CONSTRUCTING AN EFFECTIVE MEASUREMENT TOOL TO ASSESS THE SELF-EFFICACY OF PRESERVICE TEACHERS FOR TEACHING STUDENTS WITH DISABILITIES

A Thesis

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By

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ABSTRACT

Many changes have been made in education policy throughout the last two decades, particularly in the area of special education. With new legislature in place including No Child Left Behind, teachers are faced with a variety of difficult challenges, such as meeting AYP\(^1\) and preparing students for tests on an annual basis, doing so with fewer dollars at their disposal, more students per classroom, and increased expectations for professional development. Many teachers enter the field unaware of the nature of the demands that have been placed on them. Students enter the field of teaching at the college level with many idealistic notions of what they are going to be able to accomplish, and occasionally are disappointed when they are faced with reality.

One of the areas that has endured the greatest shift in policy and in practice is the education of students with disabilities. The process of educating students with disabilities has shifted across the spectrum- from the fight for rights to education in the 70s to inclusion in the 00s, the issue of students with special needs in the general education classroom has been hotly debated. Teachers today are expected to support and facilitate inclusion when they arrive to their first classroom, however many new

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\(^1\) AYP= Adequate Yearly Progress. A term used in legislature to describe the level of achievement that students should be acquiring each school year.
teachers do not know what the term means or what implications it has for their career.

The ability of teachers to carry out the tasks that teaching requires is imperative to the success of teaching and student achievement. This study addresses one of the most basic issues regarding this ability. Teachers’ perceived efficacy to complete the tasks they are required to do is known as teacher self-efficacy, and plays a critical role in the formation of teacher beliefs and also for the outcomes of their work. This study seeks to create a scale to effectively measure teacher self-efficacy for teaching students with disabilities. The Teaching Students with Disabilities Efficacy Scale (TSDES) contains 14 items specifically written to measure these beliefs. The scale was administered to 245 students of education at a large Midwestern university along with the Teacher Self-Efficacy Scale (TSES) created by Tschannen-Moran and Woolfolk Hoy (2001).

Results reveal important findings for special education and teacher education. First, preservice teachers do not conceptualize teaching in the same ways as inservice teachers. Instead of conceptualizing the different aspects of teaching, results indicate that preservice teachers consider all teaching tasks to be the same general construct. This reveals a naivety on the part of preservice teachers regarding the true nature of teaching. Teacher education programs should address this. Additionally, preservice teacher efficacy for teaching students with disabilities is significantly lower than preservice teacher efficacy for teaching the general population. Finally, the
construction of the TSDES was found to be reliable and valid, indicating that the scale is an accurate and helpful tool for the measurement of teacher efficacy for teaching students with disabilities.
For Barb, because without you I would not be here.
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# TABLE OF CONTENTS

Abstract .................................................................................................................................. iii  
Dedication ................................................................................................................................. vi  
Acknowledgements ................................................................................................................ vii  
Vita ........................................................................................................................................ viii  
List of Tables ........................................................................................................................... xii  
List of Figures ........................................................................................................................ xiii  

Chapters:

1. Introduction ......................................................................................................................... 1  
The History of Special Education Policy in the United States ........................................... 3  
The Importance of Special Education Policy ..................................................................... 4  
Disillusionment in Special Education ............................................................................... 6  
Teachers in Special Education ............................................................................................ 8  
Limitations of the Current Research .................................................................................. 9  
Purpose of the Study and Research Questions .................................................................. 10  

List of Terms ......................................................................................................................... 12  

2. Literature Review ............................................................................................................... 16  
Introduction ........................................................................................................................... 16  
Self-Efficacy in the Literature ............................................................................................. 17  
Four Processes in Self-Efficacy: Bandura’s Theory Continued ....................................... 18  
  Cognitive Processes ........................................................................................................... 19  
  Motivational Processes .................................................................................................... 20  
  Affective Processes .......................................................................................................... 21  

viii
Selection Processes ................................................. 22
Four Sources of Self-Efficacy ........................................... 22
Mastery Experiences .................................................. 23
  Self-knowledge structures ............................................ 24
  Task difficulty .......................................................... 25
  Effort Expenditure ....................................................... 25
  Self-monitoring .......................................................... 26
  Attainment trajectories ............................................... 27
Vicarious Experiences ................................................... 27
  Modeling ................................................................. 28
  Performance and Attribute Similarity ............................... 30
  Diversity in Modeling, Coping, and Model Competence .......... 31
Verbal Persuasion ......................................................... 32
Physiological and Affective States ................................. 33
Teacher Efficacy in the Literature ................................. 33
  Teacher Efficacy: A Definition ..................................... 34
  Personal Teaching Efficacy ......................................... 35
  General Teaching Efficacy ........................................... 36
The Importance of Teaching Self-Efficacy in Education Research ........................................... 38
Assessing Teacher Efficacy: How Do You Measure This? ................. 40
Teaching Students with Disabilities .................................. 44
Efficacy Among Teachers and Preservice Teachers ...................... 48
Purpose ............................................................... 50

3. Methods ............................................................ 53
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teaching Students with Disabilities Efficacy Scale</td>
<td>98</td>
</tr>
<tr>
<td>Descriptive Statistics</td>
<td></td>
</tr>
<tr>
<td>2. Teacher Self-Efficacy Scale Factor Analysis</td>
<td>101</td>
</tr>
<tr>
<td>Principle Axis Factoring</td>
<td></td>
</tr>
<tr>
<td>3. Teaching Students with Disabilities Efficacy Scale</td>
<td>102</td>
</tr>
<tr>
<td>Factor Analysis Principle Axis Factoring</td>
<td></td>
</tr>
<tr>
<td>4. Teacher Self-Efficacy Scale and</td>
<td>103</td>
</tr>
<tr>
<td>Teaching Students with Disabilities Efficacy Scale</td>
<td></td>
</tr>
<tr>
<td>Correlation Table</td>
<td></td>
</tr>
<tr>
<td>5. Teacher Self-Efficacy Scale and</td>
<td>104</td>
</tr>
<tr>
<td>Teaching Students with Disabilities Efficacy Scale</td>
<td></td>
</tr>
<tr>
<td>Paired Sample Correlations Table</td>
<td></td>
</tr>
<tr>
<td>6. Teacher Self-Efficacy Scale and</td>
<td>105</td>
</tr>
<tr>
<td>Teacher Self-Efficacy Scale for Disabilities</td>
<td></td>
</tr>
<tr>
<td>Paired Sample Statistics, Descriptive Statistics</td>
<td></td>
</tr>
<tr>
<td>7. One Sample t-test</td>
<td>106</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Model of the Formation and Influence of Perceived Collective Efficacy in Schools</td>
<td>37</td>
</tr>
<tr>
<td>2. Original instrument Teaching Students with Disabilities Efficacy Scale</td>
<td>92</td>
</tr>
<tr>
<td>3. Second construction of the Teaching Students with Disabilities Efficacy Scale</td>
<td>94</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

The focus of this study is on the beliefs of teachers about working with children with disabilities. I begin with a reflection on my experiences with these students and the path I have followed to address the questions in this study.

Many special education teachers select their field as a result of life experiences involving individuals with disabilities. For some, a sibling or other family member with a disability has framed their life experience, leading to a decision to enter a career where they may help others in similar situations. For others, a personal disability has shaped their decision to enter the field. Personal experience leads many to a career involving individuals with disabilities. My experience was slightly different.

Throughout my life, and childhood, the question of what I wanted to do when I grew up was never clear. Many factors contributed to my circumstances, and it was not clear if I would have the opportunity to attend college. However, I was fortunate enough to receive support, financial and emotional, from my loving grandparents. They afforded me the chance to do anything I wanted to, and as I
matured it became clear to me that research in the area of psychology was the path I desired most.

It was clear to me that a career in any area of psychology would require a doctorate, and although the opportunity to earn a college education was granted to me by my grandparents, I could not be sure that graduate school was realistic for me. At that time, I decided to pursue a Bachelor’s degree in a field that I knew I could rely on in the event that I would not be attending graduate school. Education was the natural choice; my grandparents and several other family members were educators, and the life of a teacher was one that was familiar and comfortable. I was sure that I could become a teacher if my dream of going to graduate school was not realized. I decided to follow in the footsteps of my grandmother and become a social studies teacher.

While pursuing the first year of my education at the local community college, I worked part time as a teacher’s assistant in a special education preschool classroom. I was assigned to work with one student with special needs, unique special needs, as his paraprofessional. He was a three-year old boy with cerebral palsy, deafness, blindness, and was unable to eat or speak. He was born prematurely and spent the first year of his life in an incubator. His disabilities were incredibly challenging to me as his specialist, his teacher, parents, and other service providers. At first my emotions kept me from really getting to know this child, as I did not know how to handle his specific needs, and his behaviors were
unfamiliar to me. However, before long this child won my heart, and the progress that I witnessed with him was emotionally moving enough to cause me to change my major to special education.

The four years that followed that experience were filled with moments of difficulty, challenge, fulfillment, and wonder. I began to feel the need to seek answers to many of the questions of parents and teachers who work with these students, about the policies the government implements regarding this unique population, how they affected families and students on a personal level, how teachers who work with special education students were different from teachers who work with the general population. It became clear to me as my undergraduate education began to wrap up that I wanted to find answers to these questions, that my skills would be best suited in an environment that allowed me to pursue these important issues in special education.

The History of Special Education Policy in the United States

Public Law 94-142 is well known among the special education community as the Individuals with Disabilities Education Act\(^2\). This law was born out of the Civil Rights movement in the middle of the twentieth century. The impetus for this law began with families of students with disabilities challenging the schools in courts across the country over their child’s rights to equal opportunity in the schools. The early 1970s marked a shift in the way the courts and policymakers

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\(^2\) The Individuals with Disabilities Education Act is also known as IDEA, or alternatively, Individuals with Disabilities Education Improvement Act, or IDEIA.
thought about students with disabilities, as cases began to be decided in favor of students with disabilities. In spite of this, there was still no constitutional basis for special education law (Itkonen, 2007).

That all changed in 1975, when on November 29, President Ford signed Public Law 94-142 into law (Itkonen, 2007, p. 10). This was known as the Education for All Handicapped Children Act. With the Education for All Handicapped Children Act came terms like Least Restrictive Environment, Free and Appropriate Education for All, and inclusion. According to this law, students with disabilities are to be educated in the “Least Restrictive Environment” in order to provide the most appropriate education possible. The Least Restrictive Environment is left open to interpretation, contributing to debate surrounding the meaning of the law for some students (Conner & Ferri, 2007; Itkonen, 2007).

The Importance of Special Education Policy

Inclusion is a controversial topic in the United States’ education system dating back to the early 1990s and before. When asked if they knew what “inclusion” meant, the vast majority of pre-service teachers in an undergraduate psychology class did not know the answer. The answer, of course, is that in the American classroom teachers are educating students of all levels of ability; students of general education and special education now occupy a single classroom, and it is the teacher’s responsibility to tend to the educational and behavioral needs of every student in that class. Pre-service teachers’ lack of
understanding of what is to be expected of them ought to awaken policymakers and university officials to the need that is permeating the education “industry.”

Today, in spite of the fact that inclusion has been part of the process of education in the United States for some time, there is still much controversy surrounding the issue of students with disabilities in the general education classroom. Many general education teachers feel that special educators should work in the general education classroom, but only with “their” students, often secluded in the corner of the classroom or some other out-of-the-way arrangement. Many teachers in general education classrooms do not know when intervention is needed or why, leaving the special educator to manage all of the tasks involved in providing intervention services. Additionally, teachers perceive special educators as disruptive and anti-collaborative due to the need for constant intervention with these students. Many teachers feel the students with disabilities are not their students and therefore do not take ownership of them or their learning (Lopes, Monteiro, & Sil, 2004).

Along with these issues, the dynamic policies often implemented and then changed leads to frustration among teachers. Teachers feel policies that are put into place are not in touch with reality, created by policymakers and bureaucrats who do not have any teaching experience, or at least no recent teaching experience. Many teachers deal with this by relying on the belief that the new
policies will expire just as quickly as the old ones did, and therefore no real change needs to happen (Lopes, Monteiro, & Sil, 2004).

There is an obvious need for collaboration between general and special educators, and this practice needs to begin in the teacher preparation program. Schools will continue to struggle with the gap in communication between these teachers as long as the gap in the general teacher and special education teaching preparation programs are completely segregated in the schools. Students of education, i.e., preservice teachers, should be educated about teaching in an environment that is conducive to collaboration and team building between general and special educators from the very first education course (Itkonen, 2007).

Disillusionment in Special Education

The issue of where to educate students with disabilities is a hot one in the field of education. Parents, teachers, administrators, special service providers, and the students themselves all have a say in the decision of whether to educate the special education student in the general education classroom or in the secluded classroom. As Conner notes, many general education teachers are unprepared to teach the special needs student. Some teachers’ understanding of inclusion simply means allowing students with special needs to share the air and space in the classroom (Conner & Ferri, 2007, p. 72). These conceptions are fundamentally flawed, as Conner et al. point out: “Thus, simply allowing students to be present and visible is not the same as promoting interaction or integration.
Anything short of full and meaningful participation, which will require fundamental changes in general education, violates the principles of inclusion” (Conner & Ferri, 2007, p. 72).

Special education suffers from enough complications without adding issues of funding or convenience. To add insult to injury, many school districts have been utilizing inclusion (incorrectly) as a cost-cutting practice, because the cost of special education is so much greater than general education (Conner & Ferri, 2007, p. 72). Using inclusion in this way may prove to have unintended consequences as the outcomes of this kind of practice may ultimately cost society more than investing the proper resources and effort into the right method of educating students with disabilities.

