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# An Investigation Into the Self-Efficacy of Jamaican Preservice Teachers for Working in Inclusive Classrooms

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# An Investigation Into the Self-Efficacy of Jamaican Preservice Teachers for Working in Inclusive Classrooms

by
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## Approval Page

This applied dissertation was submitted by Sharon Anderson Morgan under the direction of the persons listed below. It was submitted to the Abraham S. Fischler College of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova Southeastern University.

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## Statement of Original Work

I declare the following:

I have read the Code of Student Conduct and Academic Responsibility as described in the *Student Handbook* of Nova Southeastern University. This applied dissertation represents my original work, except in which I have acknowledged the ideas, words, or material of other authors.

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## Abstract

An Investigation Into the Self-Efficacy of Jamaican Preservice Teachers for Working in Inclusive Classrooms. Sharon Anderson Morgan, 2017: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler College of Education. Keywords: teacher education, inclusion, preservice teachers, self efficacy

The aim of this applied dissertation was to examine changes in the self-efficacy of preservice teachers on completion of a special needs course and to determine whether there is a correlation between self-efficacy and several demographic variables. Studies conducted in several countries revealed that, despite participation in a special needs course, preservice teachers often expressed low levels of confidence for the inclusion of students with special needs in their general education classrooms. Because there is not much research in the Caribbean on this subject, this study sought to further explore this issue within a different cultural context.

The case study, which employed an explanatory mixed-methods design, was conducted at a teachers' college in western Jamaica. The sample of 55 preservice teachers was selected through convenience sampling. The self-efficacy of participants was measured at the beginning and ending of a special needs course using the Teacher Efficacy for Inclusive Practices scale. At the end of the course, selected participants were interviewed using focus-group discussions that yielded qualitative data. Quantitative data were analyzed using inferential and descriptive statistics to determine changes in self-efficacy and to examine the relationship of several demographic variables to self-efficacy trends. Qualitative data were coded and analyzed for themes and provided an explanation of the quantitative data.

The results indicated that preservice teachers' self-efficacy increased upon completion of a special needs course. When the self-efficacy of males and females was compared, no significant differences were found. Participants who had previous training in special needs education, as well as participants who had considerable interactions with persons with disabilities, had higher self-efficacy scores. Furthermore, the self-efficacy scores of participants seemed to have been influenced significantly by increased knowledge about disabilities and inclusion following the authentic and vicarious experiences during the course.

## Table of Contents

# Chapter 1: Introduction

## Statement of the Problem

**The topic**. Inclusive education continues to be a goal of educators in countries all over the world. However, as noted by Galmic and Hansen (2012), there are barriers related to "policy, practice, and procedures" (p. 27) which affect implementation. One fundamental component in the implementation of inclusive education is teacher preparation (Loreman, Sharma, & Forlin, 2013). Although most teachers accept the philosophy of inclusion, researchers have found that preservice teachers, as well as inservice teachers in several countries, do not perceive themselves as being adequately prepared to accommodate the needs of students with disabilities in their classrooms (Forlin & Chambers, 2011; Loreman et al., 2013). Self-efficacy is the belief in one's own ability to successfully complete a task (Bandura, 1997). This study examined the self-efficacy of preservice teachers in Jamaica for inclusive education.

**The research problem**. The problem investigated in this study was that, despite participating in the existing teacher training program, teachers were reported to express feelings of inadequacy and low levels of confidence for teaching students with special needs (Chong, Forlin, & Lan, 2007; McCray & Alvarez-McHatton, 2007). Loreman et al. (2013) concluded that teacher training increased teacher self-efficacy for inclusive education; however, Chong et al. (2007) cautioned that taking a course did not guarantee that teachers felt fully prepared. Macmillan and Meyer (2006) postulated that one reason some educators expressed anxiety about teaching in inclusive settings was that they had low feelings of teaching self-efficacy for inclusive teaching. In other words, the educators perceived themselves as not having the necessary training or skills to meet the demands of this kind of diversity in the classroom (Andersen, Klassen, & Georgiou, 2007).

Therefore, preparing teachers for the diversity that exists in classrooms today should be the priority of teacher training programs (Swain, Nordness, & Leader-Janssen, 2012).

Since 1998, preservice teachers in Jamaica have been exposed to modules aimed at developing an understanding of the nature and needs of children with special needs as well as developing the necessary pedagogical skills for teaching students with varying exceptionalities (Evering, 2007). However, Meredith (2013), Special Education Project Coordinator in the Education Transformation Project of the Ministry of Education, Jamaica, noted that exposure to the information is often cursory, therefore limiting the ability of general educators to assimilate and apply this information. This has resulted in graduates of teacher training programs feeling unprepared to cater to students with special needs.

**Background and justification**. As the population in schools becomes more diverse, the question of teachers' perceptions of their ability to teach students with diverse abilities and needs becomes more pertinent (Leyser, Zeiger, & Romi, 2011). However, Lancaster and Bain (2007) questioned the adequacy of teacher preparation courses in ensuring that preservice teachers display confidence in their abilities to teach in an inclusive classroom. It is important that teachers feel confident in their ability to teach students with disabilities in their general education classrooms since research indicates a relationship between teachers' levels of self-efficacy, teacher performance, and student achievement (Woolfolk, 2007). Higher levels of teaching self-efficacy for inclusive education have been associated with increased willingness, on the part of teachers, to engage in practices that will accommodate the needs of students with special needs in their classrooms and subsequently improve students' achievement (Mergler & Tangen, 2010).

**Jamaica's education system**. Jamaica is a small island in the Caribbean with a total area of 4,181 square miles and a population of 2,930,000 people. The island is a former British colony and has an education system that closely models that of the United Kingdom. Students attend preschool from ages 2 to 4 and kindergarten or infant school from ages 4 to 6. Students between ages 6 and 12 attend primary school, and, at ages 12 to 17 or 18 years, students attend high school. Approximately 10% of high school graduates go on to access tertiary education; the others go on to work or learn a trade in skills training centers or as apprentices.

There are six teacher training colleges operated by the Ministry of Education, which prepare teachers for early childhood, primary, and secondary education. These colleges form an organization known as Teachers' Colleges of Jamaica and have a common curriculum; students in these colleges take common examinations. Teachers' Colleges of Jamaica offers a bachelor's degree through the University of the West Indies' Joint Board of Teacher Education. Prior to 2011, the teacher training colleges only offered a 3-year diploma in teaching, which was the minimum qualification for beginning teachers. Since 2011, the colleges have been offering a 4-year bachelor of education degree, which involves 140 to 145 credits of professional studies, general education, specialization courses, and electives.

**Special education in Jamaica**. Special education in Jamaica started with a small group of parents in the 1950s. During this period, the education of children with special needs was initiated by parent groups and religious groups, composed mainly of missionaries from the United States and England. These groups evolved into nongovernmental organizations. In 1973, the government instituted a policy of free education for all children. This provided a platform for these groups to advocate for the

government to include children with disabilities in its educational provisions. As a result of these efforts, in 1975, the government assumed the responsibility for paying the teachers in schools operated by nongovernmental organizations for children with various exceptionalities although the organizations continued to own and operate the schools (Anderson, 2014). The training of special educators in Jamaica began in 1975 through a partnership established with the Dutch government. The agreement heralded significant developments in special education services in Jamaica over the ensuing years. Initiatives included the training of special educators at Mico College, the establishment of a Child Assessment and Research in Education Centre, and the building of six special education units attached to primary schools (Anderson, 2014).

In addition to these initiatives, the Ministry of Education's 5-year plan for 1978 to 1983 for the first time articulated objectives for special education. This included providing a program for children with disabilities within the education system that would allow them to develop cognitive and psychomotor skills and be able to function in the community, to develop outreach programs that would assist parents, teachers, and the wider community to develop positive attitudes toward individuals with disabilities, and to make provisions within the general education system for students with disabilities who are able to benefit from inclusion.

In 1989, a special education administrative unit was established in the Ministry of Education to supervise special education programs across the island. The Ministry of Education during this period was focused on increasing access to special education at the primary and secondary levels and developing a program for children who were intellectually gifted. Over 30 special education units and resource rooms were established in public primary schools to facilitate mainstreaming of children with special needs in

these primary schools. These students are gradually reintegrated into the general education classrooms. The Salamanca Statement, which addresses the principles, policy, and practice in special needs education (United Nations Educational, Scientific, and Cultural Organization [UNESCO], 1994) was adopted by Jamaica and fueled a move toward improving the quality and access of education for students with disabilities. Among the initiatives was the inclusion of a module on special education in teachers' colleges to expose general education teachers in training to various disabilities and strategies for teaching students with special needs.

**Inclusion in Jamaica**. The World Health Organization estimates that 10% to 15% of each age cohort has a disability. This would imply that, in Jamaica, approximately 87,000 children across all levels of the education system have special learning needs. The 2013 enrollment data from the Ministry of Education indicated that 4,142 children were enrolled in special schools across the island (Ministry of Education, 2014). There is, therefore, a large number of students with special needs in general education classrooms, some of whom are unidentified or undiagnosed.

The report of the 2004 Task Force on Education in Jamaica had among its areas for attention the management of special needs. The report highlighted that there were inadequate facilities for diagnostic assessment and insufficient provision for placement and support services for students with disabilities in the general education system. Additionally, the report noted that schools were refusing to include students with special needs who could benefit from inclusion. It was also noted in the report that teachers in training were inadequately prepared to meet the needs of students with special needs in the regular classroom (Task Force on Educational Transformation, 2004). On March 30, 2007, heads of state of 81 countries, including Jamaica, signed the United Nations

Convention on the Rights of Persons With Disabilities, committing their countries to work toward ending all forms of discrimination against children and to take the necessary action to ensure equal access to education, health, and recreational services to children with disabilities. Countries should also seek to protect the dignity of children with special needs and to facilitate their inclusion in the community.

As a signatory to this convention, Jamaica has taken steps toward the inclusion of individuals with disabilities in society. Jamaica's National Development Plan, Vision 2030, has as one of its goals that persons with disabilities should be fully integrated within the society, have access to appropriate support services, and be recognized as valuable members of society (Planning Institute of Jamaica, 2009). Toward this end, the National Disability Act was passed in parliament in 2014. The legislation stipulates that a person with a disability cannot be denied access to an educational institution on the basis of a disability. Furthermore, educational institutions must provide the support needed to guarantee persons with special needs access to the facilities and resources needed to adequately facilitate his or her education (Ministry of Labour and Social Security, 2014).

This study is, therefore, of optimum relevance because it is essential to determine the perceived abilities and attitudes of student teachers toward inclusion before these teachers graduate and are employed as classroom teachers (McCray & Alvarez-McHatton, 2007). The study is also significant as it replicated previous studies on the problem using different research sites and participants in a different cultural context. Recommendations from this study will inform practice as findings will be useful when reviewing current teacher education programs. The findings may also be used to guide the development of professional-development programs for inservice teachers.

**Deficiencies in the evidence**. Although there has been much research

internationally investigating newly graduated teachers, Peebles and Mendaglio (2014) stated that there is a dearth of research examining self-efficacy and teaching beliefs of preservice teachers for inclusion. Morris (2011) acknowledged that data on the issue of access and inclusion of persons with disabilities in the Jamaican education system are "woefully lacking" (p. 6). Research on the subject has been conducted mainly in countries in which there are policies that have been developed to support inclusive education. This is not the case in Jamaica, as the special education policy is yet to be passed by parliament. This policy, which is anticipated to come into effect within the next fiscal year, will, among other things, promote a more inclusive approach to education. Despite this, no research has been conducted to assess the confidence levels of teachers leaving training colleges in Jamaica for working in inclusive settings.

A review of the literature indicated that this issue has been researched in several developed and developing countries, including the United States, Canada, South Africa, Hong Kong, Bangladesh, Brazil, and Australia. However, the literature demonstrates a deficiency in research conducted in small island nations like Jamaica. Jamaica could benefit from the results of a local study, as most professional-development modules currently offered were not developed in Jamaica and may not be applicable to the Jamaican context. Research on this subject in Jamaica would also be instructive to other islands with similar history, resources, and social and political structures. As Loreman et al. (2013) asserted, countries can learn from each other in preparing teachers for inclusive education as the differences and similarities that exist among nations will highlight the issues that need attention.

**Audience**. This research will inform policy and provide useful information to the Teachers' Colleges of Jamaica and the Joint Board of Teacher Education that are directly

involved in the training of teachers in Jamaica. The results of this study will also be useful in examining the current teacher training program and its role in preparing teachers to work in inclusive settings. Additionally, it will be beneficial to the Jamaica Teaching Council, which is the teacher licensing body, as well as the Ministry of Education, which is directly responsible for the management of schools.

**Definition of Terms**

For the purpose of this applied dissertation, the following terms are defined.

**Early childhood education**. This term refers to the education received by children who are less than 5 years old.

**Inclusion**. This term refers to an educational philosophy accommodating the educational requirements of students with special needs within the general education classrooms (DeMatthews & Mawhinney, 2013; Gokdere, 2012; Oswald & Swart, 2011; Taliaferro, Hammond, & Wyant, 2015).

**Joint Board of Teacher Education**. This term refers to a regulatory board that operates out of the University of the West Indies. This board is responsible for the monitoring of teacher education in various countries with the Caribbean. The organization also provides supervision to the Teachers' Colleges of Jamaica and is the final authority on the granting of teaching degrees.

**Mainstreaming**. This term refers to placing of students with disabilities in the regular education classroom without educational supports. Students may spend the entire day in their regular classrooms or may access additional support in a resource room setting for a part of the day (Ministry of Education, 2007).

**Preservice teacher**. This term refers to anyone enrolled in a teacher training program who has no previous teacher training and is pursuing a degree in early

childhood, primary, or secondary education.

**Primary education**. This term refers to the education of children between 6 and 12 years in Grades 1 to 6.

**Secondary education**. This term refers to the education of children 12 years and older in Grades 7 to 13.

**Self-efficacy**. This term refers to a person's belief that he or she can successfully complete a task (Bandura, 1997).

**Special needs**. This term refers to children experiencing significantly greater difficulty with learning than age or grade peers or the presence of a disability that limits or hinders a child from accessing the educational provisions normally provided for same age peers (Ministry of Education, 2014).

**Teachers' Colleges of Jamaica**. This term refers to a group of government-owned teacher training colleges that offer a joint degree. The organization includes eight training colleges that provide training in early childhood, primary, secondary, and special education.

