 12. How well can you use the library to get information for class assignments? | 1 | 2 | 3 | 4 | 5 |
| 13. How well can you organize your schoolwork? | 1 | 2 | 3 | 4 | 5 |
| 14. How well can you plan your schoolwork? | 1 | 2 | 3 | 4 | 5 |
| 15. How well can you remember information presented in class and textbooks? | 1 | 2 | 3 | 4 | 5 |
| 16. How well can you arrange a place to study without distractions? | 1 | 2 | 3 | 4 | 5 |
| 17. How well can you get yourself to do school work? | 1 | 2 | 3 | 4 | 5 |
| 18. How well can you participate in class discussions? | 1 | 2 | 3 | 4 | 5 |
| Self-Efficacy for Leisure and Extracurricular Activities | | | | | |
| 19. How well can you learn sport skills? | 1 | 2 | 3 | 4 | 5 |
| 20. How well can you learn regular physical education activities? | 1 | 2 | 3 | 4 | 5 |
| 21. How well can you learn the skills needed for team sports (for example basketball, volleyball, swimming, football, soccer)? | 1 | 2 | 3 | 4 | 5 |

Self-Regulatory Efficacy to Resist Peer Pressure

| | | | | | |
|--|---|---|---|---|---|
| 22. How well can you resist peer pressure to do things in school that can get you in trouble? | 1 | 2 | 3 | 4 | 5 |
| 23. How well can you stop yourself from skipping school when you feel bored or upset? | 1 | 2 | 3 | 4 | 5 |
| 24. How well can you resist peer pressure to smoke cigarettes? | 1 | 2 | 3 | 4 | 5 |
| 25. How well can you resist peer pressure to drink beer, wine, or liquor? | 1 | 2 | 3 | 4 | 5 |
| 26. How well can you stand firm to someone who is asking to do something unreasonable or inconvenient? | 1 | 2 | 3 | 4 | 5 |

Self-Efficacy to Meet Others' Expectations

| | | | | | |
|---|---|---|---|---|---|
| 27. How well can you live up to what your parents expect of you? | 1 | 2 | 3 | 4 | 5 |
| 28. How well can you live up to what your teachers expect of you? | 1 | 2 | 3 | 4 | 5 |
| 29. How well can you live up to what your peers expect of you? | 1 | 2 | 3 | 4 | 5 |
| 30. How well can you live up to what you expect of yourself? | 1 | 2 | 3 | 4 | 5 |

Social Self-Efficacy

| | | | | | |
|--|---|---|---|---|---|
| 31. How well can you make and keep female friends? | 1 | 2 | 3 | 4 | 5 |
| 32. How well can you make and keep male friends? | 1 | 2 | 3 | 4 | 5 |

33. How well can you carry on conversations with others? 1 2 3 4 5

34. How well can you work in a group? 1 2 3 4 5

Self-Assertive Efficacy

35. How well can you express your opinions when other classmates disagree with you? 1 2 3 4 5

36. How well can you stand up for yourself when you feel you are being treated unfairly? 1 2 3 4 5

37. How well can you deal with situations where others are annoying you or hurting your feelings? 1 2 3 4 5

*******Important*******

When you are finished with this survey, please give it to your parent or guardian who will put it in an envelope for you. Please bring the envelope to the main office of your school and put it in the box labeled *Self-efficacy Survey*. Thank you.

*******Important*******

Appendix B: Permission to Use Instrument

From: **Albert Bandura** <bandura@stanford.edu>
Date: Wed, Feb 12, 2014 at 3:51 PM
Subject: RE: Permission to use instrument
To: Irene Aikhomu <aikhomuirene@gmail.com>
Cc: concetta pastorelli <concetta.pastorelli@uniroma1.it>

You have permission to use the requested self-efficacy scales.

All good wishes for success in your research.