Other difficulties include high stakes testing for students with disabilities. Standards-based policy initiatives require all students to take and pass high stakes tests including those with disabilities. The effects of testing on students with disabilities include the extra challenge of meeting proficient levels and added stress levels the testing brings these students. Also, testing for students with disabilities can be considered high stakes- higher than the tests are for their general education peers. Failure on the part of the students with disabilities leads to poor reflection on the school, adding to the stress these students already manage on a daily basis (Katsiyannis, Zhang, Ryan, & Jones, 2007).
Disciplining students with disabilities is challenging due to the laws regarding due process for these students. Students with disabilities are entitled to additional due process because of the protection that laws like IDEA and Section 504 provide them. It is very difficult, for example, to remove a student with disabilities by suspension for more than ten (10) days. If a student requires discipline in the form of removal for more than that amount of time, the student’s IEP team must meet to discuss goals and best placement options. The student must be able to receive services and progress toward educational goals even when removed from the school setting (Yell & Rozalski, 2008).

Teachers in Special Education

Teaching has survived these drastic changes in recent decades, although many of the best practices discussed in research have not come to fruition. As this introduction has stated, teachers lack understanding of how to best serve the special education population and their preparation programs have done little to foster understanding. Without a deep knowledge of special education students and their needs, and how teachers can meet them, teachers are unprepared to take on the workload that is required of them in the field. This is unfair to these teachers, to the students, and families of all the students in the classroom.

While most teachers claim to support inclusion, they are not as willing to work with students with disabilities in their classrooms. They do not feel it is

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3 Section 504 is the Vocational and Rehabilitation Act.
4 Individualized Education Plan.
their responsibility, they are not prepared, or they lack efficacy to complete the
task (Boling, 2007). Preservice teachers may change their beliefs about inclusion.
Ways to promote understanding and acceptance of inclusion include fostering
engaging conversations about inclusion during education preparation coursework,
watching other teachers deal effectively with inclusion, and redefining the
perception about the roles of teachers. Cueing into the emotional side of
preservice teachers may also engage them in meaningful reflection about
inclusion, fostering the change in beliefs that is necessary to improve the
performance of teachers working with students with disabilities (Boling, 2007).

Limitations of the Current Research

Currently, the research on teaching students with disabilities focuses
heavily on outcomes for students. It is clear from the literature that teachers who
do not have the skills to deal with students with disabilities refer students to
special education more often, have higher levels of teacher burnout, and spend
less time working one on one with students, utilizing critical instructional
strategies (Almog & Shechtman, 2007; Brownell & Pajares, 1999; Conner &
Ferri, 2007; Egyed & Short, 2006; Lopes, Monteiro, Sil, Rutherford, & Quinn,
2004; Mastropieri & Scruggs, 2007; Meijer & Foster, 1988; Plourde, 2002; Pruitt
& Miller, 2003; Romi & Leyser, 2006; Soodak & Podell, 1994; Tournaki &
Podell, 2005).
These findings are critical to the understanding of the current problem, however they do not inherently solve the problem. The research in this area offers little on solutions to the current problem. In order to address the issue of general education teachers and special educations students, work must begin to address the issues of promoting understanding of the learning needs of these students, behavioral management strategies, collaboration skills, and more. Many contributions to research in this area talk critically about the problem, the beliefs of teachers, how the discrepancies contribute to the problem, and how students with disabilities suffer because of it. However, very few contributions offer any solutions.

Purpose of the Study and Research Questions

In order to solve the problems of special education, it is important to have an understanding of the needs of general educators. General educators must receive information that is helpful during their preservice education training. The purpose of this study was to construct a scale to measure the efficacy for teaching students with disabilities among general educators. The secondary purpose of this study was to then administer the scale among preservice teachers to determine how their efficacy for teaching students with disabilities differed from their efficacy for teaching students within the general student population.

Specific research questions address the construction of an instrument to measure the efficacy of teachers or preservice teachers for teaching students with
disabilities. How do preservice teachers conceptualize teaching students with
disabilities? Do they have similar levels of efficacy for teaching this population
that they do for teaching in the general population? How can efficacy for
teaching students with disabilities be improved?
List of Terms

**Accommodations**- The actual teaching supports and services that the student may require to successfully demonstrate learning. Accommodations should not change expectations to the curriculum grade levels.

**AYP**- Adequate Yearly Progress. A term used in legislation to refer to the amount of progress that schools should be making regarding student achievement each year. Falling short of AYP could mean loss of funding or intervention.

**FAPE**- Free and Appropriate Education. Provided by IDEA, all students with disabilities and without are entitled to this according to the law.

**General Teaching Efficacy (GTE)**- Teachers’ beliefs about the effectiveness of education.

**IDEA**- Individuals with Disabilities Education Act. Sometimes known as the Individuals with Disabilities Education Improvement Act (IDEIA). The law that outlines rights and regulations for students with disabilities in the U.S. who require special education. Signed into law in 1975 as the Education for All Handicapped Children Act.
**IEP-** Individualized Education Program. A detailed description of the educational goals, assessment methods, behavioral management plan, and educational performance of a student requiring special education services. Written by the support team, usually consisting of the teacher, special education teacher, family, and other support such as speech and language pathologists, psychologists, administrators, etc.

**Inclusion-** Special education term used to describe the delivery model used to education students with disabilities in the general education classroom as much as possible. Support services are brought to the student in the general education classroom, instead of removing the student for services.

**Inservice Teacher-** A currently practicing teacher in a general or special education classroom.

**LRE-** Least Restrictive Environment. A term used in special education and related laws to describe the legally protected rights of students with disabilities to be educated in the environment that is most inclusive.

**Personal Teaching Efficacy (PTE)**- Teachers’ beliefs about their ability to teach. Differs from General Teaching Efficacy, which is the teacher’s belief in the effectiveness of teaching.

**Preservice Teacher**- A student enrolled in a college teacher education program. These students may have experience in the classroom, however most do not. They have studied education and formulated opinions about the issues in education.

**Section 504**- Part of the U.S. Rehabilitation Act of 1973, Section 504 prohibits discrimination of a person with disabilities from any organization or program receiving federal funds.

**Self-Efficacy**- beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments.
**Teacher Efficacy** - A term adapted from Bandura’s Social Cognitive Theory used to describe the beliefs that teachers hold regarding their ability to complete a teaching task.
CHAPTER 2
LITERATURE REVIEW

Introduction

Policy regarding special education students has undergone great changes over the last three decades. Reflecting the values of society these policies have become increasingly inclusive; that is, as society slowly begins to grow more accepting of individuals’ with disabilities, so schools are beginning to change their practices to reflect these values.

As these changes occur they require shifts in paradigmatic thinking for teachers, students, administrators, and of course, policymakers. Often policies are passed in legislature that requires schools and teachers to operate outside of their comfort zone. Recent evidence of this lies with the No Child Left Behind act of 2001, which requires teachers to regularly invest in higher education and base student success from standardized test scores.

Regarding special education, the Individual’s with Disabilities in Education Act (IDEA) pushed the envelope for schools and teachers by requiring that all students be educated in the Least Restrictive Environment (Woolfolk, 2006). This requirement changed the norm for many teachers, most of whom had
never experienced teaching the student with special needs. Teachers who had never considered teaching special education were now being required to teach these students in their classrooms along with the general classroom population.

This occurrence raised many interesting questions for researchers. Do teachers who did not anticipate teaching this population have the capacity for the work? Do the students of special education receive fair treatment among the general classroom? Does the situation benefit everyone?

One question raised, and explored in this project, concerns teachers’ self-perceived abilities to teach this population. Do teachers believe they can effectively teach students of special education? Albert Bandura’s Social Cognitive Theory was used to form the framework for this research, specifically self-efficacy theory. Self-efficacy is defined and used to explore teachers’ beliefs about their ability to teach students with disabilities, one of the many critical questions concerned with special education.

Self-Efficacy in the Literature

Albert Bandura, a renowned social-cognitive researcher and theorist in the area of self-efficacy, lays the foundation for recent work in teacher efficacy. According to Bandura, the definition of self-efficacy is “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations” (1995, p. 2). People hold beliefs about their capabilities to execute courses of action for all kinds of tasks: nursing, teaching, playing
basketball, baking, driving a car. These beliefs are important because they have been found to have a profound effect on outcomes; that is, one’s self-efficacy for a situation can, essentially, change the result of that situation (citation needed).

Experiences and their outcomes help to shape these cognitive processes and beliefs. It is important to note that self-efficacy does not concern itself with the actual skills a person possesses that are related to a task, but rather the individual’s beliefs about their ability to complete the task (Bandura, 1997, 37).

This is different from other fields of research, such as the medical field, which uses efficacy to describe how well a medication does what it is intended to do. Tschannen-Moran, Woolfolk Hoy, and Hoy note “self-efficacy has to do with self-perception of competence rather than actual levels of competence” (1998, p. 211).

Four Processes in Self-Efficacy: Bandura’s Theory Continued

The social-cognitive perspective of Bandura provides a rich theoretical framework from which researchers can ground their work. Earlier work in self-efficacy focused on several primary influences: cognitive processes, motivational processes, affective processes, and selection processes (Bandura, 1993, p. 118). These four processes have deep and lasting effects on individuals’ feelings, thoughts, motivation, and behaviors. The four are described in detail below.
Cognitive Processes

The first of these, the cognitive process, involve a person’s self-efficacy and its ability to shape thought processes regarding tasks. Visualizing success on tasks, even if they are challenging, is an attribute of those with high self-efficacy (Bandura, 1993, p. 118). However, persons with low self-efficacy visualize failure and tend to dwell on all the possible things that might go wrong, leading to an increased likelihood for failure.

Additionally, one’s perspective on ability has been shown to have an affect on self-efficacy. There are typically two ways to conceptualize ability: as stable or unstable. Those who view ability as stable, or unchanging, with limited capacity, tend to seek out tasks that are going to yield a lesser chance for error and view challenges as threatening to their intelligence. Doing this allows the individual to believe they have a greater chance for success. According to a study by Bandura (1993), viewing ability as inherent and unchanging resulted in a quick drop in self-efficacy, ultimately leading to a drop in performance by the entire group that was associated with these individuals (p.121).

Individuals who view ability as an unstable characteristic that is attainable and flexible do not attribute successes or failures to their level of ability, but rather to the level of effort that was exerted. These individuals seek challenging tasks and perceive them as opportunities to extend their ability. Bandura’s study reveals that individuals who perceive ability as changeable and fluid promoted
higher self-efficacy and persistence in the face of difficulty (Bandura, 1993, p. 121). Essentially, these individuals are not facing the possibility in their own mind that their ability is not at the level they would want it to be.

Motivational Processes

Motivation to accomplish a task is strongly related to one’s belief in their ability to succeed at the given task. The likelihood that a person will persevere at a task, even if it is very challenging, is influenced by the level of desire the person has for accomplishing that task. Another way to think about this is “How bad do you want it?” as the popular phrase is heard among certain circles. According to Bandura, there are three distinct cognitive processes that interact with motivation: causal attributions (from which attribution theory is drawn), outcome expectancies (expectancy-value theory), and cognized goals (goal theory). Each of these motivational theories includes self-efficacy and its ability to increase or decrease motivation.

Attribution theory speculates that people with higher levels of self-efficacy tend to believe their failures are due a lack of effort instead of believing their failures are due to a lack of intelligence or ability. Alternatively, those with low levels of self-efficacy tend to believe their failures are due to a lack of intelligence. The tendency to attribute failure to ability or effort is what ultimately affects motivation, as well as performance, and affective reactions (Bandura, 1993, p. 128).
Expectancy-value theory focuses on the outcomes that one expects to attain after completing a task. Motivation is higher in individuals with higher levels of self-efficacy, because of their belief in the likelihood of success. Individuals who have low levels of self-efficacy tend to avoid tasks that appear challenging, ultimately avoiding potential failure (Bandura, 1993, p. 130; 1997, p. 39). Motivation and self-efficacy are intimately related to results or consequences.

*Affective Processes*

Individuals engaged in this cognitive process of assigning meaning to their abilities and gauging success or failure are simultaneously experiencing affective reactions, or emotional reactions, to these processes. Affective, or emotional reactions, are directly tied to self-efficacy due to the value a person places on the task and its meaning. In addition to the level of motivation one will possess for a task, and the level of efficacy, the level of depression, emotion, stress, and coping are also being affected (Bandura, 1993, p. 132). Individuals with lower levels of self-efficacy experience higher levels of stress, disturbing thought patterns, and lower coping abilities. Threats become magnified and worry increases. This, according to Bandura, leads to distress and impaired functioning (p. 133). Higher levels of self-efficacy for coping with threatening situations leads to further increases in self-efficacy, ultimately lowering negative reactions to potentially threatening situations, and increased coping efficacy (134).
Selection Processes

Individuals inherently accept challenges they know they can handle and avoid ones they believe are out of their range of ability. Choices people make are typically a direct result of their successes or failures on previous challenges. Quite simply, people are more likely to try things they are successful with. People who have high self-efficacy are more likely to try things they are not initially successful with, due to their beliefs about their ability. This leads to various interests, competencies, and even social networks that take people down different roads for the duration of their lives (Bandura, 1993, p. 135, 1997, p. 36). Career choice is a relevant example; those who have higher levels of self-efficacy in math tend to choose coursework that involves complex mathematics more often than those who have lower levels of self-efficacy. This may lead to career choices that involve math, such as medicine or engineering.