## Purpose of the Study

The purpose of the study was to examine whether there were changes in the self-efficacy of preservice teachers after participating in a course on special needs and inclusion and to determine whether such a course increased the preservice teachers' levels of confidence in teaching students with disabilities in general education classrooms. Additionally, the study examined whether various demographic variables impacted self-efficacy and how the various aspects of course delivery might have impacted preservice teachers' self-efficacy for inclusive education.

# Chapter 2: Literature Review

The issue of teacher preparedness for the inclusion of children with special education needs has been researched in several countries. These studies revealed a number of factors which impact the self-efficacy of preservice teachers for inclusive education. This chapter presents a review of the literature undergirded by Bandura's (1977) social cognitive theory, which formed the theoretical framework for this research. The review explores the concept of inclusion, the preparation of preservice teachers for inclusive education, and the factors that affect self-efficacy for inclusive practices.

## Inclusive Education

**Defining inclusion**. Heward (2010) argued that there is no agreement in the field of special education about what inclusion means. Although some view inclusion as the full integration of all special needs students in general education classrooms, others opine that the term is applicable once special needs students are integrated into the mainstream general education system, regardless of the level of integration. Consequently, Ainscow et al. (2006) theorized that there are two categories of definitions for inclusion: descriptive definitions, which refer to how inclusion is practiced, and prescriptive definitions, which focus on particular aspects of inclusion. Prescriptive definitions are broad and idealistic although descriptive definitions are narrow and more specific to a setting or type of disability. On the other hand, Armstrong, Armstrong, and Spandagou (2011) posited that some definitions included elements of both descriptive and prescriptive definitions.

The UNESCO (2009) defined inclusion broadly as a process of meeting the diverse needs of all learners. Inclusion is further described as increasing the capacity of the education system to meet the needs of all learners by making adaptations and

modifications in content, pedagogy, environment, and systems. This is accomplished through a common vision aimed at eliminating exclusion in all forms based on the philosophy that all children should be accommodated within the general education system (UNESCO, 2009). The Council for Exceptional Children, however, used the term inclusion to describe the model in which all children and youth with special needs are served, wherever possible in general education classrooms in their neighborhood schools, although receiving support from trained professionals (Council for Exceptional Children, 2009).

Idol (1997) specified that inclusion differed from mainstreaming in that mainstreaming referred to the placement of students with special needs in the general classroom for a part of the school day and withdrawing them out to provide additional support in a resource room, and inclusion referred to students with special needs spending their entire school day in the general education classroom. The philosophy of inclusion is, therefore, established on the principle that students with special needs should be educated in the environment with the fewest restrictions in the least restrictive environment and that they should be fully integrated in their community schools, with instruction planned to meet their individual learning needs (Hallahan, Kauffman, & Pullen, 2009). Advocates of inclusion insist that the supports that students with disabilities need can be provided in the general education classroom and that, when students have difficulties meeting the demands of the curriculum, these expectations need to be modified to meet the needs of the student (Friend & Bursuck, 2009).

Friend and Bursuck (2009) delineated three characteristics of inclusive education. First, students with disabilities are educated in the same classroom as their peers without disabilities and receive all or most of their educational services within this setting.

Second, not only are these students physically placed in these classrooms, but they are also socially integrated within this community of learners through relationships that are nurtured to achieve full integration with their peers and teachers. Third, in these inclusive classrooms, students with disabilities are instructed using the same curriculum as students without disabilities but with adaptations based on their needs.

**Rationale for inclusion**. There are three main reasons given by the UNESCO (2009) for promoting inclusion. First, from an educational perspective, inclusion is academically beneficial to all students, with and without disabilities, as all students can benefit from the strategies, materials, and additional personnel in the classroom needed to support the learning needs of students with disabilities. Second, there is social merit because, by educating all children together, they may develop tolerance and an understanding of individual differences. Consequently, when students develop tolerance for differences, this could bring about a change of attitude toward persons with disabilities in the wider society. Third, inclusion has economic benefits, as it is less costly to educate all students in the same school rather than building separate schools with specialized equipment for students with special needs (UNESCO, 2009).

Chakraborti-Ghosh, Orellana, and Jones (2014) opined that proponents of inclusion have varying views about why students with special needs should be included and about the emphasis of inclusive education. Hedegaard-Hansen (2012) suggested that there are political as well as ethical factors that have motivated the move toward inclusive education. From a political perspective, special education has failed to deliver the expected levels of student achievement. At the same time, there has been an increase in the number of students requiring special education services, demanding that more money be spent on special education. Additionally, because many countries have signed the

Salamanca Declaration, inclusion has become a political priority of governments in various countries.

From an ethical point of view, Mentz and Barrett (2011) and Lindsay (2007) articulated that one motivational factor for inclusive education is the matter of human rights. Special Education essentially segregates children from their peers, the general curriculum, and educational practices. These proponents support the view that inclusion is the guaranteed right of every child. This pronouncement, that inclusion is the right of every child, is grounded in the Salamanca Act of 1994 (UNESCO, 1994). The legislation explicitly states that education is the right of every child and that every child must be given the opportunity to achieve satisfactory levels of learning based on his or her unique characteristics and learning needs. The legislation further stated that, for children with special needs, educational systems must provide programs within the regular school that will effectively meet their needs (UNESCO, 1994).

Inclusion, therefore, validates all children as full members of society and demonstrates respect of all of their rights, regardless of ethnicity, gender, or disability. Inclusion demands the appropriate supports and the removal of barriers that might impede the satisfaction of these rights (United Nations Children's Fund, 2007). Inclusive education is consequently a means to reducing discrimination and creating more inclusive communities which will facilitate greater levels of acceptance of diversity. Additionally, inclusive education is an effective way of educating all learners and a means of improving efficiency and cost-effectiveness efforts within the education system (UNESCO, 1994).

**Models of inclusion**. A review of the literature indicates that there are two distinct models of inclusion: coteaching and consultation. Coteaching is a service-

delivery model in which a general educator and a special educator collaborate to plan, deliver, and evaluate instruction for a group of students within a classroom in which there are students with disabilities (Kloo & Zigmond, 2008). Consultation, on the other hand, is a form of collaboration that involves a triadic relationship in which a professional provides services to the clients (i.e., children with special needs) through interactions between the consultant, the expert, and the consulter, who is the general education teacher (Cook & Friend, 2010).

***Coteaching***. The coteaching model utilizes the general educator's knowledge of the scope and sequence of the curriculum and the special educator's expertise in assessing the unique learning needs of students and designing instruction to meet these needs. Cook and Friend (2010) noted that a coteaching model should reflect three characteristics: two or more professionals, joint delivery of instruction, and diverse students. There are several approaches to coteaching described in the literature (Cook & Friend, 2010). In the first model, one teaching and one observing, one teacher assumes primary responsibility for the instruction of the whole group, small group, or individual, although the other observes and collects data on the students' behaviors and learning challenges which both teachers observe. This approach does not require much common planning since the role of one teacher is simply to observe. It is important, however, to alternate roles so that one teacher does not assume the role of an assistant teacher.

A second approach to coteaching is station teaching. In this approach, both educators are responsible for instruction. The content and classroom are divided into two, and each professional is responsible for planning and delivering his or her portion of the lesson in different stations. Students move around to the stations to receive instructions and participate in learning activities (Cook & Friend, 2010). This approach is similar to

alternative teaching in which the group is divided and each teacher is responsible for instruction. However, with alternative teaching, the group is divided into two groups, one small and one large, based on learning needs, and the teachers plan together and deliver lessons simultaneously to their assigned group. This approach provides more intensive support for students with special learning needs as it provides them with a smaller pupil-teacher ratio and consequently more individualized attention (Cook & Friend, 1995).

Another approach, parallel teaching, involves the class being divided in half, with each teacher delivering the lesson simultaneously to a mixed-ability group. Teachers engage in planning the lessons together so that students receive the same instructions and are exposed to the same activities within the same time frame (Cook & Friend, 1995). This approach differs from team teaching, in which both teachers share the instructional delivery. In the team teaching approach, teachers may take turns delivering instruction or they may jointly deliver instruction assuming various roles throughout delivery (Cook & Friend, 2010). For example, although one is instructing, the other may be demonstrating, or both teachers may engage in a role play together. This approach requires joint planning as well as mutual respect and trust (Cook & Friend, 1995).

***Consultation***. Consultation is a form of collaboration that also involves two or more professionals. Consultation, however, differs from coteaching in various ways. Unlike the coteaching approach, the student has little or no contact with the specialist but benefits from the services provided though his or her teacher. Dinnebeil, McInerney, and Pretti-Frontczak (2009) identified two consultative approaches. Consultation may utilize a direct service approach or the collaborative consultations approach. In the direct service approach, itinerant teachers make regular visits to schools within their geographical remit, serving as tutors or therapists to children with special needs. This intervention is

provided in small groups or on an individual basis. During this visit, the itinerant teacher, usually a special educator, also interacts with the general education teachers to offer advice or to address issues or concerns related to students with special needs in their class (Dinnebeil et al., 2009).

In the second type of consultation, collaborative consultation, the primary role of the consultant is to provide support to the general education teacher. Cook and Friend (2010) described this relationship as directional; in other words, the consultant offers expertise to the teacher in areas in which challenges are being experienced. Dinnebeil et al. (2009) observed that, although the itinerant consultant in this setting may occasionally interact with students, his or her primary instruction is provided by the teacher under the directive of the consultant. The consultant works with the teacher to identify the best possible approaches to meet the needs of the students with special needs. The approach may also involve the itinerant acting as a coach to the teacher or helping teachers refine or enhance their skills.

**Factors impacting inclusion**. Across the globe, the move toward inclusive education requires teachers to meet the needs of diverse learners in the general classroom setting. The change, however, has not in all cases been preceded by relevant preservice experiences that would equip future teachers with pedagogical knowledge and collaboration skills that are necessary for effective inclusion (Fuchs, 2010). This has led to general classroom teachers feeling inadequately prepared to manage inclusive classrooms.

Fuchs (2010) also posited that a teacher's beliefs regarding the philosophy of inclusion may become a barrier to effective inclusion. Buell, Hallam, Gamel-McCormick, and Scheer (1999) found that teachers' beliefs about inclusion had a direct impact on

their perceptions of their ability to educate students with disabilities in their classrooms. Although inclusion requires collaboration between general and special educators, these teachers have been separately trained in their various disciplines and in some cases may not feel fully prepared for this collaborative effort. Buell et al. (1999) opined that this has led to general educators feeling that inclusion has been imposed on them. This leads to negative feelings toward inclusion which have a negative impact on the behaviors of teachers, student achievement, and the success of inclusive practices.

Lindsay (2007) postulated that teacher attitude was a key factor in successful inclusive education. Teachers' attitudes and behaviors have been proposed as key factors in successful inclusive education. However, several factors were identified as impacting on a teacher's attitude toward inclusion. These include the nature of the disability, the training the teacher received, and his or her own beliefs. Teachers' attitudes have also been influenced by the availability of resources, both human and physical. Lindsay further hypothesized that the attitudes of teachers were also impacted by their concerns about being able to meet curricular goals for all students.

Scruggs and Mastropieri (1996) analyzed studies that investigated the perceptions of general educators regarding inclusion between 1958 and 1995. The 28 studies were selected using a search of databases, and the selected surveys were analyzed and common themes were identified. These themes included support for inclusion, willingness to teach students with disabilities and whether or not teachers had enough time, expertise and resources for including students with disabilities. The analysis of the 28 studies, involving 10,560 respondents, indicated that 65% of general educators supported the principle of inclusive education, yet only 29% of them perceived themselves as having adequate training and expertise to implement inclusion. The study also brought into focus

the support needed by teachers in implementing inclusion. Teachers reported needing additional training, appropriate curriculum material and equipment, support personnel such as teacher assistants and special education teachers available to them on a daily basis, and reduced class size. Teachers also had concerns about the severity of the disabilities, demonstrating greater willingness to include students with mild disabilities in their classrooms (Scruggs & Mastropieri, 1996).

Cook and Friend (1995) identified the need for collegiality between general and special educators. For inclusion to be effective, general educators and special educators need to agree on their instructional beliefs, as well as classroom rules and routines. Because both teachers are responsible for instruction, joint planning is critical, as well as the establishment of a relationship of mutual respect. This suggests that the style and effectiveness of consultative models is of importance and is integral to the success of inclusive practices. Fuchs and Fuchs (1994) advised that the efforts toward collegiality should not outweigh the more critical aspects such as assessment of student needs and effective instructions, including the modification of materials.

Although inclusion offers a variety of formats for educating students with disabilities in general education classrooms, researchers agree that it is as much a way of thinking as it is a placement option (Carpenter & Dyal, 2007; Kilanowski-Press, Foote, & Rinaldo, 2010; Mentz & Barrett, 2011; Villa & Thousand, 1995). Villa and Thousand (1995) proposed that inclusion is a way of embracing diversity and living together as a community in which each member is valued. Inclusion, however, is often just a physical placement in which children with disabilities are placed in the general classroom and not fully integrated as members of the community (Kilanowski-Press et al., 2010).

Carpenter and Dyal (2007), therefore, offered suggestions to principals for

developing quality inclusive programs. Principals should analyze the qualifications and skills of the general education teachers and the role the special educator will play in instruction. Additionally, teachers should have professional development opportunities that will foster an understanding of the nature and needs of students with special needs and an understanding of how to apply inclusive models of instruction, causing them to feel confident in their ability to meet the needs of students with disabilities in their classrooms.

**Theoretical Framework**

The social cognitive theory proposed by Albert Bandura (1977, 1986) provides the theoretical underpinnings for understanding the levels of confidence displayed by teachers for inclusive education. Ormrod (2012) noted that the social cognitive theory is based on four basic assumptions. The first assumption is that people can learn by observing others. Although behaviorists contend that learning is achieved through trial and error, social cognitivists argue that people can learn by observing a model and do not necessarily have to engage in an activity on order to learn from it. Second, social cognitivists believe that learning can occur without a change in behavior. Because individuals can learn through observation, such learning may not be manifested in their behavior or it may be reflected at a later time. Another assumption of social cognitive theorists is that cognition plays a critical role in learning. These theorists contend that an awareness of stimulus and response, whether punishment or reinforcement, as well as an expectation of future outcome are all important processes in learning. Additionally, they contend that cognitive processes such as attention and retention also play a significant role in learning.

