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# Inclusion in Jamaican Primary Schools: Teachers' Self-Efficacy, Attitudes, and Concerns

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# Walden University

College of Social and Behavioral Sciences

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Jillian Samms

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Walden University  
2017

Abstract

Inclusion in Jamaican Primary Schools: Teachers' Self-Efficacy, Attitudes, and Concerns

by

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MA, Georgia State University, 2005

BS, Macalester College, 2002

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

January 2017

## Abstract

Inclusive education has become an international phenomenon; however, many developing countries struggle with its implementation. At last assessment of the Jamaican educational system in 2004, findings revealed exclusionary practices which are in contrast to international standards on education. Many children with special needs may not be receiving adequate support for education. Using Bandura's social learning theory as a foundation, this study examined whether there is a predictive relationship between grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, attitudes to inclusion, and teachers' ratings of self-efficacy for inclusive practices. The study also examined whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school). Data were collected from 191 primary education teachers via questionnaires in public, private, rural, and urban schools in 3 parishes in Jamaica. Multiple regression analysis revealed significant findings for some of the variables. Constructivist teaching, extent of inclusion training, attitudes and concerns about inclusion, and traditional teaching were found to have a positive predictive relationship with self-efficacy for inclusive practices. Additionally, a perceived negative school climate was found to decrease self-efficacy for inclusive practices. Attitudes and concerns were examined by grade level; however, one way ANOVA revealed no significant findings. This research is significant as the implications for social change include using the results as a guide for system-wide improvement of the educational system in line with international standards on inclusive education.

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## Dedication

To the children of Jamaica...I wish for belonging, empowerment, and upliftment  
of all.

## Acknowledgments

I would like to thank my dissertation chair, Dr. Trimble for her on-going patience, constructive criticism, and encouragement throughout the entire dissertation process. You made each step seem achievable and kept me focused on the bigger picture. Thank you to Dr. Diebold for his guidance on methodology and statistics. Your expert advice made the tasks more manageable and easier to understand. Much appreciation also to Dr. Davis for her insight and feedback. A huge thank you to all the teachers who volunteered to participate in the study, and to the principals and grade coordinators for their help with logistics. I know it increased your paperwork and added to work duties, but your input was deeply appreciated. Lastly, thanks to the Ministry of Education for granting access to the schools.

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## Chapter 1: Introduction to the Study

### **Introduction**

Beginning with the Salamanca conference in 1994 by the United Nations Educational, Scientific and Cultural Organization (UNESCO), there have been many changes on an international level regarding the education of children with disabilities (Monsen, Ewing, & Kwoka, 2011; Stella, Forlin, & Lan, 2007). The Salamanca Statement of 1994 outlines principles, policies and practices regarding special education and was agreed upon by 92 countries and 25 international organizations (UNESCO, 1994). The statement advocated for a diverse student population and the inclusion of children with special needs in the regular classrooms when possible (UNESCO, 1994). The statement further indicated that all children should have access to an appropriate education and therefore, educational supports may be necessary for children with special needs within the regular classrooms (UNESCO, 1994).

Shifting to an inclusive structure of education requires that major systematic changes take place. Therefore, *inclusion* generates research interest as there are multiple factors that contribute to its success. Some of these factors include the self-efficacy of the teaching population as well as their attitudes and concerns (Leyser, Zeiger, & Romi, 2011; Urton, Wilbert, & Hennemann, 2014). In Jamaica, inclusion has not been implemented although there is recent talk of a move toward inclusive classrooms (Ministry of Education, 2015). Therefore, it was imperative to assess some of the factors that may lead to a more successful implementation. This study examined the self-efficacy

of inclusive practices as well as the attitudes and concerns of Jamaican primary school teachers toward the practice of inclusion. Information gained from this study may create positive social change by informing the development of educational policies which also have the potential to impact the structure of the entire educational system and the lives of all its students.

This first chapter is the overview of this research study. It begins with an examination of the background information relevant to the educational system in Jamaica as well as recent initiatives in special education with a focus on inclusion. A brief overview of the literature on inclusion is given while examining the relevant variables in this research study. The research problem is then identified and defined as well as the specific purpose of the study in contributing to the existing literature in the field. Research questions and hypotheses are then stated as well as the theoretical framework which set the foundation and guided the approach of the study. An explanation is then given for the nature of the study which involves the chosen variables, the design, and methodology of the study. Operational definitions are given for some of the more frequently used terms in the study to enhance clarity and understanding. Next, the assumptions, scope, delimitations, and limitations of the study are discussed. Lastly, the significance of the study is discussed in relation to its potential for creating social change before a summarization of the main points in this chapter.

## **Background**

### **The Education System in Jamaica**

Jamaica is an island country in the Caribbean. It is the third largest country in the Greater Antilles and has a population of approximately 2.7 million (Jamaica Information Service, 2015). The country is divided geographically into 14 parishes which each have a capital town. The Ministry of Education is the arm of the government that has responsibility for overseeing the management and administration of public education in the country (Ministry of Education, 2015). There are over 1000 public educational institutions in Jamaica which include four levels: early childhood, primary, secondary, and tertiary (Ministry of Jamaica, 2015). These institutions serve approximately 100,000 students and are staffed by 20,000 teachers (Ministry of Jamaica, 2015).

Public education in the country begins with early childhood education for children 3 through 5 years old (Ministry of Education, 2015). Then, children transition to primary school which starts at Grade 1 and terminates in Grade 6 (Ministry of Education, 2015). The ministry conducts the national assessment program which is responsible for assessment of the capabilities of the nation's children at the primary level (Ministry of Education, Jamaica). In Grade 1, the Grade One Individual Learning Profile (GOILP) is administered. In Grade 3, the children take the Grade Three Diagnostic Test. In Grade 4, the Grade Four Literacy Test is administered. Finally, all children take a national exam in grade 6 called the Grade Six Achievement Test (GSAT). Based on the quality of their grades, students are then assigned to a high school (Ministry of Education, 2015). The

ramification of this is that children are clustered in high schools according to ability level. Therefore, many teachers in Grade 6 spend extra hours after school and on weekends to prepare the children to get the highest grades. This is because although children select the schools they want to attend, spaces are limited at the most desirable schools and their grades on the GSAT national exam are the sole means of assigning them to high schools based on a ranking system. The GSAT curriculum begins in Grade 4 and terminates in Grade 6. Questions on the exam span the two year curriculum. Children leave primary school at age 12 and remain in the high school system for another 5 years which terminates by completing secondary exams (Ministry of Education, Jamaica). Some schools have an additional two-year program where students are prepared for acceptance in tertiary institutions.

One division of the Ministry of Education is the Special Education Unit which supervises special education services for children island-wide. This includes children with difficulties such as hearing, visual, and physical impairments as well as intellectual and learning disabilities and giftedness (Ministry of Education, 2015). These children (ages 3 to 20 years) are served in approximately 59 special schools as well as unit classrooms in regular schools.

Of the 100,000 students in the public system approximately 37,000 children have been found to have some form of disability (UNICEF Jamaica, 2006). However, only 10% of these children are enrolled in a special program that receives governmental funding (UNICEF Jamaica, 2006). This leaves a significant number of parents of children



with disabilities to find their own solution. A likely option for those who can afford it is to seek private schooling and intervention or therapy. However, many remain in the public system without needed support resources in regular classes.

### **Education Review and Reform in Jamaica**

A task force was commissioned in 2004 to review the educational system in Jamaica, investigate local and international legislation and make suggestions for the improvement of the system (Task Force on Educational Reform Jamaica, 2004). One important recommendation was that there should be inclusion of children with special needs in regular classrooms (Task Force on Educational Reform Jamaica, 2004). The government of Jamaica has since then been working on a plan to restructure educational services which includes a special education policy to promote appropriate education for children with special needs with a focus on inclusive environments where possible.

A review of the literature revealed that there has not been much recent research on inclusion in Jamaica. Research on this topic is likely to be helpful in the development and implementation of inclusive services in the country. There are many factors that may affect the success of inclusion such as financial ability to employ additional resources and infrastructural changes (Leyser, Zeiger, & Romi, 2011; Lay Wah Lee & Hui Min Low, 2013). However, one of the most important factors to consider in the success of inclusive education is the capability of the staff to carry out these practices efficiently. Teachers' ratings of their own abilities in effecting inclusion can be studied by examining the

concept of self-efficacy. Self-efficacy ratings present a means for the teachers to evaluate their abilities.

### **Development of the Self-Efficacy Concept**

Self-efficacy was studied by Bandura in his social learning theory (Bandura, 1977, 1982). Bandura stated that a large part of learning by humans was socially oriented. Two important components are imitation and modeling (Bandura 1977, 1982). However, as humans we decide which behaviors to imitate based on the associated rewards or punishments. As such, humans are self-evaluative and goal-oriented in this process. If a person perceives his or her abilities to be lacking in a specific area, the tendency will be to avoid the situation requiring those abilities (Bandura 1977, 1982). This appraisal process is crucial to the concept of self-efficacy. Self-efficacy is defined as an individual's belief about their abilities to handle the rigors of a given task (Bandura 1977, 1982). The concept of self-efficacy has been studied widely as it is associated with teachers in the classroom. As it relates to teachers, this concept is defined as the ability to teach the subject matters effectively to all students in their classroom (Holzberger, Philipp, & Kunter, 2013).

**Research on self-efficacy.** Research on teacher self-efficacy has produced a number of notable findings. Self-efficacy has been linked to teacher instructional behavior as well as other outcomes (Holzberger et al., 2013; Leyser et al., 2011). Teachers with higher self-efficacy are believed to invest more into their lesson planning and use innovative strategies in their instruction. They have better classroom

management, and encourage and develop appropriate learning goals while fostering autonomy in their students (Holzberger, et al., 2013; Leyser et al., 2011; Tschannen-Moran, & McMaster, 2009).