Relative to teaching, selection is relevant to this field because of the nature of individual’s beliefs in their abilities to teach students with disabilities. Prospective teachers with higher levels of efficacy for teaching students with disabilities may be more likely to select special education as a career choice; prospective teachers with lower levels of efficacy may choose not to enter special education for the same reason.
Four Sources of Self-Efficacy

In addition to the four processes explained above, there are also four known sources of self-efficacy (Bandura, 1997, p. 79-115). These are the mastery experience, the vicarious experience, verbal persuasion, and physiological and affective responses (Bandura, 1997, p. 39; Tschannen-Moran et al., 1998, p. 211). Information is incorporated into the cognitive process via one of these forms of experience.

*Mastery Experiences*

Mastery experiences are the most influential of the sources of self-efficacy. Mastery experiences are genuine in that the individual actually experiences the act and receives immediate feedback on a personal level, which is more powerful than vicarious or other experience. It is a primary source of efficacy. Successful completion of a task increases efficacy, while failure at a task decreases it (Bandura, 1997, p. 80).

Repeated successes tend to promote efficacy, making it more difficult for a failure to result in immediate lowering of self-efficacy (Bandura, 1997, p. 80). In the same manner, repeated failures tend to lower self-efficacy. However, these events are not the only factors in determining if an individual’s efficacy will increase or decrease following a performance. Other factors are also critical to this, such as self-knowledge structures, task difficulty, and effort expenditure.
Self-monitoring and attainment trajectories are also important, according to Bandura (Bandura, 1997, pp. 80-85).

*Self-knowledge structures.* Bandura describes the self-knowledge structure as a pre-existing network of beliefs about tasks and also beliefs about the nature of one’s self that contribute to the attributions one will make about their ability to perform. Self-efficacy beliefs, he says, both form and are formed by self-efficacy beliefs, and they perpetuate themselves in a rich, complex weave of beliefs and thought processes that are based on the individual’s previous experience and they way they view the world (Bandura, 1997, pp. 80-82). Like scaffolds, individuals build networks of experiences that form and structure efficacy throughout their lives.

These structures are formed through previous experiences. They also contribute to the likelihood that a person will choose one given task over another. For example, someone who is inclined to have high levels of self-efficacy for sports is more likely to encounter opportunities to test their efficacy for sports because they seek these opportunities more often than someone who is not likely to engage in athletic activity.

Interestingly, individuals can be persuaded to increase their efficacy beliefs even if their behavior does not support the process. A person can experience a failure on a task, but be told verbally that they were successful, and through a “cognitive self-persuasion” process actually increase their self-efficacy.
This phenomenon gives support to one of the following sources of self-efficacy: verbal persuasion.

*Task difficulty.* A person’s efficacy for a task depends largely on the difficulty of the task. A person will not experience as great a shift in efficacy if the task is quite easy, and will experience a great shift in efficacy if the task is quite difficult (Bandura, 1997, p. 83). The more difficult the task, the more likely it is to include many levels of functioning, making it surprisingly complex for individuals who may not have anticipated all of the contingent possibilities. This can actually lower self-efficacy.

Coping skills are critical to this as well. Individuals with more, better, or higher coping skills are more likely to be successful at gauging the difficulty of a task, and therefore more accurate in their assessment of whether or not they can accomplish the task. Additionally, a person may gauge the difficulty of the task by comparing the task to the relative population’s rate of success rather than considering their own skills, leading to differences in perceived self-efficacy for that task (Bandura, 1997, p. 83). People determine if they are capable of the task by comparing it to other tasks that are similar to it that they are familiar with.

*Effort expenditure.* The level of effort one puts into the task also influences self-efficacy. Effort expenditure impacts the level of self-efficacy one has for a task by altering the assumptions one has about their ability. One’s beliefs about whether effort enhances ability or compensates for lack of ability
will affect self-efficacy as well. Effort that is expended on difficult tasks may indicate lower ability, and therefore cause efficacy to lower (Bandura, 1997, p. 84). Individuals who do not perform well on tasks they also do not expend any effort on cannot determine if they have high or low ability, which will not impact efficacy in either direction. Often, people will intentionally put no effort into a task out of fear of potentially revealing a perceived lack of ability.

Attribution theory arises out of this issue, looking closely at the relationship between ability and effort. Internal factors contributing to self-efficacy, according to attribution theory, are ability and effort. Ability is stable, meaning that it does not change over time, while effort is unstable, meaning the individual has control over it. Ability is also known as intelligence, and living in a society that values intelligence as an attribute, individuals can be sensitive to the perceived possession or lack of intelligence. External factors are task difficulty and luck. Task difficulty is regarded as stable, while luck is regarded as unstable.

Regarding effort, self-efficacious individuals tend to view successes and failures as due to effort rather than ability, while individuals who lack self-efficacy tend to view their successes and failures to their ability (Bandura, 1997, p. 85). Effort plays a larger role in self-efficacious individual’s schema, and ability tends to be of less importance. When these people do not perform as well as they had hoped, they will roll up their sleeves and dig in, ready to invest more effort.
**Self-monitoring.** Factors such as emotionality, attention, and physical states also play a role in the self-efficacy process. A person of healthy emotional functioning is more likely to focus on successes over failures, ultimately affecting their future self-efficacy. Focusing on failures tends to cause underestimation in future self-efficacy processes (p. 86). Those individuals with lower efficacy dwell on failures more intensely than those with higher levels of efficacy.

**Attainment trajectories.** The acquisition of skills is much easier at the beginning of the process of learning a new task than at the end of the process. This means that a person who is new to a task will gain related skills at the outset much more quickly than a person who has already mastered the basic skills and is at a stage of refinement (Bandura, 1997, p. 86). Experiencing a “plateau” in progress can negatively affect efficacy and ultimately cause investment in the task to drop (86). This phenomenon is well known in the weight loss community. One of the most well-known difficulties in the weight loss process occurs when the individual hits a plateau.

**Vicarious Experiences**

The second source of self-efficacy is through vicarious experience. This is essentially gaining efficacy or losing efficacy for a task by observing another person as they attempt it. Watching a person complete a task involves the observer on a cognitive and affective, or emotional level. Observers intimately involved in the task that the model is completing will take on responsibility for
the outcome, essentially, by investing thought and emotion into the process. This is a form of learning. The person completing the task provides a model for the individual to use. In addition, there are some tasks that are regarded from a normative standpoint: that is, they must be referenced against the population in order to know if they are high or low, good or bad. One example of these is standardized tests.

Vicarious experiences are social in nature, and naturally individuals who believe they have performed well in comparison to their peers will experience an increase in self-efficacy. The same is true of the alternative: individuals who believe they have performed poorly in relation to their peers will likely experience a drop in self-efficacy (Bandura, 1997, p. 87). It is critical to note that those whom individuals compare their selves to are similar to them. Individuals who are excessively different in skill are not good comparisons, and not likely to have as great an effect on self-efficacy (87). A person will not have the same level of investment, emotionally, if they are learning a task from another person with great skill, because they will not perceive that person as someone from whom they could compare themselves to.

*Modeling.* When an individual sees a peer complete a task successfully, and the task is judged to be one that is attainable by the individual, that individual will most likely experience a rise in his or her own self-efficacy (Bandura, 1997, p. 87). Modeling behavior or tasks for others is important to self-efficacy, but
only if the person doing the modeling is similar to the individual observing the modeling. As noted above, if the model and the observer are drastically different, the effect is much less critical.

Observational learning is discussed in length by Bandura within the context of Social Comparison Theory (Bandura, 1997, p. 89). There are four processes central to this theory: attentional processes, retention processes, production processes, and motivational processes (89). These four processes are central to the experience of modeling and vicarious self-efficacy, and although social comparison theory has lost some authority among social psychologists, it still provides a glimpse into the process of observational learning.

Attentional processes determine what an individual will ultimately choose to pay attention to. Choosing to pay attention to an event is the first and foremost factor in observational learning. Individuals’ previous experience and values contribute to this process and help determine what an individual will decide to pay attention to. Things that are not important to a person or have little value are likely to be filtered out from the memory, prohibiting the event from being selected and retained in the memory (Bandura, 1997, p. 90).

Retention processes utilize the memory as the machine that will transform observations into meaning and store those memories in the brain. Closely related to attentional processes, retention processes involve coding and recall committing the information to memory. Like most memory functions, memory is enhanced
with cognitive rehearsal and behaviors are easier to remember than scripts (Bandura, 1997, p. 90).

In production processes, meaning is assigned to memories and converted into behaviors. Comparisons are then made and the behaviors are modified to suit the needs of the individual. The production process focuses on aligning the behavior with the cognitive perception, essentially trying to match what the individual thinks should happen with what the individual does (Bandura, 1997, p. 90).

Lastly, the motivational processes determine if the behavior is worth learning to the individual. Behaviors that result in unpleasant or unwanted consequences are less likely to be repeated or learned, and like the behavior itself, individuals learn if the behavior is worthwhile to them by observing the consequences undertaken by the model. Values participate in this process as well, as some people may find a particular behavior satisfying while others find it dissatisfying.

Performance and Attribute Similarity. Similarity, as noted previously, is very important in determining the level of efficacy for one’s self. Similarity in the types of performance and also the similarity in personal characteristics, or attributes, play critical roles in the process. People tend to judge others past performance or characteristics to help them determine if they themselves are capable of the task. The level of similarity between the model and the individual
can have a substantial effect on the individual’s perceived self-efficacy, and therefore, performance. Individuals use this information continually, in part because it is almost always available to them, whether or not they seek it out (Bandura, 1997, p. 97-98).

Personal characteristics, or attributes, are so powerful they can influence an individual’s perceived self-efficacy greatly. These characteristics include sex, age, fitness level, socioeconomic status, race, and more. These characteristics are not necessarily good determinants of success on a task, but preconceived notions also known as stereotypes are quite influential. Of these attributes, Bandura notes that age and gender are some of the most powerful (p. 98).

*Diversity in Modeling, Coping, and Model Competence.* Observational learning is also affected by the amount of models available to them. In other words, the more observations a person can make, with more models, the more likely the modeling is to be influential to the individual’s perceived self-efficacy. One modeling experience is not as influential as repeated ones.

Along with this, individuals who are less confident about their ability may benefit from watching their model overcome difficulty while completing the task. This may be more beneficial to the individual than watching a model that can complete the task with ease, as it shows the individual that persistent effort does pay off. Observing a model that has doubts or struggles with a task is influential to the individual who also has shaky confidence (Bandura, 1997, p. 99).
Verbal Persuasion

Listening to other’s who express their faith in an individual’s ability is the third source of self-efficacy (Bandura, 1997, p. 101). Although verbal encouragement may not be sufficient to increase perceived self-efficacy alone, it can improve self-efficacy in conjunction with other sources of self-efficacy (101). For this reason, Bandura states, “persuasory efficacy attributions, therefore, have their greatest impact on people who have some reason to believe that they can produce effects through their actions” (101).

The potential effect of verbal persuasion is greatest at the early stages of task performance, or skill development (102). This is the time that perceived self-efficacy is most impacted. In addition, consequences that are immediate will enhance the value of the verbal persuasion more so than consequences that are delayed or pertain to the future in some way (102).

Listening to others verbal persuasion is only effective if it is accurate and well-intended (Bandura, 1997, p. 104). Although some individual’s attempts to increase one’s self-efficacy through verbal encouragement are well intended, it may also be selfishly motivated, an attempt to compliment someone, manipulate, or may be inaccurate altogether. These kinds of verbal persuasion are not beneficial, and Bandura notes that verbal persuasion with the intention of increasing self-efficacy should be measured according to the credibility of the individual responsible for the persuasion (104).
Physiological and Affective States

The last of the four sources of self-efficacy is known as physiological and affective states. This is essentially receiving feedback about one’s performance from the body or mind according to the mood or physical condition at the given time (Bandura, 1997, p. 106). This includes stress reactions, pain, fatigue, and depression that can all affect the self-efficacy belief.

Cognitively, individuals all experience some level of likelihood to dwell on a situation, whether it is good or bad (107). The tendency to depend on physiological and affective states in making self-efficacy judgments is related to the individual’s tendency to look inward at their sensory experiences or physical state, or outward to external factors (107). Bandura offers a good example of this: “speakers who ascribe their sweating to physical discomfort of the room read their physiology quite differently from those who view it as distress reflecting personal failings” (Bandura, 1997, p. 107).

Stress responses and physiological states can be good for the development of perceived self-efficacy. A moderate amount of arousal, but not high, enhances the alertness and functioning of the individual, resulting in a higher likelihood of success and therefore increased self-efficacy. Along similar lines, low self-efficacy can cause an individual to focus intently on their physiological responses, possibly increasing distrust in one’s own coping skills (Bandura, 1997, p. 109).
Teacher Efficacy in the Literature

With the basics of Albert Bandura’s Social Cognitive Theory, specifically Self-Efficacy Theory understood, research on Teacher Self-Efficacy can move forward. As the literature states, teacher self-efficacy has a direct effect on student achievement, which is ultimately what all research in education seeks to improve. Research on teacher efficacy began in the 1960s with Rotter’s work at RAND, and has continued since then (Tschannen-Moran, Woolfolk Hoy, and Hoy, 1998).

Teacher Efficacy: A Definition

Researchers have sought to define teacher efficacy, and done so based off of the RAND work and also Bandura’s Social Cognitive Theory. One definition of teacher efficacy is closely related to self-efficacy and Bandura, describing teacher efficacy as “a cognitive process in which people construct beliefs about their capacity to perform at a given level of attainment” (Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 203). Another definition by Ross et al. describes it as “an individual teachers’ expectation that he or she will be able to bring about student learning” (Ross, Cousins, Gadalla, 1996, p. 386). Ultimately, the meanings are similar: how much does a teacher believe they can effectively complete the tasks that teaching requires, so that students acquire the skills required for student learning?
Personal Teaching Efficacy

There is an important distinction to note from the literature on teacher efficacy. It also is based in Bandura’s work, and notes a significant and empirical difference between personal teaching efficacy (PTE)\(^5\) and general teaching efficacy (GTE)\(^6\). The difference between these two constructs is great. Gibson and Dembo first note these separate constructs in their 1984 article. In this research they sought to define teacher efficacy and discover its dimensions, resulting in the two factors.