Albert Bandura

From: Irene Aikhomu [mailto:aikhomuirene@gmail.com]
Sent: Monday, February 03, 2014 8:46 AM
To: albertob@stanford.edu
Subject: Permission to use instrument

Good morning Dr. Bandura,

I am an EdD student at Walden University and would like to use your Children's Perceived Efficacy Scale in my study to measure self-efficacy in students with learning disabilities. It would be ideal if I could access your 1990 unpublished manuscript *Multidimensional scales of perceived academic efficacy* from Stanford University, although I can access the information from this article if I need to:

Pastorelli, C., Caprara, G. V., Barbaranelli, C., Rola, J., Rozsa, S., & Bandura, A. (2001). The structure of children's perceived self-efficacy: A cross-national study. *European Journal of Psychological Assessment, 17*(2), 87-97. doi:10.1027//1015-5759.17.2.87

In either case, I still need your permission to use the instrument. I hope you are willing to grant me that permission.

I look forward to your response.

Sincerely,

Irene Aikhomu

Appendix C: Letter of Request to School District (With Draft Letter of Cooperation)

[REDACTED]
Director, Research & Evaluation
[REDACTED]

September 8, 2014
[REDACTED]

My name is Irene Aikhomu, and I am a special education teacher in the [REDACTED] Public School system. I am currently a doctoral student at Walden University and am conducting a study: "A Correlation Study of Self-Efficacy Among Students With and Without Learning Disabilities." Previous research has indicated that self-efficacy can influence student outcomes. For this reason, my primary goal is to uncover data that may inform the district with regard to possible means of improving students' levels of academic success through improvement of students' levels of perceived self-efficacy.

To achieve that goal, the purpose of this study is to (a) describe the students in Grades 3-5 in the focus schools with regard to levels of perceived self-efficacy and (b) determine whether the self-perceptions of students with learning disabilities differ from those of students without learning disabilities and whether learning disability status and gender are predictors of perceived self-efficacy.

I am seeking your permission to distribute recruitment packets (invitation to participate in the study, parental consent form, student assent form, survey, reply envelope), participation reminders letters, and a summary of the study results at three district schools [REDACTED] and to collect student responses in the same locations. Participation in this study will be voluntary and no compensation will be provided.

The intended data collection process:

1. Procure Walden University Institutional Review Board approval to conduct research.
2. Procure permission to conduct research from the [REDACTED] Public School system.
3. Send courtesy letters to school principals of study sites indicating intent to distribute to students the recruitment packets, participation reminders, and summary of results and to collect responses at the schools (locked drop box provided).
4. Send courtesy letters to teachers at study sites.
5. Distribute recruitment packets to students via teachers (i.e., implement the survey).
 - a. Instrument: Bandura's Children's Perceived Self-Efficacy Scale (37-items, 5-point scale)
 - b. Examples of the survey questions are

- How well can you learn general mathematics?
 - How well can you learn sport skills?
 - How well can you live up to what your parents expect of you?
- c. Parents will provide information about students' grade level, gender, and type of disability.
6. Distribute participation reminders 1 week after distributing the recruitment packets.
 7. After data analysis and upon completion of the study and final approval from Walden University, disseminate results via email to the district and participant schools and via hard copy letter to parents distributed to students by teachers on my behalf.

Thank you for considering my request to conduct my research in the [REDACTED] Public School system. I also have completed the proper IRB application for the district. Should you have questions, I may be reached by email at irene.aikhomu@waldenu.edu or by phone at 440-784-1964. For your convenience, I have attached a draft letter of cooperation you may edit and use as it suits your needs.

Sincerely,

Irene Aikhomu
[REDACTED]

Letter of Cooperation from Community Partner: Draft

Dear Irene Aikhomu,

Based on my review of the information you provided about your research study “A Correlation Study of Self-Efficacy Among Students With and Without Learning Disabilities,” I give you permission to conduct your study in three [REDACTED] public schools: [REDACTED]

As part of this study, I authorize you to distribute to students at their respective schools recruitment packets (invitation to participate in the study, parental consent form, student assent form, survey, and reply envelope), participation reminders, and a summary of the study results upon completion of the study.

