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Teachers' Characteristic and Exceptional Student Academic Learning Outcomes in Middle School

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Abstract

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MPhil, Walden University, 2019

MA, Pacific Oaks College, 2011

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

Federal mandates ensure that each and every child regardless of race, national origins, and socioeconomic status, is entitled to a high-quality education. Reports from the Department of Education have stated that over 80% of exceptional students receive their academic instructions within general education classrooms. There is limited research on exceptional students learning outcomes in general education classrooms with general education curriculum. The purpose of this quantitative study was to test the theory of self-determination that explains the impact of teacher characteristics ($N = 85$ educators) on the academic outcomes of exceptional students in the special and general education classrooms. Teacher characteristics such as, experience, training, and attitude were measured by the Teacher's Attitude Towards Inclusion scale (TAIS) scores, and student learning outcomes, were reports of student performance ratings and standardized scores, of the exceptional students. Results revealed significant correlations between specific inclusive TAIS attitudes and student learning outcomes. The independent sample *t* test results indicated that the years of experience and student outcomes of students of general education teachers were significantly higher in comparison to special education teachers. Availability of Instructional Options was also measured; it did not moderate the relationship between teachers' characteristics and academic outcomes of exceptional students. Positive social change thus can be initiated by training teachers in the instructional practices, identified by this study, who deliver the optimal academic outcomes for the exceptional students. This will initiate positive social change for the special child, their families, and the community as a whole.

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Dedication

I would dedicate this work to my birth mother Clarise Glode you were gone home too soon. To my grandmothers, Florence Glode and Susanna Browne thank you for your presence in my life during my childhood and teenage years. To my parents Rueben and Louisa Greene, although you have gone home, you gave me the value of hard work, perseverance, and to continue with my education; I Thank you.

I am dedicating this work to my children Amir, Lamar, and my granddaughter Laila, who have watch me work diligently during this process. Although, I never quit and work diligently through perseverance and complete my doctoral study. Your encouragement through my doctoral journey has help me immensely; my love for you is unconditional and love you always.

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

Background

The Individual with Disabilities Education Act (IDEA) requires that each state provides standards that every exceptional student must meet in order to demonstrate that the student has made adequate yearly progress (AYP). The U.S Department of Education along with the Elementary and Secondary Education Act (ESEA) is designed to build an accountability system, raise the academic standard of students, and these goals are based on academic results of student's outcomes (U.S. Department of Education, 2016). With this requisition, exceptional students' education is enhanced while meeting the high expectation provided by the ESEA (Artiles & Kozleski, 2016).

Inclusive education is mandated through legislation that provides exceptional students with an opportunity to learn within a general education instructional curriculum (Kurz et al., 2014). The most important provision of inclusion is to increase exceptional students' academic potential within general educational practice through academic domains and activities in which they participate (Artiles & Kozleski, 2016). Although, through the legislation, changes were made in educating exceptional students within general education classroom, there are still concerns and challenges. Researchers have questioned, and shared concerns about the quality of education exceptional students have received (Kurz et al., 2014).

Researchers have indicated there is a shift in studies about exceptional students, and more emphasis is placed on the type of services and support (Artiles & Kozleski,

2016). Subsequently, current research on exceptional students tends to lack clear students learning outcomes measures. Reports on student learning are mixed, because there is no specific examination of exceptional students' outcomes in various instructional context such as the general education versus special education classroom (Goodman et al., 2011). Researchers have found there is limited research in this area of achievement and general education context at the levels of schools or districts (Cosier et al., 2013).

With the advent of acts such as No Child Left Behind Act (NCLB) there were challenges with the federal requirements of testing students based on their curriculum (Darrow, 2016). Moreover, with the passage of the Every Student Succeed Act (ESSA) in 2015, each state is responsible for providing their individual educational support and services. Educational reports of special education student test scores are recorded annually, in accordance with the NCLB. Darrow (2016) stated that to determine students' progress with ESSA, multiple measures are used, that includes graduation rates and test scores. These acts increase accountability at state and district levels, however, do not address the challenges related to the process that delivers the outcomes.

Special education children are now being taught some of the curriculum in general education classroom, and there is a gap in the preparedness of general education teachers who are teachers of exceptional students (Hamman et al., 2013). In addition to the readiness to teach exceptional children, the teachers are expected to raise the achievement level of these students in their classrooms. Likewise, teachers' instructional practices must meet the students diverse learning needs in the classroom (Jordon, Glen, &

McGhie-Richmond, 2010). Disparities occur in inclusive education where the special quality along with teaching quality and effectiveness of teachers of exceptional students may conflict with policy initiatives (Jordon et al., 2010). Researchers have acknowledged there is a concern with the complicated definitions of inclusion that determine which students are placed in classrooms with special learning/behavioral needs. Other definitions consist of students who would be placed in these classrooms if not identified with a disability (Gehrke, Cocchiarella, Harris, & Puckett, 2014). The lack of clarity among preparation occur within general education classroom where exceptional student needs need to be addressed. The definition of inclusion is complicated because it is interpreted and implemented differently within school, districts and inconsistencies occur with the definition (Gehrke et al., 2014).

With these inconsistencies across teacher preparation programs, preservice teachers may be ineffective in fulfilling the academic needs of the exceptional students. There is an existing gap between education policy and teacher capacity (Hamman, Lechtenberger, Griffin-Shirley, & Zhou, 2013). In various teacher-preparation programs general education student teachers may lack the exposure to special education teacher settings. Researchers have indicated many times their courses combined with multicultural, language-minority issues and not meeting the needs of exceptional students (Hamman et al., 2013). There is thus an immediate need for identifying teacher's characteristics required when teaching exceptional students, for these educators who teach in general education classrooms (Gehrke et al., 2014).

The content is sometimes adjusted to meet the need of exceptional students. Challenges are thus evident in teaching students in general education classrooms. Educators of exceptional students face many challenges regarding pedagogical content knowledge (Powell, 2015). Challenges are evident in the teaching of mathematics to exceptional students in general education classrooms (Powell, 2015). These inadequacies may occur within the preservice preparation programs, where teachers are not adequately prepared to teach mathematics. There are standards that are appropriated in teaching mathematics to students in general education settings. In teaching this subject matter to exceptional students, characteristics such as specific instructional practices and positivism, are important (Powell, 2015).

Thus, there are challenges for general education teachers with the inclusion of exceptional students within their classrooms (Scanlon & Baker, 2012). Challenges such as planning time, need for a variety of instructional practices, and larger student caseload while having to provide high-quality student academic learning (Scanlon & Baker, 2012), make the task of the teacher in the general education classroom difficult. In addition to the challenges that teachers face regarding teaching special education children in the general education classroom, there are problems with the process as well. For example, the curriculum in the general education classroom.

The expectation of NCLB has left many states trying to find appropriate curricula to meet the needs of exceptional students. When implementing the curriculum standards for exceptional students, these standards are aligned with general education standards. Although, alternative assessment based on alternate achievement standards (AA-AS) of

student progress as identified by the Department of Education are used for special education student (Rabinowitz, Sato, Case, Benitez, & Jordon, 2008). Teachers are held accountable for students' progress in their classrooms.

In a previous study of an alternate assessment based on alternate achievement standards (AA-AAS), researchers examined the impact the assessment is having on teachers (Restorff, Sharpe, Arbey, Rodriguez, & Kim, 2012). Researchers found that assessment does impact teachers' instructional practices in the classroom as well as student outcomes. Teachers instructional practice is adjusted to meet the standards related to the expected students' outcomes. The curriculum, instruction, and assessment are the three components of the educational practice that are critical to students' learning (Roach et al., 2009). These components are fundamentally valued and needed in improving the education level of student academic outcomes. Special and general education teachers' instructional practices, including their use of resources to instruct the special education student and the impact on learning outcomes, using teacher's alternative as well as standardize assessment of exceptional students is a limited area in research. Academic learning outcomes of these special students are important to their families and communities where they reside. The study is important to exceptional students, teachers, school districts, and educational stakeholders.

Statement of the Problem

Inclusive general education policy responds to the needs of exceptional individuals by placement within general education classrooms (Fletcher, 2010). The Department of Education (2013) found that over 80% of exceptional students receive

their academic instructions within a general education classroom. The problems with inclusive education are: (a) clarity in implementing inclusive education, (b) exceptional students outcomes have not been assessed, (c) lack of objective assessment and student gains, (d) differences in training of special and general educators. Researchers have shared their concern about teachers being able to effectively teach exceptional students. Fletcher (2010) stated, that policies which encourage the inclusion of special education students into regular classrooms, "placed exceptional individuals within age appropriate general education classrooms regardless of their disabilities" (p.69). This lack for attention for the specific disability of the individual student could lead to a less than optimal educational experience for that student. There is a vast difference between what is expected from the policy level and what actually occurs within the auspices of an inclusive classroom.

Most inclusive education programs differ in their characteristics and researchers are unclear about best practices in inclusive education (Phillips, 2017). To begin, researchers have pointed out that in inclusive education, where special education students are expected to receive their curriculum in general education classes, there are differences in the definition of what inclusive education means. There are differences in how special education needs are served, and therefore, there is difficulty in comparing inclusive education programs. Furthermore, there is a lack of objective assessment, and student gains are mainly based on the perceptions of teachers (Hoover & Abrams, 2013). This study is intended to improve this assessment by not only including teacher rating but also including standardize scores.

The gap in assessing the effectiveness of the current efforts to educate exceptional children has been acknowledged in the Annual Report to Congress on the Implementation of the Individual with Disabilities Education Act, 2016 (U.S. Department of Education, 2016). Previous researchers have indicated that teachers' resources to fulfill the exceptional students' needs need to be addressed (Ellis & Todd, 2014). Furthermore, researchers have acknowledged that the gap in the research of inclusive education is the assessment of exceptional child learning capabilities and their outcomes (Ellis & Todd, 2014).

There is limited knowledge on inclusive education in a general education setting and its impact on student outcomes. General and special education teachers need to acquire effective skills, which are congruent with teaching exceptional students (Tzivinikou, 2015). The training for general education teachers is different from that of special education teachers. Teachers have often reported they are unprepared with the instructional skills needed in teaching an inclusive classroom (Swain, Nordess, & Leader-Jansen, 2012). A teacher's ability to respond to the needs of the exceptional student is important to the student's academic success, and self-determination in attaining academic goals (Carter, Lane, Pierson, & Stang, 2008).

Most researchers identify the importance of teacher preparedness and the need for a more effective professional development of exceptional students' educators to attain the desired academic outcomes (Benedict, Brownwell, Park, Bettini, & Lauterbach, 2014). Nevertheless, for general and special education educators' preparedness, the teacher's attitudes and instructional practices are factors which will influence the exceptional

student's outcomes. In this study I intend to fill the gap by assessing the impact of teacher characteristics on student learning outcomes of the exceptional child in the inclusive general education compared to those in the special education classroom.

Purpose of the Study

The purpose of the study was to identify the impact of teacher characteristics on students learning outcomes of the exceptional students in general versus special education classroom settings. The study determined the preparedness of educators and the effectiveness of inclusion of exceptional students in the general classrooms, and their educational outcomes.

This research study is a quantitative study. There is no study that explores teacher characteristics and exceptional students' academic learning outcomes. Understanding and examining the impact of general and special education teachers who teach exceptional students is an important issue. The relationship of teachers' experience and training is equally important for exceptional student outcomes. Through an examination of students' assessment, the research will determine the effectiveness of teacher's characteristics and instructional practices on exceptional students learning outcomes.

Research Questions and Hypotheses

Research questions and hypotheses from the research study are developed from the literature review discussed in Chapter 2.

Research Question 1: Do teacher characteristics have an impact on student outcomes of the exceptional child in the middle school classroom?

$H_0$1*:* There will be no significant relationship between teacher experience, training, and positive attitudes as measured by the Teacher's Attitude towards Inclusive scale, on the student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child.

H_a1: There is a significant relationship between teacher experience, training, and attitudes as measured by the Teacher's Attitude towards Inclusive scale, on exceptional student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child.

I focused specifically on experience, training, and positive attitudes of the teacher towards exceptional students, and whether they are associated with increases in exceptional student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child.

Research Question 2: Do teacher characteristics have an impact on students' outcomes of the exceptional child in the general versus the special education classroom?

$H_0$2: There will be no differences between the impacts of teacher experience, training and positive attitudes as measured by the Teacher's Attitude towards Inclusive Education scale (TAIS), on the student outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as

statewide performance scores of the exceptional child in the general versus special education classroom setting.

H_a2: There will be significant differences in teacher experience, training, and attitudes as measured by the Teacher's Attitude towards Inclusive scale, on the student outcomes such as performance ratings by teachers in subject such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting.

The purpose of the research study was to identify the impact of teacher characteristics such as, experience, training, and attitude on student learning outcomes of the exceptional student in general versus special education classroom settings. The social change in this study involves identifying the instructional practices that deliver the optimal academic outcomes for the exceptional students. This will initiate positive social change for the special child, their families and the community as a whole.

Research Question 3: Does the use of instructional options as measured by the Availability of Instructional Options (AOIO) moderate the impact of special education teacher experience, training, and attitude the special education and general classroom setting on the academic outcomes of the exceptional child?

$H_0 3$: There will be no significant impact of using the instructional options as measured by (AOIO). Using AOIO will not moderate the impact of teacher training, experience and attitude of special and general education teacher on the student academic outcomes such as performance ratings by teachers in subjects such as mathematics,

language arts, social studies and science as well as statewide performance of the exceptional child.

H_a3: Teachers use of instructional options as evaluated by the Availability of Instructional Options (AOIO) will moderate the impact of teacher training, experience and attitudes of special and general education teachers on the student outcomes such as performance rating by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child. Specifically, it is expected that teachers' use of AOIO will improve academic outcomes of the exceptional child.

Theoretical Framework

This study is based on the theories of self-determination, self-efficacy, and attribution. These theories are important in the development of an individual's psychological well-being. These theories are explained in detail in Chapter 2.

Self-Determination Theory

Self-determination (SD) is growth oriented to exceptional students in their educational process. An individual satisfaction in their psychological needs, autonomy, competence relatedness is important in achieving psychological growth and well-being (Broeck, Ferris, Chan, & Rosen, 2016). Self-determination theory is an effective theoretical process when teaching exceptional students in the classroom. The theory examines the process individuals use in achieving their goals and different behaviors exhibited while achieving these goals. As a result of not having SD and individual may

experience defeat in their goals. Additionally, a student will achieve a greater autonomy when SD is introduced into their learning process by teachers.

Teachers' characteristics helps build the self-determination of exceptional students in the classroom. The skills student needs in acquiring self-determination are decision-making, problem-solving and decision-making. Teaching and promoting self-determination in the classroom is relevant to student learning (Cho, Wehmeyer & Kingston, 2012). The argumentation supporting students' self-determination in general education curricula increases students' academic learning. Likewise, in state content, district standards and overall academic achievement are all projected in students achieving these goals (Palmer, Wehmeyer, Gipson, & Agran, 2004). SD behavior provides students with an opportunity to make progress in their standards, goals and learning strategies.

Self-Efficacy Theory

Exceptional students will choose their course of action when teachers implement their course of action in the classroom. Self-efficacy theory includes beliefs, capabilities, and the chosen course of action of certain forms of behavior (Phan & Ngu, 2014). The theory is effective in explaining student learning outcomes and the individual need to produce desired results. An individual based their beliefs and attains personal self - efficacy through information from four major form of state (Phan & Ngn, 2014). The information derives from enactive performance accomplishment, vicarious experience, verbal persuasion, emotional and psychological state (Phan & Ngu, 2014). With a low level of self-efficacy in academic learning an individual may approach a task as

apprehensive, evasive, stress, and unable to accomplish. High-level of self-efficacy, the individual is more likely to approach difficulty with more positive response and versatility of how to solve for a better outcome. Inclusive education depends on the effectiveness of teachers in their instructional practice.

Attribution Theory

Attribution theory explains the causality and the reason for the behavior (Gaier, 2015). The individual environment through their social norms, casual norms and personal history are reasons for their outcomes (McClure, Meyer, Garisch, Fischer, Weir & Walkey, 2011). Students' attribution can affect their future in their learning environment. Researchers have indicated the cognitive effects of attribution will affect the individual performance. Whether their actions are due to a cause that is uncontrollable, or motivation perseverance will depend on the attribution outcome (McClure et al., 2011). In education, the student may attribute their outcome to achieving a new skill, likewise; they may attribute their outcome how they are perceived by others. Teachers need accuracy in the classroom when a student is failing, and having the appropriate attribution, will assist the student in their learning process.

Nature of the Study

This study was a quantitative approach to statistically evaluate the impact of special education teacher training on the academic outcomes of the exceptional children; specifically; those children placed within an inclusive classroom. With the use of survey data, a statistical analysis was performed in determining if there was statistical significance with the data collection. In this research study I analyze the relationship

between the teacher's characteristics and exceptional student's outcomes within special and general education classrooms. The teacher's characteristics include teacher's experience, training, and attitudes towards exceptional children with learning disability. The dependent variables are the academic outcomes of the exceptional children in the inclusionary classroom, which will be accessed by teacher rating and through archival school records, such as statewide performance scores in mathematics, language art, social studies, and science of exceptional students.

A demographic survey was answered by all of the participants, and the gender of participants was used in not identifying teachers of exceptional students. The survey designed in this research study was used to collect data from middle school teachers of exceptional students. When data collection was completed, I then examined the relationship between the variables. Data collection for teachers experience, training, and attitude the Teachers Attitude Towards Inclusion (TAIS) scale was used (Salovita, 2015). This scale consisted of 10 items on a Likert scale of *strongly agree to strongly disagree.* The average teacher rating of their students within their classroom setting. The number of students within each classroom did differ; there were from 1 to 10 exceptional students enrolled in each classroom setting. Teachers average ratings of their exceptional students were from the subject taught with an average from *below 60% to 95% and above.* The teacher's response to the average standardized scores of their students in the classroom was from *Level 1 lowest rating to Level 4 highest rating.*

Another measurement used for data collection was the Availability of Instructional Options (AOIO) questionnaire (Picklo & Christenson, 2005). For this

study, responses were from the questionnaire which consisted of 25 items measured with the use of a Likert scale. The alternative instructional measures responses were *1 almost never to 4 almost always.* School implementing required test responses were based on (*I) increase, to (DK) don't know.* The data were collected via online through the Qualtrics data system and transcribe with the SPSS program software. The teachers of exceptional students answered all the survey questions in this study. Therefore, the scores were calculated after all data were received; an analysis was conducted in determining the relationships between the variables.

Definitions of Terms

Exceptional children: Students who are exceptional are special education students. There are differences between the exceptional child and other children in terms of mental characteristics, social behavior, communication abilities, sensory abilities and physical characteristics. In order to maximize the child learning capacity, the student will require modification of school practices (Thomson, 2012).

*Inclusive classroom**:*** A classroom that supports a heterogeneous and appropriate environment in educating each child with placement and instructional support (Winzer & Mazurek, 2009).

*Teacher characteristics**:*** The classroom environment and the instructional practice, student learning are the main elements of teachers' characteristics (Jung, Brown & Karp, 2014)

*Special education***:** These are specially designed educational instructions that include their classroom instructions, home instructions, instructions in psychical education or other facilities and hospitals (Thomson, 2012).

*Teacher training**:*** State level mandates that require general education teachers to complete course in special education (Pugach and Peck, 2016).

*Teacher experience***:** Teachers who are highly-qualified with vast knowledge with support while ensuring all children can learn (Southeast center for teaching quality, 2004)

*Benchmarks**:*** Assessments designed to monitor student progress, and improve instructional practice (U.S. Department of Education, n.d.).

*Statewide**:*** The National Assessment of Educational Process (NAEP) is based on what students in America are doing academically in various subject areas (National Center of Education Statistics, 2016).