The delivery of the materials to students has also been found to be more effective with teachers who have higher self-efficacy than teachers with lower efficacy and they appear to be less stressed than those with lower self-efficacy (Holzberger et al., 2013; Leyser et al., 2011). There are also differences in how these teachers manage their stress. Those with lower self-efficacy view stress and challenges negatively and do not perceive to have control over the situation (Cudré-Mauroux, 2011). They also attribute the difficulty that arises to situational factors. Teachers with high self-efficacy manage challenges differently. They attribute the resulting stress to personal factors that can be fixed, such as better preparation. They therefore feel that they have the ability to take control of the situation in the future (Cudré-Mauroux, 2011). Additionally, researchers have shown that teachers with high self-efficacy have been positively linked to students with higher achievement (Holzberger, et al., 2013; Leyser et al., 2011). High self-efficacy is an important factor to consider as it affects both teacher and student outcomes.

Researchers on teacher self-efficacy have also explored its relationship to teaching children with disabilities and attitudes to inclusion. Numerous researchers have found that teachers with higher self-efficacy also have a more positive view of inclusive practices (Holzberger et al., 2013; Lee & Low, 2013; Leyser et al., 2011). Factors such as years of experience in the classroom, field placement experience, training in inclusion,

and field of major have been notable predictors of level of teachers' self-efficacy. For example, in Israel, preservice teachers who were majoring in special education indicated higher levels of self-efficacy than those who were general education majors (Leyser et al., 2011). In addition, those teachers who had more experience or training with children with learning disabilities also had higher levels of self-efficacy (Leyser et al., 2011). However, teachers who had more years of experience teaching did not show much difference in efficacy levels excepting for the ability to enhance social relations in the classroom (Leyser et al., 2011).

**Measurement of self-efficacy.** Research studies have focussed on measuring self-efficacy by examining two dimensions of the construct. Personal teaching efficacy looks at the perception that one has the ability to impact a student's behavior and learning. The other construct is the general teaching efficacy of the teacher which examines outcome expectancy (Leyser et al., 2011; Loreman, & Forlin, 2012). This dimension examines the degree to which teachers perceive that their ability to bring about change in the students is affected by external factors. The Extended Teacher Efficacy Scales have been used in many studies of teacher self-efficacy (Leyser et al., 2011; Sharma, et al., 2012). These scales also include two additional scales: teacher efficacy for student social relations and teacher efficacy for low achieving students. However, Leyser et al. (2011) listed the unreliability of the general teaching efficacy as a drawback to their study. While these scales have been use widely, Sharma et al. (2012) suggested that there have been questionable results of its use cross-culturally. Their development of a new

teacher efficacy scale has shown promise in its use in cross-cultural studies of teacher self-efficacy for inclusion. This new scale developed by Sharma et al. (2012), the Teacher Efficacy for Inclusive Practices (TEIP) scale, measures self-efficacy for inclusive practices by measuring the core skill areas needed for adequate inclusion. These are: self-efficacy for inclusive instructions, self-efficacy for collaboration, and self-efficacy for managing behavior.

### **Grade Level**

Primary education in Jamaica begins in Grade 1 and ends in Grade 6. The national assessment program assesses the performance of children at various levels. Children are assessed in Grade 1 via the GOILP, in Grade 3 via the Grade Three Diagnostic Test and in Grade 4 via the Grade Four Literacy Test (Ministry of Education, 2015). The major national exam in Jamaica at the primary level is the GSAT exam as this exam determines the placement of children in the high school system. Placement is solely determined by the achievement of the children in the GSAT exam which underscores its importance. The curriculum for the GSAT begins in Grade 4 and ends in Grade 6 when the exam is taken and teachers at these grade levels are consumed by preparing their students for this major exam. Implementing inclusion may be very different for a Grade 4-6 (upper school) teacher, than for a Grade 1-3 (lower school) teacher because of time constraints imposed by the intense training for the exam. Additionally, many lower school teachers may be early childhood trained, while upper school teachers are likely to be primary

education trained. This study sought to examine whether there are differences in teachers' self-efficacy and attitudes and concerns about inclusion based on grade level.

### **School Demographics**

In Jamaica, there is great disparity in student achievement among schools at the primary level. For example, in the 2014 GSAT exams, private schools scored averages of 81%, 83%, 83%, and 80% in mathematics, science, social studies, and language arts respectively (Ministry of Education, 2015). In comparison, public primary schools scored averages of 59%, 67%, 62%, and 61% in the same subject areas (Ministry of Education, 2015). The disparity in performance is also evident in the location of the schools. Urban schools outperformed rural schools in the same exam. For example, schools in Kingston and St. Andrew, the country's capital and most populated parishes, earned combined averages of 68.5%, 73.5%, 70%, and 68.5% (Ministry of Education, 2015). St. Thomas, on the other hand which is a rural parish earned averages of 56%, 66%, 60%, and 59% (Ministry of Education, 2015). Researchers have revealed that teachers with higher self-efficacy are positively related to higher student achievement (Holzberger, et al., 2013; Leyser et al., 2011). This suggests there may be some disparity in teachers' self-efficacy according to the school's location (private versus public) and school type (rural versus urban). With impending changes to the educational structure, it would be helpful to understand if there are indeed disparities among these teachers regarding their ratings of self-efficacy for inclusive practices based on their school's location and type.

### **Access to Support Resources**

For successful inclusion, there are a number of supports that are required in the regular classrooms. As noted above, inclusion does not simply mean the physical inclusion of these children in regular classes. These children must also receive the needed supports in order to be appropriately educated. Research in inclusive elementary classrooms in Canada found that regular education teachers rated additional support in the classroom for students to be among the most important supports needed for teachers in inclusive classrooms (Horne, Timmons, & Adamowycz, 2008). Teachers also require more personnel support dependent on the severity of the disability (McNally, Cole, & Waugh, 2001). In fact, for inclusion to be effective, collaboration with other specialized personnel such as a speech pathologist or special education teacher is needed. Researchers have found that the collaboration and joint approach to supporting the child is even more crucial than the specific characteristics of the child with special needs (Odom, Buysse, & Soukakou, 2011).

### **Perceived School Climate**

School climate is a multidimensional construct that is described as the character and quality of the school environment (O'Malley, Voight, Renshaw, & Eklund, 2015). The school climate is a perception that is formed by an individual based on patterns of cultural norms within the environment and revolves around the interpersonal relationships between staff, administrators, and students in the teaching and learning process. It is an important construct to examine because researchers have found that

positive perceptions of school climate have been associated with positive outcomes for student achievement, avoidance of negative and disruptive behavior, and a contribution to positive mental health of students (Collie et al., 2012; O'Malley et al., 2015). School climate has been measured from both the perspective of the students as well as the teachers and has produced these positive associations for students. In particular, O'Malley et al. (2015) found that school climate was an important predictor of grade point average (GPA) counteracting the effect of various family structures and the homeschool risk. Although school climate is well studied in relation to student outcomes, much less attention has been given to teacher outcomes. Research by Collie et al. (2012) corroborated results and extended upon a single study that revealed that school climate was a significant predictor of teacher self-efficacy as well as teacher stress and job satisfaction. School climate has also been found to predict teacher commitment (Collie, Shapka, & Perry, 2011). No known studies have been conducted in Jamaica on the relationship between school climate and teacher self-efficacy or the self-efficacy for inclusive practices.

### **Pedagogical Beliefs**

Pedagogical beliefs refers to teachers' beliefs about the teaching and learning process. Research on this topic has yielded results that teachers' pedagogical beliefs impact their classroom practices- in particular, their approaches to planning and conduction of lessons (Lim, & Chai, 2008). Pedagogical beliefs are divided into traditional and constructivist approaches. Traditional beliefs are associated with a



didactic approach to teaching with a focus on the teacher as expert and the students as recipients of the knowledge (Feng, Ching Sing, Chin-Chung, & Min-Hsien, 2014).

Constructivist approaches on the other hand are student-centred and view the teaching and learning interaction as a process where meaning is constructed (Feng et al., 2014).

More recently, researchers have focused on the relationship between pedagogical beliefs and the use of information technology and the teaching of science in the classroom.

Focusing on the pedagogical beliefs of the teacher is important as the teacher's decision-making regarding lesson planning and approach is central to their pedagogical beliefs (Lim, & Chai, 2008). This would be particularly informative in an inclusive classroom; however, no known studies have been found on the relationship between pedagogical beliefs and self-efficacy for inclusive practices. However, if teachers are required to reform their classroom practices, it is important to study the relationship between their pedagogical beliefs and their perceptions of self-efficacy.

### **Extent of Inclusion Training**

Training is often an important factor discussed in the success of inclusion (Stella, Forlin, & Lan, 2007). Researchers who have examined attitudes to inclusion or self-efficacy have recommended that teacher training be adjusted to incorporate training in inclusion and to foster more favorable attitudes (Haq & Mundia, 2012; Leyser, et al., 2011). Teacher training remains an important variable to study because teachers must be equipped with the necessary skills to teach a diverse population of students. For many countries internationally, this means changes in the curriculum for general education

teachers (Stella et al., 2007). As Stella et al. (2007) highlighted, changes have happened much slower in some countries and there are significant differences in the perception and attitudes toward disabilities in eastern and western cultures. Changes are also slow to happen in developing countries like Jamaica. Importantly, researchers have shown that prior and ongoing training is rated highly as a needed teacher support for inclusion (Horne et al., 2008). Teacher skills in inclusion may not necessarily be acquired by graduation from a general education teacher program in Jamaica. It was therefore necessary to determine the extent of inclusion training and its relationship to the self-efficacy of general education teachers in Jamaica.

### **Attitudes and Concerns About Inclusion**

Teachers' attitudes to inclusion have been found to be an important factor in determining the success of its implementation (Urton, Wilbert, & Hennemann, 2014). Researchers have proven that attitude is an important indicator of planned behavior. More positive attitudes are related to positive behavior while, negative attitudes are related to negative behavior (Urton et al., 2014). Researchers have shown that many teachers and school leaders express mixed views about including children with disabilities in the mainstream classroom. Some important factors have included the years of experience in the classroom and type of training. Beacham and Rouse (2012) found that contrary to prior studies, there were no differences between teachers with more experience and less experienced teachers. Teachers' attitudes to inclusion have also been studied in relationship to self-efficacy. Urton et al. (2014) found that a teacher's self-efficacy has a

positive influence on a teacher's attitude to inclusion (Urton et al., 2014). However, a teacher may have positive attitudes towards inclusion, but feel inefficacious in implementing inclusive practices in the classroom. In this study I examined Jamaican teachers' attitudes to inclusion as a predictor of their self-efficacy for inclusive practices.