I understand that (a) participation in this study is voluntary, (b) all collected personal student data will be kept confidential, and (c) you will share your completed results with the school system and individual principals and provide a summary of results to parents.

I confirm that I am authorized to approve research in this setting.

Sincerely,

Appendix D: Courtesy Letter to School Principals of Participating Schools

Dear Principal,

My name is Irene Aikhomu, and I am a special education teacher in the [REDACTED] Public School system and a doctoral student at Walden University. I have received permission from [REDACTED] Director of Research & Evaluation for the [REDACTED] School System, to conduct my study “A Correlation Study of Self-Efficacy Among Students With and Without Learning Disabilities” at your school.

In particular, I have received permission to distribute study recruitment packets (invitation to participate in the study, parental consent form, student assent form, survey, and reply envelope), study participation reminders, and a summary of study results at your school via teachers.

I appreciate your support of my research and will contact you shortly to make arrangements for distributing the recruitment packets. Should you have immediate questions, I may be reached by email at irene.aikhomu@waldenu.edu or by phone at 440-784-1964.

Sincerely,

Irene Aikhomu

Appendix E: Courtesy Letter to Teachers of Participating Schools

Dear Teacher,

My name is Irene Aikhomu, and I am a special education teacher in the [REDACTED] Public School system and a doctoral student at Walden University. I have received permission from [REDACTED] Director of Research & Evaluation for the [REDACTED] School System, to conduct my study on levels of student self-efficacy in your school.

On my behalf, please distribute these recruitment packets to your homeroom students. In 1 week, I will deliver to you a reminder letter. On my behalf, please distribute these letters to your homeroom students as well. Thank you for your help.

Sincerely,

Irene Aikhomu

Appendix F: Parent Consent Form

Parent Consent Form

Your child is being invited to take part in a research study of students in Grades 3-5. This study is being conducted by Irene E. Aikhomu, a doctoral candidate at Walden University. The researcher is also a special education teacher in one of the schools within the school district. No participants will be recruited from the researcher's school.

Participant Selection: Your child was selected as a possible participant in this study because he or she is a student in Grade 3, 4, or 5 in one of the three participating schools in the [REDACTED] School District.

Purpose of the Study: The purpose of this study is to describe all students in Grades 3-5 in the participating schools with regard to how they view their capability to accomplish tasks (levels of perceived self-efficacy) and to explore (a) whether elementary students with learning disabilities view their capability to accomplish tasks differently from than students without learning disabilities and (b) whether learning disability or gender can be used to predict how capable students perceive themselves to be.

Procedures for Parents:

Please read through the survey questions before deciding whether or not allow your child to participate in this study. If your child needs help to read, understand, or in any other way complete the survey, you agree to help your child accordingly. If you do not believe your child will be able to complete the survey without assistance and you are unable to provide assistance for any reason, you agree not to allow your child to participate in this study.

If you agree that your child may participate in this study, you will be asked to provide information about your child's grade level, gender, and disability status if applicable. You will be asked to sign this parent consent form and secure it with the completed survey in the envelope provided in the packet.

Please keep the additional enclosed blank consent form for your records.

Procedures for Student Participants:

Your child will be asked to complete a survey called the Children's Perceived Self-Efficacy scale. Although student completion times may vary, the researcher anticipates that most students will complete the survey between 30 and 60 minutes. Your child will be asked to deposit the envelope containing the signed parent consent form and the survey into the collection box in the main office of his or her school. The box will be labeled *Self-efficacy Survey*.

Examples of Survey Questions:

- How well can you learn general mathematics?

- How well can you learn sport skills?
- How well can you live up to what your parents expect of you?

Voluntary Nature of the Study: Your child's participation in this study is strictly voluntary. You may decide at any time to withdraw your child from this study. Your child also may make the decision to withdraw at any time. Neither you nor your child will be penalized for refusing to participate in this study or withdrawing from this study. There will be no compensation for participating in this study.