*Teacher attitude**:*** Relates to a belief or an outward observable belief in which the individual may react favorably or unfavorably. Teachers attitude may affect teachers' confidence about the content of a subject (Munck, 2007).

Assumptions

The assumptions of this study were that teacher's characteristics do have an impact on exceptional students' academic learning outcome. Data was obtained from special and general education teachers who teach exceptional students. An assumption of this research study was teachers will provide honest answers regarding their own characteristics and the use of instructional supports, as well as provide an honest assessment of academic outcomes of the exceptional students, while protecting the

identity of students. The study examined the relationship between variables and any difference, which may occur. In Chapter 2, I present various studies on the impact of general and special education teachers on exceptional students' academic learning. There is a need for more research studies on the instructional practices of teachers who teach exceptional students and their learning outcomes.

Scope and Delimitation

The survey in this study was completed by general and special education teachers of exceptional students. The Qualtrics online survey tool was used to recruit participants after the school districts refused permission to access data about students. Thus, the findings of the study are limited to the geographical area where the participants are obtained.

Limitations

The limitations of the study are educators are responding to a questionnaire, and it is centered on self-reporting. Participants in this research are self-reporting with the measurement tool provided to them. Another limitation may include the geographic location and may limit generalization of the study with other teachers. The students within the study will be unidentifiable, and this is not a qualitative study. In order to protect the student rights in this research study, no student names or student identification numbers or socioeconomic status will be used. Students' age, ethnicity, gender, or demographic locations are not provided for this research study. Specificity of students' disability was not included; however, the students are all educated with general and special education teachers within inclusive classrooms. The database used for this

research was limited and based on test information only. The study utilized a sample size from a small area of the East Coast school districts.

Significance

Researchers have found conflicting views about inclusive education from both general and special educators (Ross-Hill, 2009). Researchers should assess the service delivery of instruction for exceptional students, and the challenges associated with these instructional programs (Fuchs & Fuchs, 2015). There is a need for adequate training for educators before entering the inclusive classroom with exceptional students. Education quality of exceptional students with learning disability depends heavily on school districts and teacher quality.

This study is important for exceptional students, teachers, and administrators in an educational setting. Researchers have indicated that teachers in the general classrooms receive very little preparation on inclusion strategies when teaching exceptional students (Hamman, Lechtenberger, Shirley, & Zhou, 2013). The lack of objective exceptional student academic assessment, the mixed results related to academic outcomes of the exceptional child in inclusive classrooms and lack of research related to identifying effective teaching practice for the exceptional child is the gap this study intend to fill. social change in this study, involves identifying the instructional practices which deliver the optimal academic outcomes for the exceptional students.

Summary

In this research study I described and examined teachers' characteristics and exceptional students' academic learning outcomes. The research study is a quantitative

study. There is a need for more research on general and special education instructional practice with exceptional students. This chapter did verify the challenges general educators face with the inclusion of exceptional students in the classroom. Although, there are legislative mandates of inclusive education for exceptional students. There is limited knowledge of exceptional students' outcomes within their educational settings. The literature will clarify the relationship of teachers' characteristics, experiences, attitude within general and special education classrooms.

In Chapter 2, I examined the literature of general and special education classrooms. The literature standpoint explained teachers' characteristics, exceptional students, and students' outcomes.

Chapter 2: Literature Review

Introduction

The National Center for Education Statistics has reported that 12.2% of middle school students within the United States have an Individualized Education Plan due to their special needs (Bitterman, Gray, & Goldring, 2013). Teachers and administrators are responsible for the success of these exceptional students within their school districts. The quality of the education that exceptional students receive is a foremost concern of schools. Authors of education literature have indicated preparing students to become effective, contributing citizens within their communities starts with inclusive education (Aron & Loprest, 2012).

The definition of *inclusion* in general educational settings differs from one district to another. Inclusion is an education philosophy constructed on the belief that all learners should be educated within a high-quality setting that includes exceptional students (DeMatthews & Mawhinney, 2013). Typically, inclusive education involves including exceptional students in general education classrooms (Van Garderen, Stromont, & Goel, 2012). Inclusion is at the forefront of various venues of education, and there are concerns about the lack of guidance for school districts in the implementation of inclusion classrooms.

Special education programs differ across state and school districts, and researchers have explored the effectiveness of the teaching methods used in various programs (Vannest, Hangan-Burke, Parker, & Soares, 2011). However, existing research remains limited in relation to the structure of special education programs (Vannest et al.,

2011). In some settings, exceptional students are placed with general education students in various programs of inclusion, whereas in other settings they are separated from the general education program. Exceptional students are segregated within many urban school districts.

There are growing concerns regarding teachers' preparedness and subsequent ability to deal with the challenges of teaching exceptional students accompanying the inclusion of exceptional students in general education classrooms (Swain, Nordes, & Leader-Jansen, 2012). Researchers have indicated that graduate training in education can enhance the educators' perception of exceptional students (Swain et al., 2012). Moreover, educators of exceptional students have indicated that they may lack confidence in educating exceptional students (Swain et al., 2012). Graduates have expressed that their coursework may not have improved their attitude or their willingness to work with exceptional students (King-Sears, Carran, Dammann, & Arter, 2012).

In this study, I will explore teachers' preparedness programs and the quality of education associated with them within special education settings and general education classrooms. Teachers' attitudes, self-efficacy, self-determination, and ability to assess students' goals are vital to the academic accomplishment of exceptional students. Teachers' attitude and preparedness to teach exceptional students effectively start with their education preservice or in-service training (Benedict, Brownwell, Yujeong, Bettini, & Lauterbach, 2014). Research related to lack of preparedness among special education teachers is limited.

For school districts throughout the country, whose educators strive to provide a high-quality education to exceptional students, concerns and challenges include the diverse backgrounds of students and the economic constraints of school districts. The challenges of educating exceptional individuals include those related to economics, as well as the priorities of the states, federal government, and local school districts. The major source of funding for education within the United States, initiated through a legislative process, derives from supplements of 8.3% that states receive from the federal government (Abbott, 2013). States are responsible for 87.7% of funding for public schools, with the other 10.8% of schools' funding originating with the U. S. Department of Education and other federal agencies (U.S. Department of Education, 2012).

The achievement gap in education is challenging for all educators and policy makers. Budget constraints within school districts affect the lives of exceptional students and will continue to do so until there is a cohesive plan between lawmakers and educators for financing special education (Rafal, 2009). Educators seeking to reach the needs of each exceptional student, particularly in larger metropolitan areas of the country, face additional challenges. Research, indicates that there are various ways of overcoming these obstacles and that positive changes can be made with inclusive education (Rafal, 2009).

In this chapter, I present a review of self-determination theory, which will inform the study's theoretical framework. This theory is applicable to education and students' awareness of their academic goals in building competence and confidence within themselves. Other theories explored in this chapter are self-efficacy theory and attribution

theory. An educator's self-efficacy is determined by his or her behavior in the presence of challenges and correlates with students' academic achievement.

The literature within this chapter relates to the challenges of teachers of exceptional students within special and general education. In this chapter, I describe research on the preparedness and instructional practices of teachers of exceptional students as well as the effectiveness of middle school teachers who are general and special educators. Additionally, I evaluate the impact educators have on exceptional students' learning outcomes. In reviewing the literature, I explored the strategies teachers use in teaching exceptional students and the corresponding student outcomes. Further, I discus how existing research has established a framework for this study.

Literature Search Strategy

This literature review is based on the results of a search of online databases such as PsycINFO, Education Research Complete, and EBSCOhost. A keyword search included the following keywords: *teachers characteristics in a special education classroom* (182 articles); s*tudent outcomes of exceptional children* (160 articles), s*tudent outcomes in general and special education classroom* (35 articles), t*eachers characteristics type of classroom and student outcomes* (6 articles), *added type of classroom, middle and 6th grade* (8 articles), *and* s*pecial education teachers versus general education teachers* (1,103

Theoretical Framework

Self-Determination Theory

Educators' knowledge and awareness of teaching self-determination within their instructional practice, is one factor in the effectiveness of education for exceptional students. Self-determination theory (SDT) is grounded in the psychological well-being of the individual (Ryan, Curren, & Deci, 2013). SDT is a vital component of education and promotes motivation among students as well as an interest in learning. SDT is structured on the identification of three basic psychological needs, social connectedness, psychological integration, and learning that relates to human potential (Ryan et al., 2013). According to this theory, individuals satisfy their potentialities when they have achieved their basic psychological needs.

SDT has been used to differentiate behavior centered on the individuals' goals and outcomes from the regulatory process that individuals may pursue to meet those goals (Deci & Ryan, 2000). Researchers have categorized SDT as a broad theory of implementation and motivation (Ryan et al., 2013). According to SDT, humans have the capability of moving, developing, and attaining greater autonomy. Individuals may possess different types of goals that yield different behavioral and affective consequences (Deci & Ryan, 2000). Individuals who do not have self-determination may experience the defeat of their hopes and aspirations.

In education, self-determination is conducive to students' learning and having confidence in their goals and capabilities (Deci, Vallerand, Pelletier, & Ryan, 1991). Within SDT, behaviors are classified as intentional or motivated. When individuals are

motivated their behaviors are self-determined, and their engagements are controlled. When control is involved, the regulatory process of an individual's behavior may be one of compliance or defiance (Deci et al., 1991).

Self-determination is vitally important to exceptional students; by giving them control over their lives, educators are able to promote positive learning outcomes. The theory is growth oriented. According to SDT, students achieve greater autonomy through attainment of instructional goals (Martin, Morehart, Lauzon, & Daviso, 2013). Researchers have indicated that self-determination is an educational process and outcome (Martin et al., 2013). Teachers who are preparing students to become active members of their communities may guide students, through academic content, towards self-determination. Researchers have presented evidence indicating that self-determination is important to teachers in delivering academic content and offering skills development to exceptional students in the classroom (Carter, Lane, Crnobori, Bruhn, & Oakes, 2011).

Promoting self-determination for exceptional students involves increasing students' awareness, of their goals, strengths, and weaknesses (Martin et al., 2013). The foundation of an educational program should be constructed using activities and content that will assist students in making informed decisions. In the process of developing skills of self-awareness, decision making, and goal setting, students demonstrate autonomy. Previous data have provided evidence that educators who foster autonomy among students also increase their motivation to learn (Deci & Ryan, 2000). Individual well-being derives from autonomy and competence; therefore, the need for satisfaction is correlated with the "what" and "why" of goal pursuit (Deci & Ryan, 2000).

Self-determination involves exceptional students' efficacy, self-awareness, and confidence, and is important in the transition to adult life (Martin et al., 2013). In the elementary and middle school years, teachers of exceptional students do not implement transition planning (self-advocacy). When exceptional students are involved in the transitional process (decision-making domain, self-advocacy skills), their independence is centered on their growth in the process. Federal law does not mandate transitional planning for exceptional students; that is constructed on an individualized education plan until the student is age 16 (Martin et al., 2013). Nevertheless, researchers have stated that independence is the ultimate goal of all education systems.

The theoretical framework of self-determination theory involves psychological needs for competence, relatedness and autonomy (Deci & Ryan, 2000). The needs hypothesized in this research study relate to teachers' competence, and training as well as students' outcomes. Self-determination theory will reciprocate differences in teacher's effectiveness through quality behavior of educators (Deci et al., 1991).

Self-Efficacy Theory

Self-efficacy theory is centered on the behavior of individuals and individuals' ability to execute a behavior for a desired outcome (Thompson & Graham, 2015). Self-efficacy theory has been researched in multiple studies and the results of those studies suggest positive relationships between self-efficacy and learning experiences. Self-efficacy is based on individuals' abilities to reach established goals based on their abilities (Urton, Wilbert & Hennemann, 2014). Individuals may base their efficacious belief on whether their task has a certain amount of difficulty.

Their belief is constructed on the outcome and the performance of the task. There is ample evidence individual self-efficacy is based on the behavior that the individual uses to produce a certain outcome. Self-efficacy beliefs are constructed on how long an individual will sustain a behavior in the course of obstacles or aversive experience (Lent & Fouad, 2011). There is abundant evidence of the influence of self-efficacy on educator standards and student outcomes (Cho, Wehmeyer, & Kingston, 2013).

Researchers using self-efficacy theory acknowledge similarities with previous research in career literature and the social cognitive career theory (SCCT). This theory is widely used as a larger theory of self on which individuals base their behavior. According to self-efficacy theory, all individuals may pursue activities, school, or employment in which they may excel (Lent & Fouad, 2011).

Solar (2011) reporting on an investigation involving students with emotional and behavioral disabilities (EBD), indicated that students with EBD generally have low self-efficacy. These students' motivations in learning are influenced by their tendency to give up on themselves when faced with difficulties. Students with EBD suffer from a lack of perseverance and motivation. The negative ways in which these students process information lead to negative behaviors in the classroom (Solar, 2011). Teachers can incorporate skills and strategies that are positive in assisting these students in maintaining their ability to learn.

Previous studies have examined self-efficacy in teaching through using a two-factor dimensional concept (Layser, Zeiger, & Romi, 2011). Teachers' sense of personal

teaching efficacy (PTE) is centered on their beliefs about their ability to influence students' learning and behavior. Another concept is teacher's greater sense of efficacy (GTE). This concept is primarily centered on teachers' ability to bring about change in students' abilities, which may in turn be limited due to students' abilities and environmental factors (Layser et al., 2011). The outcome expectancy dimensional factor is cohesive with the greater efficacy of teachers.

Meeting the demands of high-quality teaching is viewed as stressful, especially within special education classrooms. Teachers' efficacy in satisfying these demands has a strong influence on students' outcomes and behavior (Layser et al., 2011). Efficacy in teachers leads to motivation and academic achievement in their students. Researchers have indicated that college preparation courses yield mixed results in terms of the development of efficacy in teachers (Layser et al., 2011). Some reports have indicated an increase in GTE and PTE as a preparation course progresses. Others, however, have reported no changes in GTE as well as decreases or increases in PTE (Layser et al., 2011). The findings of their study indicated the preparation course developed self-efficacy in the social domain (Layser et al., 2011).

There is a need for more study of general and special education teachers who teach students with EBD (Wehby, Lane, & Faulk, 2003). There is consensus among researchers that teachers of EBD students may not receive the comprehensive training they need to contend with the magnitude of the problems these students exhibit. When instructors have been well trained in their preservice programs, they are more competent in implementing appropriate instructional procedures for exceptional student's (Wehby et

al., 2003). To provide data to inform such training, research studies focusing on EBD students' academic achievement and instructions are needed.

There is a shortage of special education teachers and student achievements are affected when teachers vacate these positions. In a study on efficacy and special education teachers' job satisfaction, researchers indicated that job satisfaction, is based on retention and attrition (Viel-Ruma, Houchins, Jolivette, & Benson, 2010). Previous research indicated that when teachers experience job dissatisfaction, student achievement is affected. Further research has indicated that teachers who teach students with EBD are more likely to have diminished job satisfaction (Viel-Ruma et al., 2010). Viel-Ruma et al. found that teachers of students with EBD s have the highest attrition and job dissatisfaction rates.

Viel-Ruma et al. (2010) found that teachers' self-efficacy correlated positively with students' academic achievement. Other studies have reported that when a teacher experiences self-efficacy they are more engaged in facilitating their instructional plans (Veil-Ruma et al., 2010). Veil-Ruma et al evaluated the effects of self-efficacy, and collective efficacy, when used to measure the level of job satisfaction. Teachers within the study were from elementary, middle, and high schools with various special education programs (resource room, self-contained, and inclusion).

In their study of special education teachers Viel-Ruma et al., (2010) stated that retention efforts and job satisfaction were casual factors in attrition. Through the study, researchers learned that teachers' self-efficacy could be improved through professional

development. Other means of developing teachers' self-efficacy included strong induction programs, which may assist in decreasing the attrition rate of special education teachers (Viel-Ruma et al.). Improvement in the school curriculum, offered within their communities, will assist in improving student academic performance and improve job satisfaction among special education teachers.

Self-efficacy theory suggests the individuals view their experiences when appraising their current capabilities (Lent & Fouad, 2011). The individuals may view their job performance in light of others' accomplishments, social persuasion, or psychological and affective states (Lent & Fouad, 2011). Self-efficacy relates to teachers' attitudes about working with exceptional students and teachers' instructional environment. Researchers have indicated that self-efficacy theory coincides effectively with other contextual variables, such as person, behavior, outcome expectations, and goals (Lent & Fouad, 2011).

Attribution theory

Weiner's attribution model is centered on individuals' beliefs about their success and their expectancy of success while valuing their achievement (Eccles & Wigfield, 2002). An assumption of attribution theory is individuals are searching for the causes of their achievement and outcomes (Clickenbeard, 2012). According to attribution theory, there are three dimensions of attribution: locus of control, controllability, and stability (Eccles & Wigfield, 2002). Teachers' responses to students play a role in how students may view their academic outcomes. Students acquire their academic performance from classroom cues, and therefore their achievement of success or failure are also based on

those cues (Clark, 1997). Within the classroom, the most efficient form of attributional response is from the teacher (Clark, 1997).

According to attribution theorists, an individual will explain their outcomes based on their striving and achievement; these are characteristics of their motivation beliefs (Eccles & Wigfield, 2002). Attribution theorists believe individuals' interpretations of their achievements are centered on their comprehension of motivation (Eccles & Wigfield, 2002). Task difficulty, efforts, and luck are identifiable components of individuals' achievement attributions. Within studies in which attribution theory is used, one of the most important considerations is the locus of causality, or whether the individual believes the cause of an outcome is either external or internal. Empirical research has indicated that controllability is vital to students' outcomes. There are causal factors that the individual can control, such as skill/efficacy; however, others are uncontrollable, such as mood and the actions of others.

The cause and outcome of an individual's behavior may be apparent based on attribution theory, and the individual may provide an explanation for the occurrence (Woodcock & Vialle, 2011). Weiner theorized in his attribution theory, that achievement-model behaviors are centered on successes and failures of learning in school (Woodcock & Vialle, 2011). Students' behavior may influence their teachers' perception of their future as well as teachers' responses to them (Woodcock & Vialle, 2011). Researchers have indicated that, in providing reasons for students' negative outcomes, teachers may make casual attributions (Woodcock & Vialle, 2011). Moreover, prior knowledge of

students' abilities is used by teachers in searching for an explanation of students' outcomes.

Attribution theory is centered on the individuals' fundamental ideas of the achievement they are expected to accomplish (Eccles & Wigfield, 2002). In this research study, I will apply attribution theory to reveal individuals' beliefs about their abilities and expectations for success. The theory will be used in examining the instructional practices of teachers and the reasons that teachers offer for their students' level of engagement and success. Researchers have indicated that attribution theory can be applied to explore teachers' interpretations of their motivational disposition and student outcomes (Eccles & Wigfield, 2002). This research study will examine the casual dimension in relation to individuals' achievement behaviors.

The theoretical constructs SD, SE, and attribution theories have all contributed to individuals' successes and failures, or outcomes (Eccles & Wigfield, 2002). Self-determination and self-efficacy goals are centered on an individual's exploration of intellectual creativity, and these goals may regulate the individual's behavior (Eccles & Wigfield, 2002). In education, where goals are specified and challenging to students, students are further persuaded in increasing their self-efficacy (Eccles & Wigfeild, 2002). The individual behavior is perceived as internal or external as found in self-determination (locus of control), self-efficacy, and attribution theories. In self-determination, the individual has a direct need for competence and may seek activities that are intrinsically motivated.

Higher levels of intrinsic motivation will produce better academic achievement and coping strategies in facilitating learning (Eccles & Wigfield, 2002). The individual's motivation is only fulfilled when their competence and self-determination are achieved. With the three theories, SD, SE, and attribution, I will explore the individuals' ability for success in work or academics. Attribution theory is cohesive with the individual development of achievement; therefore, it is intertwined with their motivational beliefs (Eccles & Wigfield, 2002). Furthermore, teachers' characteristics and student outcomes are a fundamental component of instructional practice and student academic learning.