### **Self-Efficacy, Attitudes, and Concerns About Inclusion in the Jamaican Context**

There is an impending change in the structure of education in Jamaica even if it is developing slower than other countries. That being said, there is no research that has examined some of the most important factors to the success of inclusion in the country. Most research studies so far have used a self-efficacy measure which examines personal teaching efficacy and general efficacy rather than efficacy for inclusion practices. It was, however, crucial to determine the important predictors for self-efficacy, specifically for inclusive practices, in Jamaican primary education teachers who will have to implement inclusion in their regular classrooms. The attitudes and concerns of these teachers will also be informative as this has yet to be studied. Predictors of self-efficacy, as well as attitudes and concerns for inclusive practices, may be different in Jamaica due to factors such as culture, available resources, and structure of education, among others. By examination of these concepts, administrators in the Ministry of Education will be better able to assess how ready the country is for the implementation of inclusion. This study therefore examined the following variables: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent

of inclusion training, and attitudes to inclusion and their relationship to teachers' self-efficacy for inclusive practices.

### **Problem Statement**

There is a dearth of research in Jamaica on children with special needs, and more specifically those with learning disabilities, in examining how they presently cope within the school system. Lack of resources and financial constraints may inhibit many students from receiving educational services as these are offered exclusively and privately. In 2004, the Task Force on Educational Reform Jamaica estimated that only .34% of the school population benefits from government funded or government aided special education programs (Task Force on Educational Reform Jamaica, 2004). Most other children with special needs are mainstreamed without adequate learning support resulting in underachievement (Task Force on Educational Reform Jamaica, 2004). The report by the Task Force on Educational Reform (2004) also found that teachers were not equipped with training in inclusion. These practices encourage exclusion and are in direct contrast to international standards such as those outlined in the Convention on the Rights of Persons with Disabilities (United Nations, 2006). This report yielded recommendations to implement system-wide early detection and referral for appropriate services. Additionally, it recommended teacher training in inclusion practices as well as prescriptive and diagnostic teaching (Task Force on Educational Reform Jamaica, 2004).

The nation of Jamaica presently has plans to institute a more inclusive educational system. A special education policy supporting inclusion has been drafted and it is

currently being refined. Although macro-level factors, such as infrastructure and funding are crucial, an important responsibility for the success of the new initiative towards inclusion remains with the general education teachers (Leyser et al., 2011; Olayiwola, 2011). The concept of self-efficacy has been used in many areas of research including education and psychology. For example, Tschannen-Moran and McMaster (2009) found that teachers with higher self-efficacy were better at classroom management, were more flexible in approach and held more positive views of children with disabilities being placed in the general classrooms. Teachers with higher self-efficacy have also reaped better outcomes in student performance as well as improved the self-efficacy of their own students (Tschannen-Moran & McMaster, 2009). There is an established link between self-efficacy and these characteristics and outcomes. However, it is still unknown what factors lead to higher self-efficacy in Jamaican teachers working in inclusive environments. In this study, the following variables were studied with regard to their relationship to self-efficacy in order to determine the best predictors: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion. Against the backdrop of a Special Education policy geared towards inclusive practices, this information may be crucial to the effectiveness of the policy.

### **Purpose of the Study**

The purpose of this survey research study was to examine whether there is a predictive relationship between the variables: grade level, type of school, location of

school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, attitudes to inclusion and teachers' ratings of self-efficacy for inclusive practices. The study also examined whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school). This study is crucial in understanding the attitudes of these primary educators towards inclusion as well as how efficacious they perceive themselves and what concerns they have in effecting these inclusive practices.

### **Research Questions and Hypotheses**

The first research question has three separate sets of hypotheses since a multiple regression will be conducted for each component of self-efficacy for inclusive practices (self-efficacy for inclusive instructions, self-efficacy for collaboration, and self-efficacy for managing behavior). The research questions for this study are as follows:

Research Question 1: What is the combined and relative extent to which the following variables predict the self-efficacy for inclusive practices of Jamaican primary education teachers in the regular classroom: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion?

$H_01$ : There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for inclusive instructions.

*H<sub>1</sub>1*: There is a relationship between at least one of the variables and self-efficacy for inclusive instructions.

*H<sub>0</sub>2*: There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for collaboration.

*H<sub>1</sub>2*: There is a relationship between at least one of the variables and self-efficacy for collaboration.

*H<sub>0</sub>3*: There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for managing behaviour.

*H<sub>1</sub>3*: There is a relationship between at least one of the variables and self-efficacy for managing behavior.

Research Question 2: What is the extent of difference in the attitudes and concerns about inclusion by the grade level taught?

*H<sub>0</sub>4*: There are no significant differences in the attitudes and concerns about inclusion between lower school and upper school teachers (grade level).

*H<sub>1</sub>4*: There are significant differences in the attitudes and concerns about inclusion between lower school and upper school teachers (grade level).

### **Theoretical Foundation**

The major theoretical framework for this study is Bandura's Social Learning Theory. In his work, Bandura relied upon traditional concepts of behaviorism such as rewards and punishments (Bandura, 1977). However, he expanded upon these concepts because he believed that although learning is a cognitive process, it takes place in a social context. This means that persons learn by observing and without any direct rewards or punishments for their behavior (Bandura, 1977). They make choices of behavior by vicarious reinforcement which is by observing how others are reinforced for their behavior (Bandura, 1977). Two important components of Social Learning Theory are imitation and modelling because behavior has to be demonstrated by someone and then mimicked by the other. Bandura (1982) specified that humans tend to be goal directed and self-evaluative regarding their behavior, so they will engage in behaviors that have rewards and refrain from those that are aversive in nature.

In his discussions of these goal-directed components to the Social Learning Theory, Bandura discussed the concept of self-efficacy. He described self-efficacy as one's perception of one's ability to execute courses of action as needed to manage potential situations (Bandura, 1982). He added that self-efficacy is not static in nature but instead is a dynamic cognitive, behavioral and emotional process. Drawing on the major tenets of Social Learning Theory, Bandura (1982) explained that persons will avoid situations where they appraise their capabilities to be low. The evaluation of self-efficacy will also determine how much effort and preparation a person will engage in. That is,



persons with higher self-efficacy produce higher performance and lower emotional arousal (Bandura, 1982). The reverse is true for those with low self-efficacy. Bandura went further to state that assessment on percept of self-efficacy can explain many phenomena including coping mechanisms in managing stress or failure, achievement as well as career pursuits. Bandura distinguished that self-efficacy consists of both outcome expectation and efficacy expectation. While the former is concerned with evaluating whether a specific behavior will lead to a specific outcome, the latter refers to assessing whether one has the capability to execute the desired behavior (Bandura, 1977).

The concept of self-efficacy has been used in many areas of research including education and psychology. In particular, teacher self-efficacy has been linked to many characteristics. For example, Tschannen-Moran and McMaster (2009) found that teachers with higher self-efficacy were better at classroom management, were more flexible in approach and held more positive views of children with disabilities being placed in the general classrooms. Teachers with higher self-efficacy have also reaped better outcomes in student performance as well as improve the self-efficacy of their own students (Tschannen-Moran & McMaster, 2009). An international study conducted in Israel by Leyser, Zeiger and Romi (2011) found that special education preservice teachers had higher self-efficacy than general education preservice teachers. Those teachers with more experience and training with children with disabilities also had higher self-efficacy than those who had no exposure or training (Leyser et al., 2011). A more detailed review of the literature on self-efficacy is documented in Chapter 2.

In respect to this particular study, the Government of Jamaica intends to implement inclusion and is in the process of drafting a Special Education Policy. This means that general education teachers will soon have to teach children with a variety of disabilities in their regular classrooms. This study analysed the relationship between a list of independent variables and teachers' ratings of their self-efficacy for inclusive practices. The independent variables are: grade level, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, location of school, type of school and attitudes to inclusion. Based on Bandura's theory, this will inform of how capable and ready teachers are in carrying out the task of inclusion. The higher the self-efficacy, the better the capability. The lower the self-efficacy, the lower the capability. Based on the relationship with self-efficacy, it can also be determined which variables predict high self-efficacy. This has huge implications for intrinsic motivation, preparation and approach of the teachers in implementing inclusion. In Jamaica, general education teachers are likely to have less training in teaching children with varied disabilities than special education teachers. Studying self-efficacy will also inform as to whether Jamaican general education teachers believe that their performance in the classroom will lead to better student outcomes. This study sought to determine how these variables are likely to affect the effective implementation of the policy via examining the self-efficacy of the teachers.

### **Nature of the Study**

A quantitative research design was chosen for this study. Creswell (2009) stated that choosing a research design is based on the combination of the philosophical worldview of the researcher, selected strategies of inquiry and the research methods. The philosophical worldview was post-positivist as the focus was on relationships between variables such as cause and effect (Creswell, 2009). This research study was centered around a predetermined theory which could be measured by using instruments that speak to the objective reality of participants. This worldview was reductionist as the intent was to reduce the theory to specific testable variables. The instruments reduced the opinions and beliefs to numeric data which was collected. Therefore, the post-positivist worldview was conducive to quantitative strategies of enquiry. Since measuring self-efficacy could not be done with a true experiment, this was ruled out and a non-experimental method was chosen. This strategy of inquiry chosen was a cross-sectional, correlational survey research study and the research methods involved using predetermined questionnaires and test measures which was completed by participants. This data was then subjected to statistical analysis and interpretation.

The independent variables in the first research question were: grade level, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, location of school, type of school and attitudes to inclusion. The dependent variable was the teachers' self-efficacy for inclusive practices. In the second research question, grade level was the independent variable, while teachers' attitudes and concerns

to inclusion were the dependent variables. Data was collected from Jamaican primary education teachers via a questionnaire with various test measures and demographic information. Data was analyzed after entry into the IBM SPSS statistical software program. Accuracy of data was first attended to by double checking entries and running frequencies for missing data. Data was then cleaned by satisfying the assumptions of the statistical tests such as identifying outliers, determining linearity between the independent and dependent variables, assessing independence of observations, homoscedasticity, normal distribution of the residuals and multicollinearity.