The first of these two factors, Personal Teaching Efficacy (PTE) refers to teachers’ beliefs about their own ability to complete the tasks necessary to promote student achievement. It does not consider the many other factors that contribute to student achievement such as family life, aptitude, or motivation. PTE “reflects the teachers’ sense of personal responsibility in student learning and/or behavior and corresponds to Bandura’s self-efficacy dimension” (Gibson & Dembo, 1984, p. 573). This construct focuses only on the teachers’ belief about their abilities, regardless of external factors or forces.

Hoy and Woolfolk contribute to the understanding of personal and general teaching efficacy as it relates to school organization. Personal teaching efficacy (PTE) is influenced greatly by teachers’ personal attributes. One of the greatest predictors of personal teaching efficacy is the level of education attained by the

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\(^5\) Personal Teaching Efficacy will be referred to as PTE.
\(^6\) General Teaching Efficacy will be referred to as GTE.
teacher. Additionally, Hoy and Woolfolk found that the organizational structure of the school played a critical role in the development of PTE. Specifically, when teachers perceived other teachers as likely to set high goals, be organized, and dedicated to academic excellence, they were more likely to have higher PTE (Hoy & Woolfolk, 1993, p. 365).

Tschannen-Moran, Woolfolk Hoy, and Hoy found similar constructs in their research on teacher efficacy. Self-perceptions of teaching competence align closely with personal teaching efficacy, as an inward-focused efficacy judgment. However, Tschannen-Moran et al. are careful to note the difference between PTE and self-efficacy (Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 232). The difference lies in the present versus future situations. The tendency to estimate ability on tasks in the future is more accurately defined as efficacy, while some measures of teaching efficacy often blurs the two into one construct (Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 232).

General Teaching Efficacy

General teaching efficacy (GTE) is different from PTE. While PTE focuses on the individuals’ beliefs that they can complete the tasks necessary to initiate learning, GTE is the belief that teaching itself can initiate learning. Gibson and Dembo describe this as “the belief that any teacher’s ability to bring about change is limited by factors external to the teacher” (1984, p. 574). Gibson & Dembo relate general teaching efficacy to outcome expectancy (Hoy &

The distinction between the two types of efficacy is important because they are so drastically different. It is one thing to believe in one’s ability to teach; it is another to believe in the power of teaching. A teacher can clearly have high personal teaching efficacy and low general teaching efficacy, and vice versa. The factors that contribute to each of these forms of efficacy are different as well. As noted by Hoy and Woolfolk: “factors that nurture personal teaching efficacy seem likely to have limited effects on general teaching efficacy and vice versa” (Hoy & Woolfolk, 1993, p. 368).

Principal influence and academic emphasis appear to be two factors related to personal teaching efficacy (Hoy & Woolfolk, 1993, p. 365). Those that contribute to general teaching efficacy appear to be more affective, notably integrity and morale. These differences reflect core factors that are inherently dissimilar, suggesting that the very nature of the two constructs differ (p. 386).

Closely related to GTE is the “analysis of the teaching task” as noted by Tschannen-Moran et al. (1998). It is not, however, the same. Analysis of the teaching task differs from general teaching efficacy in subtle ways, most notably in the way the teacher perceives the influence of the home life on student...
achievement. The shift in beliefs for first year teachers also contributes to these differences (Erdem & Demirel, 2008, p. 575; Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 232). As Figure 1 shows, self-efficacy is cyclical, where outcome performances serve as a source of feedback for self-efficacy. At that point, analysis and interpretation, specifically analysis and assessment of the teaching task and teaching competence influence the perceived sense of teaching efficacy, leading to a result such as higher goals, effort expenditure, or resilience. These traits influence the next performance outcome, and the cycle repeats itself.

![Figure 1. Model of the Formation and Influence of Perceived Collective Efficacy in Schools (Hoy et al. 2001)](image)

The Importance of Teaching Self-Efficacy in Education Research

With the distinction between personal teaching efficacy and general teaching efficacy understood, it is important to consider the implications that
personal teaching efficacy has for student outcomes and teacher satisfaction. Teacher efficacy has been found to have effects on many areas of education and outcomes. Research on the effect of teacher efficacy has far-reaching implications, ranging from student progress to teacher burnout, and many areas in between.

Teacher efficacy has affects issues in classroom management, goal setting, and motivation. Having a higher level of self-efficacy also encourages teachers to experiment with new teaching methods, as if providing a sense of security or bravery in the classroom. Teachers with higher levels of self-efficacy also have a tendency to be less critical of their students and more supportive, both instructionally and emotionally, are more enthusiastic, and have more commitment to the field than other teachers (Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 223; Ashton & Webb, 1986; Gibson & Dembo, 1984, p. 578). Notable for the purposes of this study, teachers with higher levels of self-efficacy for teaching were less likely to refer students to special education services, likely due to the findings of the other researchers; that is, these teachers were more likely to spend time with students with disabilities instead of giving up (Meijer & Foster, 1988). Teachers with higher levels of efficacy also utilize better instructional and assessment strategies (Allinder, 1995, pp. 247-255).

Self-efficacy is central to the motivation of teachers. Teachers are critical to the success of students; therefore a society needs motivated teachers if it is to
have successful students. Self-efficacy contributes to a teacher’s desire to stay in the field or leave due to burnout. Self-efficacy can help determine if a teacher will persevere in the face of difficulty or give up. Self-efficacy also helps to determine if a teacher will try a new strategy with a student who did not grasp the concept the first time around, or rely on old strategies that s/he may find more comfortable. These are not small distinctions— they have a lasting impact on the education system and on individual students, and their academic progress.

Woolfolk et al. found that efficacy in teaching is related to the motivation of students and the management of classrooms (Woolfolk, Rosoff, & Hoy, 1990, p. 146). The relationship between control and autonomy is critical to the healthy development of teacher efficacy, as noted by Woolfolk. Interestingly, teacher efficacy may be improved in public schools if teachers adopt a slightly more controlling classroom environment. This type of control is more likely to promote autonomy in a public school. However, in a private school, the teacher is more likely to promote autonomy with their students by relinquishing classroom control more so than a public school teacher. The increased autonomy of the students will result in an increased sense of efficacy for the teacher (Woolfolk, Rosoff, & Hoy, 1990).

Assessing Teacher Efficacy: How Do You Measure This?

Previous attempts at constructing scales for measuring teacher efficacy have found two primary factors from which efficacy seems to be constructed.
These two factors have brought about attention from researchers, who argue the meaning of the two factors. Gibson and Dembo argue the two factors are personal teaching efficacy (PTE) and general teaching efficacy (GTE). Personal teaching efficacy and general teaching efficacy differ in their conceptual meaning (Gibson & Dembo, 1984, Hoy & Woolfolk, 1993). General teaching efficacy refers to a teachers’ belief in the effectiveness of teaching, differing from personal teaching efficacy, which is the belief in a teacher’s own ability to complete the tasks required to bring about student learning.

Other research argues the two factors stem from the work of Weiner and more closely resemble the internal and external locus of control constructs of attribution theory. Causal attributions, or the belief that success or failure is due to an internal factor or an external factor, are thought by some researchers to be a more accurate description for the two consistent factors found in most teacher efficacy scales. Guskey & Passaro find that their research more accurately resembles the work of Weiner (1993).

Other constructs used to explain the two factors consistently found on the Teacher Self-Efficacy scale include work by Stein and Wang that credits the two factors on the scale as global and specific conceptualizations, a different conceptualization from personal and general teaching efficacy and from attribution theory (Guskey & Passaro, 1993, p. 640).
The earliest scale to measure efficacy was constructed by RAND in 1976, and consisted of just two items. Item number 1 on the RAND scale: “When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment.” This question clearly targets the construct of general teaching efficacy, as it asks participants to judge their perceptions of teaching rather than their perceptions of their own teaching.

Item number 2 asks participants to focus on their own ability to affect student motivation. “If I try really hard, I can get through to even the most difficult or unmotivated students” (Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 204). This item reflects the personal teaching efficacy construct noted by later researchers. The RAND work was grounded in Rotter’s (1966) work in locus of control theory.

Social cognitive theory formed the groundwork for teacher efficacy after the work of Rotter and RAND. Bandura’s work in efficacy provided the framework for many studies in teacher efficacy and branched off from the earlier works by Ashton and Webb, due to slightly different conceptualization (Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 207).

Gibson and Dembo designed a 30-item scale to measure teacher efficacy called the “Teacher Efficacy Scale.” Based on a 6-point Likert scale, this instrument measured the two primary factors in teacher efficacy for the time:
personal teaching efficacy and general teaching efficacy (Tschannen-Moran, Woolfolk Hoy, Hoy, 1998, p. 209; Gibson & Dembo, 1984). As time passed researchers found that only 16 of the original items loaded consistently onto their respective factors, leading other researchers including Hoy and Woolfolk to trim the scale down and create new scales from it.

The Ohio State Teacher Efficacy Scale\textsuperscript{7} was created in 2001, a collaborative effort between Anita Woolfolk Hoy and several of her graduate students (Tschannen-Moran, Woolfolk Hoy, 2001, p. 796). Several of the items were borrowed from Bandura’s scale and group members contributed several after much discussion and agreement. The scale was based off the Likert-type rating scales and examined for reliability and validity in three separate studies. The first study resulted in the 52-item scale being reduced to 32 items, the second scale reduced the total items to 18, and the third study resulted in an addition of 18 items.

Some debate about the items measuring classroom management efficacy arose, leading Woolfolk to investigate the inclusion of these items on the scale. After this examination, it was determined that classroom management is important and teacher efficacy is related to the success of classroom management, so it was kept (Tschannen-Moran, Woolfolk Hoy, 2001, p. 798). The OSTES was

\textsuperscript{7} The Ohio State Teacher Efficacy Scale is now known as the TSES, or Teacher Self-Efficacy Scale.
ultimately found to be reliable and valid, with high construct validity and factor loadings.

*Teaching Students with Disabilities*

Students with disabilities represent approximately 13.7% of the total student population as of 2004 (National Center for Education Statistics, United States Department of Education). Of these students, 5.8% were labeled as having a “specific learning disability” and 3% were labeled as having a speech or language disorder. The remaining 4.9% were labeled as having mental retardation, autism, emotional disorders, hearing, visual, or orthopedic impairments, and more.

Students with individual differences have not always been accepted in the mainstream classroom in the United States. Not until 1975 was legislature passed that required that “each child with a disability would be guaranteed a free and appropriate education in every state and locality across the nation” (PL 94-142). There were four main purposes of this law, which would later be named the Individuals with Disabilities Act (IDEA). Its purposes were as follows:

- “to assure that all children with disabilities have available to them…a free appropriate public education which emphasizes special education and related services designed to meet their unique needs
- To assure that the rights of children with disabilities and their parents are protected
To assist States and localities to provide for the education of all children with disabilities

To assess and assure the effectiveness of efforts to educate all children with disabilities” (Education for All Handicapped Children’s Act, 1975).

And though students with disabilities were now legally protected and had rights to the same education as the general student population, there were many roadblocks that would stand in the way of students with disabilities receiving their Free and Appropriate Public Education.

Several of these roadblocks have been extensively researched. Students with disabilities in the classroom are facing hurdles of their own, dealing with their disability and trying to overcome the gap in achievement that this state of ability brings. Additionally, these students are faced with general education teachers that are more reluctant to meet their needs than the general population. There are a plethora of possible reasons for this, including the setting these teachers must work in. Many of these teachers do not feel they are equipped with the necessary tools and resources to support the needs of the special education student (Spiridon-Georgios & Touroutoglou, 2007, p. 23).

Lack of tools and resources leads teachers to teach within their comfort zone, which is most frequently the general education curriculum. Often the general education curriculum focuses on whole-class instruction and is integrated,
leaving students with disabilities on the peripheral in the classroom. These practices lead the general education teacher to neglect the task of finding new strategies, using collaborative learning, and teaching learning strategies to the special education population, all of which have been shown to be extremely beneficial to students with disabilities (Spiridon-Georgios & Touroutoglou, 2007, p. 24).

Teachers in the general education classroom tend to rely on the teaching strategies they are most comfortable with. These are the strategies that also promote passive learning for students with disabilities, and are less effective than many other strategies. They include allowing students with disabilities to have extra time, or less homework, or less challenging homework. General education teachers have also been found to rely heavily on special education referrals, essentially passing the challenge on to the special education teacher (Spiridon-Georgios & Touroutoglou, 2007, p. 24; Almog, 2008, p. 51). This essentially relieves the general education teacher of all responsibility for the special education student.

Spiridon-Georgios and Touroutoglou suggest the reason for the tendency for general education teachers to utilize less challenging teaching strategies is due to lower confidence and self-efficacy for teaching than special education teachers. General education teachers are not prepared for the task of teaching students with disabilities in an inclusive setting (Almog, 2008, 51). Teachers’ willingness to
utilize and promote inclusion is challenged by the fast pace of the school day, high-stakes testing, and the amount of time it takes to prepare a differentiated lesson plan, making it difficult for them to complete everything in the time they are allocated (Spiridon-Georgios & Touroutoglou, 2007, p. 35; Almog, 2008, p. 51).