Risks and Benefits of Being in the Study: There is minimal risk associated with participation in this study. When completing the survey, your child should not feel any different than when he or she answers questions on worksheets in his or her classes. There are no immediate benefits of participating in this study. Long term benefits of participation in this study include increased knowledge about the effects of learning disabilities and gender on students' levels of self-efficacy—knowledge that could be used to promote the teaching of self-efficacy skills to students, skills that may support improved academic success for students in general and for students with learning disabilities in particular.

Confidentiality: Data collected during this study will be kept confidential. The researcher only will use collected data for the purposes of this research study, and all data will be kept in a locked cabinet in the researcher's home for 5 years after which time the researcher will destroy the data. Any published results will not include personal participant data.

Contacts and Questions: This form is part of a process called *informed consent* that ensures you understand the details about this study before deciding whether or not your child can take part. You may ask any questions you have now by contacting the researcher, Irene Aikhomu, by email at irene.aikhomu@waldenu.edu or by phone at 440-784-1964. If you have questions after the study is complete, you may contact the researcher or the researcher's dissertation chair, Dr. David Hernandez, by email at david.hernandez@waldenu.edu or by phone at 949-293-1506. If you have any questions or concerns regarding your rights as a participant in this study, you may contact the Institutional Review Board (IRB) at Walden University by emailing irb@waldenu.edu or calling 1-800-925-3368, ext. 3121210.

A summary of the results of this study will be provided to you. The researcher will deliver the results to students who originally were invited to participate in the study. The results will be addressed to you, the parent or guardian of each child. If you have additional questions about the study results, you may contact the researcher by phone at 440-784-1964 or by email at irene.aikhomu@waldenu.edu.

Statement of Consent: I have read the above information and have received answers to any questions I asked. I consent to my child's participation in this study.

Participant's name _____

Parent/guardian's signature _____ Date _____

Parent/guardian's name (printed) _____

This consent form was approved by the IRB on [future date].

**Important:
Please answer questions on next page.**

Student Information: Please identify the following information related to your child. This information will help the researcher group your child with other students who have similar characteristics. Please circle the response(s) that are most appropriate.

- | | | | |
|--|-------------|---------------|----------|
| 1. My child is in Grade . . . | 3 | 4 | 5 |
| 2. My child is . . . | Male | Female | |
| 3. My child has been identified as having one of the learning disabilities listed below: | Yes | No | |
| <p>(a) Dyscalculia (struggles with arithmetic facts, counting objects, and aligning numbers in columns)</p> <p>(b) Dyspraxia (struggles with language or with planning and completing single or multistep fine motor tasks)</p> <p>(c) Dyslexia (struggles with word recognition, reading comprehension, and spelling)</p> <p>(d) Dysgraphia (struggles with poor handwriting and putting one's thoughts on paper)</p> <p>(e) Executive functioning (struggles to plan, organize, problem solve, pay attention to details, remember details, and manage time)</p> | | | |
| 4. My child has a physical disability or an emotional, psychological, or behavioral disorder such as | Yes | No | |
| <p>(a) Attention deficit disorder</p> <p>(b) Attention deficit hyperactivity disorder</p> <p>(c) Passive-aggressive personality disorder</p> <p>(d) Social anxiety disorder</p> <p>(e) Post-traumatic stress disorder</p> <p>(f) REM sleep behavior disorder</p> <p>(g) Borderline personality disorder</p> <p>(h) Oppositional defiant disorder</p> <p>(i) Intermittent explosive disorder</p> <p>(j) Reactive attachment disorder</p> | | | |

Appendix G: Student Assent Form

Student Assent Form

Hello, my name is Irene Aikhomu, and I am doing a research project to learn how you feel about the things you can do. I would like you to join my project because you are a 3rd, 4th, or 5th grade student in the [REDACTED] School System.