SDT, SE, and attribution theories explain the correlation relationship between teachers' preparation and student outcomes. Educators of exceptional students have a profound influence on exceptional students' outcomes through their instructional practices. The theories help explain the relationship between characteristics, behavior, goals, and expectations of teachers of exceptional students. Students' achievement in turn is based on 'teachers' attainment of instructional goals in special and general education classrooms. With the use of this theoretical synthesis, I will explain students' outcomes based on teachers' instructional practices.

Exceptional Children

Evidence-Based Practice

One of the greatest challenges for educators is bridging the gap between practicing and in-service teachers in terms of evidence-based practice (EBP) (Dieke et al., 2009). There is a subtle difference in the preparation general and special education teachers receive in classroom management preparation. Ficarra and Quinn (2014) have

reported that classroom management in preservice preparation courses continues to be inadequate. Consequently, teachers learn from colleagues and trial and error which strategies work with classroom management.

High-quality EBP's effect and size of the design is higher than zero. There are certain characteristics needed for determining the correct fit of EBD before implementing it in the classroom. Students' characteristics such as age, grade, learning needs, and culture/linguistics are needed before choosing EBP (Torres, Farley & Cook, 2014). It is equally important to consider instructors' characteristics before choosing an appropriate EBP.

More effective educational programs and positive student outcomes are generated when EBP is used in special education (Cook & Odom, 2013). There is substantial evidence that indicates the implementation of science in the field of special education has an enormous effect on exceptional student's outcomes. Many educators have subsequently agreed the use of reliable scientific research has increased students' performance (Cook & Odom, 2013). There remains debate as to which are the best practices and the effects of the best practices when educators implement them in the classroom (Cook & Odom, 2013).

Chasm is defined as the gap between research and practice, which has existed since the beginning of special education research (Cook & Odom, 2013). Researchers have shared the concern of bridging the gap between research and practice (Cook & Odom, 2013). The use of EBP is a way of bridging the research-to-practice gap yet there are reports that indicate the gap has not been reduced. An imperative reason to use EBP

is identification of the most effective practice. The most effective practice is structured on high-quality research, which uses designs that are causality inferred (Cook & Odom, 2013).

There have been many concerns raised with implementing EBP; one of which is the failed transfer of research findings to everyday practice (Cook & Odom, 2013). Other conflicts can occur in implementing and sustaining new practice. School reform is associated with disappointing outcomes and questionable relevance to the target environment (Cook & Odom, 2013). Other causes of concerns are staffing, training, administrative support, and instructional content. Researchers have also suggested that teachers may not use the practice throughout the entire school year due to inadequate training (Cook & Odom, 2013). Teachers may find themselves implementing practices that are more appealing and an easier fit than EBP.

Improved education outcomes are centered on instructional practice (Cook & Odom, 2013). However, there may be nonresponses found within a group of students. Nevertheless, in special education EBP is the best practice for effective instructional practice (Cook & Odom, 2013). Research-based practice is not only implemented in special education; the practice is used in general education classrooms.

EBP addresses the concerns of students' conditions in skills deficit areas and it assists educators in identifying which interventions are appropriate (Harn, Parasi & Stoolmiller, 2013). Fidelity of implementation is a process that determines whether research interventions are used as intended in a research study (Harn et al., 2013).

Researchers have stated that implementation fidelity within the school districts context is most likely to improve students' achievement across time (Harn et al., 2013).

Student outcomes have been associated with fidelity, although research on this relationship has not been consistent (Harn et al., 2013). Researchers used multidimensional fidelity evaluation when investigating fidelity in education; this included an evaluation of structure and process. Multidimensional fidelity treatment and intervention in education require a determination of how and how long the practice is, as well as the effectiveness of the interventions (Harn et al., 2013). Fidelity, when used to measure school-base instructional practice, is centered on documenting the quality of offered instructions. Teachers need to examine and identify the professional development needs and what resources are required to implement effective practices for their students.

EBP identifies the best method for teaching exceptional children. The literature has suggested that many teachers are ineffective when teaching exceptional children without EBP. Researchers have stated their concerns that the gap in teaching exceptional students and those students' outcomes is not reducing without the use of EBP (Cook & Odom, 2013). The use of fidelity is important in verifying when interventions are used and that they are interpreted just as directed in the research study. Components of EBP involve instructional leadership of teachers, experiences, and self-efficacy of teachers (Harn et al., 2013). Proper implementation of EBP into everyday practice is effective in teaching exceptional students, which will effect positive students learning outcomes.

General versus Special Education Classrooms

Researchers have expressed their concerns about the limited amount of merged programs for middle/secondary education programs curriculum (Fullerton, Ruben, McBride & Bert, 2011). Access to general education classrooms for exceptional students comes with concerns centered on raising the academic standards for all students. In addition, there is a concern that special education teachers may not be prepared to teach content within their classrooms. Likewise, general education teachers may not be prepared to teach the diversity of learners within an inclusive classroom (Fullerton et al., 2011).

Classifying and identifying the academic retention of exceptional students is imperative for general education teachers (Grskovic & Trzcinka, 2011). It is equally important for general educators to have more added to their curriculum in terms of instructional strategies for teaching exceptional students. Additionally, more training is needed for general education teachers in alternative assessment techniques, teaching students at their appropriate level, modification of assessments, and collaboration with other teachers. In response to this, an initial program was developed by special and general education faculty members in adding special education to general education licensure (Fullerton et al., 2011).

Although faculty members of special and general education developed the merge program, the objective of the course was based on exceptional student gains. The candidates for this program received courses in more content area than others (Fullerton et al., 2011). The faculty based their main goals or values for these programs on research-

based practice, pedagogy, competencies knowledge, and skills (Fullerton et al., 2011). The teachers of exceptional students in this program could build on skills that are necessary for effective teaching within their classrooms.

There are growing concerns that placement of students within general education is not occurring for some exceptional students (Jackson, 2014). Placement of exceptional students within general education classrooms are discouraged by special education teams. The primary concern is exceptional students may only have access to functional skills curriculum and not grade-level curriculum in the general education (Jackson, 2014).

Researchers have argued the curriculum based in the special education classroom may derive from skills sources and not real curriculum (Jackson, 2014). There is a need for a greater alignment with the general education curriculum for exceptional students. School districts need to address and make policies that will require schools to make the general education curriculum available to exceptional students. However, there is a body of evidence, which indicates that functioning skills can be effectively taught to exceptional students. Functional skill achievements validate exceptional students' ability to learn; however, they do not validate student k-12 outcomes (Jackson, 2014).

After the examination of special education effects and outcomes based on interventions, researchers indicated that exceptional students are behind their peers (Lochman et al., 2012). This is most evident in their academic courses of science, mathematics, social studies, and reading. There is a gap, which occurs with the placement into special education classes. Moreover, the gap does not disappear; it continues throughout their academic years. The complexities for exceptional students begin with

their disabilities and sometimes educators are unprepared for their complexities. Various special education research studies have indicated that substantial implementation of evidence-based interventions is vital in going beyond general education practice (Lochman et al., 2012).

School-based intervention programs are constructed on improving exceptional student's self-regulation, social-cognitive, and emotional coping skills (Lochman et al., 2012). Exceptional student's self-regulation and self-control are enhanced with the use of evidence-based interventions. Thus, intervention programs are constructed to improve these characteristics in high-risk students. The resultant changes exhibited by exceptional students include improved task behavior and increased orientation towards academics (Lochman et al., 2012).

Special Education Teachers' Characteristics

Educational research examines how teachers can effectively improve their students' academic achievements (Konstantopoulos & Sun, 2012). The U.S. Department of Education is guided by the principles of reducing the inequalities found in the academic achievement of their students. There is ample evidence suggesting differences in teachers' effectiveness as educators are reflective in student achievement (Konstantopoulos & Sun, 2012). Previous research measured the relationship of teachers' characteristics and student achievement and the achievement of students within their classroom.

These are traditional research studies, which discussed the effects of teachers and their student achievement. Some have indicated students' achievements are linked to

their teacher's characteristics and their experience. These reports further suggested that teachers' characteristics are influential on students throughout elementary and middle school (Konstantopoulos & Sun, 2012). Furthermore, there are differences found in teachers' effectiveness and students' achievement.

Researchers have indicated students' gains are based on the teacher's characteristics and not on the student's characteristics (Rubie-Davies, et al., 2012). According to researchers Rubie-Davis et al. (2012) and their study of teachers' beliefs and characteristics, teachers' differences in instructional practice affect student outcomes. There were three areas of research, which involve teachers' characteristics. After examining previous findings, researchers measured teachers' characteristics such as level of teacher experience, salary, certification, student achievement and education; these were then used in determining the existing relationships (Haunshek; 1986, as cited in Konstantopoulos & Sun; 2012).

Though many are concerned that salary, education preparedness, and experience have little effect on student success, other in the field argue that teachers' characteristics, such as teacher experience and teacher preparation, have a profound effect on students' achievements (Konstantopoulous & Sun, 2012). However, researchers who have examined the impact of teachers' content knowledge and experience have suggested these qualities do influence student achievement (Konstantopoulous & Sun, 2012).

Teacher expectation, characteristics, and contextual factors have a profound effect on student learning outcomes (Rubie-Davies, Flint & McDonald, 2012). Teachers' expectations, formed at the beginning of each school year, can influence student

outcomes (Rubie-Davies et al., 2012). Expectation teachers form for individual students define the dyadic relationship (Rubie-Davies et al., 2012). Teachers' expectations may influence their use of curricula, and the type of curricula used will determine future-oriented progress. Contextual factors, such as school level socioeconomics, have played a vital role in teachers' decisions to alter their instructional practice (Rubie-Davies et al., 2012). Certain beliefs of teachers will affect the outcomes of their students within their classrooms.

The conceptualization of teaching inclusion pedagogy requires teaching all students within the body of learners using strategies that will not make learners feel indifferent (Bhroin, 2013). An important characteristic of teachers is their ability to teach exceptional students within the classroom; this requires their understanding of this pedagogy. Teachers' adaptation of their academic instruction supports learning for all students within their inclusive classrooms. Teaching exceptional students with emotional and behavioral needs is another area with limited information on evidence-based and non-evidence-based practice (Stormont, Reinke & Herman, 2011).

When working with exceptional students with emotional and behavioral problems it is imperative that teachers use effective practices. Previous research studies suggest that teachers may lack knowledge related to supporting exceptional students with behavioral needs (Reinke, Stormont, Herman, Puri, & Goel; 2011; as cited in Stormont et al; 2011). This emphasizes the need for EBP among those that teach these exceptional students (Stromont et al., 2011). It is imperative that researchers examine teachers of

exceptional students with behavior needs, as well as their different types of practices used with these students (Stormont et al., 2011).

There has been limited investigation as to whether special educators are more knowledgeable than general educators in EBP when teaching exceptional students with behavioral needs. There is an indication that both general and special educators feel there is a need for more professional development in teaching exceptional students with social behavioral needs (Stormont et al., 2011). In evaluating the results of their study, Stormont et al. reported teachers' lack of confidence in using EBP and that intervention selections may influence their decision to use EBP. Researchers have reported the need for preservice programs; schools should provide more programs in assisting preservice teachers in identifying evidence-based programs (Stormont et al., 2011). Professional development for teachers of exceptional students with social behavioral needs is essential in assisting these educators with the use of new research in guiding their practice.

Teachers of exceptional students with EBD are at an increased risk for attrition (Kindzierki, O'Dell, Marable & Raimondi, 2013). Teachers of exceptional student with EBD, have reported leaving their employment after one or two years of teaching. Those who do not leave the field often ask for reassignments. Areas of concern raised by teachers of exceptional students are the rising number of students and the higher levels of stress associated with teaching exceptional students with EBD (Kindzierki et al., 2013). Various studies have highlighted a gap in classroom and research-based teaching practice (Scheuerman et al; 2003; as cited in Kindzierki et al., 2013).

In 2008, The Council for Exceptional Children revised the core set of knowledge, skills, and dispositions for teachers of exceptional students with EBD (The Council for Exceptional Children 2008; Peak et al; 2008 as cited in Kindzierki et al; 2013). Educators have stated the net competencies' requirements, based on theories associated with the revised knowledge and skill set, were too difficult. There were challenges in implementing the new competencies in the classrooms of exceptional students with EBD (Kindzierki et al., 2013). Various studies have called for an improved alignment of theory and practice where there is a definite divergence between policy makers and educators (Kindzierki et al., 2013).

Special versus General Education Teachers

There has been a change in preparation of preservice teachers based on the shift to a more inclusionary classroom (Frey, Andres, McKeeman, & Lane, 2012). The creation of a more unified licensure program has expanded the responsibilities for teaching inclusive classrooms (Frey et al., 2012). The inclusionary practice has altered the undercurrent of special education classrooms. However, there are those who believe general educators are not meeting the diverse learning needs of exceptional students. Some teachers' have expressed the need for more curricula adaptation within the general education classroom.

Reports have indicated that limited training of teacher preparation programs will affect preservice teachers' capacity to adapt curricula to meet the needs of exceptional students (Frey et al., 2012). Special and general educators require the skills set of curricula adaptation for use in every inclusive classroom (Frey et al., 2012). These are all

emphasized in preservice teaching programs and viewed as a means of meeting individual student needs within the classroom.

Universal Design for Learning (UDL) encompasses teacher's lesson plans to include students with different ability and learning differences (Frey et al., 2012). When UDL is implemented in the preservice programs, it assists teachers in being responsive to their students learning needs. In a study with secondary educators (grades 6-12) programs, a collaboration of UDL and instructional adaptation was used in evaluating multiple courses (Frey et al., 2012). The participants for the study were all preservice teachers preparing to be secondary education teachers in general education.
The teachers used various types of instructional practices. The evaluation consisted of evaluating the use of UDL principles and lesson plans on students' learning outcomes in Grades 6 thru 12 (Frey et al., 2012). The impact of the collaboration of general and special education teachers on social or academic outcomes of exceptional students was measured in the results. The findings were mixed in terms of collaboration of teachers, whereas other findings were positive. The collaboration model effectiveness did have an influence on students' outcomes (Frey et al., 2012).

The preparation of general education teachers in teaching exceptional students is rife with deficiencies, as reported with the postsecondary and suboptimal education outcomes (Stanford et al., 2011, U.S. ED National Center for Education Statistics, 2013a, 2013b; Vitelli, 2015). The use of UDL is the most effective form of teacher preparation programs and the preferred approach to facilitating inclusion. Still UDL is not prominent in many general educational programs (Vitelli, 2015). The Higher Education Opportunity

Act of 2008 has provided more opportunities for the U.S. Department of Education to introduce UDL into their teacher preparation curricula (Vitelli, 2015).

Researchers have indicated a challenge for preservice teachers is working with a diverse group of exceptional students and providing for their needs (Frey et al., 2012). Their behavioral management and social needs are challenging for educators. The utilization of UDL principles will assist preservice teachers in adapting their instructional practice. The application of the UDL principles allows exceptional students to utilize content and their learning in verbal written activities.

The core values of inclusive education and teaching within general education setting were constructed on three value areas (King-Sears et al., 2014). First, educators within the general education setting should be willing to adapt their teaching to meet the needs of exceptional students. Second, an integral component of the inclusive classroom must be collaborative teaching and team teaching (King-Sears et al., 2014). Third, educators should be knowledgeable in demonstrating instructional accommodations and curricula skills, as well as in assertive technology and behavioral support. Preservice educators should be knowledgeable in demonstrating instructional accommodations and curricula skills, knowledgeable in assertive technology (adaptive learning tools) and behavioral support.

Researchers have indicated that although there are changes being made with many teacher preparation programs to include inclusive practice, there is limited research on which components of the program need enhancing (King-Sears et al., 2012). Content area is challenging for most special and general education teachers when working in

collaboration (Kennedy & Ihle, 2012). This challenge especially pertains to special education teachers who may experience marginalization in their instructional setting. There is evidence that indicated more preparation programs are including increased special education content in their courses. Researchers have examined and reconstructed a teacher preparation model. This new model was a reconstruction of the model previously developed by Van Laarhoven, Munk, Lynch, Bosma and Rouse (2007). The researchers used self-ratings to evaluate and compare attitudinal and knowledge level data (King-Sears et al., 2012).

The new model evaluated the responses to classroom-based scenarios of pre-service teachers who are preparing to teach within inclusive schools (King-Sears et al., 2012). Preservice teachers were capable of demonstrating strategies in the classroom based on the scenarios used. General educators had the most significant growth with all measures across time due to the model that was used. There were positive effects of the study on preservice general educators. Researchers shared concerns about the limitations of the study and the need to acquire skill-level information, which is needed when educators are instructing students with and without disability (King-Sears et al., 2012). The use of attitudinal and knowledge level data assisted preservice educators when teaching non-exceptional and exceptional students.

Additionally, the group, whose self-ratings of attitudinal and knowledge data were higher than the control group, spent more time in schools while in their teacher preparation programs. Researchers have indicated additional teacher education research is needed to evaluate field experience programs. Researchers, that have examined the

type of field experiences for teacher preparation programs, found those programs yield more effective teachers for exceptional students (King-Sears et al., 2012). An NCLB Act requirement for graduated special education teachers is an ability to teach more than one content area. However, general educators are not held to the same criteria; they are only required to have some level of capability in teaching exceptional students within a general education classroom.

Often materials used by the special educators are not designed to meet the needs of their students, and they receive the same materials as general educators. Another concern for the novice special education teacher is the double jeopardy they face in organized separation of general and special educators (Jones et al., 2013). Due to the novice special educator's status, these beginning educators are not positioned in an effective way to receive support from their colleagues. There is limited research comparing the experiences of general and special educators in terms of attrition and commitment, (Jones et al., 2013).

Beginning teachers rely heavily on the support of their colleagues (Jones et al., 2013). However, when the support is non-existent or relationships with colleagues are poor, teachers experience burnout and are exposed to negative influences on retention (Jones et al., 2013). Previous research indicated educators within the school might develop a shared comprehensive view of belief, and instructional practice might be based on interaction and influences. More likely, educators may share the same experiences.

Commitment to assignment and commitment to school, two variables in the proposed study, are related to colleague's support, perception of school-level collective

responsibility, and perception of fit in school (Jones et al., 2013). Researchers have indicated that there are some important factors to include when measuring the importance of teachers' level of commitment. Special education educators are more inclined to spend more of their time restructuring curricula, modifying their instructions, negotiating relationships with other teachers. The results indicated and reiterated previous research, that when educators share the belief that they are a part of a professional community, colleagues will share resources. The support, which special educators receive from their colleagues, will in turn be related to the special educators' commitment to their school.

Exceptional Teacher Characteristics and Student Outcomes

A report from the U. S. Department of Education on school characteristics and teachers who stayed, moved, or left their profession; found that among teachers who teach exceptional students 82.9% of these teachers stayed within their position, and 10.5% moved and 6.6% left their positions as Special Education teachers (Goldring, Taie, & Riddles, 2014). Teachers, may stay within the same district and is employed in other areas, there are teachers who have found employment in other areas other than education. There are ongoing concerns of teachers leaving their positions as special education teachers. A greater number of teachers leave special education than teachers within general education settings (Olivarez & Arnold, 2006).

Upon examining previous research, Olivarez and Arnold (2006) found that younger teachers of exceptional students tend to leave the classroom more often than older teachers. Previous studies have indicated demographics factors alone do not indicate which teachers will stay in the field (Olivarez & Arnold, 2006). Research,

designed to elucidate who will stay in the field, have suggested that certification status, perceived stress, age, and school climate are the best indicators of retention. In addition, Olivarez and Arnold (2006) found that teachers with five years' experience are more likely to stay in the classroom.

Researchers have indicated that students with a disability who have teachers demonstrating a negative attitude towards them will not integrate into general education classrooms (Kossewska, 2006). Research has not explored how teachers' characteristics may relate to their encounters with exceptional students (Podell & Tournaki, 2007). The subsequent experience of general and special education preservice teachers differs in their preparation to teacher exceptional students. There is limited research on how general and special educators differ, as well as on the impact these differences have on exceptional students in the classroom (Podell & Tournaki, 2007).