Firstly, descriptive analysis was conducted by running frequencies, means and standard deviations of each independent variable. Secondly, a multiple linear regression was conducted in order to determine the significance of a predictive relationship between the listed independent variables and teachers' self-efficacy for inclusive relationships. The effect size as well as values for the  $F$  test,  $df$  and  $p$  were reported as well as a decision of whether or not to reject the null hypothesis. Thirdly, a one-way ANOVA was conducted in order to examine whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school). Effect size, along with the means, standard deviations,  $F$  value, degrees of freedom and the significance value were reported before a statement was made about whether or not to reject the null hypothesis.

### **Operational Definitions**

*Grade level:* The grade in which the teacher is presently teaching. In Jamaica, Primary school starts at grade 1 and ends in grade 6 (Ministry of Education, 2015). For the purposes of this study, grade level refers to a dichotomy between upper school teachers (Grades 4-6/ages 8 to 12 years) (Wilkie, 2014) and lower school teachers (Grade 1-3/ages 6 to 8 years) (Becker, 2014).

*Support resources:* Supports and resources needed by teachers in the regular classroom in order to effectively implement inclusion which may consist of human and physical resources (Horne, Timmons, & Adamowycz, 2008; Lindsay, 2007).

*Perceived school climate:* The character and quality of the school environment (O'Malley et al., 2015) as perceived by the teachers.

*Pedagogical beliefs:* Teacher's beliefs about the teaching and learning process. These beliefs can either be either traditional or constructivist in nature (Lim, & Chai, 2008).

*Extent of inclusion training:* Initial teacher education or ongoing teacher training while in service (Florian & Linklater, 2010). In this study I examined the degree to which a teacher rates his or her training in inclusive practices.

*Self-efficacy for inclusive practices:* An individual's belief about his or her abilities to handle the rigors of a given task (Bandura 1977, 1982). In this study I examined teachers' beliefs about their abilities to implement inclusive practices.

### **Assumptions**

One assumption of this study was that participants answered the survey openly and honestly. A second assumption was that participants did not collude in their responses. Another assumption was that the sample was representative of all general education teachers in primary schools in Jamaica. Additionally, it was assumed that the teachers were self-aware as well as familiar with such terms as mild disabilities and inclusion. In the context of this study, these assumptions were made because of the choice to collect data by administering questionnaires and having to choose a sample rather than administering to the entire population of primary school teachers due to cost and efficiency. To ensure the best estimate that these assumptions are true, steps were taken to protect confidentiality and anonymity of the participants such as issuing identification numbers instead of using names. Additionally, surveys were conducted in small groups and participants were allowed to decline or withdraw participation at any time. Care was taken to select an appropriate sampling strategy and operational definitions were listed on questionnaires.

### **Scope and Delimitations**

In this study, I focused on general education teachers who teach in primary schools in Jamaica. This specific sample was chosen due to the trajectory of education in Jamaica. Primary schooling in Jamaica officially begins in Grade 1 and ends in Grade 6 and therefore the process of inclusion within the schools is likely to begin in primary education. Because upper school teachers prepare students for the GSAT exam, it was

thought that they may have different views on inclusion than lower school teachers and hence the differentiation by grade level. Specific independent variables were chosen after careful review of the literature in order to examine their relationship with teachers' self-efficacy for inclusive practices. Some of these variables have been tested in other similar studies, while others have been under researched, but all were found to be pertinent to study in the Jamaica population.

One of the delimitations of this study was that the research is only generalizable to general education teachers in Jamaica who teach in primary education. Results of this research cannot be applied to early childhood or secondary education teachers. Another delimitation involves the choice of independent variables. Although this study examined the relationship between the chosen independent variables and the dependent variable of self-efficacy, it should not be assumed that these are the only predictors of self-efficacy. Additionally, while the study results provided information as to what the relationship is between the variables, it did not answer why the relationship exists.

### **Limitations**

Limitations of the study include the fact that there are no self-efficacy measures, or any of the other test measures used in this study, that have been normed on the Jamaican population. The measures used in this study have therefore not been validated in the population that it was used. However, the self-efficacy measure used was one that has been proven to have cross-cultural validity and reliability. Validity and reliability were also checked for the other test measures used. Another limitation of the study was

that confounding variables may affect the responses by participants. Because this study was not a true experiment, it is not possible to say whether other unknown variables may affect the outcome. Additionally, because the study was correlational, only the relationships can be analysed and causation may not be assumed. This design was, however, felt to be the best fit as the independent variables cannot be manipulated as in the case of true experiments. The various independent variables were chosen after review of the literature and determination of their likely importance to the dependent variables.

### **Significance**

There is presently a dearth of information conducted on mild disabilities and inclusion in Jamaica and this study will add to the relevant literature. Jamaica is at a crucial point in amending the structure of the educational system to be in line with international standards. This study highlights the attitudes, self-efficacy, and concerns of teachers, who are critical to the success of inclusion. The attitudes and self-efficacy of teachers have been found to be key indicators of resulting behavior and classroom practices (Holzberger et al., 2013; Leyser et al., 2011; Urton et al., 2014). This study I sought to understand some of the predictors of high self-efficacy of Jamaican primary educators as well as their attitudes and concerns about inclusion. Therefore, findings of the study may provide needed information that can be used in the development of the new special education policy as well as in the training of general education teachers who will work in inclusive classrooms. The change in educational structure towards inclusion is a vehicle for social change. Hence, results of this study may also set a foundation for



social change by advancing the educational system on a whole and therefore increase Jamaica's compliance with world-wide standards of equal access to a good education for all students irrespective of disability.

### **Summary**

The inclusion of children with special needs in the regular classroom has become an international standard for education. Born out of developments on human rights, social justice and equality, many countries have made changes in their educational structure towards inclusion. Although inclusion has not been implemented in Jamaica as yet, a task force commissioned in 2004 found that Jamaica should remove itself from exclusive practices and step in line with international ideology regarding inclusion. A special education policy is now being drafted. It is against this backdrop that this research is being conducted to examine the self-efficacy for inclusive practices by the Jamaican primary education teachers as well as their attitudes and concerns towards inclusion. Additionally, this researcher examined whether a chosen set of independent variables predict self-efficacy ratings. There is no known research on this topic in the country and results may prove vital in the development of educational policy.

This chapter provided an overview to the study by highlighting the research problem as well as the specific purpose of this study, its theoretical basis, research questions and hypotheses and methodological framework. In conclusion, the assumptions, limitations, scope and delimitations were addressed. Given the description

of the educational situation presented in the background, this research study has much significance for future developments in education and psychology in the country.

In the next chapter, a review of literature is conducted. This begins with an overview, definition and history of inclusion. As previously stated, self-efficacy is one of the factors that is key to the success of inclusion. The literature review therefore focuses on the development of the self-efficacy concept, its theoretical underpinnings and the findings of current research in the field. There is also discussion of the other variables that may affect teachers' ratings of self-efficacy.

## Chapter 2: Literature Review

### **Introduction**

The Task Force on Educational Reform Jamaica (2004) found that many children with special needs were not receiving appropriate education. Using statistics by the UNESCO, World Health Organization (WHO), and other recent reports, the Task Force on Educational Reform Jamaica (2004) estimated that between 87,000 and 173, 000 children in the school system in Jamaica have special needs. However, only 2,500 students were documented to be receiving services in government and government-aided programs. The result of this is that many children are unidentified within the mainstream system, not receiving the needed support or appropriate educational placement (Task Force on Educational Reform Jamaica, 2004). Additionally, concerns were raised about the capability of teachers within the system to include and teach the children with special needs within the regular classroom. These practices leave children with special needs in a vulnerable *at-risk* state in a system that is exclusive and contrary to international standards of education that encourages inclusion (Task Force on Educational Reform Jamaica, 2004).

An important foundation for inclusion was documentation by the United Nations in the Salamanca Statement that every child has a right to an appropriate education, taking into account his or her specific learning needs (United Nations, 2007). Specifically, children should be taught in general education classrooms; included with their peers while also accessing any support services necessary for them to learn. This

shift in thinking towards inclusion has taken place differently across countries but generally, legislation had been the impetus in creating this educational reform. However, for developing countries for like Jamaica, change is a slower process. Many factors may contribute to this such as culture, infrastructure, and financial ability to support inclusion (Lay Wah Lee & Hui Min Low, 2013; Leyser et al., 2011).

There are, however, other factors that impact the success of inclusion. While Leyser et al. (2011) indicated that macro-level factors were indeed detrimental to determining the effectiveness of the implementation of inclusion, micro-level factors remain important as well. For example, one school and classroom factor which is key to the success of inclusion depends on the ability and willingness of the staff to carry out these procedures. The teachers are the vehicle by which instruction occurs and their attitudes and perceptions regarding the tasks set before them are crucial to the success of any system-wide educational plan (Leyser et al., 2011; Olayiwola, 2011). The teachers must, therefore, perceive themselves as efficacious in their ability to include children of various ability levels and teach each one adequately. Teachers' ratings of their own abilities in effecting inclusion can be studied by examining the concept of self-efficacy. Self-efficacy ratings present a means for teachers to evaluate their abilities and these self-ratings are telling of the degree of success of inclusion.

An education system transformation program has been instituted to effect recommendations of the Task Force on Educational Reform Jamaica (2004). One major activity of the program is to upgrade provisions for children with special needs by way of

a Special Education policy highlighting the need for inclusion (Ministry of Education, 2015). There, is however, a dearth of information and research on this topic in Jamaica. It is unknown as to what factors predict high self-efficacy in Jamaican primary school teachers. This study therefore focussed on several variables: grade level, location of school, type of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes towards inclusion to determine the best predictors of self-efficacy in Jamaican teachers. Additionally, the study also examined whether there are differences in attitudes and concerns towards inclusion by grade level taught (upper school versus lower school). Studying the relationship between these variables may be instrumental to the implementation of the Special Education Policy. This chapter reviews the literature research strategies, theoretical foundation relevant to the study as well as the history of inclusion and the definition of inclusion with the global context. The advantages and disadvantages of inclusion are then discussed followed by a review of published literature related to all the variables listed in respect to inclusive education and a rationale as to the inclusion of the variable in the study.