Although behaviorists purport the view that humans are directly influenced by

their environment and that behavior is a result of stimuli and responses over which an individual has little or no control, social cognitive theorists assume that individuals play an active, conscious role in modifying their environment and that these conscious thoughts have an effect on their actions. Cano, Swan, and Wolf (2011) asserted that social cognitive theory is entrenched in the understanding that individuals are agents who are proactively involved in their own development. Apart from environmental and personal factors, people exercise a degree of control over their thoughts, which, in turn, gives direction to their thoughts, feelings, and actions (Cano et al., 2011). An agent, therefore, intentionally causes actions (Bandura, 2001).

Bandura (2001) asserted that human thought had a determinative effect on actions but contended that actions were not necessarily a replica of thought as these mental processes were capable of translating into new behaviors. This is so because observing one event can allow an individual to generate possible courses of action and then select from among them a possible action to pursue. Bandura concluded that social constructs interact with psychological processes to produce behavior. The social cognitive theory is, therefore, predicated on a principle of interactive agency, which has four core features: intentionality, forethought, self-reactiveness, and self-reflectiveness (Bandura, 2001; Zimmerman, 2000). An intention is a plan for future action. Intentions affect actions but do not always result in the expected outcome. Intensions act as a guide and keep an individual moving forward. These intended actions, however, will need to be shaped and refined as one moves forward because humans do not have the capacity to anticipate every eventuality.

In addition to intentionality, Bandura (2001) stated that humans have the capacity to project their thoughts into the future and to use these thoughts to guide and direct their

actions. Foreseeable events act as current motivators through which individuals regulate their behavior. People regulate their behaviors based on anticipated outcome by following courses of action deemed to be rewarding and conversely make adjustments to present actions based on anticipated punishments. Not only does an agent need to plan and think ahead, but he or she also needs to perform the required course of action to produce the desired outcome. This involves self-directedness, which is controlled by self-regulatory processes that transform thoughts into actions. Monitoring behavior and the environment in which it is performed leads to actions, which are then compared to personal goals. If these activities are aligned to personal goals, this provides the motivation that will sustain the effort needed to pursue the activity.

Bandura (2001) outlined that another core feature of agency is self-reflectiveness. This is the ability to self-reflect on one's actions and capabilities. Through reflection, individuals resolve internal conflicts and choose to act in one way over another. Based on this metacognitive activity, individuals judge their predictive thoughts against their actions. They also reflect on the actions and beliefs of others and the knowledge derived from these sources. This forms the foundation of their own beliefs about their capabilities to perform certain actions. Unless people believe they can perform a task, there will be no motivation to act in ways that will accomplish these tasks. Bandura (1997) referred to these beliefs as self-efficacy beliefs and postulated that they were the foundations of agency.

## Self-Efficacy

**Defining self-efficacy**. Self-efficacy refers to the confidence an individual has in his own ability to carry out a task (Bandura, 1997; Zimmerman, 2000). The term refers to a belief that one is capable of demonstrating the actions required to manage prospective

goals or life events (Zimmerman, 2000). These beliefs will determine the time and effort individuals will expend in carrying out an activity and their judgment of their own mastery of the situation (Pajares, 1997). Self-efficacy beliefs are, therefore, predictive of competence and confidence in executing a task (Zimmerman, 2000). However, efficacy expectancy is different from outcome expectancy. Outcome expectancy is a person's anticipation that a certain action will lead to a particular outcome. On the other hand, efficacy expectation is the belief that one can successfully pursue the requisite actions to produce the desired outcome. This distinction is important because an individual can believe that certain actions can lead to a certain outcome; however, if there is doubt that he or she can successfully carry out these actions, then his or her efficacy expectations will not influence his or her behavior (Bandura, 1997).

Bandura (1997) described four major ways in which an individual's perceptions of self-efficacy can regulate behavior. First, self-efficacy influences one cognitively by determining one's aspirations, the challenges he or she is willing to undertake, and the outcome, which is visualized. Second, self-efficacy affects motivation as it has an effect on the goals an individual sets, the course of action selected in achieving these goals, and the level of persistence and resilience displayed in pursuit of these goals. Third, self-efficacy affects behavior affectively by regulating thoughts, which influence levels of tolerance of anxiety or stress and the management of risks. Finally, self-efficacy regulates behavior by determining an individual's choice of activities based on his or her perceived level of success.

An individual's expectation of mastery has an effect on both his initiation of a task and the persistence he will display in the execution of the task. The strength of one's beliefs in his or her ability to perform the task is likely to affect his or her willingness to

exert the effort needed to cope in given situations (Bandura, 1997). Pajares (2002) further opined that self-efficacy beliefs determine how long an individual will persevere when faced with challenges and the level of anxiety he or she displays in these situations. Individuals who display strong self-efficacy anticipate success and demonstrate confidence in performing tasks; individuals with weak self-efficacy doubt their abilities to perform the task and, therefore, do not anticipate success.

Bandura (1997) noted that self-efficacy differed in several dimensions for individuals with consequent implications for performance. First, self-efficacy differs in magnitude, as individuals may display different levels of efficacy based on the complexity of the task and greater efficacy on simpler tasks. Self-efficacy beliefs also differ in generality. Whereas some experiences foster efficacy expectations, which are limited to particular situations, others create a more generalized sense of efficacy that extends to other situations and tasks. Additionally, self-efficacy varies in strength. Strong self-efficacy leads to perseverance in difficulties although weak self-efficacy is extinguished by difficult circumstances.

**Sources of self-efficacy**. Social cognitive theorists have identified four sources of self-efficacy: performance accomplishments or enactive experiences, vicarious experience, verbal persuasion, and physiological states (Bandura, 1977). Individuals form beliefs about their ability to perform a task based on past experiences. This is thought to be the most significant contributor to self-efficacy. Bandura postulated that experiences that result in success will increase efficacy beliefs, and experiences that result in repeated failures will serve to lower efficacy beliefs; this is particularly so if failure is experienced early in the task. If, however, failure is experienced after repeated success, the negative impact is reduced. Similarly, if failure is later overcome, it may serve to strengthen

persistence. The effect of failure is, therefore, impacted by when the failure occurred and the overall pattern of experiences. Once self-efficacy has been enhanced through experiences, these beliefs are usually generalized to other situations, particularly situations which are similar to the experiences that previously enhanced the beliefs (Bandura, 1977; Usher & Pajares, 2008).

In addition to the efficacy beliefs gained through enactive experiences, individuals formulate self-efficacy beliefs through vicarious experiences, though this is not as strong a factor as performance achievements. Observing others successfully perform threatening tasks can lead an observer to believe that he or she can also perform these tasks. Self-efficacy beliefs gained through vicarious experiences tend to be weaker and more easily eroded (Bandura, 1977). Efficacy beliefs based on vicarious experiences are therefore formulated as an individual compares his performance with that of others (Arslan, 2012).

Another source of self-efficacy is verbal persuasion. This is when people are influenced into believing that they can perform successfully through suggestions from others (Bandura, 1977). The effect of verbal persuasion on an individual's self-efficacy is limited because outcomes are described and can neither be directly observed nor directly experienced. The effect of verbal experiences will therefore depend on the perceived credibility of the persuader (Bandura, 1997; Zimmerman, 2000). Bandura argued that efficacy expectations derived solely through suggestions could be easily eroded by subsequent negative experiences.

Finally, an individual's self-efficacy beliefs are often predicated on psychological reactions or emotional arousal (Bandura 1997; Zimmerman, 2000). If particular tasks elicit feelings such as fatigue or stress, these are often interpreted by the individual as an

indication of incapability (Zimmerman, 2000). Further, when faced with negative emotions prior to a task, these emotions lead to fear; initial fear leads to subsequent greater levels of fear and eventually high levels of anxiety (Bandura, 1997). However, individuals are likely to expect success if they are not faced with feelings of stress and anxiety when undertaking a task.

**Teaching self-efficacy**. As established, self-efficacy is a general term that describes an individual's belief in his or her ability to perform a task. Teaching efficacy is a construct that is specific to the discipline of teaching (Loreman et al., 2013). Teaching efficacy is an important characteristic of effective teachers that has been extensively studied over the last 30 years (Yeo, Ang, Chong, Huan, & Quek, 2008). Fives and Buehl (2009) posited that the concept might be defined from a locus of control perspective as well as a self-efficacy perspective. For example, Armor, Rand-Corp, and And (1976), in their seminal work, defined teaching efficacy as teachers' beliefs that internal factors have a greater impact on the outcomes of teaching than environmental factors or the students themselves. Based on the self-efficacy perspective, Tschannen-Moran and Woolfolk-Hoy (2001) defined teaching efficacy as a teacher's belief in his or her ability to successfully perform the requisite actions that will cause students to achieve their learning objectives.

Gibson and Dembo (1984) applied the concept of self-efficacy to teaching and reported a two-factor construct for teachers' efficacy: personal teaching efficacy and general teaching efficacy. Personal teaching efficacy is a teacher's perception that he or she has the ability to influence students' learning and behavior. General teaching efficacy is the belief that a teacher's ability to create change is limited by external factors such as the students' abilities or their home environments. In exploring the concept, Tschannen-

Moran and Woolfolk-Hoy (2001) opined that teaching efficacy is delineated into three constructs: student engagement, instructional strategies, and classroom management. Student engagement is defined as the ability to motivate students to want to learn, instructional strategies refer to the pedagogical practices, and classroom management refers to the teachers' ability to effectively manage the learning environment. Yeo et al. (2008) summarized that teachers with high teaching efficacy spend more time on teaching and organize and maintain more conducive learning environments. These teachers also expend more effort in modifying learning activities to meet the specific needs of individual learners. They also demonstrate higher levels of student engagement and spend more time assisting struggling learners.

Research indicates that teachers with high teaching efficacy find teaching more rewarding, set higher expectations for their students and assess their own performance when their students are not successful. Additionally, these teachers think positively about themselves and their students and this forms the basis for goal setting and the implementation of strategies for achieving these goals (Tschannen-Moran & Woolfolk-Hoy, 2001, 2007). On the other hand, teachers with low self-efficacy beliefs do not expect to be successful with certain students and, therefore, do not expend the effort needed to meet the needs of these students even if they possess the necessary pedagogical skills (Tschannen-Moran & Woolfolk-Hoy, 2007).

Teachers' self-efficacy, therefore, affects the degree of inspiration, motivation and effort a teacher exhibits (Isiksal & Cakiroglu, 2005) and is also strongly correlated with student achievement (Fives & Buehl, 2009; Tschannen-Moran & Woolfolk-Hoy, 2001, 2007). Yeo et al. (2008) hypothesized that a strong sense of teacher efficacy is necessary in cultivating the dynamism and motivation needed to cause one to be committed to

teaching. Tschannen-Moran and Woolfolk-Hoy (2001) concluded that teachers' efficacy beliefs were related to students' motivation and their own sense of efficacy.

**Sources of teaching efficacy**. Social cognitive theorists believe that contextual variables interact with personal factors to determine behavior in a reciprocal relationship. A teacher's self-efficacy beliefs are, therefore, a combination of personal and environmental factors. Of the four sources of efficacy beliefs postulated by Bandura (1997), mastery experiences appear to have the greatest impact on teaching efficacy (Fives & Buehl, 2009). Teachers' efficacy beliefs increase when they are satisfied with their own performance causing them to believe that future performances will also be successful. Similarly, if performances are viewed as negative, then teachers will expect future performances to be unsuccessful (Tschannen-Moran & Woolfolk-Hoy, 2007).

Although mastery experiences are the strongest contributors to perceived competence, vicarious experiences also contribute to teaching self-efficacy (Tschannen-Moran & Woolfolk-Hoy, 2001; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). Watching others teach, whether from the perspective of a student or even from media presentations, contributes to an impression of one's own competence (Tschannen-Moran et al., 1998). As teachers observe a model performing a task, their level of confidence in performing similar tasks may also increase. This, however, is contingent upon how the observer perceives the model. If the observer values the model and can identify with the model, the effects on self-efficacy beliefs may be more positive. If, however, the model differs from the observer in terms of experience, gender, race or training, the model's performance may not have an impact on the observer's self-efficacy (Tschannen-Moran & Woolfolk-Hoy, 2007).

Additionally, emotional arousal experienced while teaching or while observing

others teach adds to self-perception of competence (Tschannen-Moran et al., 1998). In other words, feelings of relaxation and enjoyment may increase feelings of competence, whereas feelings of anxiety and stress may decrease feelings of competence (Bandura, 1997). Furthermore, verbal persuasion in the form of pep talks, lectures, or professional-development workshops may also contribute to efficacy beliefs of teachers. Although the effects of verbal persuasion on teaching efficacy may be limited, it often serves as a motivator when a teacher is faced with obstacles (Tschannen-Moran & Woolfolk-Hoy, 2001; Tschannen-Moran et al., 1998).

Nevertheless, the strength of the persuasion depends on the credibility of the persuader (Bandura, 1997). Based on the literature, self-efficacy beliefs are formed as a result of experiences and the attention placed on these experiences. Bandura (1977) asserted that these beliefs are most instrumental during early learning of particular skills. Once these beliefs are formed they are resistant to change. It is, therefore, imperative to examine the self-efficacy beliefs of preservice teachers since these beliefs are likely to transcend into their future teaching careers and will have a direct impact on student achievement.

**Teaching Self-Efficacy and Inclusive Education**

As nations embrace the principle of inclusion, teachers are at the center of its implementation (Savolainen, Engelbrecht, Nel, & Malinen, 2012). In applying Bandura's theory to inclusive education, Sharma, Loreman, and Forlin (2012) posited that a teacher with high teacher efficacy in implementing inclusion believes that students with special needs can be effectively educated in the general education classroom. On the other hand, teachers with low levels of self-efficacy for implementing inclusive practices believe that they do not have the capacity to include students with special needs and consequently

may be inclined to reject the idea of inclusion. Teacher education programs, therefore, have an integral role to play in equipping teachers with the requisite attitudes and skills needed to ensure that they develop high levels of self-efficacy (Taylor & Ringlaben, 2012).

Loreman et al. (2013) concluded that it is imperative that teachers develop self-efficacy for inclusive practices as this will have a direct impact on their classroom practices. This is important because the teaching-efficacy beliefs of preservice teachers about inclusive education will determine the extent to which inclusive values will be reflected in their classroom practices (Ahsan, Sharma, & Deppeler, 2012). Sharma et al. (2012) concluded that self-efficacy beliefs are the most imperative variable in the successful inclusion of students with special needs. These efficacy beliefs for inclusion are related to several factors including gender, level of specialization, and experience or familiarity with persons with disabilities as well as teacher training. All of these variables correlate with a teacher's attitude toward students with disabilities and ultimately his or her classroom practices (Mahat, 2008).