Various studies have suggested that teachers may have a more positive attitude towards students with social and physical disabilities (Podell & Tournaki, 2007). The same consideration may not be given to those exceptional students with academic and behavioral disorders in inclusive classroom. Other research suggested that students may be given labels by their general education teacher (Podell & Tournaki, 2007). Students who are poor readers in general education settings are labeled as having a lesser degree of academic success.

Students' behaviors within the classroom are attributed to social behavior and are challenges for the teacher in the classroom (Podell & Tournaki, 2007). The behavior of a student is attributed to school failure more than any of the student's other attributes.

Educators may characterize students with behavior challenges, as deviation academics and may have reduced expectations for them (Podell & Tournaki, 2007). Researchers have found that teachers are more attentive to students with disruptive behavior than students who are inattentive in the classroom (Podell & Tournaki, 2007).

Professional development has a profound effect on teachers' effectiveness, teacher quality, and student academic learning (Soine & Lumpe, 2014). There remains limited research on the professional development of educators and student achievement. Educators' learning is a process of both the individual and the organization. The growth of an educator is a process that builds and strengthens teachers' capacity to learn new skills (Soine & Lumpe, 2014).

According to researchers, teachers' professional development has no universal agreement, although, there are key components in the literature that state otherwise (Soine & Lumpe, 2014). For professional development to withstand and contain the characteristics of a process, it must contain, collective participation, active learning, and focus on content knowledge. These are all elements that are needed in measuring and strengthening the evidence-based practice (Soine & Lumpe, 2014). Within the U.S., there are well-design professional development teachers who are not taking the opportunity to participate in EBP (Barber & Mourshed 2007; Darling-Hammond et al. 2009 as cited in Soine & Lumpe, 2014).

There is ongoing research that indicates changes in teachers' characteristics and student learning may be credited to professional development; however, this research is very limited. Continuous, professional development does increase the teachers practice in

content knowledge and student achievement. In a study of professional development and teachers there were reported changes in teachers' skills, although, it did not investigate the relationship of student outcomes, which can provide the effectiveness of professional development (Sione & Lumpe, 2014). This study relied heavily on teachers' self-report on their changes in skills, and not through the observation of teachers in the classroom.

Teacher expectations have a significant impact on student learning gains. Rubie-Daveis et al.'s, (2012) investigation found in their study of teacher expectation yield low effect size of ($r < .20$). The strength or large effect for high expectation for students within the classroom was ($d = 1.01$). Consequently, teachers' expectations were center on the whole class and not the individual student.

Teachers' goal orientation has been identified as an important characteristic (Rubie-Davies et al., 2012). There are two types of goal orientations identified as having a profound effect on students learning. Performance goal orientation teachers' instructional procedures are more focused on assessing their student's ability to achieve (Rubie-Davies et al., 2012). Teachers who are a mastery goal orientated place more emphasis on students' learning. For classes with mastery goal orientated teacher, the focus is on students acquiring skills, insight or an understanding of their learning process (Rubie-Davies et al., 2012).

Rubie-Davis et al. (2012) explain that teachers' instructional practice was not included in the study of teachers' belief and characteristics. Rubie-Davis et al. note that teachers' instructional practice may be influenced by their beliefs and can lead to differential outcomes among students in their classrooms (Rubie-Davies et al., 2012).

Other areas, which may influence teachers' beliefs, are school culture, type of class and practices. A supportive school culture, allows their teachers to concentrate more on their instructional practice (Rubie-Davies et al., 2012). With the supportive school culture, a teacher will then focus on students' goals and mastery of learning.

The subscale was used in their study of teachers' beliefs, and characteristics were the subscale Patterns of Adaptive Learning Scales (PALS) was designed to measure the mastery and performance approaches to instruction (Rubie-Davies et al., 2012). All the items which were used in determining and testing teachers' mastery goal orientation were correlated. The findings in the study indicated teachers' instructional beliefs do affect how teachers make their decisions. Teachers' beliefs can impact the way in which they structure their classroom and instructional practices.

Educational stakeholders have a valid interest in teacher quality; measuring the quality of teachers with the use of certification is important to student outcomes (Hill, Umland, Litke, & Kapitula, 2012). Different forms of measures are used in determining teacher's salary, years of experience, degrees attained, and student scores from state assessment. A teachers' promotion to a professional development position is centered on classroom performance, academic degrees, personality, motivation and external credential, which involve the National Board Certification (Hill et al., 2012).

Research on teacher quality and teaching quality are viewed as challenging and are not obtaining the value in teaching quality (Hill et al., 2012). Measures such as a teacher's salary increase, degrees, and teacher's experience are not proficient in predicting student outcomes. These components are only moderately associated with

predicting student outcomes (Hill et al., 2012). There are other reports have indicated that certification is a weak predictor of student outcomes.

In previous investigations of certification assessments, researchers found certifications are only valid for job analysis and topics presented at the exam (Hill, et al., 2012). However, the assessment will not predict future job practice. Other investigations have determined teachers who score poorly on their assessment are successful in students' outcomes. Likewise, teachers who may score highly on their assessments students' outcomes may not be as successful (Hill, et al., 2012). Consequently, the evaluation used in cut-scores assessment does not predict teacher's effectiveness in the classroom.

Teacher Characteristics, Type of Classroom, and Student Outcomes

The quality of education students receive is important when determining their learning outcomes. Social competence, self-regulation, and academic achievement of students are all influenced by the quality of teachers' instructional practices. Various researchers have indicated student outcomes are centered on classroom environment, instructions and management, these are defining factors of how teachers conduct their classrooms (Roehrig, Turner, Arrastia, Christensen, McElhaney & Jakiel, (2012). Additionally, these factors are primarily the domain of all classroom practice.

The atmosphere of the classroom plays an essential role in motivating students to learn. Likewise, making and planning the instructional process and delivering engaging instructions to students are equally important in classroom management (Roehrig, et al., 2012). Equally important in learning is the assessment of students, which allows teachers

to evaluate students' progress and the level of challenges needed. Assessments of students determine the proficiency of teachers' knowledge in the classroom and assist students with their learning capabilities. Essentially, students learning, and teachers' motivation style will affect students' outcomes in the classroom.

Students' autonomy may have a profound effect on their educational development (Reeve, 2009). Consequently, teachers' controlling instructional behaviors may negatively affect students' outcomes as that style does not support student autonomy (Reeve, 2009). Autonomy-supportive and controlling behaviors are both exhibited when teachers are presenting their instruction in a classroom. Controlling may be teachers' way of thinking about student engagement, although, teachers may not be aware they are employing controlling strategies. These strategies are often used in the classroom to produce positive outcomes; however, students may be less rather more than receptive (Reeve, 2009). Rewards are a common first-year teacher controlling strategy.

A reliance on an outside source of motivation may occur during instructional practice in the classroom (Reeve, 2009). This form of motivation may lead to neglect explanations when giving direct orders to students. The words teachers may use such as should, and have to, approaches such as guilt-criticism and impatience may have a negative effect on students (Reeve, 2009). Teachers' controlling motivations are found in two forms in the classroom, direct and indirect. With direct control teachers are giving students verbal commands. With indirect control teachers actions, may cause students to experience guilt, shame or anxiety. As a result, the teachers are creating ways in which motivate the student through internal compulsions.

The autonomy-supportive style is more supportive of students' thoughts, and their autonomous self-regulation (Reeve, 2009). The classroom atmosphere is more productive when teachers use this approach which acknowledges students' perspective and support their motivational development. As a result, teachers are able to create a classroom where autonomy motivation is associated with classroom activities. This in-turn will have a positive effect on students' long-term development, and student will continue to learn control their own motivation.

The incorporation of an autonomy-supportive style may strengthen teachers' instructional behaviors and enhance the teachers' strength and ability to nurture their students (Reeve, 2009). Teachers use a noncontrolling language to provide students with an explanation of the principles associated with learning. Through the use of autonomy-supportive styles teachers allow students to acquire instructional practice in their way; in addition, students' complaints are viewed as reasonable. Previous research suggest that students acquire more from an autonomy-supportive classroom (Reeve, 2009).

Academic learning outcomes for students are aligned with teachers' instructional practices in the classroom. The quality of teachers' instructions in the classroom is determined by the atmosphere, instruction delivery, assessment, and teachers' motivation style. Exceptional students benefit and function more positively in the classroom when teachers support their autonomy (Reeve, 2009). Researchers have indicated when students are fully engaged in the classroom, their behavioral, emotional and cognitive development as well as their voice, are variances that explain students' achievement.

Gap in Research

This research study will assess the effectiveness of instructional practice used in the classroom by educators of exceptional students. There is a lack of research centered on exceptional students' outcomes within general education classroom and the impact teachers' characteristics on exceptional students' outcomes. Limited research is available in exceptional students' achievement level and how instructional practices of educators are affecting exceptional student outcomes.

There is limited research on the effect education in a general education classroom with general education curriculum has on exceptional students' outcomes. Therefore, there is a need to examine the context of instructional practices for exceptional students within general education classroom versus those within the special education classroom. The quality of education exceptional students receive depends on the classroom environment and the attributes of their teachers. The purpose of the study is to test the theory of self-determination and the impact of general and special education teachers on exceptional student learning outcomes. The study will assess the impact of special and general education teachers on exceptional students' academic learning in these classrooms setting. Although, there is a limited amount of research on how professional development impacts teachers' characteristics and student learning, there is no available research on professional development and its relationship to student outcomes. Research is limited on exceptional student outcomes within general and special education classroom with teachers' characteristics, and the application of training and instructional practices.

Summary

Various studies within the literature have confirmed the general and special education teacher's inadequacy in teaching exceptional students with various disabilities. Exceptional students' academic outcomes are centered on content-level, skill level and adequate subject matter during their education process. Teachers' characteristics are based on their beliefs, attitudes, instructional practice and whether the practice is EBP or experience in student level learning.

The most effective ways of teaching exceptional practice is through EBP. There is an ongoing argument that the academic outcomes of exceptional students are not adequately reported, and the achievement gap is widening with exceptional students. This research study will evaluate students' skill-levels and the characteristics of teachers who teach these exceptional students. The identification of the association between student's outcomes and teachers' characteristics is important in finding effective ways for teaching exceptional students and positive learning outcomes.

The vast majority of literature on special and general education teachers utilizes a thoroughness of methodologies, and consistencies with student achievement. Examining previous research on student achievement, other sources have been used to assist with identifying student achievement (Konstantopoulos & Sun, 2012). In measuring the effects of teachers on student achievement, regression models are used in value-added research. The result of regression models is a posttest measure of student achievement such as on standardize tests (Konstantopoulos & Sun, 2012).

Other studies centered on teacher effectiveness have used the students' backgrounds or previous academics achievement between classrooms. However, the results of these studies indicated student gains were based on the effectiveness of their teachers (Konstanotpoulos & Sun, 2012). When teachers provide students with alternative instructional practice, this may motivate the lower–preforming students within their classroom. However, when teachers are effective with their content level knowledge students may demonstrate more positive achievement gains. The variances of these studies were calculated with the use of regression analysis thereby accounting for students' achievement gains and teachers' effectiveness.

U.S Department of Education (2013) have reported three-fourth of public-school teachers have not received training in teaching exceptional students during their previous year (NCSER, 2014). There is a concern with the lack of research on the overall academic achievement of exceptional students who are educated with general education teachers (Browder et al., 2007). Little is known about the instructional content for exceptional students who are taught in both general and special education classrooms and their academic outcomes. With the use of valid measures, this research study will fill the gap of evaluating exceptional students learning outcomes and the association with teachers' characteristics and competence in teaching exceptional students.

In Chapter 3, I provide information on the methodological components of the study to include the research design and its rationale. A specification of the population and an overview of the independent and dependent variables is included. The sampling

strategy, inclusion and exclusion criteria for this study, threats to validity and ethical considerations are also discussed.

Chapter 3: Research Method

Introduction

The purpose of this study is to identify the impact of teacher characteristics on student learning outcomes of the exceptional student in general versus special education settings. Teacher characteristics such as: experience, training, and attitude were assessed. Student learning outcomes were reports of performance ratings by teachers in subjects such as mathematics, language arts, social studies, and science as well as statewide performance scores of the exceptional child in general versus special education classroom settings. Teachers use of instructional options as evaluated by the AOIO scale was expected to moderate the impact of teacher training, experience and attitudes special and general education teacher on the student outcomes.

This chapter will describe the design, ethical consideration, sample, data analysis and instruments. Within this chapter an overview of the chosen design will be included and clarification why quantitative design was the most appropriate design for this research study. A description of the instrument used, and characteristics of the sample size will be presented. The recruiting process is included in this chapter.

Research Design and Rationale

The research question for this study is: Do teacher characteristics have an impact on student outcome of the exceptional child in the middle school classroom?

A quantitative design is appropriate for addressing the relationship of teacher characteristics on exceptional student learning outcomes. To evaluate the impact of teacher characteristics on student learning outcomes, the quantitative methodology and

not qualitative is appropriate. Quantitative design is centered on the individuals' behavior and investigating the behavior through observable and objective data (Stainback & Stainback, 1984). This study will use objective data and conduct a quantitative analysis to ascertain the relationship among variables and answer the research questions.

A cross-sectional survey design was used in this research study rather than an experimental design. An experimental design requires a manipulation of the independent variable to assess the impact of teacher characteristics teachers on student learning outcomes. Experimental research, which will require the manipulation of the learning experience of exceptional children, is neither feasible or ethical. This study conducted in an educational setting, evaluated the relationships between variables such as teacher characteristics and student learning outcomes while using cross-sectional data for this research study. A cross-sectional survey design was test appropriate to analyzed the relationship between variables (Field, 2013).

This study was a quantitative approach to statistically evaluate the impact of teacher characteristics on the academic outcomes of the exceptional students in the middle school classrooms. Specifically, I analyzed the relationship between the teachers' characteristics and exceptional students learning outcomes within special and general education classrooms. The teachers' characteristics include *teachers' experience*, *training, and attitudes* towards exceptional children with learning disabilities. The independent or predictor variables for this research study are teachers' characteristics and type of classroom. The dependent variables are the academic outcomes of the exceptional students in the inclusionary classroom, such as *performance ratings by the teachers in*

mathematics, language arts, social studies, and science. Content standard test or benchmarks assessments are conducted during the second and third term of the school year by the teachers. State content performance test, which is a standardized test, is conducted by teachers once during the final term of the school year. Teachers reported the standardized test scores of these exceptional students as well. Both these student outcome measures performance ratings in subjects and standardized test scores were utilized in the study as the dependent measures.

Research Questions and Hypothesis

The research questions for this study are:

Research Question 1: Do teachers characteristics have an impact on student outcomes of the exceptional child in the middle school classroom?

$H_0$1: There will be no significant relationship between special education teacher experience, training, and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child.

H_a1*:* There is a significant relationship between teacher experience, training and attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on exceptional student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as state wide performance scores of the exceptional child.

Research Question 2: Do teacher characteristics have an impact on student outcomes of the exceptional child in the general versus the special education classroom?

$H_0$2*:* There will be no differences between the impact of teacher experience, training and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting.

H_a2: There will be significant differences in teacher experience, training, and attitudes as measured by the Teacher's Attitude towards Inclusive scale, on the student outcomes such as performance ratings by teachers in subject such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting.

Research Question 3*:* Does the use of instructional options as measured by the Availability of Instructional Options (AOIO) moderate the impact of teacher experience, training, and attitudes in the special education and general classroom setting on the academic outcomes of the exceptional child?

$H_0$3: There will be no significant impact of using the instructional options as measured by the AOIO. Using AOIO will not moderate the impact of teacher training, experience and attitude of special and general education teacher on the student academic outcomes such as performance rating by teachers in subjects such as mathematics,

language arts, social studies and science as well as statewide performance of the exceptional child.

H_a3: Teachers use of instructional options as evaluated by the Availability of Instructional Options (AOIO) will moderate the impact of teacher training, experience and attitudes of special and general education teachers on the student outcomes such as performance rating by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child. Specifically, it is expected that teacher's use of AOIO will improve academic outcomes of the exceptional child.

Methodology

Population

A convenience sample was used in this research study. The participants for this research study were middle-school special and general education teachers. There were approximately 85 educators of exceptional students used in this study. The teachers are employed within urban and rural areas. The inclusionary criteria for participants are

- Educators of middle school exceptional students
- Employed by the Department of Education
- Teach within urban and rural areas of any state within the U.S.

All participants for this study were recruited via Qualtrics research recruitment system (Qualtrics, 2017). The participants of this study were compensated by Qualtrics for participating in this study. A letter of consent was approved by all participants before

participating in the survey. Permission was obtained from the participants via survey linked with Qualtrics.

Sampling Procedure

The participants were all middle school teachers of exceptional students. population. The teachers were certified for special education or general education and alternative certification in middle school. A convenience sample was used for this research study. The group of teachers who was selected for this research study was a diverse group from various school districts. Teachers for this research were from the Qualtrics participation pool. The letters with email the participants received included the consent form. A copy of the participants' consent form is in Appendix A.

Teachers who agreed to the terms and conditions of the research received a link to the questionnaire. The initial link included a package with very brief introduction questions. The brief information on the consent form explained the questions they will be asked regarding their own demographic information such as classroom, gender, ethnicity, level of education degree, years of teaching exceptional students. Participating teachers answered the demographic questions, TAIS items, AOIO survey items, and provided information about performance ratings in subjects such as mathematics, language arts, social studies, science as well as standardized scores. This will be done via an online submission. Participants who are interested in receiving the results were asked to contact the researcher via email which was provided on the consent form.

School Selection

The schools selected to participate in this research study were middle schools who included exceptional students in their general education classrooms. These schools employ special and general education teachers. The schools are part of the U.S. Department of Education and provide academic support for the students.

Approval for this research study was determined by the Department of Education in the various school districts. Approval had to be determined by the school administrators or school principals through written consent. I obtained a copy of the school districts application from the Research and Accountability department of each of the school districts. However, upon receiving consent from the U.S. Virgin Islands Commissioner of Education, principals and teachers were not able to participate due to the severe damage to their infrastructure caused by the weather. A copy of the approval is located in the appendix (Appendix F).

Power Analysis

A between groups design was used to assess the differences in the teaching characteristics of the teachers in the inclusive general education versus the special education middle school classrooms on the academic outcomes of the exceptional students. Thus, the research design includes two groups (n =2) used for this study; the special education teachers and general education teachers. The number of participants needed for this study is N = 85 educators with 44 participants for each group. The power (1- β) is = 0.80, with an α of 0.05 was used for the sample size determination.

Instrumentation

Teacher's Attitude Towards Inclusive Education (TAIS)

The effects of a study rely heavily on the psychometric properties of the measuring instruments (Saloviita, 2015). Using the sound development of psychometric scales was influential in improving the reliability and validity of the measurements. The scale provides more valid measures in comparative studies and those with theoretical development (Saloviita, 2015). The TAIS scale was developed to examine teachers' attitudes towards exceptional students within the classroom (Saloviita, 2015). This scale was developed from an original scale of 65-items, and a reduction of items was performed; using correlation coefficients and Cronbach's alpha the items were reduced to 10. In order to arrive at a sum total to indicate a more positive attitude towards inclusive education, the values of six items (1, 3, 5, 6, 8) were reversed before counting them together. The scoring of the items is on a five-item scale ranging from strongly agree to strongly disagree. The range of possible scores is 10-50.

TAIS was calculated with expected outcomes of exceptional children learn best when they are educated with specially trained teachers. Exceptional students learn more effectively when educated in general education classroom. The rights of exceptional students are to be educated within special education classroom. Teachers workload should not increase with exceptional students in the general education classroom. Adequate support is provided for students with EBD and attention deficit hyperactivity disorder, when enrolled in general education classrooms. There are arrangements made when educating exceptional students in general education classrooms.