### **Literature Research Strategy**

A database search of PSYCH INFO and Education Search Complete was conducted using the search terms “disabilities”, “learning disabilities”, “children”, “grade level”, “school climate”, “attitudes”, “self-efficacy”, “support”, “training”, “teacher beliefs”, “pedagogical beliefs”, “constructivism”, “inclusive education” and “inclusion”. Articles were restricted to peer-referenced, scholarly articles published within the last 10

years. Exceptions for articles outside of the 10 year date range were made for seminal literature on the theoretical foundation as well as articles on the status of inclusion in Jamaica, (as these were few).

### **Theoretical Foundation**

The theoretical framework for this study is grounded in Social Learning theory which was posited by Albert Bandura. Bandura believed that humans were not blank slates, but that learning, although a cognitive process, also took place in the social realm and is heavily influenced by it (Bandura, 1979). In social learning, imitation and modelling are two important concepts. This is because humans can learn vicariously through observing the rewards and punishments meted out to others. This thereby serves as a guide for which behaviors to engage in as well as which ones to avoid. Therefore, social interaction helps to guide and shape behavior.

Bandura (1977) discussed a theory for behavior change and this centered on the concept that he coined self-efficacy. Self-efficacy is defined as a person's belief about his/her ability to handle the rigors of a given task (Bandura 1977; 1982). In this theory of behavior change, it is hypothesized that psychological procedures may affect the level and intensity of self-efficacy. One's held expectations of self-efficacy, in turn, determines the degree of motivation to overcome obstacles (Bandura, 1977). In his theory, Bandura differentiates between two components: outcome expectancy and efficacy expectancy. Outcome expectancy refers to the belief that a specific behavior will lead to a specific outcome. Efficacy expectancy refers to the belief that one can execute the behavior

required for the desired outcome. The premise of this theory is Bandura's belief that humans are goal oriented and self-evaluative (Bandura, 1979). Goals are part of the cognitive process that pre-empts behavior (Bandura, 1993; 1979). Goals are determined from forward planning in order to understand what consequences may lie in the future (Bandura, 1977; 1993). Other than assessing goals, humans also evaluate themselves on being able to achieve the goals. Bandura states that our expectations of efficacy are shaped by personal successes, vicarious experiences, verbal persuasion, and emotional arousal (Bandura, 1977).

Bandura's findings on self-efficacy present interesting discourse in relation to ability. Bandura stated that self-efficacy can be a more important indicator of successful performance and positive attitudes than actual ability (Bandura, 1993). This is because, people with high self-efficacy tend to see success as achievable and persist under adverse conditions. Those who have the required ability, but have low self-efficacy, tend to be overcome with self-doubt in the face of adversity and inhibit performance (Bandura, 1993). Self-efficacy therefore regulates motivation and arousal such as anxiety when faced with challenging tasks (Bandura, 1993).

Bandura likened this situation to the classroom environment in regards to teachers' efficacy. Since human learning is partly affected by the environment, teachers' self-efficacy plays an important role in shaping the classroom learning environment for students. In this regard, teachers with high self-efficacy devote more time to academic learning, are more patient in helping struggling students, and use positive reinforcement

(Bandura, 1993). Those with low efficacy have been found to be less motivated and resort to punitive measures for control (Bandura, 1993). In addition, because of the coping mechanisms of teachers with high efficacy, they tend to set challenging goals for themselves to master (Bandura, 1993). Teacher efficacy has generated much interest in the fields of psychology and education. There are important implications of studying teachers' efficacy as relates to reform such as inclusive practices and this is why the theory was chosen for this study. Researchers have found that studying self-efficacy has both outcomes for the teacher as well as the students. For instance, teachers with higher self-efficacy tend to be more flexible in approach, are better skilled at managing their classrooms and are more supportive of including children with disabilities in the regular classroom (Tschannen-Moran & McMaster, 2009). Additionally, students with teachers who rate themselves as highly efficacious, perform better academically and also show increased self-esteem and motivation (Klassen & Chiu, 2010; Stipek, 2012). Because of the positive outcomes that can occur when teachers are high in self-efficacy, it is important to assess Jamaican primary teachers' self-efficacy as it pertains specifically to including children with special needs in the regular classroom. This study examined which variables are the most important predictors of teacher efficacy for inclusive practices in Jamaican primary school educators.

### **History of Inclusion**

Inclusion or inclusive education is still a relatively new concept. Adequate understanding of this concept is gained from examining the historical concept of



education and how this affected people's perceptions of persons with disability. Previous to the 19<sup>th</sup> century, education in Europe was considered a privilege and available only to the upper class of society (Kudlačova, 2008). Additionally, humans who were considered healthy frequently had different and unequal laws in comparison to those who were disabled as they were often rejected or even killed as babies (Kudlačova, 2008; Spaulding, & Pratt, 2015). As stated by Spaulding and Pratt (2015), the care and education of persons with disabilities over time has depended upon the ideology and cultural trends of a society. Therefore, the approach taken with persons with disabilities began to change somewhat from the 16<sup>th</sup> to the 18<sup>th</sup> century to the provision of specialized care, when philosophers began to conceptualize humans as autonomous beings with intellect, and human dignity became valued (Kudlačova, 2008).

However, it was not until the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century that individuals began to receive institutionalized special care (Jahnukainen, 2011). The development of science and technology was instrumental in this area. Firstly, it gave rise to industrialization and created a need for a workforce, hence the investment in education by making it mandatory for all persons (Spaulding, & Pratt, 2015). Secondly, development of scientific disciplines such as psychology, sociology, and pedagogy flourished and with these developments came technical thinking with regards to education (Kudlačova, 2008). There were also changes in legislation as emphasis on human dignity and a newfound focus on child development spurred the development of

the Universal Declaration of Human Rights in 1948 and in 1959 the Declaration of the Rights of the Child (Kudlačova, 2008).

A cross-country comparison of some developed countries show that in the late 19<sup>th</sup> century and beginnings of the 20<sup>th</sup> century, disabled frequently meant visible handicaps (such as deaf, blind, or physical handicaps) and these children were most likely to be identified and receive treatment, albeit in separate, residential facilities (Jahnukainen, 2011; Kudlačova, 2008) as opposed to many children with developmental delays which were not detected before school age (Odom, Buysse, & Soukakou, 2011). Special facilities were also created for persons who were deemed mentally retarded or feeble minded (Jahnukainen, 2011, Spaulding & Pratt, 2015). In Alberta, Canada, as in other countries, many of these facilities were out of the province and so parents were often separated from their children who were disabled in order for them to receive education (Jahnukainen, 2011). The development of psychometrics and eugenics placed focus on improving the genetic quality of humans and therefore it became commonplace to separate persons by their natural intellectual abilities (Spaulding & Pratt, 2015; Thomas, 2013). Notably, pedagogy became a focus in education and a dual education system was created whereby there was special pedagogy for the disabled (Jahnukainen, 2011). Academic instruction was therefore dispensed according to these predisposed abilities causing segregation based on ability. Many teachers also believed that children with disabilities were better off educated in separate facilities than their peers (Spaulding & Pratt, 2015).

In the 1950s to 1980s, there was much rhetoric regarding dismantling the exclusive practices and segregation that pervaded the education system (Thomas, 2013). Notably, however, changes in the education system away from segregation have been largely credited to social and political movements instead of educational reform (Aron & Loprest, 2012; Stella et al., 2007; Thomas, 2013). For example, in the United States, the Civil Rights movement of the 1960s was instrumental in publicly highlighting the notion that separate was inherently unequal (Thomas, 2013). Although much of the movement examined issues of race, it was also centered on inclusion as embracing diversity and achieving social justice. In both Canada and Finland, there was also a shift in the 1960s, as there was an increase in the identification of children with disabilities which further resulted in the provision of more special education classes as well as the types of special education classes.

In the post-modern period, starting in the 1970s, societies moved beyond industrialization and internationalization became a focus (Kudlačova, 2008). Before this period, the constitutional and civil rights of Americans, as well as other countries were not protected by federal laws. However, in the United States, this changed with the Rehabilitation Act of 1973 (Aron & Loprest, 2012). In particular, section 504 of this act addressed the prohibition of discrimination by any entities receiving federal funding. Since schools receive federal funding, it became mandatory for children who were disabled, along with those who were not disabled to be entitled to an appropriate education (Aron & Loprest, 2012).

Discrimination against persons with disabilities was due to the perception of these individuals using a deficit model where the focus was on pathology and limitations (Peters, 2007). Much of this rhetoric continued into the 1980s where there were opposing forces in society adamant for removing segregation. In the United States, more than 1 million children with disabilities prior to 1975 had no access to public education (Aron & Loprest, 2012). Many of these children were served in state-run residential facilities while many other were rejected from schools (Aron & Loprest, 2012). Of those that were granted access to public education, approximately 3.5 million of them were taught in segregated facilities (Aron & Loprest, 2012).

The discourse of the social and political movements had a slow but definite impact, however, and changes became evident in society. As a representation of changing ideologies regarding special needs during the post-modern period, the social model eventually replaced the deficit model as a means of comprehending disability (Peters, 2007; Thomas, 2013). The social model of disability examines the societal and environmental barriers faced by persons with disabilities as the main source of under achievement by persons with disabilities. This includes stigma and discrimination and exclusion of this population. Challenging beliefs on ability and achievement meant that educational institutions were part of the failure for those with disabilities to achieve success in society (Thomas, 2013). Therefore, all students should fall under the category of general education as the school environments should be flexible in meeting the needs of all students (Thomas, 2013). There was consequently a systematic and institutional

push towards integrating or mainstreaming children with disabilities with their peers to be educated (Aron & Loprest, 2012; Brackenreed, 2008; Jahnukainen, 2011). However, for all children to receive appropriate education, the school system must be flexible to supporting the needs of each child. If not, segregation continues within the mainstream classroom, although children are integrated (Symeonidou & Phytiaka, 2014). The term inclusion finally replaced integration with the caveat that a diverse population of students are served together in the mainstream classroom with the additional supports provided as needed (Horne, Timmons, & Adamowycz, 2008).