Several researchers (Forlin, Loreman, Sharma, & Earle, 2009; McCray & Alvarez-McHatton, 2007, 2011; Woodcock, 2011) have documented differences in the teaching efficacy of males and females for inclusive education. Generally, females were found to have more positive attitudes toward inclusive education than their male counterparts (Forlin et al., 2009; McCray & Alvarez-McHatton, 2007; Woodcock, 2011). Using a large sample of 1,623 student teachers in the primary and secondary teacher training program in Bangladesh, Ahsan et al. (2012) set out to establish a correlation between several variables and teaching-efficacy for inclusion. Gender differences were apparent as females demonstrated higher levels of perceived self-efficacy than males.

These findings are supported by Forlin et al. (2009) in a study that compared the attitudes of preservice teacher toward inclusive education in Australia, Canada, Hong Kong, and Singapore. The authors found that, regardless of the country, female preservice teachers exhibited more positive attitudes toward inclusive education than their male counterparts. Other studies, including Woodcock (2008), who conducted a study of Australian preservice teachers, reported similar findings. Gokdere (2012) reasoned that this might be because women are more emotional. Teacher administrators in Bangladesh also alluded to the psychological makeup of women as a contributing factor to their higher efficacy beliefs (Ahsan et al., 2012).

On the contrary, Haq and Mundia (2012) found no significant correlation between gender and attitudes toward inclusion. Further to this, Loreman et al. (2013) conducted a study of 737 teachers in Hong Kong in which self-efficacy was measured using Sharma et al.'s (2012) Teacher Efficacy for Inclusive Practices (TEIP) scale. Based on the data collected before and after completion of an introductory inclusion course, these researchers found that the only area in which gender appeared to affect self-efficacy beliefs for inclusion was in the area of managing behavior. In this domain, males tended to have higher self-efficacy beliefs than females. However, on completion of the course females reported the highest gains in this area and were on par with their male counterparts.

In addition to gender differences, Woodcock (2011), Forlin et al. (2009), and McCray and Alvarez-McHatton (2007) asserted that there are also differences in self-efficacy based on level of specialization. Several researchers found that primary education majors demonstrated higher levels of teaching efficacy for inclusion than secondary majors (Forlin et al., 2009; McCray & Alvarez-McHatton, 2007; Woodcock,

2011). McCray and Alvarez-McHatton (2011) explored the perceptions of elementary education majors and secondary education majors toward the inclusion of students with exceptionalities in their classrooms and whether there was a difference in perceptions between both groups. Participants in this study included 128 elementary education majors and 33 secondary education majors between the ages of 18 and 25, who were enrolled in a course on integrating students with special needs in the general classroom. Elementary education majors showed more positive perceptions. However, despite this trend, both groups were less amenable to the inclusion of students with particular low-incidence disabilities. There was also a high percentage of undecided responses by both groups, which may suggest reservations.

Loreman et al. (2013) found that preservice teachers in their study also showed differences in self-efficacy based on the level they were being prepared to teach. These differences were found in the areas of managing behavior and collaboration as measured on the TEIP scale. Primary teachers rated higher than secondary teachers on both of these subscales. This suggests that primary teachers felt more confident in managing behaviors and in collaboration skills. On the other hand, Ajuwon et al. (2012), in their study of preservice teachers in Bangladesh, found that, when compared to elementary teachers, secondary teachers exhibited more positive attitudes toward inclusive education. On the contrary, McCray and Alvarez-McHatton (2011), following a study of 77 elementary majors and 38 secondary majors, all enrolled in an introductory special needs course, concluded that there were no significant differences between the perceptions of secondary and elementary majors.

Another element that impacts self-efficacy for inclusive education is whether preservice teachers have had experience with or were familiar with persons with

disabilities. Ajuwon et al. (2012), in a study of 116 general education preservice teachers enrolled in introductory special education courses in three universities in the United States, found that the teaching-efficacy scores of teachers who had prior experience with persons with disabilities were significantly higher than the scores of those who did not. This is in keeping with the findings of Forlin et al. (2009), who found that preservice teachers who had previous close contact with individuals with disabilities displayed more positive attitudes and had less concerns about inclusion than those who had no experience. However, in a more recent study of preservice teachers in Canada, Specht et al. (2015) found that, although familiarity with persons with special needs had a positive impact on self-efficacy for inclusive education, the effect varied based on whether the experience involved the individuals themselves, friends, work, or volunteering. These researchers concluded that having a friend with a disability and working with someone with a disability correlated with higher self-efficacy.

In contrast, Forlin and Chambers (2011) found that preservice teachers who had previous experience with persons with disabilities had statistically significantly lower measures of positive attitudes toward including students with disabilities and showed no significant difference after taking a special needs course. Similarly, in a comparison study, which involved participants with and without experience, Peebles and Mendaglio (2014) postulated that, although the individuals with experience demonstrated higher levels of self-efficacy throughout their course, the overall gains for both groups were very similar. These researchers concluded that having experience with disabilities might initially correlate with higher self-efficacy; however, over time it may not be a significant factor.

Teacher training has also been found to be a rather significant factor in the self-

efficacy of teachers for inclusive education. Researchers agree that teacher education appears to have a positive impact on teaching self-efficacy for inclusive teaching practice (Forlin & Chambers, 2011; Jung, 2007; Lancaster & Bain, 2007; Loreman et al., 2013). Lancaster and Bain (2007) identified a strong correlation between preservice teachers' measures of self-efficacy and their participation in an inclusive education course. This was consistent with the findings of Forlin and Chambers (2011), who also reported significant differences in the levels of confidence and knowledge reported by the participants on completion of a special needs course. Jung (2007) concluded that confidence increased with training. In other words, preservice teachers who had taken courses in special education had higher levels of confidence than did those who had not.

**Teacher Training for Inclusive Education**

The preparation of teachers during preservice training has been identified as the greatest predictor of their future success in an inclusive setting (Ahsan et al., 2012). Preservice teacher preparation programs should facilitate the development of a positive disposition toward disabilities and the abilities of students. Teaching pedagogy may not be particularly specialized but should promote excellent teaching methodology that includes assessment of special learning needs, adapting content using individualized teaching and exploring the use of assistive technology to meet the diverse needs of all learners (UNESCO, 1994).

Kim (2011) studied the impact of various types of teacher preparation programs on the attitudes of 110 preservice teachers toward students with disabilities. The results of this study indicated that different types of teacher preparation programs have distinct influences on the attitudes of preservice teachers. Based on the results, Kim emphasized the need to examine the differences among programs as it relates to course content, field

practicum, and teaching approaches. Kim further opined that an investigation of self-efficacy for inclusion should include qualitative measures which would provide specific information with regard to personal characteristics and field of education of instructors, as well as information regarding differences in programs as these factors may have a variety of influences on preservice teachers. These differences in programs relate to course content, design, length as well as delivery.

**Course content**. Ahsan et al. (2012) indicated that the content of the preservice teacher education curriculum is directly related to their perceived teaching-efficacy for inclusive education. Similarly, Lancaster and Bain (2007, 2010), in their studies of Australian preservice teachers, concluded that participation in an inclusive education course during teacher preparation was a strong predictor of perceived high teaching efficacy. Taylor and Ringlaben (2012) added that teachers who do not receive adequate training in strategies for teaching students with special needs frequently expressed negative attitudes toward students with disabilities, and these attitudes will influence the success of these students in their classrooms.

Although researchers generally agree that involvement in a special needs course during teacher preparation had a positive effect on levels of preparedness and teaching efficacy (Ahsan et al., 2012; Loreman et al., 2013; McCray & Alvarez-McHatton, 2011; Sharma, 2012), the content of courses should be considered. These courses should provide educational experiences that will shape positive attitudes and instill confidence in the teachers (Taylor & Ringlaben, 2012). Lancaster and Bain (2010) suggested that inclusion courses should cover modules in behavior management strategies, the nature of disabilities, inclusion practices, and curricular adaptations. These researchers contend that courses, which focused on these areas, could increase the self-efficacy of preservice

teachers for teaching students with disabilities. Additionally, Cooper, Kurtts, Baber, and Vallecorsa (2008) alluded that any inclusive education course should, along with behavior management, provide preservice teachers with content related to collaboration, and communication skills.

Loreman et al. (2013) found that, as teachers' knowledge of disabilities and characteristics as well as the policies that govern inclusion increased, their attitude toward inclusion improved as well as their self-efficacy. These researchers, therefore, suggested that courses should retain aspects of this more traditional content. The findings of Brown, Welsh, Hill, and Cipko (2008) supported the view that information about the legislation and policies on inclusion should be included in the preservice teacher education program. Further to this, Ahsan et al. (2012), in their study of preservice teachers in Bangladesh, concluded that knowledge about inclusion terminology increased the confidence level of preservice teachers. It appeared, however, that a balance between knowledge, skills and attitudes is important since positive attitudes are more likely to be maintained when teachers have the knowledge and skills needed for inclusive education (Beacham & Rouse, 2012).

Lancaster and Bain (2010), however, criticized that these courses often focus too heavily on knowledge and may not provide preservice teachers with the practical skills needed to navigate the multiplicity of demands they will face in the classroom. McCray and Alvarez-McHatton (2011) further postulated that, if preservice general education teachers are going to be adequately prepared to offer effective services to students with special needs, then special education content must be infused across the teacher-training curriculum rather than delivered in an isolated course. This suggests that, although content is a critical element in increasing self-efficacy, appropriate course design and

delivery are also key elements in ensuring that preservice teachers feel confident in teaching students with disabilities in the general classroom.

**Course design**. Although researchers seem to agree on the general content, there have been distinct variations in delivery. Florian and Linklater (2010) explored an initial teacher preparation course at the University of Aberdeen in Scotland, which was built on the premise that, instead of deciding on the skills that teachers need for inclusive pedagogy, focus should be on how teachers use what they already have to make their classrooms accessible to all learners. This was based on the theory of transformability in which instead of learning how to include students with special needs in their classrooms, teachers were exposed to pedagogy for meeting the specific needs of all learners. Qualitative data collected in the form of transcripts of lessons taught by the preservice teachers indicated that their perspectives of teaching had changed to reflect the principles advocated in the course. This was evident in their responses to individual differences, willingness to take risks, adapt the curriculum, and challenge their students. They also developed new collaboration skills, such as negotiation, which are critical in inclusive settings.

Lancaster and Bain (2010) also conducted a study which examined the design of an inclusion course. Participants in this study were exposed to an embedded design and attended seven lectures over a 13-week period. The embedded design consisted of four levels. Level 1 was knowledge awareness, in which students were given objectives prior to the class session to be used as a guide for reading in preparation for class session. At the second level, active experience, students participated in two 2-hour workshops, which engaged them in creating lessons using the particular skills taught. During this workshop, the facilitator engaged the participants using the very strategies they were being taught to

use. Level 3, continuous application and feedback, had students working in collaborative communities to create lessons. At the fourth level, personal impact, students used the particular skill they were learning to prepare for quizzes. This embedded approach yielded slightly higher levels of self-efficacy when compared to another course, which consisted of 39 hours of lectures and tutorial sessions and 11 hours of site experience.

Brown et al. (2008) also advocated for an embedded design that allows special education issues to be addressed in all courses. Although acknowledging that regular education faculty may not have the expertise in special education to adequately address these issues, these researchers suggested that faculty trained in special education should act as consultants to general education faculty. The general education faculty would, therefore, benefit from the expertise of the special education faculty, thereby increasing their competence in special education. Despite the obvious benefits of this collaboration, Brown et al. added that this would not eliminate the need for the more specialized courses offered by the special education faculty. Concurring with this view, Beacham and Rouse (2012) noted that preparing teachers for inclusive classrooms would be accomplished when teacher education programs model more inclusive practices such as collaboration between general and special education faculty.

**Field experiences**. Despite participation in inclusion courses, preservice teachers internationally, have reported feelings of low confidence in their ability to meet the learning needs of children with special needs in their classes (Avramidis & Norwich, 2002; Forlin et al., 2009). Swain et al. (2012), Ajuwon et al. (2012), and Lancaster and Bain (2010) examined how different course designs impacted the self-efficacy of preservice teachers for inclusive education. Lancaster and Bain reiterated that these courses were too theoretical in nature and did not provide the experience needed to

develop practical skills, which would increase their levels of confidence.

For example, in a study of 350 preservice teachers in Canada, Moore-Hayes (2008) reported that participants noted the need for more experience in helping them feel more prepared to work with students with disabilities. Student teachers who engaged in field experiences with children with special needs demonstrated more positive attitudes than student teachers who only completed a theoretical course that did not include field experience (Jung, 2007). Swain et al. (2012), while acknowledging that a course in special education has a significant impact on the feelings of preparedness of teachers for inclusion, added that content should be paired with field experiences in which students can be mentored by a teacher who is successfully accommodating students with special needs.

Ajuwon et al. (2012) found that students from one university showed a more significant increase in positive attitudes than did students in the other two universities used in their study. It was noted that students in that particular university were exposed to field experience and had, as a part of their course, talks from persons with disabilities. Florian and Linklater (2010) also concluded that field experience provided an opportunity for student teachers to develop skills in inclusive pedagogy and positive attitudes toward individual differences. Through field experiences, preservice teachers experienced an attitudinal shift, which positively impacted their classroom practices.

Although researchers have agreed that field experiences have a positive impact in self-efficacy for inclusive education (Ajuwon et al., 2012; Chambers & Forlin, 2010; Florian & Linklater, 2010), Peebles and Mendaglio (2014) reported differences in self-efficacy based on the type of field experience. The study, which examined gains in self-efficacy following various types of field experiences, revealed that participants who had

opportunities for individual instruction of students with special needs showed the greatest gains in self-efficacy, followed by those who had engaged in small-group instruction. Participants who engaged only in observation or whole-group instruction reported the smallest gains. These researchers concluded that the self-efficacy of preservice teachers who were involved in direct one-on-one or small-group experiences with individuals with disabilities were more likely to increase than those who worked with an entire class.

**Length of course**. Researchers have also examined the impact of courses of various lengths on the teaching efficacy of preservice general education teachers. Leyser et al. (2011), in a study of preservice teachers in Israel, found that special needs training, whether it was enrollment in a special education course, workshops, or some course work, compared to no training, had a positive impact on all areas of self-efficacy. Chong et al. (2007), in a study of 218 preservice teachers in China, concluded that, even after taking only a 20-hour module, there were significant changes in the attitudes, knowledge, and general confidence levels of preservice teachers toward inclusion. This finding was supported by Sharma (2012), who noted that a 20-hour model was adequate in achieving higher levels of confidence and greater levels of preparedness.