Teachers must deal with more than just students with differences. They must also deal with textbooks that are difficult to use, time constraints, and large amounts of material to teach before the annual testing cycle begins, which shortens the academic year considerably. Often textbooks in high school classrooms are written at the college level, which is tremendously challenging for both students with disabilities and those who are responsible for teaching them (Mastropieri & Scruggs, 2007, p. 89). These challenges add to the overall difficulty of teaching in an inclusive classroom.

Teachers may experience success with the inclusion process if school districts offer information for these teachers in inservice programs. The success of these programs depends on three important pieces of information: the needs of the students with disabilities, the curricular and instructional adaptations needed, and specific behavior management techniques that students with disabilities require. These practices have been shown to increase efficacy for teaching the special education population, and this can lead to more successful inclusion and
persistence to teach these students among the general education teachers (Brownell & Pajares, 1999, p. 154-164).

Efficacy Among Teachers and Preservice Teachers

It is easy to imagine applying the research that has been done on teachers, teacher efficacy, and teaching students with disabilities to student teachers and preservice teachers. Preservice teachers are just teachers in training, after all. However, the literature indicates that preservice teachers hold different beliefs and have varying levels of efficacy for the tasks they are expected to complete. Preservice teachers have fundamentally different beliefs from inservice teachers, for good reasons.

Preservice teachers have shown much higher levels of efficacy for teaching than inservice teachers, raising an interesting point. As Bandura’s theory indicates, mastery experience is one of the four sources of self-efficacy, which preservice teachers do not have. The beliefs of preservice teachers are notoriously optimistic, even pretentious. Many preservice teachers arrogantly, even if innocently, assume their own beliefs happen to be the same as the best beliefs regarding teaching, and that the difficulties of teaching will not affect them. They also assume they will become better teachers than their peers (Pajares, 1992, p. 323).

One specific reason for the inflated beliefs and efficacy of preservice teachers is founded in the work of Lortie in the mid-1970s. The “apprenticeship
of observation” as Lortie calls it accounts for the phenomenon that will likely plague teaching until the end of time. Unlike many career choices such as law or medicine, teaching acquires its employees and experts from education. All students are bred from the classroom. All students begin in a classroom and move to the venue of their future career, such as a courtroom or emergency room. However teachers begin in a classroom and end in the classroom, meaning their understanding of the career of teaching is a product of their experience as a student, regardless of how much “undoing” higher education attempts to complete (Calderhead, 1991, p. 532; Pajares, 1992, p. 323). Students of law and medicine are essentially “blank slates” that the professors of those professions can work with, forming and molding them into the professionals that the field requires. However, students of education are anything but blank slates, leaving the potential for reform in the field of education very difficult or even impossible.

It is during the student teaching experience that many preservice teachers endure a drastic shift in their efficacy for teaching. Student teaching proves to be a negative experience for many preservice teachers, resulting in deterioration in efficacy and confidence (Plourde, 2002, p. 252). The mastery experienced gained during the student teaching period reveals the difficulty and complexity to the preservice teachers. Changing the length of the student teaching experience did not appear to have an affect on this process (Chambers & Hardy, p. 7).

Efficacy differs among teachers when special needs are combined with
other perceived difficulties. Preservice teachers and teachers had higher levels of efficacy for teaching a student with a disability or for teaching a student whose primary language was not English, but their efficacy began to drop if those identities were combined. A possible solution to this is to promote second language skills for preservice teachers during their teacher preparation program, which may promote understanding of different cultures and enhance efficacy for teaching students with disabilities who are not primary English speakers (Paneque & Barbetta, 2006, p. 185).

Preservice teachers also tend to hold negative views regarding individuals with disabilities. This view may be because of a fear of teaching students with disabilities which is likely related to preservice teachers efficacy for teaching this group. As noted in research by Bradshaw and Mundia, “preservice teachers have a difficult time constructing a positive view of disability” (Bradshaw & Mundia, 2005, p. 571). Other contributing factors to these biases may include images from the media, which often portray disabilities in a negative fashion. Without personal experience to draw upon, preservice teachers may only have these kinds of information to form their beliefs about this population.

Purpose

The purpose of this study was to examine the literature regarding preservice teacher’s beliefs about their ability to effectively teach student with disabilities and create a scale to measure the efficacy for this task. This is a
complex process, involving many constructs and dimensions. Grounded in the Social Cognitive Theory, specifically Albert Bandura’s Self-Efficacy Theory, this scale was designed specifically to measure general educators, and more specifically, preservice general educators efficacy for teaching students with disabilities. By measuring this construct, researchers can better predict the perceptions and ultimately the behaviors of classroom teachers, improving the quality of instruction.

There are several components that are critical to the analysis of this research study. The first of these, as mentioned above, is understanding the framework that the study is grounded in, Social Cognitive Theory, specifically Self-Efficacy Theory. Another body of work has been completed on teacher efficacy, also critical to this study. The belief of teachers regarding special education students, working with students with disabilities is the third critical component of this work. Lastly, understanding preservice teachers and their beliefs is proven to be critical to understanding the foundation of research that exists in relation to this study.

Additionally, looking at scale construction in the field of psychology is important, because it is critical to have a working knowledge of the proper statistical processes that will guide this scale construction. The ability to create a scale to measure a psychological construct like self-efficacy depends on sophisticated knowledge of scale construction and quantitative analyses.
Construct validity is crucial to the successful design of any instrument, and will be considered in depth in this study.

The questions to be answered or considered in this study include the following: Do preservice teachers in general teacher preparation programs have lower self-efficacy for teaching students with disabilities than for teaching students of other minority statuses? Is the Preservice Teacher Efficacy Scale valid and reliable? Is the scale constructed sufficiently and aligned with the work of the field previous to it?
CHAPTER 3

METHODS

The purpose of this study was to develop a scale to measure preservice teachers’ sense of efficacy for teaching students with disabilities. Previous scales have been designed to measure teachers’ sense of efficacy in the broader sense (Tschannen-Moran & Woolfolk Hoy, 2001; Gibson & Dembo, 1984). This study sought to create a reliable and valid scale specifically to measure the efficacy of preservice teachers for teaching students with disabilities. Bandura’s social cognitive theory of self-efficacy notes, “perceived self-efficacy refers to beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). Regarding students with disabilities, this refers to one’s capabilities to organize and execute the courses of action required to produce given attainments in academic achievement for those students, or the capability to organize and execute the courses of action required to produce attainments in delivering instruction, leading to academic achievement. This is an important issue for all; students with disabilities will benefit from having teachers with high levels of efficacy for teaching to their
needs, and teachers will benefit from added efficacy for teaching these students, leading to greater teacher satisfaction.

Efficacy is closely related to agency, outcomes, self-esteem, and self-concept (Bandura, 1997, p. 20). An outcome, according to Bandura, largely depends on the judgment they hold about their ability prior to engaging in the activity (p. 21). To simplify this statement, someone with higher expectations will likely perceive an outcome as more successful than someone who experiences the same outcome but had lower expectations leading up to the event. When considering teaching students with disabilities it is important to distinguish between expectations the teacher holds about their own ability to teach, not the expectations they hold about their students’ outcomes. Quite naturally, then, a positive outcome will act as an incentive, a negative outcome will become a disincentive (Bandura, 1997, p. 21). Through repeated attempts at tasks, the individual will receive incentives or disincentives, which contribute to perceived success or failure.

Participants

Demographic data gathered in this study provides information about the background of the preservice teachers participating in this study. Data such as age, years of teaching, and race or religion provide information about the history of the participants, enriching the research and results and possibly unearthing correlations between demographic information and efficacy beliefs.
Participants in this study were 245 preservice teachers enrolled in a teacher education program at a large Midwestern university. Participants ranged in major area of study from certificate programs in welding or electrics education to secondary education majors to graduate students in the teacher education program. The students were selected from courses in educational psychology and teacher education. Specifically, 177 (73%) of the participants were selected from educational psychology courses for undergraduate and graduate students, all of whom were preservice teachers. The remaining 68 (28%) were selected from the graduate teacher education program, and were also preservice teachers. Of the total participants, 65 (26.5%) were male and 175 (71.4%) were female. Two percent of the respondents did not report a gender.

Self-reporting in the demographic section, 205 (83.7%) of the total participants characterized themselves as white/Caucasian, 15 (6.1%) as African-American or black, 3 (1.2%) as Asian or Pacific-Islander, 6 (2.4%) as Latino/a or Hispanic, 2 (.8%) as Middle Eastern, and 1 (0.4%) as Native American. The remaining 13 participants (5.3%) did not report their racial or ethnic identity.

Given the nature of the courses that the sample was drawn from, it was expected that most of them would fall between the ages of 20-25, as the demographic data indicate. Of the 245 total participants, 168 (68.6%) of them were between the ages of 20-22. The next largest age group for the participants is still consistent with the college-age group, with 43 participants (17.6%) falling
between the ages of 23-25 years. Twenty-six and twenty-seven year olds represented 3.7% (9 total participants) of the sample and 28-30 year olds represented 2%, or 5 individuals. Thirty to thirty-five year olds made up 2% of the sample, with a total of 5. The 36-40 year olds represented 2% of the group with 5 total individuals. The remaining 8 of the participants (3.3%) of the group were ages 40 and up. Two participants did not report.

Religions represented included Christianity, with 111 participants (45.3%), Judaism with 10 reported participants (4.1%), and 1 reporting to follow Islam (0.4%). The Catholic religion represented the second largest religious representation with 62 total participants, or 25.3% of the total participants reporting affiliation. 5 participants report to be agnostic (2%), and Hinduism 1 participant (0.4%). 53 participants (21.6%) did not report.

Of the 245 participants, 153 (82.3%) reported having no teaching experience. Being preservice teachers, teaching experience was not expected. However, 13 participants (7%) reported having one year of teaching experience, and 10 participants (5.4%) reported having 2 years of teaching experience. The remainder of the participants ranged in teaching experience from 3 years (4 participants, or 2.2%), 7 years (1 participant, or 0.5%), 9 years (1 participant, 0.5%) and 16 years (1 participant, 0.5%). Teaching experience was defined loosely, with the participants using their own judgment to determine if their previous experiences qualified as teaching. Three participants did not report.
Participants were asked to report their preferred location for their future teaching job, and given the following selections: “urban,” “rural,” and “suburban.” They could also select to choose “any” if they could not decide or were open to more than one type of school. For the participants, seventy-seven of the total (31.4%) selected “any” for their preferred work environment. The largest number of students, 84 (34.3%), selected “suburban” and 38 (15.5%) of the participants selected the “rural” option as their preferred teaching location. The remainder, 36 (14.7%), chose “urban” as their preferred teaching location. 10 participants did not report.

Instruments

Two instruments were included in this study, the established TSES (Tschannen-Moran & Woolfolk Hoy, 2001) and the instrument designed for the study, described below.

*Teaching Students with Disabilities Efficacy Scale*

Items for the Teaching Students with Disabilities Efficacy Scale (TSDES) were constructed based from the literature on teaching students with disabilities. Constructs such as classroom management, instructional strategies, impact on the student and impact on the world were at the center of the item construction process. Eleven original items were written during the summer of 2007 and then presented to a doctoral-level writing seminar for feedback and suggestions. This seminar consisted of doctoral students in education, all of them studying both
statistics and education. The items were then rewritten or edited based on the suggestions of the seminar participants and three new items were added for a total of 14.

Final items that were chosen for use in the study included:

• How much can you do to adjust lessons to meet the needs of all students in your class, regardless of ability level?
• How much can you do to create an environment that is open and welcoming for every student, including those with disabilities?
• How much can you do to encourage all students to accept those with disabilities in your classroom?
• How much can you do to manage a classroom when your students range from learning disabled to gifted?
• How much can you do to change society’s view of individuals with disabilities?
• How much can you do to establish meaningful relationships with your students with disabilities?
• How much can you do to de-escalate a situation involving a student with disabilities that is getting out of control in your class?
• How much can you do to motivate a student in your class who has a disability, regardless of how uncomfortable you may be?
• How much can you do to control a situation in which a student with Autism is having a major temper tantrum in your class?

• How much can you do to promote acceptance of students with disabilities among the community?

• How much can you do to ensure students with disabilities are held to the same academic and behavioral standards as other students?

• How much can you do to facilitate group learning in your class, i.e. promote students with and without disabilities to work together on projects and lessons?

• How much can you do to teach a student who is motivated to learn but struggles because of his/her disability?

• How much can you do to utilize different strategies when your teaching isn’t as effective as you had hoped?

The instrument was constructed using a 9-point Likert rating scale. A response of “1” or “2” indicated that the participant believed they could do nothing to enhance the given situation, or had no strategies available to them. A response of “3” or “4” indicated that the participant believed they could do very little to enhance or deal with the given situation, perhaps knowing 1 or 2 strategies. A response of “5” or “6” indicated that the individual believed they had some ability to handle the situation, perhaps 3 or 4 strategies. A response of “7” or “8” indicated the participant believed they had a greater ability to enhance
the given situation, perhaps using 5 or 6 strategies available to them. Finally, a response of “9” indicated a strong belief in the participant’s ability to handle the given situation.

Teacher Self-Efficacy Scale

Tschannen-Moran and Woolfolk Hoy designed an effective tool to measure teacher efficacy in 2001, the Teacher Self-Efficacy Scale (TSES). Their work in constructing this scale is beneficial to the field for many reasons. It will contribute to this study by providing a basis for comparison between beliefs of preservice teachers for teaching students with disabilities and the general population. Analyses done on the TSES have revealed findings that are reliable (.87-.91) and typically yield three strong factors (p. 799).