### **Defining Inclusion in the Global Context**

The term inclusion became popular in the early 1990s. UNESCO's Salamanca Conference in 1994 can be referred to as a defining point for inclusive education (Blândul, 2010; Brackenreed, 2008; Monsen, Ewing, & Kwoka, 2011; Stella, Forlin, & Lan, 2007). At this conference, 92 countries and 25 international organizations agreed to the statement that supported the education of a diverse student population where all are included in the regular classroom to the greatest extent possible (UNESCO, 1994). Inclusive education was referred to in the statement as education that meets the needs of all children, particularly those with special needs (UNESCO, 1994). The conference was aimed at re-commitment from countries to the concept of education for all. Additionally, the statement outlined principles, policies, and best practices that would be the international approach to enhancing inclusive education as it was felt that a global directive was needed to change the outlook of special education (UNESCO, 1994).

Since this monumental conference, inclusion has evolved differently in various countries. While some countries have gone the route of full inclusion such as Denmark and Sweden, other countries have defined inclusion as a continuum of services. This experience of inclusion as a continuum is used by countries such as Australia, the United Kingdom, and the United States where the child is placed in the least restrictive environment along the continuum (Aron & Loprest, 2012; Stella et al., 2007). Therefore, inclusion can be defined by the way it is enacted (Odom, Buysse, & Soukakou, 2011). That is to say, that inclusion is defined by the systems, individuals, organizational structure and scope of service delivery options as well as funding initiatives involved in the endeavor (Jahnukainen, 2011; Odom et al., 2011). For instance, in Finland, they previously employed a part-time special education model and slowly transitioned to the placement of the least restrictive environment along a continuum (Jahnukainen, 2011). Formal assessments or referrals are not needed for the children to attain intervention. The main goal of the system is to prevent and remediate mild problems by focusing on reading, writing, mathematics, and behavioral challenges (Jahnukainen, 2011). Using this Finnish model, preferred placement begins within the regular classroom. Children are then moved to other points on the continuum only as needed.

The enactment of inclusion in the United States evolved similarly to Finland. The Individuals with Disabilities Act of 1975 (IDEA; 1975), by using assessment and explicit categorization, was the precursor to the current Response to Intervention (RTI) model. IDEA entitled all children to free public education (Bouck, 2009). Children with

additional needs were entitled to their required support services without charge and to the greatest extent possible, they were to be schooled with their peers. The IDEA itemized the various categories under which children could qualify for support services, making it more expansive so that more children could benefit from support services (Aron & Loprest, 2012). For example, along with categories such as: deaf, blind and mental retardation, children could now receive services for speech and language impairments and learning disabilities. The latter two categories were not well-understood and often overlooked. Revisions of the IDEA over time have mainly focused on funding, identification, and eligibility (Aron & Loprest, 2012). IDEA was reauthorized in 2004 and the Response to Intervention (RTI) approach is now used to identify children with learning disabilities (Bouck, 2009). This approach uses a tier system that begins with research-based instruction to benefit all students, followed by early screening and a variety of interventions starting with the least restrictive to the student. Therefore, only few students should require special education services in an exclusive setting.

On the other hand, other countries defined inclusion simply as full inclusion. One example of this can be found in Canada. In contrast to the slow and evolving process of inclusion in Finland and the United States, in Canada the process moved very quickly (Brackenreed, 2008). In the 1990s, the resource room model of special education was demolished and approximately 60% of special education students were placed within the regular education system (Jahnukainen, 2011). There were either exclusive settings or full inclusion. Much emphasis was placed on testing and labelling children and schools

receive extra funding based on how many children with severe disabilities they serve. School boards receive a specific amount of base instructional funding and this expected to cover expenses of children in the mild to moderate category irrespective of how many children in a schools meet this eligibility (Jahnukainen, 2011).

For many developing counties, inclusion is still not well defined or even enacted. For instance, research in India reveals that the country has legislation in support of inclusion (Sharma, Moore, & Sonawane, 2009). However, in practice, it is enacted in a disjointed way and many students with disabilities remain without any access to education. In fact, Sharma et al. (2009) emphasized that there is confusion about the term and it is often used interchangeably with integration. Similarly, research in Kenya demonstrates that there is still much progress needed to achieve inclusion. An estimated 1882 public, primary, and secondary schools practice some form of inclusion, although it is unclear which children with disabilities are included (Elder, 2015). In Kenya, approximately half of the estimated figure of children with disabilities in primary schools attend segregated schools and many attend residential special schools which means they do not get to live with their families (Elder, 2015). Kenya has ratified many international declarations and policies as well, but inclusion is also fragmented and ambiguous in definition in policy documents (Elder, 2015). Furthermore, developing countries face many barriers to inclusion such as financial inability to adequately prepare infrastructure, inadequate teacher training, lack of resources, and negative attitudes (Leyser et al., 2011). Although Kenya demonstrates some potential for implementing inclusion by the fact that



some schools have begun to implement it, it is concerning that approximately 10% of children with disabilities in the country do not have access to any type of education (Edler, 2015).

The sentiment of slow progress towards inclusion despite legislation is also a predicament in Jamaica which is another developing country. Published literature on the topic of inclusion is scant and what literature there is, is dated. A monograph paper by Bergsma (2000) discussed the situation in the Caribbean regarding moving towards inclusive education. The author found that many Caribbean nations, including Jamaica, had agreed to the educational philosophy of “Education for All” which was first articulated at a World Conference on education in Thailand, 1990.

Following the Salamanca conference in 1994, Jamaica instituted a five year development plan to improve the quality of and access to education for children in grades 1 to 9 while simultaneously upgrading the access to special education at both the primary and secondary education levels (Bergsma, 2000). Bergsma (2000) cited statistics from The Economics and Social Survey Jamaica (1998) to reveal that approximately 31,982 primary school children nationwide were believed to have special needs. Of that number, 28,784 were thought to have mild/moderate disabilities while the remaining 3,198 were profound. Children with mild to moderate disabilities were educated in the mainstream primary schools, while children with profound disabilities were usually educated exclusively. Also, educated in exclusive settings were children with physical disabilities, the deaf and the blind. It was noted however, that although there is a separate and parallel

system, many children with special needs were not served due to long wait lists and issues with access (Bergsma, 2000). Additionally, for those with mild to moderate disabilities who were served in the mainstream, many students suffered from ridicule and decreased self-esteem. There are no additional supports available in mainstream and also a shortage of human resources. Bergsma highlighted that for inclusion to be feasible in the Caribbean, macro level factors would need reform such as: legislation, teacher education, and a supplemental resource system.

The 2004 review of the status of education in Jamaica addressed that children with special needs were not being identified and given the needed supports in order to achieve appropriate education (Task Force on Educational Reform Jamaica, 2004). A system of referral and identification was recommended and an education system transformation program was assembled. It is the mandate of this program to, among many other things, improve the special education system (Ministry of Education, Youth and Information, 2015). This is presently being spearheaded by a Special Education Policy which emphasises inclusion for children with special needs (Ministry of Education, Youth and Information, 2015).

Mentz and Barrett (2011) conducted a comparative analysis between Jamaica and South Africa in respect to progress with inclusive education and leadership. The authors found that Jamaica had made some commitments towards facilitating inclusive environments. For example, new schools are required to be accessible to those with physical challenges, the GSAT exam can now be conducted in Braille, and many children

with developmental abilities now graduate high school with vocational or technical skills (Mentz & Barrett, 2011). On the other hand, Mentz and Barrett (2011) found that infrastructure and basic resources in schools were lacking and underfunded. Schools and classrooms were largely overcrowded and principals were not adequately prepared to lead the charge in creating an inclusive environment (Mentz & Barrett, 2011).

Although internationally, inclusion is a commonly used term referring to a new approach to education, it is notable that its definition is still considered quite ambiguous because of how it is enacted in each country (Odom et al., 2011). For many developing countries, there has been difficulty moving from legislation to implementation and therefore, inclusion may occur sporadically. Developed countries have made more system-wide progress and have either gone the route of full inclusion or inclusion along a continuum of the least restrictive environment. Jamaica is still working on devising legislation to support inclusive practices in schools. This study therefore will provide useful information on enacting inclusion in the Jamaican educational system.

### **Advantages and Criticisms of Inclusion**

Although inclusion can be perceived as an international trend, there is discussion about how beneficial it is. Researchers attest that inclusion does not only benefit those with disabilities. Instead, the positive effects of inclusion have been said to extend to all the students (especially in the area of social functioning) and even the teachers (Horne, 2013; Jeong, Tyler-Wood, Kinnison, & Morrison, 2014). A study by Chmiliar (2009) examined the perspectives of inclusion from the major stakeholders: the parents, students,

and teachers. Results revealed that students preferred placement in inclusive classrooms as they had more friends and experienced less bullying. Students also pointed to strong teacher-student relationships, receiving positive feedback from teachers and helpful adaptations in the classroom to be reasons for preferring this inclusive placement (Chmiliar, 2009). Parents were also happy about the inclusive environment, possibly due to the positive teacher-student relationships and teachers were generally positive towards inclusion (Chmiliar, 2009). It is important to note that although Chmiliar (2009) found positive results from all stakeholders (students, parents, and teachers), the study solely focused on children with learning disabilities. Many researchers have found that teachers are more likely to be positive about including children with mild disabilities, or those with academic or physical challenges (Chmiliar, 2009; Jeong et al., 2014; Sharma, Moore, & Sonawane, 2009). On the other hand, teachers expressed negative views towards including those children who require significant accommodations or those with behavioral and disruptive disorders in the regular classroom (Bhatnagar & Das, 2014; Chmiliar, 2009; Jeong et al., 2014; Sharma et al., 2009).

Although inclusion has been found to be beneficial, there is criticism that there is not enough empirical evidence that supports its effectiveness (Lindsay, 2007). However, researchers have also stated that studying inclusion can prove difficult for a number of reasons. Firstly, the term inclusion is still unclear in many countries (Lindsay, 2007). Although the term has been changed from integration, and may be reflected as so in legislation, in practice there may be very little difference. Also, disability may be defined

and categorized differently in various countries as discussed earlier. This makes it difficult to compare studies. Additionally, support services and interventions provided to children with special needs vary widely (Lindsay, 2007). Beacham and Rose (2012) posited that students are not always placed in successful inclusive classrooms and therefore at times inclusion can be detrimental. This is because inclusion requires many factors for success (Bhatnagar & Das, 2014). This next section outlines some important variables for inclusion and discusses the relevant literature for why it was chosen for this study.