On the contrary, Woodcock, Hemmings, and Kay (2012), following a study of preservice teachers in Australia, found that there was little change in the beliefs and concerns of their participants over a 5-month course. Leyser et al. (2011) commented that a two- or three-credit-hour course about students with special needs or about inclusion does not appear adequate in changing the beliefs of preservice teachers. Similarly**,** Tait and Purdie (2000) found that a 12-month teacher-training course had very little impact on preservice teachers' beliefs about inclusion. Ahsan et al. (2012), however, cautioned that the emphasis should be on curriculum content, as this has a more significant impact on

teacher preparedness than the number of hours in the course. Leyser et al. recommended that content be integrated with hands-on experiences including curricular adaptations and instructional pedagogy as well as assessment, behavior management strategies, and communication skills across curricular areas rather than in just one course.

**Summary**

As schools become more inclusive, teachers are expected to demonstrate new knowledge and competencies needed for successful inclusive practices. These include skills in collaboration and communication, in addition to specialized pedagogy and assessment and classroom management strategies. Self-efficacy beliefs have been found to be a strong predictor for successful implementation of inclusive practices in the classroom. A teacher's efficacy beliefs may be derived from several sources, including mastery experiences, vicarious experiences, verbal persuasion, and emotional arousal. Because preservice teachers have limited experience in teaching, most of their efficacy beliefs may be based on these other sources. Regardless of how these beliefs are derived, they will have a direct impact on the preservice teachers' classroom practices based on their perception of their own abilities to be successful in teaching students with special needs.

Much research has been done on various aspects of teacher preparation for inclusive education and their impact on teaching self-efficacy for inclusive education. Although there seems to be a correlation between teacher preparation and self-efficacy, the literature highlights several intervening variables, which also seem to impact the perceived level of confidence of preservice teachers in their abilities to teach students with disabilities in inclusive settings. These variables include gender, level of specialization and experience with persons with disabilities. Additionally, the design and

delivery methods of the courses also appear to affect self-efficacy for inclusive practices.

Most of the studies reviewed utilized quantitative data collection methods using surveys to measure self-efficacy before and after the delivery of a special needs course. Several studies also utilized the same instruments or sections of the same instruments. The literature also revealed a small number of qualitative studies on the subject as well as some studies, which utilized a sequential mixed-methods design in which qualitative data were collected following the use of quantitative measures; this was done using focus groups or reflections. When the latter was employed, data from the qualitative measures provided additional information that was beneficial in interpreting the data from surveys. The methodologies in these studies were effective in answering the research questions and enabled statistical analysis to extrapolate statistically significant data.

**Research Questions**

The following research questions were established to guide this applied dissertation:

1. To what extent does preservice teachers' self-efficacy for inclusive education change on completion of a special needs course?

2. What are the relationships between demographic variables such as gender, level of specialization, and experiences with persons with disabilities and self-efficacy levels, following completion of a special needs course?

3. What is the relationship between course delivery and the self-efficacy of preservice teachers on completion of a special needs course?

# Chapter 3: Methodology

The purpose of the study was to examine whether there were changes in the self-efficacy of Jamaican preservice teachers after participating in a course on special needs and inclusion and to determine whether such a course increased the preservice teachers' levels of confidence in teaching students with disabilities in general education classrooms. This chapter provides details of the methodology used in the study, including a description of the population, the sample, the instruments, and procedures that were employed and how the data were analyzed. Limitations of the study are also highlighted.

## Participants

The participants in the study were second-, third-, and fourth-year preservice teachers who were currently taking the course entitled Teaching Students With Special Needs in General Education Classrooms, which is a mandatory course in the 4-year bachelor of education program. Four groups of students were taking the course that semester, including three groups of primary education majors and one group of secondary education majors. Forty percent of the students were in their second year of the program, 23.6% were in the third year, and 36.4% were in their final year and had recently completed their final year practice teaching experience. Participation in the study was voluntary, and participants were required to sign consent forms indicating their willingness to participate.

The study was conducted at a teachers' college in Jamaica. The college offers 4-year bachelor in education degrees in early childhood education, primary education, secondary education, and special education. The student population consisted of 615 students: 64 males and 551 females. Of these preservice teachers, 90 were enrolled in the secondary education program and 258 were enrolled in the primary education program.

The others consisted of early childhood, special education, and school counseling majors. Of the total population, approximately 80% were full-time students and the other 20% were enrolled in the part-time program. Most full-time students were recent high school graduates, and others were nontraditional students who were more mature in age. The average part-time student would be in the nontraditional group, which consisted of persons who are seeking to change careers by becoming teachers or persons who have a diploma in teaching and are upgrading to a bachelor's degree.

**Quantitative**. Quantitative data were collected to answer the first research question: To what extent does preservice teachers' self-efficacy for inclusive education change on completion of a special needs course? The sample, which was selected through convenience sampling, initially consisted of 60 student teachers who completed the TEIP scale (Sharma et al., 2012). A pretest-posttest design was utilized; however, five participants did not complete the postsurvey and were, therefore, not included in the final report.

The sample studied included 55 preservice teachers, consisting of 36 primary education majors and 19 secondary education majors. The sample was predominantly female (90.9%) with only 9.1% males. The average age of the sample was 17 to 25 years old (63.6%), 20% of the students were 26 to 30, 14.5% of the students were 31 to 40, and one participant (1.8%) was over 40 years. The sample was not disaggregated based on ethnicity, as the Jamaican population is not particularly diverse in terms of ethnicity; the population being 90.9% Blacks or people of African descent.

**Qualitative**. Qualitative data were later collected to validate the quantitative data and to answer Research Question 3: What is the relationship between course delivery and the self-efficacy of preservice teachers on completion of a special needs course? The

sample for the qualitative data was selected from the 55 participants who completed both the presurvey and postsurvey. Self-selection sampling was used because it was the end of the semester when student teachers are usually preoccupied with examination preparations and completing course work. The researcher, therefore, thought it prudent to engage volunteers as it was felt that they would be more likely to attend the focus group session.

This is supported by Mujere (2016), who proposed that, when self-selection sampling is used, the potential units are likely to be more committed to attend and display a greater level of participation. Consequently, each of the four class groups that completed the surveys was advised that two volunteers were being sought to participate in a focus-group discussion. However, only seven of the eight volunteers attended and participated in the discussion; three males and four females who were all in the 17 to 30 age group. The focus-group interview provided data on how the preservice teachers' experiences in the course impacted their self-efficacy. These data were used to answer Research Question 3 and also to validate the quantitative data collected using the TEIP scale (Sharma et al., 2012).

**Mixed methods**. Quantitative data from the survey were also used to answer Research Question 2: What are the relationships between demographic variables such as gender, level of specialization, and experiences with persons with disabilities and self-efficacy levels following completion of a special needs course? Additionally, demographic data were collected using a questionnaire designed by the researcher, which provided qualitative data that were also used in answering this question. Each demographic variable was individually correlated with the qualitative self-efficacy data obtained on the TEIP scale.

## Instruments

**Demographic questionnaire**. In order to answer Research Question 2, participants were asked to complete a questionnaire (see Appendix A), designed by the researcher, to collect preservice teachers' demographic information. The items elicited demographic information that included age, gender, and educational and experiential background, including previous teaching experience and experience in teaching children with special needs, experience in dealing with persons with disabilities, and previous training on educating students with disabilities. These variables were used to disaggregate the data in order to compare the self-efficacy scores obtained on the TEIP scale for different groups.

**Focus group**. A focus-group interview (see Appendix B) was conducted in order to gain qualitative data to support the interpretation of quantitative data gained from the survey. A focus group is an interview technique which is used to collect data from a group of four to six persons. Focus groups are used when interaction between participants is likely to yield the best information and when interviewees share common characteristics (Creswell, 2012). A focus group was used to collect qualitative data because the researcher is an instructor at the institution and felt that students might have been reluctant to share in a one-on-one interview, and they might have provided vague responses if they had been asked to write reflections.

According to Barbour (2007), focus groups are useful when interviewing participants who might have been otherwise reluctant to participate, as they have the support of the group. Focus groups also transfer power from the researcher to the participants, which allows them to feel more empowered to share their experiences. Two preservice teachers from each class volunteered to participate in the focus group. The

researcher posed five open-ended questions to the group to elicit responses from each individual regarding his or her experiences with the course delivery and the impact of these experiences on their self-efficacy for inclusive education. Responses to these questions also provided qualitative data, which allowed the researcher to validate the results of the TEIP in answering Research Question 1.

**The TEIP scale**. The TEIP scale (Sharma et al., 2012) was used to measure the self-efficacy of preservice teachers for inclusive education (see Appendix C). The scale comprises of an 18-item Likert-type scale with six possible responses. Participants responded to the statements by selecting answers that ranged from 1 (*strongly disagree*) to 6 (*strongly agree*). The higher the score was on the TEIP, the higher the participant's efficacy for implementing inclusive practices (Savolainen et al., 2012). During the development of the TEIP, a Delphi approach was used for initial validation of the scale. The scale was evaluated by six university faculty members from four countries, one each from Canada, Hong Kong, and India and three from Australia, who had experience in special and inclusive education and educational psychology. After suggested modifications were made, the scale was piloted among 609 preservice teachers from four countries who were purposefully sampled.

Based on the results of this study, the scale was deemed a highly reliable measure for rating teacher efficacy for inclusive practices with an overall alpha coefficient of 0.89. The TEIP scale was reported as measuring three factors related to efficacy for inclusive practice: inclusive instruction, collaboration and managing disruptive behaviors. Sharma et al. (2012) reported that these three factors had strong reliability estimates ranging from 0.85 to 0.93. There was also adequate reliability among the scores for each of the four countries, which suggests that the scale is suitable for international use (Sharma et al.,

2012).

## Procedures

**Design**. This study utilized an explanatory, sequential, mixed-methods design. This is a design in which quantitative data are first collected to obtain general information about the research problem and then qualitative data are collected to provide an explanation for or to provide more specific information on the quantitative results (Creswell, 2012). A review of the literature indicated that research related to teacher preparation for inclusive education has mainly utilized Likert scales to collect data. This approach though convenient and inexpensive is limited in its scope (Fuchs, 2010). Although quantitative data are useful in providing general answers to research questions, collecting quantitative data helps the researcher to understand the contexts as well as the people and environments which contributed to the findings (Manzoor, 2016). Using an explanatory mixed-methods design, therefore, allowed the researcher to gain a deeper understanding of the preservice teachers' contexts and perceptions in their own words rather than just having participants select from a set of responses (Fuchs, 2010). Consequently, the researcher was able to gain an understanding into the factors that contributed to the self-efficacy of preservice teachers for inclusive education.

**Quantitative data collection**. Qualitative data were collected using the TEIP scale (Sharma et al., 2012). Fifty-five participants completed the presurvey as well as the postsurvey. This survey used a Likert scale, which measured self-efficacy for inclusive instruction, managing behavior, and collaboration. The sample included preservice teachers who were taking the course entitled Teaching Students With Special Needs in General Education Classrooms. The sample was selected using convenience sampling, as all students taking the course were invited to participate.

Permission to conduct the study was sought from the administration of the institution via an initial e-mail explaining the purpose and procedures of the study. The researcher met with the Vice Principal of Academic Affairs and the Head of the Department of Professional Studies to outline the procedures for the study and to clarify concerns. A briefing was conducted with instructors facilitating the course to explain the study and to make arrangements for data collection. The researcher met with each of the four class groups enrolled in the special needs course and informed potential participants about the study. The consent form was read to the potential participants and explained. Persons who wished to participate were given consent forms which they were asked to sign and return to the researcher. Participants were informed that participation was voluntary and that all information would be confidential. To maintain confidentiality, students' identification numbers were used on the survey instead of names. The researcher administered the presurvey to all the participants who signed the consent form; the participants completed the survey in 10 to 15 minutes.

For the next 13 weeks, participants were engaged in lectures and other teaching and learning activities as they took the course entitled Teaching Students With Special Needs in General Education Classrooms. The first unit examined the concept of diversity and explored terminologies for referring to individuals with special needs. Preservice teachers were also exposed to the laws, policies, and agencies that govern the education of children with disabilities in Jamaica. Additionally, the concept of inclusion was explored. The second unit explored the characteristics of children with various exceptionalities, including learning disabilities, intellectual disabilities, gifted and talented, and physical disabilities. Participants explored accommodations and modifications that may be employed to facilitate learners with varied exceptionalities in

the classroom, although Unit 3 explored the principles of Universal Design for Learning.

Students were also introduced to teaching approaches, such as direct instruction, multisensory teaching, task analysis, and peer tutoring, and they were taught how to plan differentiated lessons. In this unit, they were also exposed to individualized education plans. The final unit evaluated different models of collaboration used in inclusive settings. Students also studied the referral process and were made aware of agencies, which provide services for children with special needs in Jamaica. In the last week on the course, the researcher readministered the TEIP scale to all participants who were available. Once the participants completed the postsurvey, this was attached to their presurvey and their identification numbers erased. Five of the 60 participants did not complete the postsurvey, as they were either not in attendance or had dropped the course.

**Qualitative data collection**. Using the same convenience sampling procedure employed for collecting the quantitative data, all participants completed the demographic questionnaire at the same time as the presurvey. The questionnaire contained six items requiring participants to provide their student identification number, gender, age group, area of study, whether they had experience with persons with disabilities, or whether they had previous training in special needs. For Items 2 to 4, students selected from a list of responses. However, for Item 5, which asked about experience, and Item 6, which asked about previous training, participants could indicate another response if their response was not included in the list provided.

**Data analysis**. In an explanatory mixed-methods design, priority is placed on the quantitative data collection and analysis, which is conducted prior to the collection of qualitative data. Manzoor (2016) instructed that, when the quantitative phase is completed, the researcher then analyzes and interprets the qualitative data to determine if

these qualitative results provide an explanation for the quantitative results that were previously collected. Therefore, in this study, the researcher analyzed the quantitative data that were collected using the TEIP scale and then analyzed the data from the demographic questionnaire and the focus group.