Procedures

This study was conducted between January 2008 and June 2008. Data were collected in two different courses: several sections of an educational psychology course and several sections of a teacher education course for undergraduate and graduate students. Data collection occurred at the beginning of the course, requiring approximately 15 minutes of total time. The survey administered consisted of 5 separate sections: perceived efficacy for teaching students of multicultural diversity, perceived efficacy for teaching students with disabilities, perceived efficacy for teaching students who are not primary English
speakers, the TSES (Tschannen-Moran & Woolfolk Hoy, 2001), and a demographic section.

Preceding the survey was a scripted segment designed to instruct the participants regarding the survey and demographic information. The script read as follows:

“Hi, my name is ____________, and I’m here today to ask for your participation in a survey about teacher beliefs. This survey is completely voluntary; you will not be penalized in any way if you decline to participate. If you do choose to participate, I would like to point out a few things that will make the survey a bit easier for you. First, please take note of the directions at the top of each survey. There are actually three sets of directions, so please pay attention to each one. Second, the scales for each part of the survey are different. You will notice, for example, that one scale asks you to think in terms of strategies while another asks for you answer the prompt “How much can you do to…?”. Finally, please take note that the survey continues on the front and back pages of each page. This includes the back side of the last page. I will begin by passing a survey to everyone. If you choose not to participate, you may keep the survey with you until other people turn theirs in so you may protect your privacy. I will need to get every single survey back, even if you choose not
to complete yours. If you have any questions, please do not hesitate to ask me. Are there any questions now?”

Once this script was read, the students were permitted time to complete the survey. They were given as much time as they needed. When the survey was completed students could signal to the administrator to have their work collected, and then could proceed to do other tasks such as reading, using the restroom, or preparing for their class.

Data Analysis

The purpose of this research study was to develop a scale to measure preservice teacher’s efficacy for teaching students with disabilities. Initially, the frequencies and descriptive statistics were calculated to determine the mean score for each item and its standard deviation. A factor analysis of the TSES was conducted to determine if the factor loadings were congruent with other analyses of this scale. A factor analysis on the Teaching Students with Disabilities Efficacy Scale was also completed, and reliability scores for both scales were calculated. The correlation between the TSES and the Teaching Students with Disabilities Efficacy Scale (TSDES) was examined to determine whether the scales were indeed measuring discrete constructs. Additionally, a one-sample t-test was conducted to analyze the differences between the means for the two scales.
CHAPTER 4

RESULTS

The purpose of this study was to construct a scale to measure the efficacy of teachers and preservice teachers for teaching students with disabilities. In addition, the study sought to measure the self-efficacy beliefs of preservice teachers with the scale that was constructed, and determine if preservice teachers have higher or lower levels of self-efficacy for teaching students with disabilities, relative to their efficacy for teaching in general. An instrument, the Teaching Students with Disabilities Efficacy Scale, TSDES, was designed that intended to measure teachers and preservice teachers perceived efficacy for teaching students with disabilities. This scale was constructed in collaboration with other researchers who were designing instruments to measure teachers and preservice teachers perceived efficacy for teaching students of multicultural diversity, and also teachers and preservice teachers perceived efficacy for teaching students whose primary language is not English. These three scales were merged into one instrument and included in this scale was the TSES and demographic information.

The scale was constructed in the summer of 2007. Tschannen-Moran and Woolfolk Hoy designed the short version of the Teacher Self-Efficacy Scale in
2001, providing the basis for the development of the Teaching Students with Disabilities Efficacy Scale. The original version of the TSDES scale contained 11 items, intended to focus on the following areas: classroom management, instructional strategies, relationships, and professionalism. The items were reviewed by experts and graduate students in the field of education over the course of a quarter writing seminar. After collaboration and feedback, the items were adjusted and rewritten to incorporate the advice of the experts and graduate students and three items were added to the instrument and several items were clarified. The second version of the TSDES included 14 items. They survey for this study also included the 12 items from the short form of the TSES, plus demographic data, and two subscales measuring teacher efficacy for teaching students of multicultural diversity and teacher efficacy for teaching students whose primary language in not English. The results of these last two subscales will not be included in this study.

Descriptive Statistics

The descriptive statistics for this research project begin with the mean and standard deviation for the Teaching Students with Disabilities Efficacy\(^8\) Scale. The sample \(n = 245\). The mean scale response for the TSDES was 6.87, standard deviation \(S = 1.18\).

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\(^8\)The Teaching Students with Disabilities Scale will be referred to as the TSDES.
The TSDES is a 9-point Likert scale, modeled after the TSES. Interestingly, the highest scoring item on the TSDES was “How much can you do to establish meaningful relationships with your students with disabilities?” with a mean score of 7.85. The lowest scoring item was “How much can you do to control a situation in which a student with Autism is having a major temper tantrum in your class?” with a mean score of 5.71. These findings suggest preservice teachers feel more efficacious about their ability to build relationships with students with disabilities, and less efficacious about their ability to deal with students with severe disabilities such as Autism. “How much can you do to change society’s view of individuals with disabilities?” also scored low, with a mean score of 5.76. Mean scores on the TSDES ranged from 5.71 to 7.85. The mean and standard deviations for each of the 14 items can be found in Table 1.

Factor Analysis

Because the survey measured two separate constructs (teaching efficacy and teaching students with disabilities efficacy), factor analyses were conducted on the TSES and TSDES separately to measure validity and quality of scale construction. Results of a principal components analysis of the TSES revealed one strong factor explaining 60.12% of the total variance. Factor loadings for the TSES range from .664 to .837. These results are congruent with the TSES administrations to preservice teachers (Tschannen-Moran & Woolfolk Hoy, 2001).
Principal components analysis conducted on the TSDES revealed one strong factor explaining 52.52% of the total variance. Factor loadings for the TSDES yield a range from .453 to .819. All 14 of the items on the TSDES loaded comfortably on to one factor, suggesting that preservice teachers do not make distinctions among the different components of teaching when considering students with disabilities.

Using all 12 items, the TSES had a Cronbach’s α of .938. The TSDES had a Cronbach’s α of .926. Cronbach’s α is used to determine the internal consistency of the items on a scale. A higher Cronbach’s α typically indicates that the correlations between the items are strong, suggesting that the items are measuring one single construct. Scores over .90 are considered highly reliable.

Construct Validity

In order to test the validity of the TSDES, the correlation between the TSES and the TSDES was examined. Pearson correlation coefficients are used to determine if there is a linear relationship between two scales. In this study, participants were asked to complete the TSES as part of the larger instrument including the TSDES and the measure of multicultural teaching efficacy and English Language Learner teaching efficacy. Regarding the TSDES and TSES, the two scales were moderately correlated (r = .686, p > .01). This suggests the two scales are measuring similar but not identical constructs.
Comparing the Samples

The analysis continues with a comparison of the means between the TSES and the TSDES. This analysis was conducted to see if there was a significant difference between the scores on the TSES and TSDES. A significant difference would suggest that preservice teachers’ sense of efficacy for teaching in general differed from their sense of efficacy for teaching students with disabilities. The t-test yielded results that were significant. The mean score for the TSDES was 6.87, significantly lower than the mean score for the TSES was 7.22, a significant difference with $\alpha > .05$ (see Table 7).

Creating An Improved Scale: A Look to the Future

Using the results from the first administration of the TSDES, literature about constructing instruments that measure efficacy, and other literature about efficacy and the use of efficacy scales, a second version of the TSDES was constructed for the purpose of measuring preservice teacher efficacy for teaching students with disabilities. This instrument can be found in Figure 1.

According to Bandura’s Guide for Constructing Self-Efficacy Scales (2006), there are several critical elements that must contribute to the process of creating a valid and accurate instrument to measure self-efficacy. A strong understanding of the construct being measured is necessary to construct items that are accurate – and representative of the task. The second scale was constructed
after careful consideration of the components involved in teaching students with disabilities. See figure 2.

In order to distinguish between self-efficacy and other domains such as self-esteem, outcome expectancy, or locus of control, items must be phrased with the words “I can do” rather than “I will do” or “I would like to do,” which are not measures of efficacy but other domains (Bandura, 2006, p. 309). Self-efficacy, or perceived efficacy, is a measure of perceived ability, not will or desire. The first and second scales were constructed with these considerations at the forefront of the process. Each of the 14 items on the first scale begin with “How much can you do to,” implying that the person answering the item responds with the understanding that the task they are evaluating is something that they believe they can do or can’t do at the time the response is given. Other phrasings would not be accurate measurements of efficacy.

The first version of the TSDES utilized a 9-point Likert scale. While this method is not inappropriate, Bandura suggests using a 100-point scale to measure efficacy, for the purpose of obtaining a broader range of answers, which may result in a more accurate measurement. Bandura states, “scales that use only a few steps should be avoided because they are less sensitive and less reliable” and “an efficacy scale with the 0-100 point response format is a stronger predictor of performance than one with a 5-interval scale” (Bandura, 2006, p. 312; Pajares,
Hartley, & Valiente, 2001). As shown in Figure 2, the new scale takes the 0-100 point response scale into consideration.

Additionally, Bandura suggests including items of varying difficulty on the instrument. This ensures a more accurate measurement, as items that are perceived as easier should rate differently than items that are perceived as more difficult. Additionally, ensuring the instrument measures efficacy anonymously encourages honest and ultimately accurate answers, reducing bias. These factors are all taken into consideration in the final version of the scale.
CHAPTER 5
DISCUSSION

There were multiple purposes of this study. The first purpose of this study was to construct a scale to measure teachers’ and preservice teachers’ efficacy for teaching students with disabilities. The scale was designed to be an accurate and helpful measure of teacher and preservice teacher efficacy for teaching students with disabilities. The second purpose of this study was to use the scale to measure teachers’ and preservice teachers’ efficacy for teaching students with disabilities. Obtaining measurements of efficacy for teaching students with disabilities is useful in guiding professional development for teachers, curriculum for teacher education programs, and education for all responsible in the important work of teaching students with disabilities. The third and final purpose of this study was to analyze the findings after the administration of the scale, to determine if there was a significant difference between preservice teachers’ efficacy for teaching students with disabilities and their efficacy for teaching in general.
There has been a significant paradigm shift in American schools in the last three decades. Schools today are required by law to provide a free and appropriate education for all students. This has not always been the case. At one time, students with disabilities were not entitled to the same quality of education as the general population. Laws including the Individuals with Disabilities Education Act (2004) and No Child Left Behind (2001) have made equal opportunity for students with disabilities. These changes in the law have led to great changes in the landscape of the American classroom. However, while the scenery has changed greatly over the last 30 years, some aspects of teaching for the students with disabilities have not.

Preservice and practicing teachers are not readily prepared to deal with the demands that students with disabilities present. When asked “How many of you are expecting to have students with disabilities in your class?” participants of an undergraduate educational psychology class responded with blank looks and stares. Only two of the 23 students raised their hands. No student could answer the question “What is inclusion?” This lack of understanding about the responsibilities and involvement with the special education population reveals a fundamental problem in the schools that could be at the heart of many other larger school-related issues.

Teachers entering the field unprepared for the duties that are required of them may endure higher stress levels, have more difficulty working with students,
be less equipped to utilize helpful teaching strategies, classroom management techniques, or collaboration between other teachers, intervention specialists, or service providers such as speech-pathologists. This can lead to teacher burnout, lower levels of student achievement, higher levels of student referral to special education, and lower levels of involvement between students and teachers.

Understanding teacher efficacy for teaching students with disabilities can contribute to a better understanding of teacher beliefs, help shape professional development for teachers, influence the teacher education curriculum, and provide the foundation for a better conception of what it means to be a teacher today. This can promote equality for individuals with disabilities, job satisfaction for teachers, and improve outcomes regarding student achievement.

Summary and Conclusions

The first step in this study was to determine how teaching students with disabilities was different from teaching in general. To do this, one special educator and a cohort of doctoral students in education were consulted to discuss the components of teaching this population and provide feedback and information as the items were written. Domains considered to be important in the process included classroom management, instructional strategies and accommodations, building relationships with students with disabilities, impact on student learning and ability to promote acceptance among the learning community of those with disabilities.
The instrument was constructed on a 9-point Likert scale and included 14 items. Items were phrased according to the literature to match the conceptual understanding of efficacy. Efficacy is the perceived ability to complete a task at the time of measurement. It is conceptually different from will or desire, and therefore must be measured by the use of the phrase “I can” rather than “I will” or “I want to.” Each of the 14 items begins with the phrase “How much can you do to...” with the remainder of the item filled with a domain specific task, such as “promote acceptance of individuals with disabilities in the community?” The item phrasing ensures the scale is measuring efficacy over another construct such as will or desire.

Tschannen-Moran and Woolfolk Hoy (2001) designed a teaching efficacy scale that was reliable and valid, with high construct validity and strong correlations to the Rand scale and the Gibson and Dembo scale (1984). The TSDES was modeled from the TSES, designed to measure the more specific tasks associated with teaching students with disabilities. The results were promising; findings show the scale does indeed measure teacher efficacy for teaching students with disabilities. The TSDES is reliable, with a Cronbach’s $\alpha$ of .926. These findings suggest the scale in internally consistent, and that each item on the scale correlates adequately to the others. When the items on a scale correlate with one another they are thought to be measuring the same underlying conceptual
While the scale shows a high level of reliability, the results do not suggest the scale is too homogenous to be accurate in its intent.