### **Rationale for Selection of Key Variables**

#### **Grade Level**

One variable that is important to inclusion is the grade level taught by teachers. Implementing inclusion at different levels of the school system may present unique challenges or issues. In Jamaica, primary school starts at Grade 1 and ends in Grade 6 (Ministry of Education, 2015). For the purposes of this study, grade level will refer to a dichotomy between upper school teachers (Grades 4-6/ages 8 to 12 years) (Wilkie, 2014) and lower school teachers (Grade 1-3/ages 6 to 8 years) (Becker, 2014).

There was no research found that on inclusion that stratified results by grade level within primary schools. However, research in the field has examined the differences among teachers in preschool, elementary/primary school and high school in regards to their views of inclusion. For example, Kraska and Boyle (2014) studied the perceptions of 465 pre-service teachers in Australian universities towards inclusive education.

Teachers were registered in one of three streams of enrolment: preschool, primary or secondary education. Kraska and Boyle (2014) chose to use this variable because results of previous research had produced controversial findings. Referring to previous research, these authors found that high school teachers may have more positive views towards inclusion in comparison to primary school teachers (Kraska & Boyle, 2014). Bhatnagar and Das (2014) also found that secondary/high school teachers in India have somewhat positive views towards inclusion, but did not offer a comparison to primary or pre-school teachers. On the other hand, research by Ross-Hill (2009) found that pre-school and primary teachers had similar views towards inclusion. However, high school teachers had less favorable views. Kraska and Boyle (2014) also found that pre-school and primary teachers did not differ significantly and held favorable views towards inclusion. Differences in views towards inclusion according to grade level taught may also be related to the wide variety in the target population studied. For example, while Kraska and Boyle (2014) studied pre-service teachers in the Australian universities, Ross-Hill (2009) studied in-service teachers in Southeastern U.S. school districts.

This study compared the self-efficacy, attitudes and concerns towards inclusion between upper school and lower school primary teachers in Jamaica. The comparison of grade level is being made because teachers' self-efficacy may be affected by different requirements of teachers at the various grades. For example, all primary school children take the Grade Six Achievement Test (GSAT) in order to be placed in a high school. Placement can only be done by the quality of the student's scores (Ministry of Education,

2015). This places much pressure upon students, teachers, and school administrators for students to get the best possible grades so that they are placed in the best ranking high schools. The curricula preparation for the exam begins in Grade 4 and ends in Grade 6. Most schools mandate extra classes throughout the week and weekends to aid children in receiving the highest scores. Teachers in the upper school (Grades 4 to 6) may have different self-efficacy, attitudes, and concerns about inclusion in comparison to teachers in the lower school (Grades 1 to 3) due to the fact that upper school teachers are geared towards exam preparation. The pervading exam preparation may negatively impact the capacity to effectively include children with special needs in the regular upper school classroom.

Another reason to include grade level as a variable is due to the background training of teachers in upper as opposed to lower school. Many teachers in the lower school may be early childhood trained and this may affect their attitudes, concerns, and self-efficacy for inclusive practices. Research has shown that early childhood teachers and those teaching younger children have higher self-efficacy (Klassen & Chiu, 2010). Knowing the relationship between these variables in the Jamaican context may have important implications for the implementation of the Special Education policy.

### **School Demographics**

In this research study, school demographics was stratified by the geographical location of the school (rural versus urban) as well as the type of school (private versus public). Very little research could be found on these school demographics in relation to

inclusive education. In one study in Australia, Vaz et al. (2015) categorized schools by private/independent, catholic or government. The type of school, however did not have a relationship with the attitudes of teachers towards inclusion. Neither did other school variables such as class size. In Jamaica, these may be particularly important variables to examine given the disparity in student achievement due to location and type of school. The results of the 2014 GSAT exams indicated higher performance by private primary level schools (Ministry of Education, 2015). While scores for private schools ranged from 80% to 83% across four subject areas - Mathematics, Science, Social Studies and Language Arts, public school scores ranged from 59% to 67% (Ministry of Education, 2015). Disparity was also evident between urban parishes (such as Kingston & St. Andrew) and rural parishes (such as St. Thomas). Schools in Kingston & St. Andrew demonstrated combined averages ranging from 68.5% to 73.5%, performing above the national average for all four subjects. On the other hand, schools in St. Thomas attained scores ranging from 56% to 66% which all fell below the national average for the said subjects.

The disparity in student achievement may have implications for the self-efficacy of teachers to implement inclusive practices. It is commonly known in Jamaica that public schools may have larger class sizes and children from a variety of socio-economic backgrounds. They may also have less access to financial support than their private counterparts. These may affect their ratings of competence in inclusive classrooms. Self-efficacy is known to be positively correlated with student achievement and outcomes



(Holzberger et al., 2013; Leyser et al., 2011). Studying these school demographic variables may indicate if specific schools have more difficulty with the implementation of inclusion than others.

### **Access to Support Resources**

One of the distinctive features of inclusion is the need for the school system to be flexible in its approach to meeting the needs of a diverse population of students (Lindsay, 2007; Sharma et al., 2009). Therefore, one important variable to be studied in relation to teacher's self-efficacy is their access to support resources. Support resources refers to the various supports and resources needed by teachers in the regular classroom in order to effectively implement inclusion which may consist of human and physical resources (Horne, Timmons, & Adamowycz, 2008; Lindsay, 2007).

Research has shown that financial support is required on the part of the governments to fund the inclusion process (Braun-Lewensohn, 2015; Jahnukainen, 2011). The allocation of these monies may vary according to how inclusion is implemented, but financial support is required to ensure implementation. This is because funding has to be applied to the various supports needed in the school and classroom environment. Physical resources are necessary because in many instances children with special needs may require rearrangement or modification of the physical environment as well as other teaching materials (Lindsay, 2007).

In order for inclusive education to be successful, one of the key components is adequate human supports in the form of professional staff (Lindsay, 2007). Research has

shown that regular classroom teachers identify the provision of educational assistants or paraprofessionals and a lower staff to student ratio as two the most important supports needed for inclusive education (Horne et al., 2008; Lindsay 2007; Monsen, Ewing & Kwoka, 2011). Other human supports within the school setting include support from regular education colleagues as well as parents. However, the success of inclusion has been linked to the management of not only internal support staff but also those who may be external such as educational psychologists and speech and language therapists (Monsen et al., 2011). In fact, teachers who had more supports also had more positive views towards inclusion (Monsen et al., 2011). Additionally, teachers with more positive views towards inclusion also had more positive classroom learning environments (Monsen et al., 2011). This solidifies the importance of adequate supports for regular classroom teachers.

Odom, Buysse, and Soukakou (2011), in conducting a review of early childhood inclusion over the last quarter of a century, found that collaboration of professional staff is not just necessary, but a foundation of high quality inclusion. In fact, successful inclusion rests less upon the characteristics of the children with special needs and more upon the degree of collaboration of staff (Odom et al., 2011). Collaboration is fundamental because it includes several key features beneficial to successful inclusion (Goodman & Burton, 2010; Odom et al., 2011). For example, there is better communication and planning, joint philosophies and ideologies towards all children. Collaboration also enhances a shared responsibility for the children and encourages stable

professional relationships and administrative support. Collaboration in inclusive environments takes place between the regular education teacher and specialized professionals such as a special education teacher, psychologist, speech therapist, physical therapist or social worker whereby guidance and coaching is given to the class teacher (Goodman & Burton, 2010; Odom et al., 2011). The specialist staff are involved in an itinerant position, but coteaching models exist where special education and regular education teachers jointly teach in classrooms (Odom et al., 2011). In the United Kingdom, the professional staff may exist through various agencies outside of the school but interact in a supportive capacity and may also provide diagnostic and assessment services (Goodman & Burton, 2010). Teams of professional staff who support the classroom teacher is not a new phenomenon and dates back approximately a century (Salm, 2014). However, how they are assembled and their mode of operation may differ. For example, teams may be called multidisciplinary, interdisciplinary, collaborative problem-solving teams, among others (Salm, 2014). Professionals may function independently but interface with the regular classroom teacher at various times or they may collaboratively interface with the classroom teacher (Salm, 2014).

By having support services from specialized staff, classroom teachers are better able to accommodate the children with special needs in the regular classrooms. This also prevents the children with special needs to have to make a high adjustment to “fit in” in the mainstream (Odom et al., 2011). Brackenreed (2008) studied teachers perceptions of inclusion as well as their perceived stressors related to inclusion. The author noted that

many teachers left the profession in Canada when inclusion was first implemented due to lack of support which elevated stress levels. In-service teachers in the study cited lack of general and in-class support as stressors in implementing inclusion (Brackenreed, 2008). This underscores that supports for teachers are crucial in implementing inclusion.

In Jamaica, it is not mandatory that support services be provided within the primary schools and multidisciplinary teams are not part of the educational structure. However, some schools may invest in specialized teachers or teacher's assistants and guidance counsellors. Other professional help is likely sought on an individual basis by parents or through referrals to outside agencies. Based on research, those teachers with more access to support services may find that their ratings of self-efficacy for inclusion are higher (Monsen et al., 2011). On the other hand, since teachers in Jamaica often function without much human or physical supports, access to support services may not affect their self-efficacy for inclusive practices.

### **Perceived School Climate**

Another important variable to be studied in relation to teachers' self efficacy for inclusive practices is school climate. School climate is a complex multidimensional concept, but can be described broadly as the overall quality and character of a school (O'Malley et al., 2015). Researchers Cohen, McCabe, Michelli, and Pickeral (2009) further described school climate as having four dimensions: (a) safety – both physical and social-emotional; (b) relationships that respect diversity, are collaborative and community-oriented and also encourage morale and connectedness among its members;

(c) the quality of the teaching and learning process, including the appreciation for varied learning styles and strong support from administration; and (d) environmental-structural which encompasses the aesthetic qualities, curricular and extra-curricular offerings of the school among others.