***Quantitative data***. Quantitative data collected using the TEIP scale were recorded on a spreadsheet and analyzed using the Statistical Package for the Social Sciences, Version 24. Measures of descriptive statistics including frequency of percentages of responses were undertaken. Tests of inferential statistics were also used to determine changes in self-efficacy from the first to second phase. Additional inferential statistics were used to compare the results of males versus females, elementary and secondary cohorts, participants with and without experience with persons with disabilities, and participants with and without previous teaching experience based on each demographic variable.

***Qualitative data***. The detailed transcript of the focus-group interview was read several times to obtain a general sense of the entire document. A list of code words and phrases was then generated and assigned numbers. These numbers were used to code the document. Following this initial coding, themes were then reduced to a small number of categories. The transcription was again reviewed and statements from participants were recorded under each category. This information was then used to write the qualitative report in response to the first and third research questions.

**Limitations**

There were several limitations to this study. First, the study utilized convenience sampling; therefore, there was no guarantee that the sample was representative of the Jamaican population. Mujere (2016) noted that one of the disadvantages of convenience

sampling is that there can be underrepresentation or overrepresentation of some groups in the sample. An additional limitation was that only preservice teachers from one institution were sampled; therefore, the findings may not be generalizable to preservice teachers in other colleges across the country. The ratio of males to females may also be a limitation as the sample consisted of five males and 55 females.

One other possible limitation stems from the fact that it is difficult to measure self-efficacy because it is based on self-reporting. In addition to the fact that it is difficult to measure self-efficacy, Pendergast, Garvis, and Keogh (2011) noted that preservice teachers tended to overestimate their self-efficacy due to their lack of experience or an underestimation of what is required of them. Further to this, because the research utilized a pretest-posttest design, it was difficult to ascertain whether changes in self-efficacy were as a result of intervening variables or as a direct result of the intervention.

# Chapter 4: Results

## Introduction

The purpose of the study was to investigate the self-efficacy of preservice teachers for inclusive education. In particular, the study sought to determine whether there were changes in self-efficacy following participation in a special needs course. In the explanatory, sequential, mixed-methods design, quantitative data are first collected to obtain general information about the research problem and then qualitative data are collected to provide an explanation for or to provide more specific information on the quantitative results (Creswell, 2012). This chapter presents the data relative to each research question.

Quantitative data were collected using the TEIP scale (Sharma et al., 2012). The data were entered into a Microsoft Excel spreadsheet and then exported to the Statistical Package for the Social Sciences, Version 24. Descriptive statistics were calculated and mean scores were compared. The overall self-efficacy scores at the beginning and ending of the course were compared and the results were further analyzed based on the three factors measured by the TEIP scale: inclusive instruction, managing behavior, and collaboration. A one-way analysis of variance (ANOVA) was conducted to determine the correlation between self-efficacy scores and demographic variables, such as gender, area of specialization, experience with persons with disabilities, and previous training in working with individuals with special needs. The mean scores of each demographic group were also compared based on the three factors measured in the survey. The overall scores at the beginning and ending of the course were also compared to determine changes in self-efficacy for each factor.

Qualitative data were collected using a focus-group interview in order to

substantiate the quantitative data collected in response to the first research question as well as to provide answers to the third question. There were seven participants in the interview: four females and three males. The focus-group interview was scheduled for 30 minutes, but lasted 50 minutes since the researcher was taking notes. The researcher took detailed notes in order to capture exactly what the participants shared then orally restated responses to ensure that there was no misrepresentation of information. Notes were also verified by participants at the end of the session to ensure that they accurately reflected what was said.

Open coding was used to analyze the data. The entire transcript was read several times and themes identified. Each theme was assigned a number. Each time the theme occurred, the assigned number was written beside the statement. From the responses given, eight themes were identified: reservations about teaching students with special needs, positive attitudes about teaching students with special needs, changes in perceptions, collaboration with other professionals, characteristics of students with special needs, teaching strategies, course delivery, benefits of and rationale for inclusion.

These eight themes were then organized into the following three categories for purposes of data analysis: (a) perceptions, which involved positive attitudes, reservations, and changes in attitudes; (b) knowledge and skills, which involved characteristics of disabilities, teaching strategies, and rationale for inclusion; and (c) impact of the course on self-efficacy, which involved vicarious experiences, access to or lack of vicarious experiences, and psychological arousal. Finally, the categories were organized in relation to the relevant research question of the study, and samples of quotations from the participants were highlighted to illustrate how their responses supported each question in the study.

**Research Question 1**

To what extent does preservice teachers' self-efficacy for inclusive education change on completion of a special needs course? The following paragraphs represent a discussion of the quantitative and qualitative data to answer the first research question.

**Quantitative data**. Data were collected using the TEIP scale. Respondents included 55 preservice teachers. Participants completed the TEIP scale before and after taking the course entitled Teaching Students With Special Needs in General Education Classrooms. The scale consisted of 18 items that measured three factors: self-efficacy for inclusive instruction (Items 5, 6, 10, 14, 15, and 18), self-efficacy for managing behavior (Items 1, 2, 7, 8, 11, and 17), and self-efficacy for collaboration (Items 3, 4, 9, 12, 13, and 16). The total possible score for each factor was 36, making the total possible self-efficacy score 108. The total self-efficacy scores for the presurvey, as indicated in Table 1, ranged from 30 to 90, and the postsurvey scores ranged from 64 to 101. A comparison of the pretest and posttest scores demonstrated a significant increase in the mean scores of participants on completion of the course, as the mean score on the posttest ($M$ = 84.56, $SD$ = 8.906) was 9.6 points higher than the mean score on the pretest.

Table 1

*Comparison of Overall Self-Efficacy Scores*

| Item | Minimum | Maximum | Mean | *SD* |
|---|---|---|---|---|
| Presurvey | 30 | 90 | 74.96 | 12.290 |
| Postsurvey | 64 | 101 | 84.56 | 8.906 |

Further examination of the distribution of the scores, as shown in Item 1 in Appendix D, indicated that the distribution of self-efficacy scores on the presurvey was

positively skewed with most participants gaining scores between 65 and 85. The postsurvey results, as shown in Item 2 in Appendix D, indicated a normal distribution with scores ranging from 62 to 101 and the majority falling between 80 and 90. Additionally, on the presurvey, the highest score was 90, and only two participants achieved this score. On the other hand, the postsurvey showed 16 participants scoring 90 and above, with two participants scoring 101 points of a possible 103.

The overall mean scores for all three factors on the TEIP scale showed variable increases in the postsurvey. For Factor 1, inclusive instruction, the mean score in the presurvey ($M$ = 25.45) was 4.8 points higher than the mean for the postsurvey ($M$ = 29.27). For Factor 2, managing behavior, the mean score for the presurvey ($M$ = 24.47) was marginally higher than the mean on the posttest ($M$ = 26.00). On the collaboration factor, the mean score for the postsurvey ($M$ = 28.00) was 2.96 points higher than the presurvey scores ($M$ = 25.04).

**Qualitative data**. Among the themes that emerged from the focus-group interview were positive attitudes toward teaching students with special needs. An examination of the data revealed several statements that indicated a positive attitude. For example, statements included the following: “It’s a good thing,” “Inclusion is positive for the teacher,” and “Students with disabilities have a right to be included.” In addition to these positive statements, preservice teachers also expressed reservations. Most of these reservations surrounded the type of disability. These statements included the following: “It depends on the disability,” “It depends on the kind of disability,” “Some are easier to handle,” and “Behavior problems are easier than learning problems.”

Further reservations related to a perception that including students with special needs increased the workload of the teacher. For example, when asked about their views

regarding including students with disabilities, there were responses such as the following: "The teacher has to do more research," "It takes away from general teaching time, thus challenging for the teacher," "It is difficult for the teacher as more time is needed in meeting the needs of various exceptionalities," and "Extra effort is needed on the part of the teacher."

Despite their reservations, the data showed changes in the perceptions and levels of confidence expressed by preservice teachers upon completion of the course. This was evident in their responses, which indicated differences in attitudes, perceptions, and levels of confidence before and after the course. For example, one participant noted that, before taking this course, she was not in favor of including students with special needs in the general education setting. However, the same participant noted that, upon completion of the course, she believed that students with special needs have a right to be educated with their peers so that they would have the opportunity to play and socialize with students without disabilities. This participant concluded that, with support, students with special needs can achieve academic success.

One participant remarked, "During this course, I learned that we all have differences so we only have to learn about those needs and incorporate them." Another participant offered the following comment:

> This course has positively impacted me to view my students differently and to understand their needs, now I take a different look when I enter a classroom. I now realize that students may look alike physically but they are different in how they behave or learn so I approach the class with a more open mind."

The participants reported that, after taking the course, they felt more confident having students with special needs in their classes because they now understood how to better

prepare their lessons for diverse groups of students. They also mentioned that they felt more comfortable relating to students with special needs because they were now more knowledgeable of their characteristics and how to accommodate them. One participant said, “I am prepared to accommodate all students.” Other responses included the following: “I am now better prepared,” “I would accept the challenge,” and “This has really impacted my thinking.”

**Research Question 2**

What are the relationships between demographic variables such as gender, level of specialization and experiences with persons with disabilities and self-efficacy levels following completion of a special needs course? A one-way ANOVA was used to analyze self-efficacy based on gender, level of specialization, experience with persons with disabilities, and training in working with individuals with special needs.

**Gender**. Males composed a significantly smaller proportion of the sample ($n$ = 5) than females ($n$ = 50). The overall self-efficacy for inclusive education of males was compared to females. For the presurvey, the mean overall self-efficacy score for females ($M$ = 75.92) was 10.6 points higher than the mean for males ($M$ = 65.00) with a significance of .56 between groups. However, in the postsurvey, the overall mean score for females ($M$ = 84.54) was minimally lower than the mean for males ($M$ = 84.80) with a significance of .951 between groups (see Table 2).

Further analysis was done to compare self-efficacy for males and females based on the three factors measured by the scale: inclusive instruction, collaboration, and managing disruptive behaviors (see Table 3). In the presurvey, the mean self-efficacy for inclusive instruction score was higher for females ($M$ = 25.92) than for males ($M$ = 20.80). For managing behavior, the mean score for this factor was also higher for females

(*M* = 24.80) than for males (*M* = 21.20). The results were also similar for collaboration, which also indicated a higher mean for females (*M* = 25.24) compared to males (*M* = 23.00).

Table 2

*Analysis of Variance for Self-Efficacy Scores by Gender*

| Item | Sum of squares | *df* | Mean square | *F* | *p* |
|---|---|---|---|---|---|
| Presurvey | | | | | |
| Between groups | 546.007 | 1 | 546.007 | 3.803 | .056 |
| Within groups | 7609.920 | 53 | 143.583 | | |
| Total | 8155.927 | 54 | | | |
| Postsurvey | | | | | |
| Between groups | .307 | 1 | .307 | .004 | .951 |
| Within groups | 4283.220 | 53 | 80.815 | | |
| Total | 4283.527 | 54 | | | |

Table 3

*Comparison of Self-Efficacy Scores Across Factors by Gender*

| | Females | | Males | |
|---|---|---|---|---|
| Item | Mean | *SD* | Mean | *SD* |
| Presurvey | | | | |
| Inclusive instruction | 25.92 | 4.772 | 20.80 | 5.762 |
| Managing behavior | 24.80 | 4.789 | 21.20 | 8.871 |
| Collaboration | 25.24 | 4.424 | 23.00 | 3.391 |
| Postsurvey | | | | |
| Inclusive instruction | 29.30 | 3.781 | 29.00 | 1.414 |
| Managing behavior | 26.96 | 3.213 | 28.00 | 5.050 |
| Collaboration | 28.26 | 4.164 | 27.80 | 1.304 |

The postsurvey showed females scoring higher in two of the three factors. The results indicated a slightly higher mean self-efficacy for inclusive instruction scores for females ($M$ = 29.30) than males ($M$ = 29.00). However, on the second factor, managing behavior, females scored lower ($M$ = 26.96) than males ($M$ = 28.00). In self-efficacy for collaboration, the mean score for females ($M$ = 28.26) was slightly higher when compared to males ($M$ = 27.80).

**Level of specialization**. The sample consisted of 36 preservice teachers who were pursuing a degree in primary education and 19 preservice teachers who were pursuing secondary education. The overall self-efficacy of preservice teachers in both specializations was compared. The mean scores for preservice teachers in the primary program ($M$ = 74.98) was minimally higher than the scores for those in the secondary program ($M$ = 75.11). On the postsurvey, the overall mean score for the primary program ($M$ = 84.11) was lower than the secondary program ($M$ = 85.42). The significance between groups in the presurvey was .951 and .609 on the postsurvey (see Table 4).

Table 4

*Analysis of Variance for Self-Efficacy Scores by Specialization*

| Item | Sum of squares | *df* | Mean square | *F* | *p* |
|---|---|---|---|---|---|
| Presurvey | | | | | |
| Between groups | .582 | 1 | .582 | .004 | .951 |
| Within groups | 8155.345 | 53 | 153.874 | | |
| Total | 8155.927 | 54 | | | |
| Postsurvey | | | | | |
| Between groups | 21.340 | 1 | 21.340 | .265 | .609 |
| Within groups | 4262.187 | 53 | 80.419 | | |
| Total | 4283.527 | 54 | | | |

Further analysis was done to compare self-efficacy for inclusive instruction, managing disruptive behavior, and collaboration. There were no significant differences in the mean scores for the three factors for each specialization. As shown in Table 5, on the presurvey, for inclusive instruction the mean score for the primary program ($M$ = 25.33) was similar to the secondary program ($M$ = 25.68). The mean self-efficacy score gained by students in the primary program ($M$ = 24.69) was also similar to the secondary program ($M$ = 24.05) in the area of managing behavior, whereas for collaboration, the mean score for the primary program ($M$ = 24.86) was slightly lower than the secondary program ($M$ = 25.37). On the postsurvey, the mean self-efficacy score for inclusive instruction for the primary program ($M$ = 28.94) was minimally lower than the secondary program ($M$ = 29.89). The mean scores for managing behavior were also similar for the primary group ($M$ = 27.00) and secondary programs ($M$ = 27.05). The scores for both groups were also similar on the collaboration factor for both the primary ($M$ = 28.00) and secondary group ($M$ = 28.47).

**Experience with persons with disabilities**. The self-efficacy scores of participants who reported having experience with persons with special needs were compared to those who reported not having any experience. Sixty-one percent of the sample reported having experience with persons with disabilities, and 39% did not. Experiences included having a friend or relative with a disability, having a coworker or classmate with a disability, or having any other type of interactions with individuals with disabilities. Almost half of the sample (45.5%) reported having a friend or a relative with a disability, 3.9% reported having a coworker with a disability, 10.9% reported having other types of interactions, and 40.0% reported having no experience with persons with disabilities.