The scale was administered to preservice teachers in a large Midwestern university over the course of the 2007-2008 school year. Participants were drawn from various sections of an educational psychology course, and a course in teacher education. Tschannen-Moran and Woolfolk Hoy’s Teacher’s Sense of Efficacy Scale (TSES) was administered at the same time as the Teaching Students with Disabilities Efficacy Scale. Like the TSDES, the TSES was found to be highly reliable in this sample with a Cronbach’s $\alpha$ of .938. The TSES has been used since 2001 to measure the efficacy of teachers. There was a moderately strong correlation between the TSES and the TSDES, supporting the construct validity of the TSDES. The Pearson correlation between the two scales was $r = .686$, $p > .01$, meaning the two scales were measuring similar but not identical constructs.

Interestingly, a principal axis analysis revealed only one strong factor on the TSDES explaining 52.52% of the total variance. This is contrary to the expectations of the researchers, who designed the scale to measure three to four separate factors including classroom management, instructional strategies, impact on society, and professionalism. It is congruent, however, with the literature, which suggests that preservice teachers are not capable of separating the tasks of teaching into different sub-domains, but conceptualize the tasks of teaching into a
unidimensional construct. These findings support the idea that preservice teachers do not conceptualize the different aspects of teaching, but conceptualize the tasks as one task. This could contribute to the difficulty teachers endure their first year of teaching, as the difficulties and complexities teaching presents are unexpected by first year teachers.

The findings from the administration of the TSDES show moderate levels of efficacy for teaching students with disabilities. The TSES was also administered, and both scales were constructed on a 9-point Likert scale. The mean score for the TSES was 7.22. This is consistent with previous administrations of the TSES, which reveal a mean score of 7.1 (Tschannen-Moran, Hoy, 2001, p. 800). The mean score for the TSDES was 6.87, significantly lower (p = .05). These results show that preservice teachers do indeed have a lower level of self-efficacy for teaching students with disabilities than they do for teaching students in the general population. These results are interesting, but not surprising.

Among the 14 items on the TSDES, the lowest scoring item was “How much can you do to control a situation in which a student with Autism is having a major temper tantrum in your class?” This item yielded a mean score of 5.71, suggesting that students perceive their efficacy for dealing with this particular population of students as most challenged. Reasons for this may vary; Mavropoulou and Padeliaidu have found that regular education teachers seem to
be less knowledgeable about Autism and its causes, as well as its implications for education than special education teachers (2000, p. 179).

Another low scoring item on the scale was “How much can you do to change society’s view of individuals with disabilities?” with a mean score of 5.76. This item may score low because of its nature; preservice teachers may not conceptualize their work as having a large impact on society, or they may be overwhelmed by the thought of having that much responsibility.

Also scoring low among the 14 TSDES items was “How much can you do to ensure students with disabilities are held to the same academic and behavioral standards as other students?” with a mean score of 6.53. This item presents an interesting finding: preservice teachers hold lower levels of efficacy for holding students with disabilities to the same standards behaviorally and academically, suggesting that preservice teachers know little about what educating a student with disabilities means. Teachers in the general education classroom typically hold the belief that students with disabilities cannot learn the general education curriculum, which is, of course, ludicrous (King-Spears, 2008, 56). If the preservice teachers had knowledge about accommodations and differentiating instruction, they might feel more equipped to hold students with disabilities to the same standards as the general population.

Among the highest scoring items was “How much can you do to establish meaningful relationships with your students with disabilities?” with a mean score
of 7.85, the highest scoring item on the scale. This finding is not surprising; Mavropoulou and Padeliadu note “regular education teachers seemed more concerned with the social and psychological well being of the autistic child, and they perceived the role of the school as one of comforting, making happy, sociable, and warm” (2000, p. 179). This sentiment may transfer over from children with autism to children of all disabilities. These motivations are well intended, but may have limiting effects on the academic progress of students with disabilities. Another high scoring item on the scale was “How much can you do to create an environment that is open and welcoming for every student, including those with disabilities?” with a mean score of 7.55. This item is conceptually similar to the first item, regarding the environmental and relational situation of the student with disabilities. These items both support the idea that regular education teachers are more concerned with the social-emotional and psychological well being of the student with disabilities than they are of those students’ academic well being.

These results are consistent with literature about teaching students with disabilities. The lowest scoring items were associated with classroom and behavior management, impact on society, and academic impact. The highest scoring items were associated with relationships and acceptance, as suggested by Mavropoulou and Padeliadu. These findings bolster the results that have been previously reported regarding the special education teaching experience.
Implications

Using the scale to measure the teaching efficacy of preservice teachers for teaching students with disabilities revealed interesting findings, most of which were not surprising. However, the results have many implications for educators, administrators, and teacher education programs. As education moves toward inclusion and individualized education for all, it is important to address these findings and begin the work of meeting the needs of preservice teachers while they are in the university, so that they are adequately prepared for the demands they face upon entering the field of teaching. Teachers have many anxieties about teaching today, for many reasons (some of which are quite justified). Some of these issues are inclusion, testing, accountability, standards, lack of time, lack of funding, and oversized classrooms, to name just a few.

No Child Left Behind (2001) and the Individuals with Disabilities Education Act (2004) have left teachers with great responsibility and little support. The tasks of the teacher are great, and there is research to suggest that teachers can successfully teach students of all ability levels in one classroom, while meeting the requirements of testing and accountability. However, teachers need support to bolster their expertise and provide a foundation for them, where they can address their concerns and learn the strategies that have been proven effective in research.
King-Spears (2008) addresses two popular misconceptions about students with disabilities in the general education classroom. First, there is a strong fallacy that students with disabilities are incapable of learning the general education curriculum. King-Spears finds that teachers who are experienced in the use of research-based techniques for teaching promote higher achievement in students with disabilities as well as low-achievers, average students, and gifted students simultaneously (2008). This suggests that teachers should not feel conflicted about having students with disabilities in their classroom.

With increased success at teaching students with disabilities comes increased efficacy for teaching students with disabilities. Teacher education programs should address the issues associated with having students with disabilities from the start of the undergraduate teacher education program and provide resources to students of education, such as readings, field experiences, and support. Building this experience from the beginning of the teacher preparation program could have a positive effect on teacher efficacy for teaching students with disabilities.

Another important implication of this research involves the referral of students to special education by general education teachers. As the literature has reported, teachers with lower levels of self-efficacy tend to refer students to special education more often than teachers with high levels of efficacy (Almog, 2008; Spiridon-Georgios & Touroutoglou, 2007). Students that might not
otherwise need special education are being referred to this service, possibly becoming labeled and moved into a system of accommodations that are not necessary. This can lead to a dramatic decrease in perceived potential and learned helplessness. However, there is a chance that many students referred to special education suffer simply at the hands of their teachers who have low self-efficacy for teaching.

The second misconception that King-Spears (2008) addresses regarding special education laws is the notion that teachers are required to cover every aspect of the curriculum, in a short period of time. The truth of the matter is, “differentiation can potentially achieve higher scores on large-scale assessments” compared to a “one-size fits all” curriculum, which is what many schools use (King-Spears, 2008, p. 59). Many teachers feel pressure to teach every single content standard and benchmark, without realizing that many states’ content standards and benchmarks have been written specifically to cover numerous aspects of the curriculum. These content standards are written to address the in-depth kind of instruction that students require to be truly prepared for testing. By picking and choosing which pieces of the curriculum to teach, teachers gloss over important pieces that are designed to promote a deeper understanding of the curriculum. King-Spears notes that the pressure to cover all the material possible for testing purposes often results in “a pedagogical dilemma in which educators feel they must leave some students behind (generally, those students who have
mild disabilities or are at-risk for school failure) in order to cover the curriculum” (2008, p. 59).

By increasing the efficacy of teachers for teaching students with disabilities, teachers will experience a greater likelihood for feeling they are capable of teaching this group of students. This may reduce the perceived need to skim over some parts of the curriculum, leading to a deeper understanding of the important concepts the curriculum is teaching for students, both with and without disabilities. This may have a positive effect on test scores and outcomes for students with disabilities, which in turn may increase the efficacy of teachers even further.

Future Directions

This study needs further examination, as it has only been developed and analyzed for the better part of one year by a student in the master’s phase of a combined M.A./Ph.D program in educational psychology. The second scale construction has not been utilized to measure the efficacy of preservice teachers or teachers. Results of this study have only been examined preliminarily, and have many more possibilities for research and contribution to the literature.

First, the second construction of the TSDES must be subjected to administration with a large sample of preservice teachers and in-service teachers. It is important to capture the essence of preservice teachers’ efficacy beliefs as well as in-service teachers’ efficacy beliefs, to look for significant differences in
conceptual understanding, differences in efficacy levels, and to examine what results of that magnitude might mean.

Additionally, the second TSDES must be subjected to a factor analysis and reliability analysis to ensure it is constructed properly and that the validity is sound. It must also be compared to other efficacy scales that have been found to be valid and reliable, to look for consistency and determine that the scale is a solid measurement tool. It should also be compared and contrasted to the first version of the TSES so that developments can be noted.

Examining teacher efficacy has proven to be difficult, even “elusive,” but is still important to the field of education. Improving methods for instructing students with disabilities must continue to progress, so that individuals of all ability level can experience the opportunity that is provided by an American education. Allowing some students to fall through the cracks is unacceptable, but by taking small steps toward understanding the process of teaching and all of its complexities we can take necessary action toward increasing the quality and outcomes of the teaching and learning process.

Limitations of this Study

Demographics contribute to the limitations of the current study. The respondents may not represent the true nature of the teaching population for numerous reasons. First, the sample consisted of preservice teachers who, with few exceptions, have had no formal teaching experience. While the study itself
was conducted on preservice teachers and the researcher made that clear throughout the process, utilizing the TSDES with inservice teachers is not recommended until further research is done on this sample. The literature is clear about the differences between preservice and inservice teachers regarding the conceptualization of the teaching process, therefore this scale must be tested with both populations to ensure it is constructed soundly and fit for use.

The convenience of the sample contributes to the limitations of the study. The research sample was easily accessible, as the researcher also acted as the instructor for many of the participants. The sample was also selected from one geographic area, which may not be representative of the larger population. Further studies with this instrument should consider a wider demographic sample, and include research among inservice teachers.

Because the study consisted of self-reported data, the researcher assumed the respondents were answering the items honestly, understood the meaning of the items accurately, and did not vary in their meaning from the items as they were written. Additionally, the nature of items designed to measure self-efficacy assumes individuals answer according to their belief about their ability to complete a task at the moment the survey is conducted. Given that preservice teachers have not practiced teaching, it stands to reason that their answers may be optimistic about their abilities.
BIBLIOGRAPHY


Chambers, S. M., & Hardy, J. C. Length of time in student teaching: Effects on classroom control orientation and self-efficacy beliefs. Education Research Quarterly, 28(3)


APPENDIX A

TEACHING STUDENTS WITH DISABILITIES EFFICACY SCALE

PILOT
Teacher Beliefs Survey

Directions: This scale is designed to measure how much impact you feel you have through your teaching. Please select the best possible answer for each statement. Your answers are confidential and anonymous. Answer questions according to how many good strategies you have at your disposal for use in the following situations.

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<td>… adjust lessons to meet the needs of all students in your class, regardless of ability level?</td>
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<td>2</td>
<td>… create an environment that is open and welcoming for every student, including those with disabilities?</td>
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<td>… encourage all students to accept those with disabilities in your classroom?</td>
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<td>… manage a classroom when your students range from learning disabled to gifted?</td>
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<td>… change society’s view of individuals with disabilities?</td>
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<td>… establish meaningful relationships with your students with disabilities?</td>
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<td>7</td>
<td>… de-escalate a situation involving a student with disabilities that is getting out of control in your class?</td>
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<td>… motivate a student in your class who has a disability, regardless of how uncomfortable you may be?</td>
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<td>… control a situation in which a student with Autism is having a major temper tantrum in your class?</td>
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<td>… promote acceptance of students with disabilities among the community?</td>
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<td>11</td>
<td>… ensure students with disabilities are held to the same academic and behavioral standards as other students?</td>
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<td>… facilitate group learning in your class, i.e. promote students with and without disabilities to work together on projects and lessons?</td>
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<td>13</td>
<td>… teach a student who is motivated to learn but struggles because of his/her disability?</td>
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<td>14</td>
<td>… utilize different teaching strategies when your teaching isn’t as effective as you had hoped?</td>
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Figure 2. Original instrument Teaching Students with Disabilities Efficacy Scale
APPENDIX B

SECOND CONSTRUCTION OF THE

TEACHING STUDENTS WITH DISABILITIES EFFICACY SCALE
**Teacher Beliefs Inventory**

This scale is designed to measure the beliefs that preservice teachers hold as they prepare to enter the field of education. Please select the best answer: answers range from 0 (I do not believe I can do that at all) to 100 (I believe I can handle this task). Answer all items regarding your ability to complete the tasks today. Teaching experience is not required; you have beliefs about these things whether or not you realize it. Your answers are confidential and anonymous.

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1. I can adjust my lesson plans to meet the needs of all of my students, regardless of their ability level.
2. I can create an environment that is open and welcoming for students with disabilities in my classroom.
3. I can effectively encourage all of my students to accept those with disabilities in my classroom.
4. I can manage a classroom that includes students with disabilities.
5. I can establish meaningful relationships with my students with disabilities.
6. I can administer medication to students with disabilities who need it if I am asked to and have the proper certifications.
7. I can motivate students with disabilities to persevere, regardless of the level of emotion they may be experiencing.
8. I can remain in control of a situation that involves a major temper tantrum in my classroom.
9. I can hold students with disabilities to the same academic standards as other students.
10. I can facilitate group learning in which students with disabilities and students without disabilities work together productively.
11. I can change teaching strategies if my current plans don’t seem to be working.