You have been given this form because your parent or guardian has given permission for you to participate. Now I want you to learn about the project before you decide if you want to be in it. Please read this form with a parent or guardian.

Who I Am: I am a student at Walden University. I am working on my doctoral degree. I also teach in a school in the school district, but I do not teach in your school.

About the Project: If you agree to be in this project, you will be asked to fill out a survey which will take you between 30 and 60 minutes to complete.

Here are some examples of the type of survey questions you will be asked:

- How well can you learn general mathematics?
- How well can you learn sport skills?
- How well can you live up to what your parents expect of you?

It's Your Choice: You don't have to be in this project if you don't want to. You will not get into trouble if you do not participate in this study. If you decide now that you want to join the project, you can still change your mind later. If you want to stop, you can.

Being in this project shouldn't make you feel any different than you do when you answer questions on worksheets in your other classes. You will not be given anything for being in this study, but by taking this survey, you might help others by helping me figure out ways the school can help students believe in themselves and maybe do better in school.

Privacy: Everything you tell me during this project will be kept private. That means that no one else will know your name or what answers you gave.

Asking Questions: You can ask me any questions you want now. Your parents may contact me by email at irene.aikhomu@waldenu.edu or by phone at 440-784-1964. If you think of a question later, your parents can contact me then. If you or your parents would like to ask my university a question, you can call Dr. Leilani Endicott. Her phone number is 1-800-925-3368, ext. 3121210.

This form is yours to keep.

| | |
|-------------------------|-------------------------|
| Researcher's name: | Irene Aikhomu |
| Researcher's signature: | <i>Irene E. Aikhomu</i> |
| Date: | 2014. 06. 06 |

Appendix H: Invitation to Participate in the Study

Do different types of students feel differently about their ability to accomplish tasks?

Does gender or having learning disability affect that belief in their ability?



Your child can help answer these important questions!

- By completing a simple survey, your child can help schools learn how students feel about themselves and potentially how they can better succeed in school.
- This packet contains a parent consent form, a participant (child) assent form, a survey, and a return envelope. Please read the parent consent form and read the student assent form with your child before allowing your child to complete the survey.
- Thank you for considering participating in this important project. Please have your child return the completed parent consent form and survey to the main office of your child's school. A return envelope has been provided for you.

Appendix I: Reminder Letter to Parents

Dear Parent:

My name is Irene E. Aikhomu. I am a doctoral candidate at Walden University and also a special education teacher in one of the schools within the school district. About a week ago, I gave your child a packet of information addressed to you. In it was an invitation to allow your child to take part in a research study of student-perceived self-efficacy among students in Grades 3-5. If your child has completed the survey, thank you. If your child has not already completed the survey, I hope you will consider allowing him or her to complete the survey now and return it and the signed parent consent form to the main office of his or her school in the envelope I provided in the packet.

Sincerely,

Irene Aikhomu

irene.aikhomu@waldenu.edu

Phone: 440-784-1964

Curriculum Vita

IRENE E. AIKHOMU

EXPERIENCE

- 2006-Present Special Education Teacher
[REDACTED] Public Schools, Georgia
- 2004-2006 Paraprofessional
Nesbit Elementary School (GCPS), Tucker, GA

EDUCATION

- 2007-2014 EdD in Teacher Leadership
Walden University
- 2004-2005 Certification Classes
Kennesaw State University, Kennesaw, GA.
- 1986-1988 M.Ed., Guidance Counseling
University of Maiduguri, Nigeria
- 1982-1984 B. Ed., English Language
University of Maiduguri, Nigeria
- 1978-1982 National Certificate of Education
(English Language Arts/History)
Ahmadu Bello University, Zaria, Nigeria.

CERTIFICATIONS

Interrelated Special Education (Language Arts Cognitive Level), K-12, 2006
Georgia Professional Standards Commission

SP ED General Curriculum Consultative, P-12, 2006
Georgia Professional Standards Commission