Reliability of the present scale is a Cronbach's alpha of α = .89 and 65-items scale was *r* = .94; therefore, the new scale explained 88% of the variance of the original scale (Saloviita, 2015). The test psychometric properties were previously used in 5 samples of in-service and preservice teachers' attitudes towards working with exceptional students. In examining the attitudes of teachers, the reliability of the scale was Cronbach's alpha α = .81 and α = .90. Other items on the scale were used to indicate a more positive attitude of teachers about inclusion. When exceptional students are integrated general education teachers are presented with more work *r* = .56. Exceptional student learns best with specially trained teachers in expected outcomes *r* = .67.

Data was collected from special and inclusive general-classroom middle school teachers who teach exceptional students. Data collected included responses to demographic questions such as gender, ethnicity, instructional grade-level, level of education of teachers, and number of years employed.

Availability of Instructional Options (AOIO)

A grade promotion survey by general and special education teachers, and school psychologists was examined to measure the effects of grade promotion and high-stakes testing of exceptional and non-exceptional students (Picklo & Christenson, 2005). The examination of the data was centered on participants' response to Availability of Instructional Options (AOIO). A 16-item instructional options scale was constructed, and ratings were a 4-point Likert scale. The scale responses were *1 = almost never, 2 = occasionally, 3=frequently, and 4 = almost always.* The responses were based on students who struggled academically and did not pass their required tests. In examining

the internal consistency, the instructional options, a Cronbach's coefficient alpha was calculated as $\alpha = .86$. Some of the 16 instructional optional items used were one on one tutoring, smaller class sizes, multi-age group, within ability grouping, school interventions and the use of curriculum base measurement (CBM) and instructional consultants.

AOIO measures were used in determining the usage of instructional options in middle/junior high school group work; the frequency of these options was 77.9%. The frequency of instructional options in middle school for cooperative learning strategies was 68.6%. Before and after school homework program frequency was 58. 7% and intensive remedial help was 50.9%. These frequencies all determined which of the instructional options were used in the highest-ranking order. Respondents of the survey used a yes-no answer in their responses (Picklo & Christenson, 2005).

Data Analysis

According to Carter (2010), variables are correlated when a relationship among the variables are predicted. With the use of quantitative research, this study examined the strength of those relationships. The study measures the relationship of general and special education classrooms (nominal scale) experience, training and attitude (interval scale). In this study, the predictor variables are teachers' characteristics and type of classroom. Academic outcomes of students are dependent variables (interval scale) which includes proficiency ratings by teachers and proficiency in mathematics, language arts, social studies, science in-class assessment and statewide assessment.

The data analysis tested for statistical differences in the independent variable by the dependent variable. A relationship between the covariate and dependent variable was described and explained.

$H_0$1*:* There will be no significant relationship between special education teacher experience, training, and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student academic outcomes such as performance in subjects such as mathematics, language arts, social studies and science as well as standardize performance of the exceptional child.

H_a*1:* There is a significant relationship between special education teacher experience, training and attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on exceptional student academic outcomes such as performance in mathematics, language arts, social studies in the classroom and state-wide level.

Specifically, it was expected that increases in experience, training and positive attitudes of the teacher towards exceptional students, would be associated with increases in mathematics, language arts, social studies in the classroom and state-wide level of the exceptional student. The hypothesis was tested by examining the relationship among the variables (Creswell, 2014). The predictor in this research study is *teacher training, experience and attitude.* The predicted variables were the student performance in mathematics, language arts, social studies in the classroom and state-wide level content. According to Krishnamoorthy and Xia (2008) multiple correlation is used to measure the association of variables in behavioral science and education research. A multiple

correlation is the appropriate analyses for these continuous variables. Assumptions of the multiple correlation is that continuous variables are being measured. Teachers experience, attitude and student performance are the continuous variables. This may include a linear relationship between the two variables (Laerd Statistics, 2015). If the assumptions are not met, a non-parametric analyses via the rank order correlation was to be conducted.

$H_0$2: There will be no differences between the impact of special education teacher experience, training and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student outcomes such as mathematics, language arts, science and social studies of the exceptional child in the general versus special education classroom setting.

H_a2*:* There will be significant differences between the impacts of special education teacher experience, training, and attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student outcomes such as performance in mathematics, language arts, science and social studies as well as standardized test scores based on teachers' content evaluation of the exceptional child in the general versus special education classroom setting.

Specifically, it is expected that there were significant differences between the impact of teacher experience, training and positive attitudes of the teacher towards exceptional students, on performance in mathematics, language arts, science and social studies as well as standardized test scores of the exceptional student. The hypothesis was tested by examining the relationship among the variables (Creswell, 2014) as a function

of the two groups. The independent variables in this research study are type of classroom and *teacher training, experience and attitude.* The dependent/predicted variables were the teacher ratings of student performance and student performance in mathematics, language arts, social studies in the classroom and state-wide level content. The ratings and standardize scores are on a ratio scale (numeric percent). A multiple regression analyses is the appropriate analyses for these continuous variables.

In this research study, there are two or more independent variables and two or more predictor variables, a multivariate multiple regression was used to analyze the data (Carter, 2010). Assumptions of the multiple regression are there are two or more independent variables that are continuous variables and these variables are interval, ratio or categorical. These were tested prior to the analyses. If the assumptions are not met, a non-parametric analysis via the Kruskall Wallis test was to be conducted.

$H_0$3: The use of the availability of instructional options (AOIO) will not moderate the impact of special and general education teacher experience, training and attitude on the performance in mathematics, language arts, science and social studies as well as standardized test scores of the exceptional child

H_a3: Teachers use of instructional options as evaluated by the Availability of Instructional Options (AOIO) will moderate the impact of teacher training, experience and attitudes of special and general education teachers on the student outcomes such as performance rating by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child.

The hypothesis was tested with type of classroom, teachers' experience, training and attitude, as the predictors. The covariate was the AOIO or the percent of instructional options used by the teacher. A Multivariate analysis of covariance (MANCOVA) assessed the predictors (teachers training, experience and attitude) as well as the impact of the predictors on the continuous dependent variables, which are performance in mathematics, language arts, science and social studies as well as standardized test scores of the exceptional child. The assumptions for conducting this test independence, normality and homogeneity of variance between groups, was (Field, 2013). If the assumptions are not met other parametric tests were to be used.

Operationalization Variables

General Education Classroom

General education classroom provides an equality opportunity of learning to all students and prepare these students for a global competitiveness by ensuring they achieve educational excellence (U. S. Department of Education, 2011).

Special Education Classroom

Special education classrooms are classrooms that are designed to meet exceptional students' academic instructional needs (U.S. Department of Education, nd).

In-Class Performance (Benchmarks)

Student Performance Data **is** information on students' progress based on coursework, instructor observation and activities in the classroom (U.S. Department of Education, nd).

Statewide Assessment (Ready)

The U.S. Department of Education (2009) determined each state is responsible for providing and determining methods that constitutes measures for an adequate yearly progress (AYP).

Teacher Experience and Training

This is determined by years of experience in teaching whether they are special or general education teachers, highest degree earned from a bachelor's degree to a doctoral degree, and certification earned.

Demographic Questions

A special and general education teachers' questionnaire ascertained the basic information such as gender, education, ethnicity, and grade level of instructions. These items are based on the questionnaire Appendix B. Level of education will be assessed through self-report on whether the participants have obtained a bachelor, masters or above degrees. The participants will clarify whether their instructional practice is centered on general or special education. Grade level of teaching is determined by middle grades of 6^{th} -8^{th}. Subject matter may include if students are involved in other subject matters such as related arts. Other items included in the demographic survey are the type of program and how many special education students are enrolled in their classroom. Assessing the participants' collaboration of students' progress within their various courses may be included within the survey items.

Permission was granted to use the AOIO survey from Dr. Christenson via email from a communication between researcher and Dr. Christenson. A copy of the communication is found in Appendix B. The developer of the TAIS scale Dr. Salovita

was contacted via email about the availability and use of this test for the research study. Permission was given to use the instrument in this research study by Dr. Salovita via email. A copy of the communication between researcher and Dr. Salovita is available in Appendix E.

Threats to External Validity

External threats occur when samples are drawn from others who does not demonstrate the characteristics of the participants (Creswell, 2014). Other threats may occur in the generalization of individuals in other settings. In this study participants, were asked to participate based on their qualification of general and special education teachers. The characteristics of the participants were equally distributed in the selection process (Creswell, 2014). To address this threat, the participants were recruited from a diverse group of teachers. The population used for this research study can be generalized based on their qualifications as general and special education teachers of exceptional students.

Threats to Internal Validity

A convenience sample of teachers of exceptional students was used in this research study. In this study participants are chosen based on their qualification of employment status as general and special education teachers. One of the threats to internal validity may include participants' mortality which may affect the impact of the dependent variable. Another area that may threaten the internal validity of the research study are participants who may return an incomplete survey. Having an incomplete sample size from participants will threaten the integrity of the research study. However, the use of the qualtrics panel to recruit participants, reduced this threat.

The characteristics of the participants are equally distributed in the selection process (Creswell, 2014). In addressing internal validity, the participants are from a diverse group of teachers. The population used for this research study can be generalized based on their qualifications as certified teachers of exceptional students. The participants' response to the study is based on their self-report and evaluation of exceptional students. In order to increase the participants' motivation, the following methods were used; incentives, confidentiality and IRB approved consent for the research study.

Ethical Procedures

This research study adhered to the guidelines of the American Psychological Association (APA, 2010) in ensuring the research is conducted legally and ethically for research standards. Using the university approved consent form, participants were advised about the nature of the study. Participants were aware of the confidentiality of participating in this research study. Participants are not obligated to continue with the research study and could withdraw at anytime. The participants received the researcher's contact information and that of the Walden University representative. The risks of participating in the study were noted some discomfort in completing the survey. The data set is stored with the researcher on a password protected computer. All efforts were made to protect the data storage and data will be discarded after five years.

Summary

In this chapter, the variables were identified along with the research design. Likewise, the sampling procedure and the test and measures were described in this chapter. The

participant characteristics along with the procedure of obtaining data needed for this research study was identified. Chapter 4 will describe and explain the data analysis used in this research study along with the results.

Chapter 4: Results

Introduction

This is a quantitative study designed to investigate the effectiveness of general and special education teachers on exceptional students' education learning outcomes. Inclusion education programs differ in their characteristics and the definition of inclusive education. Researchers have indicated there is limited knowledge of exceptional students learning outcomes in a general educational inclusion setting. The statistical approach will evaluate students academic learning outcomes in an inclusive setting. The hypotheses in Chapter 3 stated general and special education teacher's training, experience, and attitude can affect students learning outcomes in their subject areas such as mathematics, language arts, social studies, and science. The purpose of the study is to identify the impact of teacher's characteristics on student learning outcomes of the exceptional student in general versus special education classroom setting. In this chapter, I will explain the data collection process that was collected with the use of a survey linked to participants. Descriptive analysis will illustrate the sample size, and I evaluated the following three research questions and hypotheses.

Research Question 1: Do teachers characteristics have an impact on student outcomes of the exceptional child in the middle school classroom?

$H_0$1: There will be no significant relationship between teacher experience, training, and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student academic outcomes such as performance ratings by

teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child.

H_a1: There is a significant relationship between teacher experience, training and attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on exceptional student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as state wide performance scores of the exceptional child.

Research Question 2: Do teacher characteristics have an impact on student outcomes of the exceptional child in the general versus the special education classroom?

$H_0 2$: There will be no differences between the impact of teacher experience, training and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting.

$H_a 2$: There will be significant differences in teacher experience, training, and attitudes as measured by the Teacher's Attitude towards Inclusive scale, on the student outcomes such as performance ratings by teachers in subject such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting.

Research Question 3*:* Does the use of instructional options as measured by the Availability of Instructional Options (AOIO) moderate the impact of special education

teacher experience, training, and attitudes in the special education and general classroom setting on the academic outcomes of the exceptional child?

$H_0$3: There will be no significant impact of using the instructional options as measured by the AOIO. Using AOIO will not moderate the impact of teacher training, experience and attitude of special and general education teacher on the student academic outcomes such as performance rating by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance of the exceptional child.

H_a3: Teachers use of instructional options as evaluated by the Availability of Instructional Options (AOIO) will moderate the impact of teacher training, experience and attitudes special and general education teacher on the student outcomes such as performance rating by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child. Specifically, it is expected that teacher's use of AOIO will improve academic outcomes of the exceptional child.

In this chapter, I will explain the data collection procedure or where and when the data was collected. The data preparation for this study is described within this chapter. The data was screened for statistical assumptions. Analytical procedures performed include descriptive statistics, mean, standard deviation, and the number of participants. The analyses also included parametric and non parametric tests of the hypotheses.

Data Collection

The data collection was prolonged due to inconsistencies with the requirements of various school districts. However, there was one school districts where the study was approved by the commissioner of education, although, teachers did not respond to the survey. The diverse school districts that was original potential participants were unable to participate in the research study upon request. Changes were made to the demographic survey and returned to the IRB for approval. Therefore, data for this research study was obtained with the use of Qualtrics data system. Participants received the approved IRB consent form (2017.09.15) with the linked received from Qualtircs. The survey included Teachers Attitude Towards Inclusion Survey (TAIS; Salovita, 2015), and Availability of Instructional Options (AOIO; Picklo & Christenson, 2005) questionnaire along with the demographic survey of 18-items were used as measured during this research study. The survey began in May 2018 and concluded in June 2018. Although, participants were given 15 minutes to complete the survey, the survey was completed within approximately 8 minutes. The response from each participant was downloaded as an SPSS file from Qualtrics. The population in this research study were middle school general and special education teachers of exceptional students.

Descriptive Demographics

The educators of exceptional students who completed the survey were $N = 85$, and the requirement was met for completion of the survey. The respondents represent a sample from the population who are general and special education teachers of exceptional students in middle school. The gender distribution however was not equal. There were *n*

= 66 females (77%), and *n* = 19 (23%) male participants who responded to the survey. Special education teachers' who completed the survey were 49%, and 50% were general-education teachers. The highest degree earned by participants were bachelors degree (16%), graduate degree (12%), graduate plus (7.7%) and doctoral degree (2.3%). Middle school grades taught by participants are 6th grade (4.6%), 7th grade (2.1%), 8th grade (2.8%), and 6th thru 8th (11%). The participants are teachers in special education programs (15%), general education programs (84%). The instructional practice of exceptional students are for the majority of the time in a general education classroom setting (51%) and (19%) receive their instructional practice in the special education classroom setting. The responses from variables for this study are years of experience (*M* = 2.42, *SD* = .820),. Responses for the measure of TAIS (*M* = 31.27, SD= 4.44), and AOIO (*M* = 40.08, *SD* = 8.48). average student ratings by the teachers are (*M* = 3.78, *SD* = 1.46) and average ss (average standardized scores) are (*M =2.72, SD*= .882). This information is presented in Table 1.

Table 1

Descriptive Statistics of Continuous Variables

	TAIS	AOIO	Average rating	Average SS
Mean	31. 24	40.08	3.78	2.72
SD	4.44	8.48	1.46	.88
Range	29.00	38.00	5.00	3.00

The dataset was screened for normality and how the data is distributed with the use of simple regression. The assumptions were met and there was a linear realtionship with TAIS and average teacher ratings and TAIS and average standardized scores

(average ss) which were normally distributed. Linear regression was conducted. The normal probability plot is demonstrated in Figure 1.

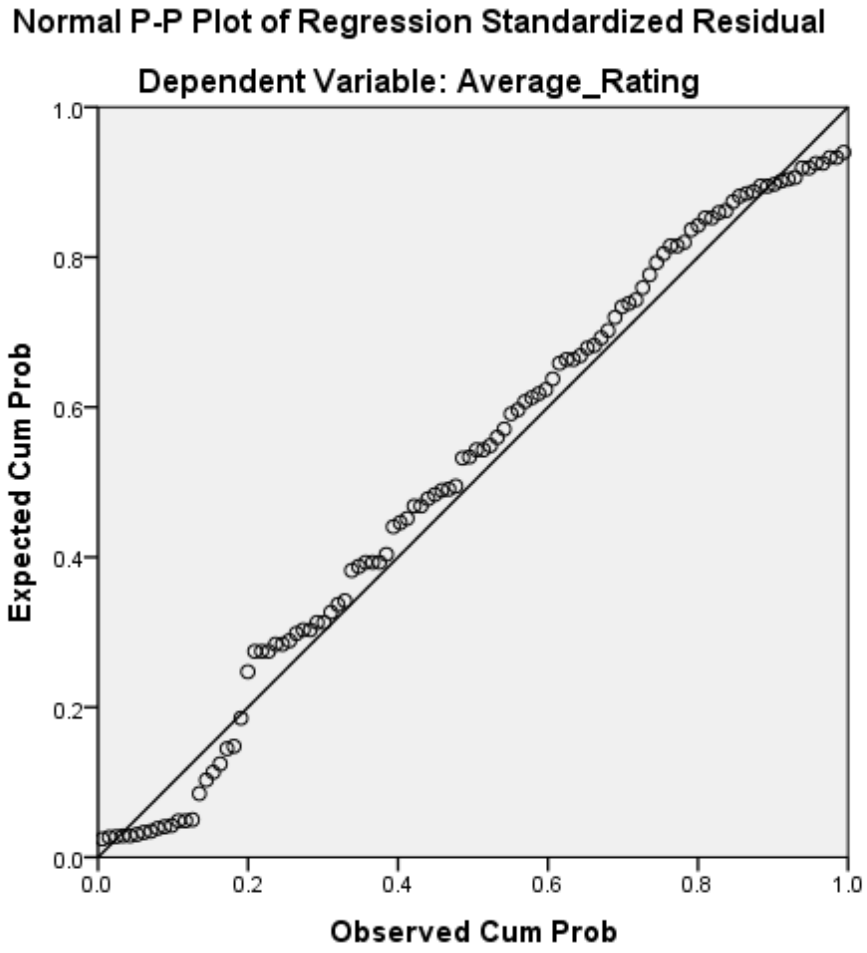


Figure 1. Normal P-Plot for simple linear regression model

There was no multicollinearity presented with the variance inflation factor (VIF), it was not greater than 10 (Field, 2013). Durbin-Watson for the average teacher ratings and average standardize score were (1.75 and 1.88) therefore, there was independence of residuals.

Analyses

The following are the results of the hypothesis tests. A correlational analysis was conducted to test the following hypothesis.

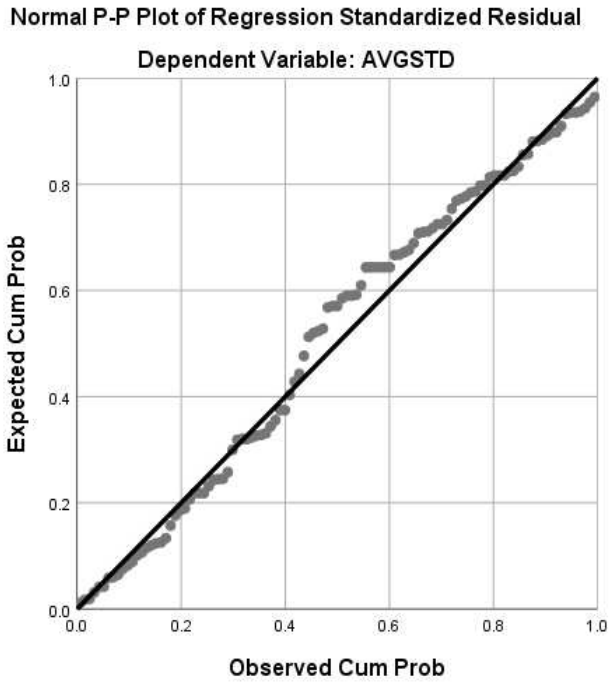
Research Question 1: Do teacher's characteristics have an impact on student outcomes of the exceptional child in the middle school classroom?