*Figure 3. Second construction of the Teaching Students with Disabilities Efficacy Scale*
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<td>12.</td>
<td>I can break down a skill into its component parts to facilitate learning for students with disabilities.</td>
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<td>13.</td>
<td>I can model a skill for a child with a disability so they may learn it more efficiently.</td>
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<td>14.</td>
<td>I can adapt the curriculum to help meet the needs of a student with disabilities in my classroom.</td>
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<td>15.</td>
<td>I can be consistent with my schedule during the day so that my students with disabilities will benefit from the added stability in my class.</td>
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<td>16.</td>
<td>I can use a wide variety of strategies for teaching the curriculum to enhance understanding for all of my students, especially those with disabilities.</td>
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| 17. | I can be sure to treat all of my students with fairness and equity, regardless of their ability level. |   |   |   |   |   |   |   |   |   |   |
| 18. | I can teach my students with disabilities using the same materials as the general education students in my classroom. |   |   |   |   |   |   |   |   |   |   |
| 19. | I can teach students with disabilities to take responsibility for their actions, such as teaching them to raise their hand to speak or teaching them how to follow a deadline. |   |   |   |   |   |   |   |   |   |   |
| 20. | I can accomplish all of the tasks I am required to in a day even with students with disabilities in my classroom. |   |   |   |   |   |   |   |   |   |   |
| 21. | I can be an effective team member and work collaboratively with other teachers, paraprofessionals, and administrators to help my students with disabilities reach their goals. |   |   |   |   |   |   |   |   |   |   |
| 22. | I can effectively transport students with physical disabilities from vehicles to wheelchairs, from wheelchairs to desks, and to the restroom without becoming intimidated. |   |   |   |   |   |   |   |   |   |   |
| 23. | I can adjust the curriculum to meet the needs of high-achieving students and low-achieving students simultaneously. |   |   |   |   |   |   |   |   |   |   |
| 24. | I can express empathy for a student who is struggling at reading. |   |   |   |   |   |   |   |   |   |   |

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<td>25. I can provide feedback to my students with disabilities in a way that is helpful and increases their self-esteem.</td>
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<td>26. I can use strategies such as taping a paper to the desk of a child with a disability to aid in their writing.</td>
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<td>27. I can use time from other tasks to help a child with a disability. For example, I can read the instructions three times in a row to help the student understand.</td>
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<td>28. I can anticipate the kinds of challenges having students with disabilities will bring to the classroom.</td>
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<td>29. I can model positive behavior for all students with or without disabilities.</td>
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<td>30. I can practice patience with a student with disabilities that has a high frustration level.</td>
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<td>31. I can remember to remind students with disabilities frequently of the things they need to complete to help them stay on task.</td>
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<td>32. I can provide instructions orally in addition to in print, to meet the needs of students with disabilities in reading and the needs of students without disabilities.</td>
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<td>33. I can meet the individual needs of students with disabilities without singling them out.</td>
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<td>34. I can teach all children regardless of their ability level.</td>
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<td>35. I can promote understanding for students with disabilities among the rest of the class.</td>
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<td>36. I can utilize resources within the school and outside the school for the purposes of increasing my level of understanding of a specific disability.</td>
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<td>37. I can give consistent praise for students with disabilities, regardless of how small or slow the progress.</td>
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<td>38. I can effectively deal with behaviors in the class that are disruptive, such as tantrums.</td>
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<td>39.</td>
<td>I can teach a lesson to students and then reteach it to students with disabilities without experiencing frustration.</td>
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<td>I can teach students to work together on projects, regardless of their ability level.</td>
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<td>I can consult with an intervention specialist or other specialist when I need help, without harming my own morale.</td>
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<tr>
<td>42.</td>
<td>I can use reinforcers (i.e., rewards and punishments) with students with disabilities consistently and effectively to increase desired behaviors in the classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43.</td>
<td>I can encourage students in my class to be good role models for students with disabilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44.</td>
<td>I can teach students that are typically developing about disabilities in a way that is not offensive or demeaning in my classroom.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45.</td>
<td>I can focus on the task at hand when there are several things happening in my class at one time. For example, I can effectively teach a math lesson while a paraprofessional is working with one student and a speech-language pathologist is conducting a session, all at the same time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46.</td>
<td>I can assist students with disabilities with daily tasks such as restroom use and feeding.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47.</td>
<td>I can de-escalate a situation that is getting out of control when it involves a student with disabilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48.</td>
<td>I can interfere to stop a bullying situation between students with no disabilities and a student with disabilities, without humiliating or offending the student with disabilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49.</td>
<td>I can help all students learn to read regardless of their ability or disability.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.</td>
<td>I can hold students with disabilities to the same behavioral standards as other students.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3 continued. Second construction of the Teaching Students with Disabilities Efficacy Scale
APPENDIX C

TABLES
<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Valid</th>
<th>Mean</th>
<th>SD</th>
<th>Var.</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to adjust lessons to meet the needs of all</td>
<td>0 2 7 14 27 40 74 38 43</td>
<td>245</td>
<td>6.80</td>
<td>1.614</td>
<td>2.606</td>
</tr>
<tr>
<td>students in your class, regardless of ability level?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to create an environment that is open and</td>
<td>0 0 3 6 15 29 50 60 82</td>
<td>245</td>
<td>7.55</td>
<td>1.438</td>
<td>2.068</td>
</tr>
<tr>
<td>welcoming for every student, including those with disabilities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to encourage all students to accept those</td>
<td>1 0 2 7 14 35 41 69 72</td>
<td>241</td>
<td>7.48</td>
<td>1.478</td>
<td>2.184</td>
</tr>
<tr>
<td>with disabilities in your classroom?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to manage a classroom when your students range</td>
<td>1 2 6 18 35 40 57 64 21</td>
<td>245</td>
<td>6.59</td>
<td>1.619</td>
<td>2.620</td>
</tr>
<tr>
<td>from learning disabled to gifted?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to change society’s view of individuals with</td>
<td>2 10 11 30 57 48 36 34 13</td>
<td>241</td>
<td>5.76</td>
<td>1.781</td>
<td>3.173</td>
</tr>
<tr>
<td>disabilities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to establish meaningful relationships with your</td>
<td>1 0 1 4 12 14 46 62 102</td>
<td>242</td>
<td>7.85</td>
<td>1.358</td>
<td>1.845</td>
</tr>
<tr>
<td>students with disabilities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to de-escalate a situation involving a student</td>
<td>2 2 8 17 39 32 60 56 28</td>
<td>244</td>
<td>6.58</td>
<td>1.716</td>
<td>2.945</td>
</tr>
<tr>
<td>with disabilities who is getting out of control in your class?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Means and standard deviations for the TSDES.
<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Valid</th>
<th>Mean</th>
<th>SD</th>
<th>Var</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to motivate a student in your class who has a</td>
<td>2 0 5 13 20 39 63 63 39</td>
<td>244</td>
<td>6.96</td>
<td>1.58</td>
<td>2.49</td>
</tr>
<tr>
<td>disability, regardless of how uncomfortable you may be?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to control a situation in which a student with</td>
<td>7 10 25 24 34 47 49 3 14</td>
<td>245</td>
<td>5.71</td>
<td>2.00</td>
<td>4.03</td>
</tr>
<tr>
<td>Autism is having a major temper tantrum in your class?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to promote acceptance of students with</td>
<td>1 3 9 24 31 26 51 55 42</td>
<td>242</td>
<td>6.68</td>
<td>1.84</td>
<td>3.39</td>
</tr>
<tr>
<td>disabilities in the community?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to ensure students with disabilities are held</td>
<td>2 3 10 18 40 32 58 47 35</td>
<td>245</td>
<td>6.53</td>
<td>1.80</td>
<td>3.25</td>
</tr>
<tr>
<td>to the same academic and behavioral standards as other students?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to facilitate group learning in your class (e.g.</td>
<td>0 2 5 11 20 24 55 60 67</td>
<td>244</td>
<td>7.27</td>
<td>1.62</td>
<td>2.64</td>
</tr>
<tr>
<td>ask students with and without disabilities to work together on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>projects and lessons)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to teach a student who is motivated to learn</td>
<td>0 2 3 5 23 27 52 75 58</td>
<td>245</td>
<td>7.33</td>
<td>1.49</td>
<td>2.22</td>
</tr>
<tr>
<td>but struggles because of his/her disability?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How much can you do to utilize different teaching strategies when</td>
<td>0 2 2 7 15 34 54 68 62</td>
<td>244</td>
<td>7.36</td>
<td>1.46</td>
<td>2.15</td>
</tr>
<tr>
<td>your teaching isn’t as effective as you had hoped?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 continued. Means and standard deviations for the TSDES.
# Teacher Self-Efficacy Scale

<table>
<thead>
<tr>
<th>Question</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to control disruptive behavior in the classroom?</td>
<td>.664</td>
</tr>
<tr>
<td>How much can you do to motivate students who show low interest in school work?</td>
<td>.731</td>
</tr>
<tr>
<td>How much can you do to get students to believe they can do well in school work?</td>
<td>.722</td>
</tr>
<tr>
<td>How much can you do to help your students value learning?</td>
<td>.770</td>
</tr>
<tr>
<td>To what extent can you craft good questions for your students?</td>
<td>.779</td>
</tr>
<tr>
<td>How much can you get children to follow classroom rules?</td>
<td>.755</td>
</tr>
<tr>
<td>How much can you do to calm a student who is disruptive or noisy?</td>
<td>.783</td>
</tr>
<tr>
<td>How well can you establish a classroom management system with each group of students?</td>
<td>.750</td>
</tr>
<tr>
<td>How much can you use a variety of assessment strategies?</td>
<td>.751</td>
</tr>
<tr>
<td>To what extent can you provide an alternative explanation or example when students are confused?</td>
<td>.772</td>
</tr>
<tr>
<td>How much can you assist families in helping their children do well in school?</td>
<td>.695</td>
</tr>
<tr>
<td>How well can you implement alternative strategies in your classroom?</td>
<td>.837</td>
</tr>
</tbody>
</table>

Table 2. Teacher Self-Efficacy Scale Factor Analysis, Principle Axis Factoring
## Teacher Self-Efficacy Scale for Disabilities

<table>
<thead>
<tr>
<th>Factor</th>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How much can you do to adjust lessons to meet the needs of all students in your class, regardless of ability level?</td>
<td>.706</td>
</tr>
<tr>
<td></td>
<td>How much can you do to create an environment that is open and welcoming for every student, including those with disabilities?</td>
<td>.701</td>
</tr>
<tr>
<td></td>
<td>How much can you do to encourage all students to accept those with disabilities in your classroom?</td>
<td>.665</td>
</tr>
<tr>
<td></td>
<td>How much can you do to manage a classroom when your students range from learning disabled to gifted?</td>
<td>.703</td>
</tr>
<tr>
<td></td>
<td>How much can you do to change society's view of individuals with disabilities?</td>
<td>.453</td>
</tr>
<tr>
<td></td>
<td>How much can you do to establish meaningful relationships with your students with disabilities?</td>
<td>.725</td>
</tr>
<tr>
<td></td>
<td>How much can you do to de-escalate a situation involving a student with disabilities who is getting out of control in your class?</td>
<td>.715</td>
</tr>
<tr>
<td></td>
<td>How much can you do to motivate a student in your class who has a disability, regardless of how uncomfortable you may be?</td>
<td>.777</td>
</tr>
<tr>
<td></td>
<td>How much can you do to control a situation in which a student with Autism is having a major temper tantrum in your class?</td>
<td>.670</td>
</tr>
<tr>
<td></td>
<td>How much can you do to promote acceptance of students with disabilities in the community?</td>
<td>.624</td>
</tr>
<tr>
<td></td>
<td>How much can you do to ensure students with disabilities are held to the same academic and behavioral standards as other students?</td>
<td>.739</td>
</tr>
<tr>
<td></td>
<td>How much can you do to facilitate group learning in your class (e.g. ask students with and without disabilities to work together on projects and lessons)?</td>
<td>.747</td>
</tr>
<tr>
<td></td>
<td>How much can you do to teach a student who is motivated to learn but struggles because of his/her disability?</td>
<td>.819</td>
</tr>
<tr>
<td></td>
<td>How much can you do to utilize different teaching strategies when your teaching isn't as effective as you had hoped?</td>
<td>.691</td>
</tr>
<tr>
<td></td>
<td>Disability Scale</td>
<td>TSES Table</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>.686**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>245.000</td>
<td>237</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>TSES Table</th>
<th>Teacher Self-Efficacy Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.686**</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>237</td>
<td>237.000</td>
</tr>
</tbody>
</table>

Table 4. Teacher Self-Efficacy Scale and Teacher Self-Efficacy Scale for Disabilities Correlation Table, $\alpha \cdot .01$. 
### Paired Samples Correlations

<table>
<thead>
<tr>
<th>Pair 1</th>
<th>TSDES &amp; TSES</th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>237</td>
<td>.686</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 5. Teacher Self-Efficacy Scale and Teaching Students with Disabilities Efficacy Scale Paired Sample Correlations Table, _ .01.
### Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSDES</td>
<td>6.8727</td>
<td>237</td>
<td>1.1846</td>
<td>.07695</td>
</tr>
<tr>
<td>TSES</td>
<td>7.2297</td>
<td>237</td>
<td>1.0229</td>
<td>.06645</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSDES</td>
<td>91.784</td>
<td>244</td>
<td>.000</td>
<td>6.88445</td>
<td>[6.7367, 7.0322]</td>
</tr>
<tr>
<td>TSES</td>
<td>108.808</td>
<td>236</td>
<td>.000</td>
<td>7.22973</td>
<td>[7.0988, 7.3606]</td>
</tr>
</tbody>
</table>

Table 7. One sample t-test. $\alpha > .05$