Table 5

*Comparison of Self-Efficacy Scores Across Factors by Specialization*

| | Primary | | Secondary | |
|---|---|---|---|---|
| Item | Mean | *SD* | Mean | *SD* |
| Presurvey | | | | |
| Inclusive instruction | 25.33 | 4.472 | 25.68 | 6.083 |
| Managing behavior | 24.69 | 5.307 | 24.05 | 5.307 |
| Collaboration | 24.86 | 3.893 | 25.37 | 5.241 |
| Postsurvey | | | | |
| Inclusive instruction | 28.94 | 3.295 | 29.89 | 4.202 |
| Managing behavior | 27.08 | 3.193 | 27.00 | 3.771 |
| Collaboration | 28.08 | 3.706 | 28.47 | 4.563 |

On the presurvey, participants who had no previous experience with individualities with disabilities had a similar mean score (*M* = 73.68) to those who had a classmate or coworker with a disability (*M* = 73.00). Those who had a friend or relative with a disability (*M* = 77.20) and those who had other interactions (*M* = 71.00) also had comparable mean scores. Overall, the mean self-efficacy scores on the postsurvey were higher for participants who had experience with persons with disabilities. Participants who had a coworker or classmate with a disability had the highest mean score (*M* = 91.50). A one-way ANOVA indicated a between group significance of .639 on the presurvey and .697 on the postsurvey (see Table 6).

The results of the surveys, as shown in Table 7, indicated that, on the presurvey, the mean self-efficacy score for participants who had no experience with individuals with disabilities on the inclusive instruction factor (*M* = 25.00) was lower than the score for participants who reported having a friend or relative with a disability (*M* = 26.24), a

coworker or classmate with a disability (*M* = 25.00), and those who had other interactions with a person with a disability (*M* = 24.00). On the self-efficacy for managing behavior factor, participants with no experience also had a slightly lower mean score (*M* = 23.14) than those with a friend or relative with a disability (*M* = 25.60), those who had a coworker or classmate with a disability (*M* = 25.50), as well as participants with other types of interactions with individuals with disabilities (*M* = 24.33). On the collaboration factor, participants with no experience also had a lower mean score (*M* = 25.55) than those with a friend or relative with a disability (*M* = 25.36), coworker or classmate with a disability (*M* = 22.50), and those who had other interactions with individuals with disabilities (*M* = 22.67).

Table 6

*Analysis of Variance for Self-Efficacy Scores by Experience*

| Item | Sum of squares | *df* | Mean square | *F* | *p* |
|---|---|---|---|---|---|
| Presurvey | | | | | |
| Between groups | 263.155 | 3 | 87.718 | .567 | .639 |
| Within groups | 7892.773 | 51 | 154.760 | | |
| Total | 8155.928 | 54 | | | |
| Postsurvey | | | | | |
| Between groups | 117.990 | 3 | 39.330 | .482 | .697 |
| Within groups | 4165.537 | 51 | 81.677 | | |
| Total | 4283.527 | 54 | | | |

On the postsurvey, participants who reported having a coworker or classmate with a disability had the highest mean score on all three factors. On Factor 1, inclusive instruction, participants who had no experience with individuals with disabilities had the lowest score (*M* = 28.91), whereas the mean for participants who reported having a friend

or relative with a disability (*M* = 29.40) was lower than those who reported having a coworker or classmate with a disability (*M* = 32.00) and those who had other interactions with individuals with disabilities (*M* = 29.70).

Table 7

*Comparison of Self-Efficacy Scores Across Factors by Experience*

| | None | | Friend-relative | | Coworker | | Other | |
|---|---|---|---|---|---|---|---|---|
| Item | Mean | *SD* | Mean | *SD* | Mean | *SD* | Mean | *SD* |
| Presurvey | | | | | | | | |
| Inclusive instruction | 25.00 | 5.715 | 26.24 | 4.666 | 25.00 | 2.828 | 24.00 | 4.858 |
| Managing behavior | 23.14 | 6.621 | 25.60 | 3.926 | 25.50 | 4.950 | 24.47 | 5.266 |
| Collaboration | 25.55 | 3.912 | 25.36 | 4.847 | 22.50 | 4.950 | 22.67 | 3.559 |
| Postsurvey | | | | | | | | |
| Inclusive instruction | 28.91 | 4.093 | 29.40 | 3.240 | 32.00 | 0.000 | 29.17 | 4.167 |
| Managing behavior | 27.27 | 3.298 | 26.88 | 3.480 | 27.50 | 2.121 | 26.83 | 4.167 |
| Collaboration | 27.59 | 3.996 | 28.64 | 3.988 | 31.50 | 3.536 | 27.67 | 4.274 |

The trend was different on the second factor, self-efficacy for managing behavior, in which participants with no experience had a higher mean score (*M* = 27.27) than those with a friend or relative with a disability (*M* = 26.88) and those who had other types of interactions with individuals with disabilities (*M* = 26.83). Participants who had a coworker or classmate with a disability, however, still had the highest mean scores for this factor (*M* = 27.50). On the self-efficacy for collaboration factor, participants with no experience had a lower mean score (*M* = 27.59) than those with a friend or relative with a disability (*M* = 28.64) and those who reported other types of interactions (*M* = 27.67). As with the other two factors, participants who had a coworker or classmate with a disability had the highest mean score (*M* = 31.50).

On the postsurvey, participants who reported having a coworker or classmate with

a disability had the highest mean score on all three factors. On Factor 1, inclusive instruction, participants who had no experience with individuals with disabilities had the lowest score ($M$ = 28.91), whereas the mean for participants who reported having a friend or relative with a disability ($M$ = 29.40) was lower than those who reported having a coworker or classmate with a disability ($M$ = 32.00) and those who had other interactions ($M$ = 29.70). The trend was different on the second factor, self-efficacy for managing behavior, in which participants with no experience had a higher mean score ($M$ = 27.27) than those with a friend or relative with a disability ($M$ = 26.88) and those who had experienced other types of interactions ($M$ = 26.83). Participants who had a coworker or classmate with a disability, however, still had the highest mean scores for this factor ($M$ = 27.50). On the self-efficacy for collaboration factor, participants with no experience had a lower mean score ($M$ = 27.59) than those with a friend or relative with a disability ($M$ = 28.64) and those who reported other types of interactions ($M$ = 27.67). As with the other two factors, participants who had a coworker or classmate with a disability had the highest mean score ($M$ = 31.50).

**Previous training in special needs**. The self-efficacy scores of participants who reported having previous training in special needs were compared to the scores of those who reported having no training prior to the course. The majority of participants (90.9%) reported having no previous training related to special needs, 7.3% reported taking a previous course, and 1.8% did not indicate if they had previous training in special needs education. On the presurvey, the mean self-efficacy scores for participants with previous training was higher ($M$ = 73.50) than participants with no previous training ($M$ = 75.44). Similarly, on the postsurvey, the overall mean self-efficacy scores for participants with previous training ($M$ = 87.74) was higher than participants who reported having no

previous training (*M* = 84.64). A one-way ANOVA indicated a between-group significance of .328 on the presurvey and .137 on the postsurvey (see Table 8).

Table 8

*Analysis of Variance for Self-Efficacy Scores by Training*

| Item | Sum of squares | *df* | Mean square | *F* | *p* |
|---|---|---|---|---|---|
| Presurvey | | | | | |
| Between groups | 342.607 | 2 | 171.304 | 1.140 | .328 |
| Within groups | 7813.320 | 52 | 150.256 | | |
| Total | 8155.927 | 54 | | | |
| Postsurvey | | | | | |
| Between groups | 315.257 | 2 | 157.629 | 2.066 | .137 |
| Within groups | 3968.270 | 52 | 76.313 | | |
| Total | 4283.527 | 54 | | | |

When scores for each factor were compared for participants with and without previous training, those with no training had a lower mean self-efficacy score (*M* = 25.64) for inclusive instruction on the presurvey than on the postsurvey (*M* = 29.20). Similarly, on the presurvey, those with previous training had a lower mean score (*M* = 25.25) than on the postsurvey (*M* = 31.00). On the second factor, managing behavior, the mean score for participants with no previous training (*M* = 24.52) on the presurvey was minimally higher than the postsurvey (*M* = 26.98). On the other hand, for participants with previous training, the mean score on the presurvey was 24.75 compared to 28.50 on the postsurvey. On the measure of self-efficacy for collaboration, participants with no previous training had a mean score of 25.28 on the presurvey and 28.44 on the postsurvey, whereas those with previous training had a mean score of 23.50 and 28.25 on the presurvey and postsurvey, respectively (see Table 9).

Table 9

*Comparison of Self-Efficacy Scores Across Factors by Training*

| | No indication | | None | | Previous | |
|---|---|---|---|---|---|---|
| Item | Mean | *SD* | Mean | *SD* | Mean | *SD* |
| Presurvey | | | | | | |
| Inclusive instruction | 17.00 | -- | 25.64 | 5.122 | 25.45 | 5.033 |
| Managing behavior | 21.00 | -- | 24.52 | 5.478 | 24.75 | 2.217 |
| Collaboration | 19.00 | -- | 25.28 | 4.394 | 23.50 | 3.317 |
| Postsurvey | | | | | | |
| Inclusive instruction | 26.00 | -- | 29.20 | 3.725 | 31.00 | 1.414 |
| Managing behavior | 25.00 | -- | 26.98 | 3.490 | 28.50 | 1.000 |
| Collaboration | 17.00 | -- | 28.44 | 3.850 | 28.25 | 0.957 |

**Research Question 3**

What is the relationship between course delivery and the self-efficacy of preservice teachers on completion of a special needs course? From the focus-group interview conducted, quantitative data were collected in response to this question. Based on the responses, the course was delivered using various strategies that included lectures, films, discussions, student presentations, case studies, and interactions with resource persons. Participants' responses uncovered common themes that were woven throughout the data. One theme that emerged was that knowledge of special needs is important in the development of self-efficacy for inclusive education.

The data from the interviews demonstrated that, through these modalities, participants' knowledge of the characteristics of persons with disabilities as well as strategies for teaching students with disabilities increased. The participants made reference to strategies such as differentiated instructions, individualized teaching and

multiple intelligences. For example, one participant noted, “We have to learn about these needs and incorporate them, applying multiple intelligences, finding their strengths, and working on it.” Another remarked, “Now I understand that students with special needs are there and that teachers need to meet their needs so that they do not get lost along the way.”

Participants’ knowledge of and appreciation for inclusive education also increased. They referred to inclusion as a human right and spoke of the social benefits. They mentioned that inclusion “brings out diversity” and “allows students to respect each other” and “socialize with students without disabilities.” Additionally, one participant stated that students in an inclusive setting may “be feeling isolated.” However, another participant posited that teachers in an inclusive setting must “create the psychosocial environment for all students to be accepted.” Participants also recognized the value of collaboration in an inclusive classroom. Reference was made to the need for “support of a special education teacher who can make it easier.”

Engaging in authentic experience was another theme that emerged. Several participants reported that the course was delivered to them through real-life experiences of persons with disabilities. One student said, “Even one of our lecturers with a disability addressed us.” When authentic experiences were not readily available, vicarious experiences, in the form of films, played a significant role in increasing awareness and changing attitudes. There was also much evidence to suggest that these experiences during the course impacted the preservice teachers on a psychological level. One participant commented, “Watching the film was the high point for me, as the film brought me to tears.” Reflecting on the film, which they watched in class, another participant recounted, “This impacted me a lot as it made me realize that children with disabilities

have gifts and talents that can cause them to excel just like any other student." Another participant remarked, "The movie changed my entire thoughts about special needs, knowing that someone just needs to care." One participant said, "Now I realize that disabilities are more common than I thought and all should be treated equally."

The course content and the delivery modalities seemed to have had a significant impact on the self-efficacy of participants. However, the data also revealed that the experiences of the course did not include field experiences. One participant lamented that "there were no field experiences," and another contended, "I would not have been ready for the field experience." The comment of one participant, however, points to the need for field experience in increasing self-efficacy. When asked how he would respond if, on his first day teaching he was told that students with special needs would be included in the class, he responded, "I would be shocked. I would want to know what the disabilities are but I would take up the challenge and then after 3 months decide if I can cope." This is in contrast to another participant who, in explaining how the course delivery impacted his confidence, remarked, "The course was delivered using videos, discussions, and guest speakers with disabilities; teaching a class of students with disabilities would be difficult for me but, now I think I can manage."

# Chapter 5: Discussion

## Introduction

This study was designed to investigate the self-efficacy for inclusive education in a group of preservice teachers attending a teachers' college in Jamaica. In particular, the study sought to determine what changes, if any, occurred in their self-efficacy on completion of the course entitled Teaching Students With Special Needs in General Education Classrooms. This course is a mandatory course in the bachelor of education program. Data were collected using the TEIP scale developed by Sharma et al. (2012) at the beginning and end of the course. A focus-group interview was also conducted with seven participants. This chapter presents a discussion of these findings based on each research question. The findings are further compared to the literature, which was reviewed. The implications and limitations are described along with recommendations for further research.

## Discussion of Results

**Research Question 1**. To what extent does preservice teachers' self-efficacy for inclusive education change on completion of a special needs course? The results of the TEIP scale indicated that the overall self-efficacy scores increased on completion of the course. The self-efficacy scores on the postsurvey ranged from 30 to 90, although the postsurvey scores ranged from 64 to 101 of a possible score of 108. The overall mean score for the presurvey was 74.96 and the overall mean for the postsurvey was 84.56, which indicates an increase in the mean of 9.60. Additionally, in all three factors measured by the TEIP scale, the results of the postsurvey showed an increase in self-efficacy scores.

For Factor 1, inclusive instruction, the mean increased from 25.45 to 29.27. For

Factor 2, managing behavior, the mean increased from 24.47 to 27.05. For Factor 3, collaboration, the mean increased from 25.04 on the presurvey to 28.00 on the postsurvey. The increase in the mean self-efficacy for inclusive instructions had the highest increase, 3.82, whereas the lowest increase was in managing behavior, which only increased by 2.58. These findings are congruent with those of previous researchers, including Loreman et al. (2013), Ahsan et al. (2012), McCray and Alvarez-McHatton (2011), and Sharma (2012). All of these researchers concluded that participation in a special needs course has a positive impact on the self-efficacy of preservice teachers for practicing inclusion.