$H_0$1: There will be no significant relationship between special education teacher experience, training, and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child.

H_a1*:* There is a significant relationship between teacher experience, training and attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on exceptional student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as state wide performance scores of the exceptional child.

The TAIS measured the teachers attitude towards exceptional students in the classroom (Saloviita, 2015). A Pearson product-moment correlation was conducted in determining the relationship between special education teacher experience (number of years teaching), training (highest degree earned) and attitude as measured by the TAIS on student academic outcomes such as average teacher ratings and average standardized scores (average ss). The assumptions for conducting a correlation test are there are two or more continuous variables and there is a linear relationship between the two variables. Other assumptions are there are no outliners and both variables are normally distributed.

A test for assumptions for the linear relationship of the dependent variables was illustrated with the use of a normality p-plot of standardized residuals. This is illustrated in Figure 2.



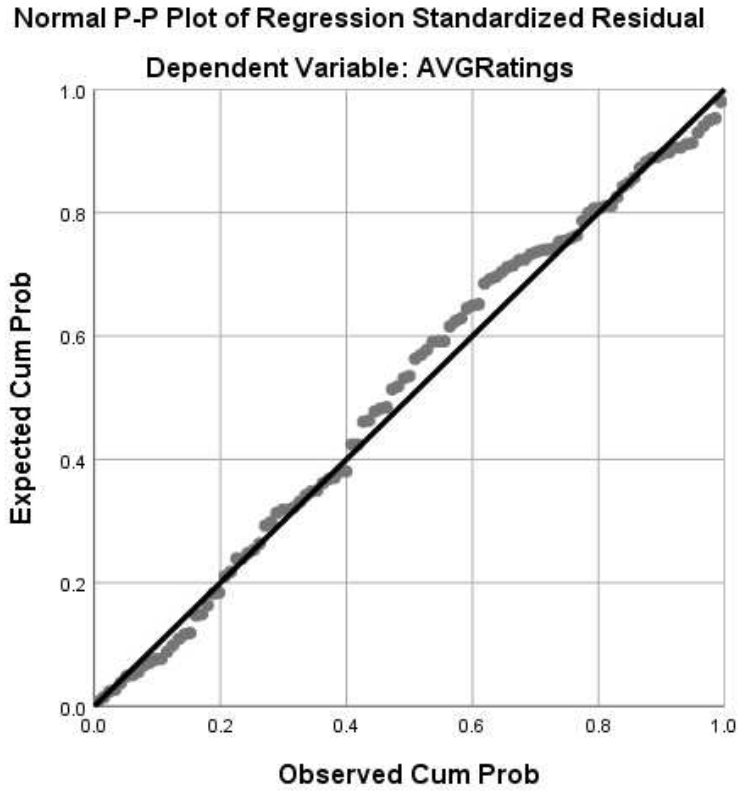


Figure 2. Normal Probability Plot for Average Standardized Scores (Average_SS) and Average Teacher Ratings (AVGRatings) for Items on the TAIS

In testing the order of distribution, a normality plot of residuals was constructed as illustrated in figure 2. The quantile was normally distributed in the figure the point lies along the line in both average teacher ratings and average standardized scores (Henderson, 2006). The normality plot indicates the value of 95% confidence intervals. The assumption was met with average teacher ratings and average standardized scores.

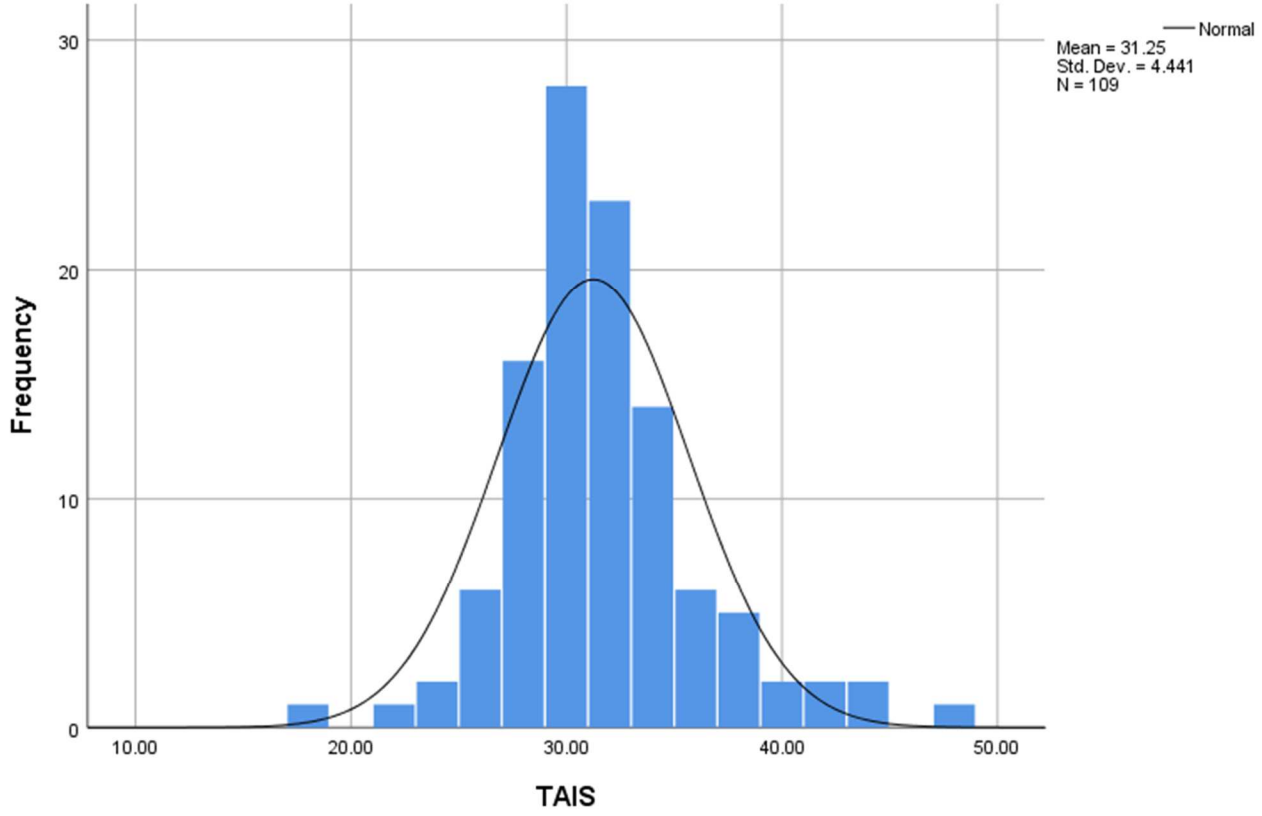


Figure 3. Histogram of TAIS.

The TAIS variable data scores was normally distributed between the participants. In figure 3 there is a normal distribution of data scores. The M= 31.25, SD= 4.44 and N= 109 for TAIS. This was done with the use of SPSS. The skewness of the TAIS is (.677) and the kurtosis is (2.05). Carter (2010) indicated skewness of data can be positive or negative and a tall distribution is called leptokurtic. The curve of the histogram means the assumption was met.

Pearson Correlation Results

A Pearson correlation was conducted with the TAIS, average teacher ratings and average standardize scores. There was no significant correlation with the TAIS overall score and the average teacher ratings and average ss. There was a significant correlation between some of the TAIS scale questions and average teacher ratings and average standardized scores, as demonstrated in Table 2 and 3.

Table 2

Correlation of TAIS scale items and Average Teacher Ratings

Questions	N	*r*	*p*
Q# 2	108	.455**	*p<.001*
Q# 3	108	.423**	
Q# 4	108	.414**	
Q# 7	108	.558**	
Q# 10	108	.412**	

Notes. p value, p<.001

Question 2. The children with emotional and behavioural problems should be educated in mainstream classrooms, with the provision of adequate support. (inclusion as a value).
Question 3.It is the right of a child with special educational needs to be placed in a special education classroom. R (rights of the child)
Question 4. Children with attention deficit/hyperactive disorder (ADHD) should be admitted in mainstream classrooms with adequate support. (inclusion as a value).
Question 7. The students with special educational needs should be educated in mainstream classrooms as much as possible. (inclusion as a value).
Question 10. The learning of children with special educational needs can be effectively supported in mainstream classrooms as well. (expected outcomes).

Table 3 illustrates the relationship the TAIS items and the average standardized scores.

Table 3

Correlation of TAIS Scale Items and Average Standardized Scores

Items	N	r	p
Q#2	113	-.269**	.004
Q#3	112	.229*	.015
Q#4	113	-.266**	.004
Q#10	111	-.232*	.014

Notes. Question. 2. The children with emotional behavioral problems should be educated in mainstream classrooms, with the provision of adequate support. (inclusion as a value)

Question 3. It is the right of a child with special educational needs to be placed in a special education classroom. (rights of a child)
Question 4. Children with attention deficit/hyperactive disorder (ADHD) should be admitted in mainstream classrooms with adequate support. (inclusion as a value)
Question 10. The learning of children with special educational needs can be effectively supported in mainstream classrooms as well. (expected outcomes)

Research Question 2: Do teacher characteristics have an impact on student outcomes of the exceptional child in the general versus the special education classroom?

$H_0$2*:* There will be no differences between the impact of teacher experience, training and positive attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting.

H_a2*:* There will be significant differences in teacher experience, training, and attitudes as measured by the Teacher's Attitude towards Inclusive scale, on the student outcomes such as performance ratings by teachers in subject such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting.

Conducting an independent sample t-test will explain if there are differences among the independent groups, the continuous dependent variables and statistical significance between the two groups (Bakker & Wicherts 2014). The assumptions for this analysis are that the independent variable (type of classroom) is categorical; there are no outliners, and that the groups are normally distributed (Laered, 2015). The teachers of exceptional students responded to the question of where exceptional students received the majority of their academic learning instructions, whether in general education classrooms or special education classroom. The teachers responded to the following question: "Based on the 1 to 5 students you have reported on

please indicate if the majority of class instruction is in a general education classroom setting or in a special education setting? - General Education. The responses were reported on the following scale: 1= never, 2= sometimes, 3= frequently, 4= almost always. The responses of those who indicated frequently and almost always in the General Classroom were compared to those who responded with Never and Sometimes. The descriptive statistics and results are illustrated in Tables 4 and 5 below.

Table 4

Descriptive Statistics by Type of Classroom

	Special education Classroom			General education Classroom		
	N	M	SD	N	M	SD
TAIS	27	30.51	3.98	71	31.22	4.20
Average teacher rating	29	3.30	1.58	74	3.97	1.34
Average standardize scores	29	2.51	.974	74	2.81	.820

Years of experience						
Teaching	29	2.28	.841	74	2.65	.607
Highest degree earned	29	1.97	.778	74	2.14	.911

An independent samples t-test was conducted among special education teachers (n = 44), and general education teachers (n = 61). The assumption of homogeneity of variance between the groups for conducting the t-test was checked. The descriptive statistics are reported below:

Table 5

Independent Samples t-test: Special Education Classroom versus General Education Classroom

Variable	*t*	df	*p*-value
Years of experience teaching	-2.50	101	.014*
Highest degree earned	-.883	101	.379
TAIS	-.753	98	.453
Average Teacher Ratings	-2.149	101	.034*
Average Standardized Scores	-1.59	101	.115

Note. $p < .05$.

Thus, there were significant differences between the average teacher ratings between the type of classroom where majority of class instruction was delivered. The teacher ratings of the students in the General Education classroom were significantly

higher than the teacher ratings of students who received their instruction mostly in the special education classroom.

There were also significant differences in the years of experience teaching between the classroom type. The teachers who delivered instruction in the general education classroom had significantly more years of experience teaching than those in the special education classroom.

An independent groups t-test was also conducted on the student outcomes by the type of teachers—Special education versus General education teachers. The results are provided in Tables 6 and 7.

Table 6

Descriptive Statistics: Special Education Teachers versus General Education Teachers

	Special education		General education	
	N	**M (SD)**	**N**	**M(SD)**
Years of experience	74	2.14 (.775)	186	2.42 (.836)
Highest degree earned	73	1.99 (.905)	183	1.86 (.927)
TAIS	44	31.20 (4.82)	61	31.47 (4.21)
Average teacher rating	46	3.46 (1.54)	64	4.04 ((1.36)
Average standardize scores	46	2.42 (.904)	64	2.95 (.813)

The independent groups *t* test indicated significant differences between the average teacher ratings and the average standardized scores. There were no significant differences between the training, experience, attitudes as measured by the TAIS between

the special education teachers and the general education teachers. The results are in Table 6 below:

Table 7

Independent Samples t-test: Special Education versus General Education Teachers

Variable	*t*	df	*p*-value
Years of experience teaching	-.124	258	.901
Highest degree earned	1.007	254	.315
TAIS	-.306	103	.760
Average Teacher Ratings	-2.068	108	.041
Average Standardized Scores	-3.216	108	.002

The independent sample t-test indicated that there are significant differences between average teacher ratings and average standardized scores. Both these scores were significantly higher for the general education teachers than for the special education teachers. Thus, the research hypothesis that there will be differences in special education teacher experience, training, and attitudes as measured by the Teacher's Attitude Towards Inclusive Education scale, on the student outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child in the general versus special education classroom setting, was partially supported.

Research Question 3*:* Does the use of instructional options as measured by the Availability of Instructional Options (AOIO) moderate the impact of special education teacher experience, training, and attitudes in the special education and general classroom setting on the academic outcomes of the exceptional child?

$H_0$3: There will be no significant impact of using the instructional options as measured by the AOIO. Using AOIO will not moderate the impact of teacher training, experience and attitude of special and general education teacher on the student academic outcomes such as performance rating by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance of the exceptional child.

H_a3: Teachers use of instructional options as evaluated by the Availability of Instructional Options (AOIO) will moderate the impact of teacher training, experience and attitudes of special and general education teachers on the student outcomes such as performance rating by teachers in subjects such as mathematics, language arts, social studies and science as well as statewide performance scores of the exceptional child. Specifically, it is expected that teacher's use of AOIO will improve academic outcomes of the exceptional child.

Multivariate analysis of covariance (MANCOVA) is used in this dataset in testing the outcome variable when there is more than one independent variable (Garson, 2015). The dependent variables are the TAIS scores, years of experience, highest degree earned, average teacher ratings and average standardized scores. The independent variable or fixed factor is the type of teacher, special education or general education. The

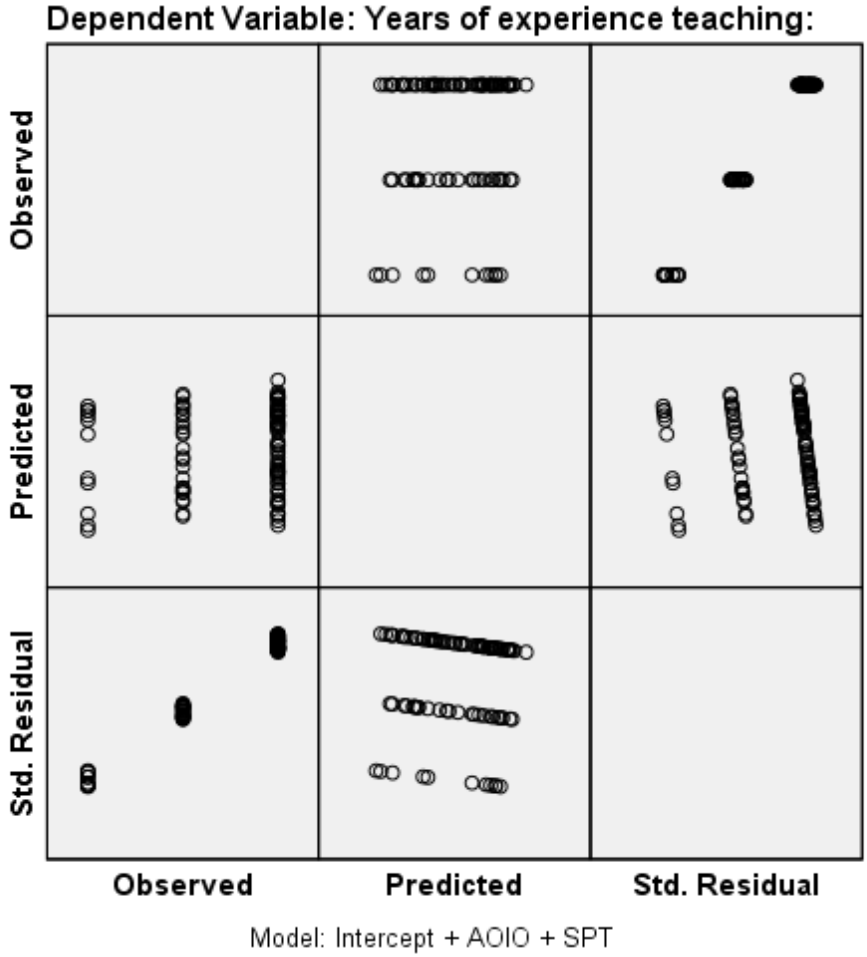
covariate in the use of AOIO options. The assumptions for MANCOVA are there are two or more continuous variable; independent variable has two or more groups, homogeneity of variances and covariances, no significant univariate outliners in each group, no significant multivariate in each group and residuals normally distributed for the group of the independent variables (Field, 2013).

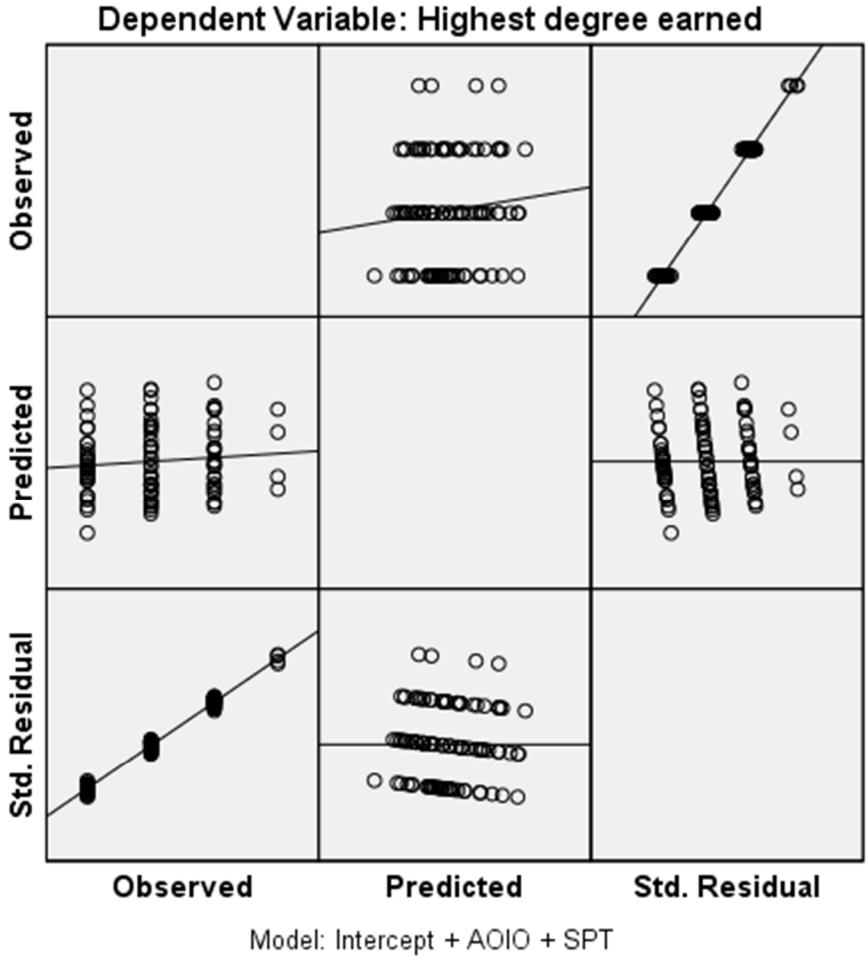
Multivariate analysis of covariance (MANCOVA) was used to test the hypothesis whether teachers use of instructional options as evaluated by the Availability of Instructional Options (AOIO) will moderate the impact of teacher training, experience and attitudes of special and general education teacher on the student outcomes such as performance ratings by teachers as well as statewide performance scores of the exceptional child. MANCOVA is used in testing the relationship of each dependent variable, likewise the linearity of each variable (Laerd, 2017). Testing for homogeneity of regression slopes was performed, along with homogeneity of variance and covariance.

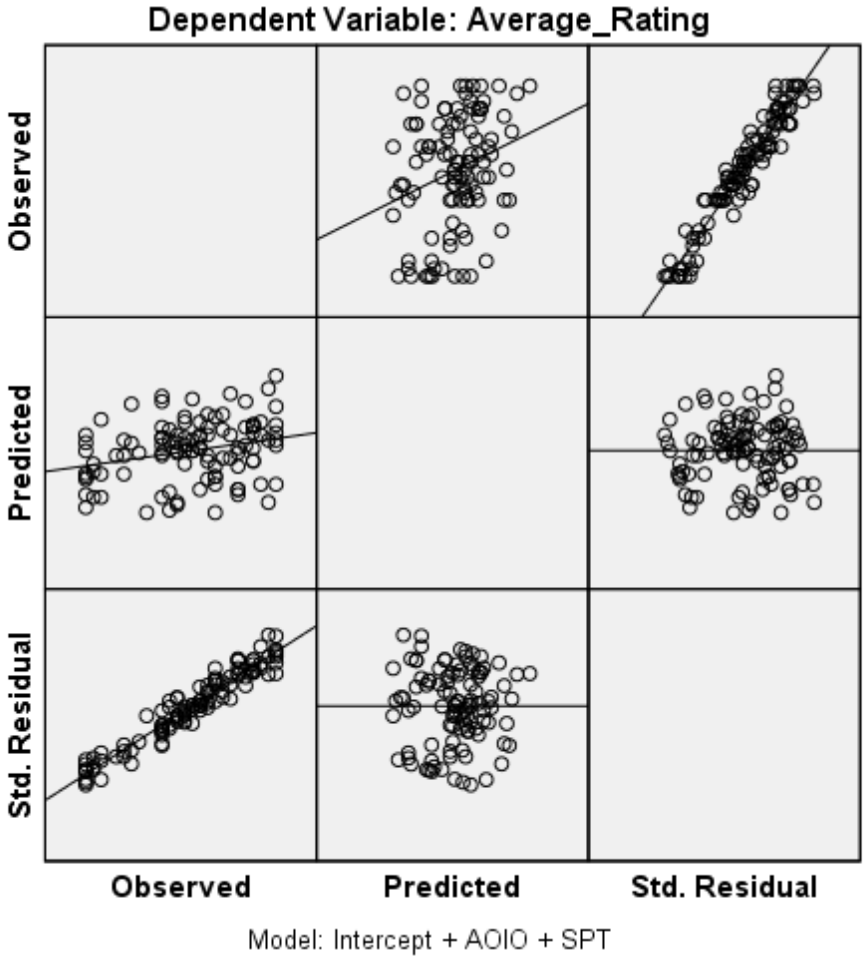
Huttema (2011) stated MANCOVA is used to test the adjusted population differences. With this analysis, each dependent variable was tested along with the AOIO as the covariate.

An observed, predicted, Std. residual plot was used in testing for linearity and whether the assumptions for linearity was met. The assumption for linearity in MANCOVA are, there will be linearity between the two groups of the independent variable with each pair of the dependent variable (Laered, 2017). There was a linear relationship with each dependent variables' years' experience, highest degree earned,

average teacher ratings and average standardized score and the covariate AOIO as illustrated in the following scatter plots below Figure 4.




Dependent Variable: Highest degree earned
Observed
Predicted
Std. Residual
Observed
Predicted
Std. Residual
Model: Intercept + AOIO + SPT


Dependent Variable: Average_Rating
Observed
Predicted
Std. Residual
Observed
Predicted
Std. Residual
Model: Intercept + AOIO + SPT

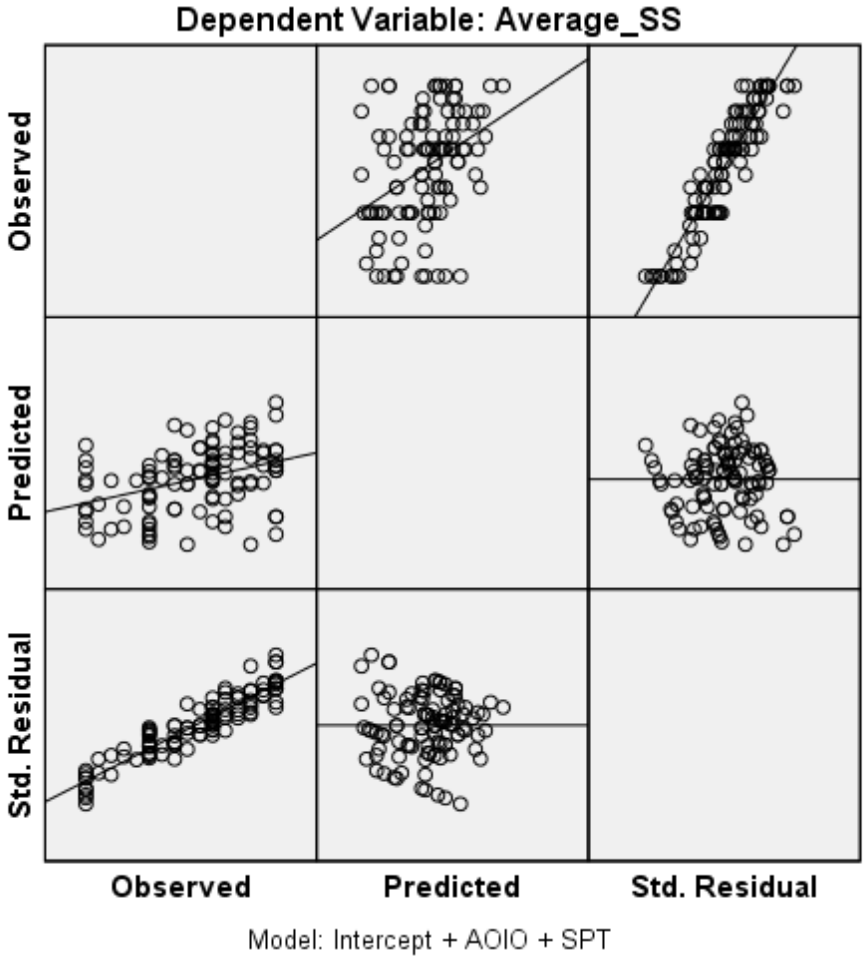


Figure 4. Scatter Plot, Years of Experience Teaching, Highest Degree Earned, Average Teacher Rating (AVG Rating), Average Standardized Scores (Average__SS) for the items on AOIO

There is a linear relationship between years of experience, highest degree earned, average teacher ratings, and average standardize scores. Likewise, there is a linear relationship between the covariate special education teacher (SPT) and the dependent variables years of experience; the highest degree earned, average teacher ratings and average standardize scores. Since the relationship was established between covariate, I

then tested the assumption of homogeneity of regression slopes in determining if the covariate variable SPT and independent variable AOIO is statistically significant or violated. In explaining the relationship between each dependent variable and covariate are not the same (Laerd, 2017).

The Wilks' lambda a multivariate analysis was used in determining the differences between groups of the vector of means on the independent variables (Garson, 2015). The lower the number of the Wilks' lambda analysis (0) indicates there are no effects and no variance explained by the independent variable (Field, 2012). When the number is small, there is statistical significance. This test the null hypothesis that the dependent variables are equal across groups. Wilks' Lambda was used in testing the effect of AOIO, and the results were as follows: Wilks' Lambda = .901, F (5,93) = 2.03, p = .081; partial η^2 =.099. Thus, AOIO did not have any effect on the dependent variables. Wilks' Lambda for the effect of type of teacher (special versus general education) was significant, and the results were as follows: Wilks' Lambda = .850, F (5,93) = 3.29, p = .009, partial η^2 = .150.

Levene's test of equality of error variance test the dependent variables throughout the levels of the independent variable. The null hypothesis error variance of the dependent variable is equal across groups. The test indicated as demonstrated in Table 7 below, the $p > .05$, therefore, the assumptions were not violated. The assumption of homogeneity of variance was met as illustrated in Table 8 below.

Table 8

Test the Homogeneity of Variances[a]

	Levene's test	df1	df2	sig
Years of experience teaching	.540	1	.98	.464
Highest degree earned	.000	1	.98	.985
Average teacher rating	1.02	1	.98	.315
Average standardized scores	1.25	1	.98	.291
TAIS	.107	1	.98	.744

The Box M test of equality of covariance indicated the test the dependent variable is equally distributed among the independent variable $p > .956$. In testing the equal population covariance matrices across groups Box M was used and the $p > .001$, therefore, the assumption was not violated and do not have statistical significance (Laerd, 2015). There was homogeneity of covariances, and variances as illustrated in the Table 9 below $p > .001$.

Table 9

Box Test of Equality of Covariance Matrices[a]

Box M	3.977
F	.380
df1	10
df2	40376.38
Sig	.956

Test the null hypothesis that the observed convariance matrices of the dependent variables are equal across groups. a. Design: Intercept + AOIO + SPT

The Levene's Test of Equality of Error Variance states there was the homogeneity of variance with $p > .05$. Levene's test states equal variance was assumed

and did not violate the assumption for the dependent variable average teacher ratings p = .285 and average standardize scores p = .221. Results of the between subjects effects indicated that there were significant differences between the average teacher ratings of the special education and general classroom teachers, F (1, 97) = 5.17, p = .025; and the average standardized scores of students, F (1, 97) = 14.59, p < .001

A MANCOVA analysis was also conducted in determining whether the use of AOIO moderated the impact of years of experience, highest degree earned, TAIS scores on average teacher ratings and average standardized scores of the students as a function of the type of classroom where majority of the instruction was provided. The descriptive statistics are illustrated below in Table 10.

Table 10

Descriptive Statistics for Type of Classroom

Variables	Special education		General Education	
	N	M(SD)	N	M(SD)
Years experience	27	2.26(.859)	66	2.62(.627)
Highest degree earned	27	1.93(.781)	66	2.11(.897)
TAIS	27	30.51(3.98)	66	31.10(4.30)
Average teacher ratings	27	3.41(1.57)	66	3.94(1.38)
Average standardized scores	27	2.57(.965)	66	2.82(.839)

The Wilks' Lambda results for the effect of AOIO were Wilks' Λ=.961, F (5, 86) = .694, p=.629, partial η^2 =.039. Therefore, there were no significant differences or main effects of the use of AOIO on the dependent variables. On the question of where the majority of instructional practice or the effect of the type of classroom of instruction, indicated no effect, Wilks'Λ =.911, F (5, 86) =1.68, p =.146, partial η^2 =.089. Thus, there

were no significant differences or main effects based on the type of classroom. Thus, the use of AOIO did not moderate the impact of teacher attitudes, training, experience on student outcomes such as teachers ratings and standardized scores.

Summary

In this chapter, I explain the data analysis and the results of the hypothesis tests. Included in the results are descriptive statistics and plots. A Pearson correlation was conducted for the first hypothesis test. The assumptions for the first hypothesis were met, and there are no outliners along with normal distribution among the variables. There was no significant correlation with the TAIS overall score and the average teacher ratings and average standardized scores. There were significant correlations between some of the TAIS scale questions and average teacher ratings and average standardized scores. An Independent sample t-test was used in conducting the test for hypothesis 2, and the homogeneity of variance between groups was checked, and findings indicated that there are significant differences between average teacher ratings and average standardized scores. Both these scores were significantly higher for the general education teachers than for the special education teachers. To test hypothesis 3, MANCOVA was conducted, and the results indicated a failure to reject the null hypothesis. Use of AOIO did not affect teachers attitude, training, experience or student outcomes in average teacher rating or average standardized scores. In Chapter 5 I will explain and interpret the findings.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The quantitative study was conducted to identify the impact of teacher's characteristics on exceptional students learning outcomes in general versus special education middle school classrooms. There are many differences in how exceptional students needs are served, and it is difficult in comparing inclusive programs of exceptional students (Hoover & Abrams, 2013). This study determined the impact and effectiveness of teacher's characteristics and their instructional practice, on exceptional students learning outcomes.

The majority of the literature has indicated that the majority of exceptional students learning occurs within general education classrooms (Hamman et al., 2013). Teachers need to meet the diverse students need in the classroom, while the educators are expected to raise their student's achievement levels. Researchers have identified there is a gap between research and practice since the beginning of special education (Cook & Odom, 2013). There is a need to address exceptional students' outcomes and academic learning capabilities (Ellis & Todd, 2014). There is limited knowledge on the exceptional students who are educated within a general education setting and their academic learning outcomes (Ellis & Todd, 2014). Researchers have indicated the way to bridge the gap of exceptional students academic learning outcome is through evidence-based practice (EBP) however, the gap still exists with no reduction (Cook & Odom, 2013). There is limited research on exceptional students' academic learning, teachers' characteristics, and their instructional practice.

This study included three theories; the SDT is important in learning and student motivation and their social connectedness, psychological needs and psychological integration (Ryan et al., 2013). Self-efficacy theory is the individual's capabilities and abilities in reaching their desired goals (Urton et al., 2014). The other theory is the Attribution theory that is based on the individuals' search for an explanation of their achievement and outcomes (Eccles & Wigfeild, 2002).

The study was completed with the use of Qualtrics data systems. Participants were general and special education teachers who teach exceptional students in middle school. The teachers who participated were sent a survey link which consisted of a consent form, a survey for completion and all responses were anonymous. The participant's responses were measured with the use of Teacher's Attitude Towards Inclusive Education scale (TAIS), Availability of Instructional Options questionnaire (AOIO), and demographic survey consisting of 15 questions, and questions about the student academic outcomes such as performance ratings by teachers in subjects such as mathematics, language arts, social studies, and science, as well as statewide performance scores of the exceptional child.

The current study includes three research questions; research question 1 was; Do teacher's characteristics have an impact on student outcomes of the exceptional child in the middle school classroom? Results indicated no significant correlation with the TAIS overall score and the average teacher ratings and average standardized scores. There were significant correlations between some of the TAIS scale questions and average teacher ratings and average standardized scores. For research question 2; Do teacher

characteristics have an impact on student outcomes of the exceptional child in the general versus the special education classroom, findings indicated that there are significant differences between average teacher ratings and average standardized scores. Both these scores were significantly higher for the general education teachers than for the special education teachers. To test research question 3; Does the use of instructional options as measured by the Availability of Instructional Options (AOIO) moderate the impact of teacher experience, training, and attitudes in the special education and general classroom setting on the academic outcomes of the exceptional child, MANCOVA was conducted, and the results indicated a failure to reject the null hypothesis. Use of AOIO did not affect teachers' attitude, training, experience or student outcomes in average teacher rating or average standardized scores.

Interpretation of the Findings

Researchers have indicated teachers' attitude about working with exceptional students is critical in determining their attitude towards inclusive education (Markova, Cate, & Krolak-Schwerdt, 2016). Likewise, the teachers of exceptional students' attitude would play an intricate role in these students' achievement. Teachers experience and their experience with inclusion are variables used to determine their attitude towards inclusive education (Markova et al., 2016). When exceptional students are placed within the general education curriculum, these students spend more of their academic learning on state or the school district level standards. Exceptional student's performance levels do improve within the general education settings (Roach, Chilungi, LaSalle, Talapatra, Vignieri & Kurz, 2009).

The results of this study are supported by past researchers Podell and Tournaki (2007) and Rubie-Davies et al. (2012); however, this study examined the impact of teacher characteristics on average teacher ratings and average standardized scores in determining their students' outcomes, unlike other studies. Using these indices to study student outcomes is a more reliable way to study student outcomes. Teachers variables, efficacy, instructional practice is synonymous with students learning and outcomes and researchers have simultaneously examined how these variables influence student learning. Researchers have acknowledged the effects of teacher's efficacy, beliefs on the type of instructional practice, used in the classroom (Rubie-Davis et al., 2012). Various instructional methods of teaching are used by teachers who disseminate high efficacy, when meeting their student's needs in the classroom. Although these methods are influential in students learning, researchers have indicated, teachers may rely on other methods such as formal assessments and ratings of students test performances (Rubie-Davis et al., 2012). These formal assessments are tangible methods used by teachers in assessing students learning outcomes.

Research Question 1

The first research question examines the interrelatedness of teacher characteristics on exceptional student's academic learning outcomes. The research question 1 is: Do teacher's characteristics have an impact on the exceptional child in the middle school classroom? Results indicated no significant correlation with the TAIS overall score and the average teacher ratings and average standardized scores. However, there were significant correlations between some of the TAIS scale questions and average teacher

ratings and average standardized scores. Responses to items such as; *The children with emotional and behavioural problems should be educated in mainstream classrooms, with the provision of adequate support. (inclusion as a value); It is the right of a child with special educational needs to be placed in a special education classroom. R (rights of the child); Children with attention deficit/hyperactive disorder (ADHD) should be admitted in mainstream classrooms with adequate support. (inclusion as a value); The students with special educational needs should be educated in mainstream classrooms as much as possible. (inclusion as a value); The learning of children with special educational needs can be effectively supported in mainstream classrooms as well (expected outcomes)*; were positively correlated to teacher ratings of the special education student. Thus, in general, positive attitudes of inclusion into the mainstream classrooms were positively correlated with teacher ratings of student outcomes.

A previous study of inclusive education and teachers attitude researcher found there were significant influences with teachers' attitude, and their beliefs about including exceptional students into general education classrooms (Cansiz & Cansiz, 2018). Consequently, the results reveal a lack of knowledge will be attributed to teachers' inadequacies in the amount of knowledge they received in teaching students with diverse needs. Teachers sense of self-efficacy is attributed to the teachers' instructional practice in the classroom and their student's academic learning within the classroom. Exceptional students' teachers' self-efficacy has a direct link with their students' academic learning, outcomes, and student's belief in their self-efficacy (Levi et al., 2015). A teacher's attitude is influenced by the teachers' self-efficacy, and likewise; teachers will meet the

needs of their students within their classroom. A teacher's self-efficacy does have a pivotal role in whether inclusion is successful in their classroom setting.

In the current study, the results of the study did support the findings of Podell and Tournaki (2007). The researchers explored general and special education teachers' characteristics and learner characteristics and indicate the need to examine how teachers' characteristics do relate to the academic performance of exceptional students in their classrooms. Other researchers have indicated teachers' characteristics do influence student outcomes in middle school and that differences in teachers' effectiveness, would reflect the student's achievement in the classroom (Konstantopoulos & Sun, 2012). The findings are also explained by findings of Van Garderen et al., (2012), in their study of special and general education teachers, who found that special education curriculum tends to adhere to the student's individual needs, and general educators' curriculum are focused on goals and outcomes which are more group oriented. Therefore, there is an assumption that general and special education teachers have different educational goals for their exceptional students in their classrooms. Although, there are differences in goal attainment special and general education teachers have a vested interest in their students achieving positive outcomes. Researchers have indicated teachers of exceptional students do have a positive attitude, especially those within the general education curriculum (Pearson, Calvenna-Deane & Carter, 2015).

The results however identified a positive relationship only between the following teacher attitude*; It is the right of a child with special educational needs to be placed in a special education classroom* (rights of a child) and standardized scores of the special

education students. The attitudes of inclusion were negatively correlated with the standardized score of the special education students.