The qualitative data also indicated increased levels of confidence, prefaced by more positive attitudes toward children with disabilities, greater knowledge of the characteristics of children with special needs and strategies for teaching in inclusive settings, and an understanding of the philosophy of inclusion. This corroborates the findings of Ahsan, Deppeler, and Sharma (2013), who noted that course content had a direct correlation to increased self-efficacy for inclusion. The findings are also further supported by the research of Taylor and Ringlaben (2012), who asserted that teachers who had a greater knowledge of the strategies for teaching students with special needs demonstrated more positive attitudes. The findings of the current research are also validated by Loreman et al. (2013), who argued that, when teachers possessed knowledge of the nature and characteristics of disabilities as well as inclusion policies, their attitude toward inclusion and their self-efficacy improved.

**Research Question 2**. What are the relationships between demographic variables such as gender, level of specialization, and experiences with persons with disabilities and self-efficacy levels following completion of a special needs course? The following

paragraphs present a discussion of the findings according to gender, level of specialization, experience with persons with disabilities, and levels of training.

***Gender***. Although only 9.1% of the participants in the study were male, compared to 90.9% females, the self-efficacy of males and females were compared. The findings related to males in this study, however, may not be generalized across the population since so few males were included in the study. Nevertheless, these findings may still be noteworthy since the number of males included in the sample is in keeping with the ratio of males to females enrolled at the college and in most other teacher training colleges across the country.

Studies conducted by Woodcock (2011) and Forlin et al. (2009) indicated differences in the self-efficacy for inclusive practices in males and females. The literature generally suggested that females showed higher levels of self-efficacy for inclusive education than did males. The results of the presurvey concurred with previous research as the female participants had a higher mean score ($M$ = 75.96) than male participants ($M$ = 65.00). On the postsurvey, females also scored higher; however, the difference in the mean score for males ($M$ = 84.80) was only marginally higher than that of females ($M$ = 84.54). These findings are consistent with those of Sharma et al. (2012), who concluded that gender was not a significant factor in self-efficacy for inclusive education. These researchers, however, noted that the only area in which gender seemed to be a significant factor was in the area of managing behavior in which males tended to demonstrate more confidence. Sharma et al. concluded that these differences were more obvious before taking a course and further determined that, upon completion of the course, females showed greater gains in this area and achieved scores equal to the males in the sample.

***Area of specialization***. Both primary and secondary education majors

demonstrated increases in their overall self-efficacy for inclusive education. On the presurvey the mean score was higher for participants in the secondary program than participants in the primary program. On the postsurvey, however, the mean for the primary program was minimally lower than the secondary program. Additionally, there was only a marginal difference between the mean scores of the primary and secondary programs on both presurvey and postsurvey across the three factors, except in the area of collaboration in which the mean score was marginally higher for students in the secondary program.

Previous research also reported mixed results on the relationship of area of specialization and self-efficacy for inclusive education. Although several researchers, such as Woodcock (2011) and Forlin et al. (2009), reported that preservice teachers being trained in primary education had higher levels of self-efficacy for inclusive education, Ajuwon et al. (2012) found that secondary teachers showed more positive attitudes about inclusion. Loreman et al. (2013), however, found that differences were only evident in areas of managing behavior and collaboration. The findings of the current research are consistent with the findings of McCray and Alvarez-McHatton (2011), who reported no significant difference between the self-efficacy of primary and secondary teachers for inclusive education.

***Experience with persons with disabilities***. Social cognitive theorists identified enactive experiences as one of the strongest predictors of self-efficacy beliefs (Bandura, 1997). Peebles and Mendaglio (2014) also noted that individuals who have had one-on-one contact with persons with disabilities developed higher levels of self-efficacy for inclusive practices. Although Specht et al. (2015) agreed with this finding, these researchers indicated that the extent of the impact of these experiences with persons with

disabilities on self-efficacy depended on the nature of the interactions. Consistent with this trend, the participants in the current study who reported having a coworker or classmate with a disability had higher self-efficacy than those who reported having other interactions with persons with disabilities. Peebles and Mendaglio purported that prior experience with individuals with disabilities may be an initial determinant of self-efficacy for inclusive education, but it might not be as significant later on. In this study both participants who had experience interacting with persons with disabilities, as well as those who did not have any significant interactions with persons with disabilities, demonstrated similar increases in self-efficacy scores following the course.

***Previous training***. Jung (2007) theorized that the levels of confidence experienced by preservice teachers for teaching in inclusive settings increased with training. This study sought to determine whether preservice teachers who had previous training in special needs education prior to taking this mandatory college course had higher levels of self-efficacy than those who had no previous training. On both presurveys and postsurveys, participants who reported having previous training had higher self-efficacy scores than those who had no previous training. This supports the finding of researchers such as Loreman et al. (2013), who contended that completion of a special needs course had an impact on the self-efficacy beliefs of preservice teachers. On the inclusive instruction factor, participants with previous training had slightly lower scores than participants with no previous training; however, on the other two factors the differences were not significant.

**Research Question 3**. What is the relationship between course delivery and the self-efficacy of preservice teachers on completion of a special needs course? Taylor and Ringlaben (2012) maintained that special needs courses for general education teachers

should provide educational experiences that will promote positive attitudes and increase their levels of confidence. Additionally, these courses should balance knowledge, skills, and attitudes since knowledge and skills are important factors in maintaining positive attitudes about persons with disabilities and inclusive practices (Beacham & Rouse, 2012). Lancaster and Bain (2010) also opined that courses designed to prepare preservice teachers for inclusive education should emphasize the practical skills that teachers will need in order to meet the demands of inclusive education.

The course, Teaching Students With Special Needs in General Education Classrooms, provided preservice teachers with knowledge, skills, and attitudes which researchers deem critical for developing self-efficacy for inclusive education. The data generated from the focus-group interview provided strong evidence that participants' attitudes were impacted by the experiences during the course. There was also evidence that the preservice teachers had an increased awareness of inclusion on a whole and were able to identify benefits of inclusion as well as an understanding of the need for collaboration between general and special education teachers. Participants' references to specific teaching approaches also indicated that exposure to these strategies have also contributed to their increased levels of confidence.

Consistent with the tenets of social cognitive theorists, authentic experiences, vicarious experiences, and psychological arousal appeared to have contributed to the increases in self-efficacy. Through presentations and interactions with persons with disabilities, the participants gained authentic experiences which, according to Bandura (1997), had the greatest impact on self-efficacy. Vicarious experiences provided through films also seemed to have had a positive impact and also appeared to have aroused strong emotions which may account for changes in attitudes about inclusive practices. These are

all factors that Bandura posited as sources of self-efficacy.

The fact that students were still experiencing reservations after the course may indicate a need for greater authentic experiences through field experiences, which would provide one-on-one interactions with students with disabilities. Preservice teachers would also have an opportunity to observe teachers in the classroom teaching students with special needs. This would provide additional vicarious experiences as social cognitive theorists have also concluded that watching others perform a task increases an individual's confidence in carrying out the task himself or herself.

**Conclusion**

As Taylor and Ringlaben (2012) postulated, teacher education programs are fundamental in ensuring that teachers develop the skills and attitudes that will positively impact their self-efficacy for inclusive education. This study has confirmed the view that taking courses in special education has a positive impact on preservice teachers' self-efficacy for inclusive education. However, after participating in a 30-hour course, the self-efficacy level, although increased, was still moderate for most participants, with the average increase in self-efficacy scores being only 9.6 at the end of the course. Additionally, participants still expressed reservations regarding teaching students with special needs.

The results indicated that, although females had marginally higher self-efficacy scores than their male counterparts, gender did not appear to be a significant factor in self-efficacy for inclusive education. Similarly, there were no significant differences between primary and secondary preservice teachers. On the contrary, experience with persons with disabilities appeared to be a significant factor in self-efficacy for inclusive education. Further, self-efficacy scores for participants who had had interactions with

persons with disabilities, such as those who had a classmate or coworker with special needs, was higher than the self-efficacy of participants who reported having no interactions with persons with disabilities. This further underscores the need for field experiences as part of the preparation of teachers for inclusive classrooms. Similarly, previous training appeared to have also had an impact on self-efficacy as participants with previous training had higher self-efficacy scores than participants with no previous training. This suggests that additional training may yield greater gains in self-efficacy for inclusive education.

**Recommendations**

Based on the findings of this research, it is recommended that all preservice teachers be exposed to courses in special education. These courses should include field experiences as the literature indicates that experiences with persons with disabilities increases self-efficacy for inclusion. Preservice teachers also need opportunities to observe other teachers working with students with special needs; this will provide vicarious experiences, which can greatly impact self-efficacy. Further, because participants with previous training in special education had higher self-efficacy scores, preservice teachers should be exposed to more than one course in special education. This should result in an increase in their knowledge about disabilities and strategies for teaching students with disabilities.

Knowledge and skills about special needs is strongly correlated with increases in self-efficacy for inclusive education. Therefore, preservice teachers who participate in several courses focusing on special needs and inclusion should develop higher self-efficacy for inclusive practices. Further research could compare preservice teachers in several colleges because this research was conducted in one college. This would allow for

greater comparison of factors, which may contribute to self-efficacy for inclusive education. Second, this research was conducted using a small sample that was selected using convenience sampling. Further research could utilize a larger randomly selected sample.

Further investigation is also suggested in determining whether there are differences in the self-efficacy of preservice teachers who are instructed by special educators and those who are instructed by instructors not having qualifications in special education. Comparisons may also be done with students enrolled in other special education courses as this would provide a basis for determining the impact of various course designs on self-efficacy. This comparison may include courses, which consist of field experiences and courses that are more theoretical in design. Further studies could also be done to evaluate the impact of various types of field experiences.

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# Appendix A

## Demographic Questionnaire

Demographic Questionnaire

This questionnaire is designed to gather demographic information. All information is confidential and will be used only for research purposes.

1. Student Identification Number:

2. Gender: Male Female undisclosed

3. Age: 18-25 26-30 31-40 over 40

4. What level of education are you being trained to teach? Primary Secondary

5. Have you had prior experience with persons with disabilities? Yes No

   If yes, how was this experience gained?

   a. You have a relative/friend with a disability
   b. You have had classmates with disabilities
   c. You have a disability
   d. You have worked with persons with disabilities
   e. Other _____

6. Have you had previous training in teaching students with special needs?

   Yes No

   If yes, how did you receive this training?

a) I participated in a workshop.
b) I took a course.
c) Other _____

Thank you for your participation.

# Appendix B

## Focus-Group Questions

# Focus-Group Questions

1. What are your views about including students with disabilities in regular education classrooms?
2. How have your views been impacted since doing the course Teaching Students with Special Needs in General Education classrooms?
3. How was the course delivered? (Lectures, field experience, field trips, films discussions, simulations etc.)
4. What experiences during the course have impacted your level of confidence?
5. If on your first day of your next practice teaching experience you are told that you have one or two students with disabilities in your class, how would you respond?

# Appendix C

## Teacher Efficacy Scale

# Teacher Efficacy Scale

This survey is designed to help understand the nature of factors influencing the success of routine classroom activities in creating an inclusive classroom environment. In an inclusive classroom students from a wide range of diverse backgrounds and abilities learn together with necessary supports available to teachers and students.

Please circle the number that best represents your opinion about each of the statements.

Please attempt to answer each question

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| **Strongly disagree** | **Disagree** | **Disagree Somewhat** | **Agree** | **Agree Somewhat** | **Strongly agree** |

| | | SD | D | DS | A | AS | SA |
|---|---|---|---|---|---|---|---|
| 1. | I can make my expectations clear about student behaviour. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. | I am able to calm a student who is disruptive or noisy. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. | I can make parents feel comfortable coming to school. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. | I can assist families in helping their children do well in school. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. | I can accurately gauge student comprehension of what I have taught. | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. | I can provide appropriate challenges for very capable students. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. | I am confident in my ability to prevent disruptive behaviour in the classroom before it occurs . | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. | I can control disruptive behaviour in the classroom. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. | I am confident in my ability to get parents involved in school activities of their children with disabilities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. | I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated. | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. | I am able to get children to follow classroom rules. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. | I can collaborate with other professionals (e.g., itinerant teachers or speech pathologists) in designing educational plans for students with disabilities. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. | I am able to work jointly with other professionals and staff (e.g., aides, other teachers) to teach students with disabilities in the classroom. | 1 | 2 | 3 | 4 | 5 | 6 |

14. I am confident in my ability to get students to work together in pairs or in small groups. 1 2 3 4 5 6

15. I can use a variety of assessment strategies (e.g., portfolio assessment, modified tests, performance-based assessment, etc. 1 2 3 4 5 6

16. I am confident in informing others who know little about laws and policies relating to the inclusion of students with disabilities. 1 2 3 4 5 6

17. I am confident when dealing with students who are physically aggressive. 1 2 3 4 5 6

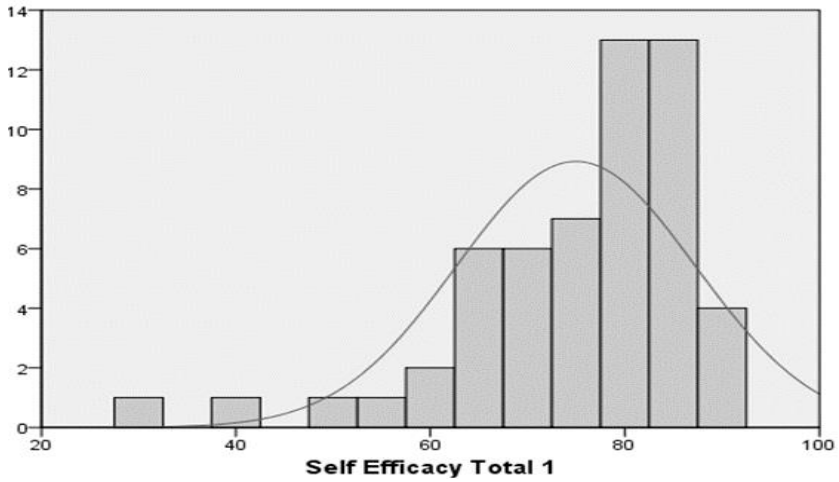
18. I am able to provide an alternate explanation or example when students are confused. 1 2 3 4 5 6

# Appendix D

## Distribution of Self-Efficacy Scores

Distribution of Self-Efficacy Scores

Item 1: Presurvey




Item 2: Postsurvey