Thus, it is possible that teachers may be positively rating their special education students in the general classroom, but when standardized scores are considered, the individualized instruction (Van Garderen et al., (2012) serves the special education student better. Attainment of the students, whether assessed by teacher ratings or standardized scores can be explained by the self-determination theory, which indicates that exceptional students will attain their educational achievement through their instructional goals (Martin et al., 2013). The self-determination theory asserts that self-regulation, goal setting, decision making, and choice making are components of the behavior of the individual (Denny & Daviso, 2012; Roy, Guay & Valios, 2013) and teacher characteristics play and important role in the exceptional students' learning process.

Teachers of exceptional students do believe the student's psychological needs; and that their need for autonomy is met within the general education classrooms. Both general and special education teachers used the average ratings of their students more often in determining how students are progressing with their academic learning. Likewise, in this study as in the previous study (Roy, Guay & Valios, 2013), the individual needs of the student are met through the use of the teacher's autonomy, choice making decisions on their instructional practice and their competence in instructing students on reaching their goals within the classroom.

Researchers have indicated providing students with academic instructions and enhancing the self-determination of the exceptional student, is essential to both general and special educators (Carter et al., 2008). Teacher characteristics are vital in building all components of self-determination theory with their students in the classroom. This study contributes to the body of literature on teacher's characteristics and exceptional students learning outcomes. The current study examines the inclusion of exceptional students in middle school, and teacher's level of teaching, it examines teacher's characteristics, their experience, and use of student's evaluations through average ratings and standardized scores in determining exceptional students' outcomes. The findings related to the teacher attitudes and teacher ratings versus the standardized scores are important contributions to the field of special education.

Research Question 2

The second research question explores the difference in instructional practice and student's academic learning within both environments. The second research question is: Do teacher characteristics have an impact on student outcomes of the exceptional child in the general versus special education classroom?

The findings indicate there were significant differences between the exceptional student outcomes between the type of classroom where majority of class instruction was delivered. There were significant differences between average teacher ratings and average standardized scores. Both these scores were significantly higher for the general education teachers than for the special education teachers.

There were also significant differences in the years of experience teaching between the classroom type. The teachers who delivered instruction in the general education classroom had significantly more years of experience teaching than those in the special education classroom. Teaching exceptional students requires high-quality teachers who are prepared to teacher academic level content in their various school district. Teachers characteristics, years of experience, degree earned, and students academic learning content were examined in this research study. In this study, teachers used their knowledge of monitoring their student's progress, and their instructional goals while implementing grade-level content. Teacher ratings and standardized scores were higher in general education than special education classrooms. Moreover, there were significant differences in the type of classroom exceptional students received their academic learning. Teachers with more teaching experiences were those in the general education setting. Notably, being afforded the opportunity to learn within general education classrooms, it was expected that exceptional students would show evidence of increases on the standardized test scores (Cosier et al., 2013).

These results can also be explained by the theoretical framework of this study. Teachers of exceptional students' knowledge, practice and attitude do affect students' outcomes in the type of classroom (Woodcock & Vialle, 2016). The perception and principle of attribution theory support student's achievement and teachers' instructional practice. The results of the teacher's ratings and average standardized scores indicated exceptional students in these special and general education classrooms are exhibiting their efforts and their abilities in their academic learning. Attribution can affect student's

performance and thus their learning outcomes. Furthermore, a teacher's self-efficacy does have a direct effect on their student's achievement in the classroom and this is demonstrated in their teacher ratings and students' standardized scores.

Research Question 3

The third research question examined various instructional based practices used by teachers of exceptional students. The third question is: Does the use of instructional options as measured by the Availability of Instructional Options (AOIO) moderate the impact of special education teacher experience, training, and attitudes in the special education and general classroom setting on the academic outcomes of the exceptional child?

The third hypothesis examined teachers use of the AOIO, and the impact on their student learning outcomes with the various instructional practices used in the classroom settings. Findings indicated that the use of AOIO did not moderate the impact of teacher attitudes, training, experience on student outcomes such as teacher ratings and standardized scores. Although, AOIO did not impact or moderate the teacher attitude, training, experience, on students' outcomes on average ratings, and standardized scores, AOIO was used more in the special education classrooms.

A previous study of learning within an inclusive classroom researcher identified various methods used in teaching exceptional students (Morningstar et al., 2015). As in this study, teachers used a variety of instructional practices which determined student academic learning outcomes. It is possible that the special education teachers used the instructional outcomes when delivering specific content in the special education

classrooms. Thus, years of experience teaching, positive attitudes towards inclusion and use of individualized instruction (possibly with the use of AOIO in the special education setting), were associated with overall positive learning outcomes of the exceptional students, in the mainstream general education classrooms. These results may be explained by the self-efficacy theory which explains the influence of self-efficacy on educators and student outcomes (Cho et al., 2013) and the attributions of the teacher in the classroom. Teachers attribution does influences students academic performance in their classroom and their outcomes in their future academic learning (Woodcock & Vialle, 2016). Therefore, the choices that teachers make in their instructional practice will influence students learning outcomes.

Research on the instructional practice of exceptional students in middle school classrooms are very limited. The majority of the research is focused on the social function of exceptional students, and the use of differential instructions in educating exceptional students is limited. Researchers Ballard and Dymond (2017) indicated much of the research has a limited focus on the where exceptional students are instructed, while their academic learning content is not discussed. With inclusion, the attention of the past decade is on improving the quality of education exceptional students receive in the general education classroom (Ballard & Dymond, 2017).

Limitations of the Study

In this research study, I examined the impact of teachers' characteristics on exceptional students learning outcomes in a classroom setting. One of the limitations to the study is participants of the study are teachers of exceptional students in middle

school. Thus, the results may be applicable for middle school settings only. Other limitations were these participants were not random participants were not randomly selected; this is a convenience sample. However, participant responses revealed a pattern across the respondents, indicating a motivation to respond about this important topic. The questionnaire is centered on self-reporting of the academic outcomes—when reporting the teacher ratings of the students, however, the standardized scores were also used as a reliability check. The participants used for this study were recruited from Qualtrics data system, and geographic locations and identity of participants were based on anonymity. The research did not seek to investigate students' names, identification, socio-economic status, or disabilities, thus encouraging honest responses. The research study did not contain responses from one area of the country, which allows one to generalize the findings to middle schools in the country.

Recommendations

This study adds to the body of knowledge of teachers' characteristics and exceptional students academic learning outcomes. Currently, there are no studies that have examined teachers' characteristics and exceptional students learning outcomes, via teacher ratings and standardized scores, in middle classroom settings. The study did indicate there is a relationship with teacher attitudes and student performance based on reports of average teacher ratings and average standardized scores. Browder et al., (2007) reported there is a need to discuss the outcomes for exceptional students and what they can achieve with the use of the general education curriculum.

Although, it is important to note that teachers' ratings and standardized scores of exceptional students were higher in the general education classroom than those of exceptional students in special education classrooms only. General education teachers had better learning outcomes, and special education teachers seemed to use more adaptive methods for the students who are not in the general education settings. The results have indicated the findings of previous research of students who are educated in general education classrooms settings achieve more in their academic learning (Cosier et al., 2013).

This research has examined the importance of relationships of teachers' characteristics variables and students learning outcomes in middle school settings. A larger sample size from a focused geographical area may be required for future research. This would allow us to understand the results in the context of policies of different districts. An observational study or longitudinal through high school or mixed method study will add to this body of knowledge in understanding the best practices for teachers for the exceptional child. Future research could examine exceptional students' social outcomes as they move into their communities.

Implications

Although previous research on exceptional students tends not to include exceptional students' academic learning outcomes, I have examined and reported on exceptional students' outcomes within middle school classroom settings within this study. Instructional practice in the classroom is aligned with exceptional students academic learning outcomes. When improving students' educational outcomes, this is

centered on the instructional practice of the exceptional students' teachers (Cook & Odom, 2012). Exceptional students social change begins with a positive academic learning outcome for the student and their families.

Conducting this research study will provide more opportunities for researchers to examine more research on teachers of exceptional students not only in middle school, in other educational areas. This study offers positive social change for teachers of exceptional students in the future. This study contains informative information and recommendations for teachers, administrators, stakeholders, and policyholders, research base practice individuals who are educating exceptional students within a general classroom setting. The recommendations are valuable to families of exceptional students who are interesting in setting and accomplishing long-term academic learning for these students.

Conclusion

The purpose of this study was to examine teachers' characteristics and the impact on exceptional students' learning outcomes in general versus the special education classroom. This study has added to the body of knowledge involving special and general education teachers who teach exceptional students within a classroom setting, by indicating that inclusive education had significantly better academic outcomes, while including the individualized instruction, for exceptional children. Exceptional students should have access to general education classrooms; this is the meaning of inclusion. Federal mandates, stakeholder and policymakers equally share the same belief of educating exceptional students with a general education curriculum. Teachers of

exceptional students need to understand what strategies worked best in their classrooms and will develop the best academic learning outcomes for their students.

A majority of the research had indicated exposure inclusion begins with pre-service teacher education programs, and subsequently during their level of teaching exceptional students. Furthermore, the majority of school districts have increased the number of exceptional students educated within general education classrooms. Teachers can improve the quality of education exceptional students receive during their academic learning years with the use of evidence-base practice. This will improve special and general education teacher's knowledge, confidence, and skills in teaching exceptional students. Although, the research was based on teachers' characteristics, and attitude, in this research study, exceptional students academic learning outcomes is vital to their success within their communities. By using the information provided in this study, administrators and school districts will have a better understanding of how teachers' characteristics do influence the psychosocial needs of exceptional students in general and special education classrooms.

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Appendix A: Demographic Survey

Teachers' Characteristics and Exceptional Student Academic Learning Outcomes in Middle School

Brenda I Johnson

Doctoral Research

Walden University

Dear Middle School Educators:

You are invited to take part in this research study because there is limited research on exceptional students learning outcomes in general education classrooms. I am inviting approximately 128 middle school grades 6-8 teachers, who teach exceptional students to be in the study. This form is a part of the process called "informed consent" to allow you to understand this study before deciding whether you want to participate. This study is being conducted by me, Brenda I Johnson, and I am a doctoral candidate at Walden University. Although I do teach exceptional students, I am not in any way associated with the districts and your schools.

Background Information:

The purpose of the study is to identify the impact of teacher characteristics on students learning outcomes of the exceptional students in general versus special education classroom settings. This study will help in identifying the instructional practices that deliver the optimal academic outcomes for the exceptional students.

Procedure:

If you agree to be in this study, you will be asked to:

• Provide demographic information

• Provide information about your instructional practices and attitudes

• Upload last year's performance ratings of the exceptional students you teach

The questionnaire should take approximately 15 minutes.

Here are a few sample questions:

• Years of experience teaching: 1 to 2years, 3 to 5 years, 5 years and over

• Level of teaching: 6th grade, 7th grade, eight grade, 6th thru 8th grade

• The learning of children with special educational needs can be effectively supported in mainstream classrooms as well. (The scoring of the item is on a five-item scale which ranged from strongly agree to strongly disagree).

• To what degree are the following instructional options routinely used for these students at your school?

Multi age-grouping 1 2 3 4

Flexible scheduling 1 2 3 4

Payment

No payment is offered for participating in this study. There is no compensation (ex. travel cost or gifts) for participating in this research study.

Voluntary Nature of the Study:

This study is voluntary. Everyone will respect your decision whether or not you choose to be in the study. No one at the School districts will treat you any differently if you decide not to be in the study. If you decide to join the study now, you can change your mind. You may stop at anytime.

Risk and Benefits of Being in the Study:

Being in this type of study involves some risk of minor discomfort that can be encountered in daily life, such as stress, fatigue and becoming upset. Being in this study would not pose a risk to your safety or well-being. The purpose of this study is to identify teacher characteristics which are associated with optimal academic outcomes for exceptional students. Knowledge of these characteristics will inform stakeholders and administrators to design training and interventions, benefit teachers by providing

information about the characteristics which are helpful for the success of the exceptional students, and families and communities would benefit from this research study if the academic outcomes of this vulnerable population are improved as well.

Privacy:

Your participation is anonymous. Any information you provide will be kept confidential. The researcher will not use your personal information for any purpose outside of this research project. Data will be kept stored and locked by the researcher. Data will be kept for a period of 5 years as required by the University.

Contacts and Questions:

You may ask any questions you have now. Or if you have any questions, you may contact the researcher via telephone 803-315-9507. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott (612-312-1210). She is a Walden University representative who can discuss this with you.

The approval number for this study is 09-15-17-0305291 and it expires on September 14th, 2018.

Obtaining Your Consent:

There are no signatures requirements for this survey, in order to protect your rights of privacy and given complete anonymity for your participation. As a participant, you are encouraged to keep and print a copy of this consent form.

Researcher's Signature: Brenda I Johnson (Doctoral Candidate Walden University)

Q2
Years of experience teaching:

- ○ 1 to 2 years (1)
- ○ 3 to 5 years (2)
- ○ 5 years and over (3)

Q3 **Gender**

- ○ Male (1)
- ○ Female (2)

Q4 **Ethnicity**

- ○ White (1)
- ○ Black or African American (2)
- ○ American Indian or Alaska Native (3)
- ○ Asian (4)
- ○ Native Hawaiian or Pacific Islander (5)
- ○ Other (6)

Q5 **Are you a Special Education Teacher**

- ○ Yes (1)
- ○ No (2)

Q6 **Are you a General Education Teacher**

- ○ Yes (1)
- ○ No (2)

Q7 **Highest degree earned**

- ○ Bachelor Degree (1)
- ○ Graduate Degree (2)
- ○ Graduate Degree Plus (3)
- ○ Doctoral Degree (4)

Q8 **Certification Received**

- ○ Special Education Certification (1)
- ○ General Education only (2)
- ○ Alternative Certification (3)

Q9 **Level of Teaching**

- ○ 6th grade (1)
- ○ 7th grade (2)
- ○ 8th grade (3)
- ○ 6th thru 8th grade (4)
- ○ Other (5)

Q10 **Type of Program**

- ○ Special School (1)
- ○ General Education School (2)

Q11 **Number of exceptional students enrolled in your classroom**

- ○ 1 to 5 Students (1)
- ○ 5 to 10 Students (2)
- ○ 10 or more Students (3)
- ○ None (4)

Q12 **Assessments are completed in the form of**

- ○ Benchmarks (1)
- ○ State Assessment (2)
- ○ Other Instructional Practice (3)

Please check the responses that apply:

	Subject					Teacher Rating of Student						
	Math	Science	Language Arts	Social Studies	All	Below 60%	61-70%	71-80%	81-90%	91-95%	Above 95%	Level 1 lowest rating
Student 1	☐	☐	☐	☐	☐	○	○	○	○	○	○	○
Student 2	☐	☐	☐	☐	☐	○	○	○	○	○	○	○
Student 3	☐	☐	☐	☐	☐	○	○	○	○	○	○	○
Student 4	☐	☐	☐	☐	☐	○	○	○	○	○	○	○
Student 5	☐	☐	☐	☐	☐	○	○	○	○	○	○	○

Based on the 1 to 5 students you have reported on please indicate if the majority of class instruction is in a general education classroom setting or in a special education setting?

	1-Almost never	2- Occasionally	3-Frequently	4-Almost always	
General Education	○	○	○	○	
Special Education	○	○	○	○	

Appendix B: Availability of Instructional Options Questionnaire

In some schools, alternative instructional programming is limited. Sometimes educators are faced with either-or decisions, namely social promotion or retention for students who are struggling academically and/or do not pass the required tests. To what degree are the following instructional options routinely used for these students at your school? Select a number between 1 and 4, where:

1 = Almost never
2 = Occasionally
3 = Frequently
4 = Almost always

	1 Almost never	2 Occasionally	3 Frequently	4 Almost always
Cooperative learning	○	○	○	○
Group work	○	○	○	○
One-to-one tutoring	○	○	○	○
Smaller class sizes	○	○	○	○
Multi age-grouping	○	○	○	○
Flexible scheduling	○	○	○	○
Use of frequent curriculum-based measurement to make instructional changes	○	○	○	○

Within- class ability grouping	○	○	○	○
Small group instruction	○	○	○	○
Looping (e.g., teach students for two years)	○	○	○	○
Intensive remedial help	○	○	○	○
After school homework programs	○	○	○	○
Coordinated home-school interventions	○	○	○	○
Instructional consultation	○	○	○	○
Peer-assisted learning strategies	○	○	○	○

What has happened at your school as a result of implementing required tests (graduation exit exams, grade level) for students? *Chose whether the event has "Increased (I)", "Not Changed (NC)", or Decreased (D)". Use Don't Know (DK) only if you cannot select one of the other responses or the event is not applicable for some reason.*

	(I) Increase (1)	(NC) Not Change (2)	(D) Decreased (3)	(DK) Don't Know (4)
Staff development on teaching practices for at-risk learners? (Q29_1)	○	○	○	○
Teachers' expectations and standards for the student? (Q29_2)	○	○	○	○
Teachers' knowledge about student progress? (Q29_3)	○	○	○	○
Clarity of instructional goals? (Q29_4)	○	○	○	○
Teaching to the test? (Q29_5)	○	○	○	○
Programs to prevent early school failure (e.g., reduce class size, early childhood education, family literacy programs, effective reading programs)? (Q29_6)	○	○	○	○

Monitoring of student performance and progress? (Q29_7)	○	○	○	○
Monitoring the quality of instruction? (Q29_8)	○	○	○	○
Teachers' knowledge and skills for teaching diverse learners to meet standards? (Q29_9)	○	○	○	○
Time allocated to reading instruction? (Q29_10)	○	○	○	○

Page Break

Appendix C: Permission for Questionnaire

Dear Committee members,

I grant permission to Brenda Johnson to use the survey entitled, Availability of Instructional Options, in her dissertation study. Should you have any questions, I can be reached at chris002@umn.edu.

Best wishes,

Sandy Christenson

Appendix D: Teachers Attitude Towards Inclusion Scale

Full texts of the items in the TAIS scale

	Item **The scoring of the items is on a five-item scale which ranged from strongly agree to strongly disagree.**
1.	Children with special educational needs learn best in their own special education classes where they have specially trained teachers. R (expected outcomes)
2.	The children with emotional and behavioural problems should be educated in mainstream classrooms, with the provision of adequate support. (inclusion as a value)
3.	It is the right of a child with special educational needs to be placed in a special education classroom. R (rights of the child)
4.	Children with attention deficit/hyperactive disorder (ADHD) should be admitted in mainstream classrooms with adequate support. (inclusion as a value)
5.	Teachers' workload should not be increased by compelling them to accept children with special educational needs in their classrooms. R (workload of the teacher)
6.	The best result is achieved if each child with special educational needs is placed in a special education classroom that best suits him/her. R (expected outcomes)
7.	The students with special educational needs should be educated in mainstream classrooms as much as possible. (inclusion as a value)
8.	Integrated children with special educational needs create extra work for teachers in mainstream classrooms. R (workload of the teacher)
9.	A child with special educational needs should be transferred to a special education classroom in order not to violate his/her rights. R (rights of the child)
10.	The learning of children with special educational needs can be effectively supported in mainstream classrooms as well. (expected outcomes)

Appendix E: Permission for Teachers Attitude Towards Inclusion Scale

UNIVERSITY OF JYVÄSKYLÄ

DEPARTMENT OF TEACHER EDUCATION

August 22, 2016

LETTER OF APPROVAL

Hereby I permit Brenda I Johnson (MA) to use the below TAIS scale, which I have developed, freely in her research.

Timo Saloviita
Professor

Appendix F: Permission U.S.V.I

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OFFICE OF PLANNING, RESEARCH AND EVALUATION
1834 Kongens Gade, Charlotte Amalie
St. Thomas, V.I. 00802-6746

April 6, 2018

Brenda Johnson
PO Box 91060
Columbia, SC 29290

Dear Ms. Johnson,

We are pleased to inform you that your research proposal has been approved. Enclosed is a copy of your proposal with all necessary approval signatures.

Best wishes in your endeavors.

Sincerely,

James Richa
Director – RE

Dire or PRE Richardson