School climate's importance has been acknowledged for over a century, but only systematically studied since the 1950s (Cohen et al., 2009). Scholars believe it to be associated with many student outcomes such as increased student achievement, better overall well-being, and decreased engagement in negative behaviors (Cohen et al., 2009; O'Malley et al., 2015). It has also been shown to be a protective factor for students who face adverse home environments, particularly those most at-risk such as homeless youth (O'Malley et al., 2015). On the other hand, a negative school climate can be a contributing factor for children already at risk.

Interestingly, included as the basis of school climate is the need for belonging and connectedness just as is described as the basis of inclusion (Odom et al., 2011; O'Malley et al., 2015). School climate is a subjective construct and is usually measured by the perceptions of students or teachers. Although much research on inclusion has highlighted the need for administrative support and collaboration between staff within the school environment, no known research has been found to examine the relationship between the concept of school climate and inclusion. Literature in the field has also not focused much on the teacher outcomes of school climate in the way it has analyzed the outcomes for students.

One such study that has focused on teacher outcomes was conducted by Collie, Shapka, and Perry (2011) who studied the impact of school climate and social-emotional learning on predicting teacher commitment. Results revealed that one variable on the school climate measure, student relations, predicted three forms of teacher commitment – general professional commitment (GPC), future professional commitment (FPC), and organizational commitment (OC). While GPC relates to teachers' general commitment to the teaching career, FPC refers to their commitment to the profession of teaching in the future and OC refers to teachers' commitment to their specific school. These results have important implications since all forms of teacher commitment have been found to predict other teacher outcomes such as teacher performance, burnout, attrition, absenteeism among others. In particular, Collie et al. (2011) found that the better the relationship between students and teachers, the more commitment teachers displayed towards the profession, in the future and in their designated school. Collaboration among teachers, which is another school climate variable, predicted increased OC which was also supported by existing literature. Teachers who collaborate with each other benefit from improved relationships and a more supportive atmosphere as it relates to managing student behavior and implementing teaching strategies (Collie et al., 2011).

School climate is a dynamic process and it affects the members of its organization and the interactions and patterns of communication between its members also affects the school climate (Collie et al., 2012). The variables are therefore interrelated. Collie et al. (2012) examined teachers' perceptions of school climate and social-emotional learning as

predictors of teacher stress, teacher efficacy and job satisfaction. Teachers who experienced high levels of stress from student behaviors had lower levels of teacher efficacy and lower job satisfaction (Collie et al., 2012). Researchers also found relationships on two dimensions of school climate. Firstly, positive student relations were correlated with lower student behavior stress, higher teaching efficacy and higher job satisfaction (Collie et al., 2012). However, researchers also found that collaboration with colleagues could be perceived as either positive or negative by teachers and therefore the stress level may increase (Collie et al., 2012). Collaboration also has a positive relationship with teacher efficacy (Collie et al., 2012).

The findings of the studies discussed above demonstrate that although research is limited, school climate has important implications for teacher outcomes such as self-efficacy. This relationship will be explicitly explored in this study by examining whether perceived school climate predicts teaching efficacy for inclusive practices. There is also no known research in Jamaica on school climate in the context of the inclusive environment. Since the school environment is known to have an impact on the performance of teachers, this study will be able to detect if the perceived climate of a school can predict Jamaican primary school teachers' efficacy for implementing inclusion.

### **Teachers' Pedagogical Beliefs**

In addition to school climate, teachers' pedagogical beliefs may be an important predictor of teachers' self-efficacy for inclusive practices. Teachers' beliefs can be

conceptualized in various ways, but it is thought to have various dimensions that organize to form a core (Feng, Ching Sing, Chin-Chung, & Min-Hsien, 2014). One important type of teacher belief is pedagogical belief which focusses on the beliefs about the teaching and learning process. Teachers may employ a variety of instructional practices in the classroom and research has shown that instructional practices and other decisions made in the classrooms affect the quality of teaching (Feng et al., 2014; Lim & Chai, 2008). Furthermore, instructional practices have been found to be directly affected by the pedagogical beliefs of teachers. These pedagogical beliefs are therefore important to study in respect to its importance in the inclusive classroom.

Pedagogical beliefs are generally categorized as either traditional or constructivist and are discussed in the literature as opposing points-of-view (Feng et al., 2014; Lim & Chai, 2008). For instance, traditional beliefs are teacher-centered and closely aligned with behaviorism. A traditional teacher believes himself or herself to be the authority and expert in the classroom who relays knowledge to the students. Teaching is didactic in nature and learning is a passive process. The teacher holds the control over both the behavior of the students as well as the content of instruction. On the other hand, constructivism is child-centered (Feng et al., 2014; Lim & Chai, 2008). The constructivist approach is founded on the premise that students construct their own meaning and understanding from their experiences. Therefore, it is crucial for constructivist teachers to structure the environment to promote active learning. This means that students are a part



of an interactive process making decisions on how and what to learn by making sense through teacher-generated activities (Feng et al., 2014; Lim & Chai, 2008).

Constructivism has been greatly encouraged in classrooms as the education system in America endorses reform (Lee Yuen, 2010). There are no specific strategies that are recommended for constructivism. However, one of the advantages of a constructivist approach is that the students' thinking is the impetus for lesson planning within the classroom and autonomy is encouraged in learners (Feng, et al., 2014; Lee Yuen, 2010). Therefore, content has to be adaptive and strategies are planned based upon students' responses (Lee Yuen, 2010). This drives differentiated instruction and encourages teaching to a diverse population (Lee Yuen, 2010), which is needed in inclusive classrooms.

Much of the research on pedagogical beliefs of teachers has focused on the use of technology in the classroom or the teaching of science subjects. Feng, Ching Sing, Chin-Chung, and Min-Hsien (2014) found that teachers' beliefs predicted their use of information and communication technology (ICT) in the classroom. Specifically, those with more traditional beliefs were not likely to use ICT for instruction in their classroom, while constructivist views were found to predict the use of ICT. Lee Yuen (2010) also found that new science teachers were likely to use skills learned from enrollment in a preparation program that focussed on constructivism. On the other hand, Lim and Chai (2008) found that although teachers identified as constructivist in belief, in the classroom they practiced in didactic and traditional ways due to the context of the environment. This

means that because schools are very focused on a set curriculum with importance placed on examinations, teachers tended to ignore the use of ICT. Constructivism places more emphasis on formative assessment whereas traditional approaches place importance on summative assessment such as cumulative exams. This study also highlighted that teachers may feel conflicted because they tend to teach in the way that they were taught (Cross, 2009; Lim & Chai, 2008). Teaching the theory of constructivism is not enough to change practices as it requires constant modelling in order to change teacher beliefs (Cross, 2009; Lim & Chai, 2008). Cross (2009) addressed the issue of underachievement in the area of mathematics by stating that reform should focus on instructional practices of math teachers. Since these instructional practices are influenced by pedagogical beliefs, these must be appropriately modelled in teacher training (Cross, 2009). Understanding the pedagogical beliefs of teachers is key to the improvement of mathematics achievement (Cross, 2009).

Although there is emphasis on pedagogical beliefs and its influence on ICT reform and areas of science and mathematics, there is a dearth of research on pedagogical beliefs and inclusion. Just as inquiry has been spurred in these areas of education due to reform, this is also necessary to consider in respect to inclusion. Berry (2006) found that though teachers support inclusion, they held different beliefs and this influenced their approaches to teaching children with learning disabilities. It is well established that effective teaching and learning is a result of decisions that teachers make on a day to day basis in the classrooms, and these decisions are the direct result of pedagogical beliefs

(Berry, 2006). Pedagogical belief is therefore an important variable to also study in regard to the efficacy of teachers for inclusive practices. There was no research found on teachers' pedagogical beliefs in Jamaica. Jamaican primary teachers, however, do teach from a set curriculum. Examinations are highly valued as children are assessed at the national level in grades one, three, four and six (Ministry of Education Jamaica, 2015). The examination at grade six determines the high school that students will attend based on the quality of the grade. Understanding the relationship between teachers' pedagogical beliefs and their self-efficacy for inclusive practices will be informative to the teaching and learning process that will ensue in Jamaican inclusive classrooms. This is because teachers' pedagogical beliefs may influence their choice of strategies in an inclusive classroom and these may be related to their ratings of self-efficacy.

### **Extent of Inclusion Training**

Another variable to study in relation to teachers' self-efficacy is the extent of their training in inclusion. Despite the challenges with implementation, inclusive education has increased internationally and has created dialogue about teacher education, training, and readiness to conduct inclusion. Research that has analyzed teachers' perceptions about inclusion has brought to the forefront that teachers generally feel unprepared to teach in inclusive classrooms (Brackenreed, 2008; Florian & Linklater, 2010; Forlin & Chambers, 2011; Symeonidoou & Phtiaka, 2014). Brackenreed (2008) cited research in Australia where it was found that an overwhelming majority of teachers felt they were not adequately trained for inclusion. The same results were mirrored in the said study by

Brackenreed who found that teachers in Canada felt just as unprepared for inclusive classrooms, citing training as the reason. In particular, teachers felt that student behaviors, such as disrupting class teaching and disturbing other students would be the most difficult to handle (Brackenreed, 2008). In addition, teachers were concerned about managing the interpersonal relationships of the child and indicated that increased stress for teachers would be the result (Brackenreed, 2008).

Indeed, research has found teachers to be lacking the skills for managing the behavior of children with emotional and behavioral disabilities (EBD). Of the entire population of children with special needs, children with EBD are thought to be the most demanding to manage in an inclusive classroom and therefore teachers tend to have negative attitudes to including this population within the mainstream classroom (Scanlon & Barnes-Holmes, 2013). Scanlon and Barnes-Holmes (2013) assessed the implicit and explicit attitudes of in-service and pre-service teachers towards children with EBD. If negative attitudes were found, behavior management and stress management intervention was implemented and results revealed a decrease in negative attitudes after intervention. However, researchers maintain that teachers showed deficits in behavioral techniques from the outset of the study. Furthermore, teachers gained knowledge of behavior and techniques during the course of intervention as much emphasis was not placed on behavioral training during initial teacher education (Scanlon & Barnes-Holmes, 2013).

Teacher education and training in inclusion is crucial for the success of inclusion. For example, training is crucial to reduce a high dropout rate from teachers who cite lack

of preparation as their reasons for leaving the inclusive classroom (Forlin & Chambers, 2011). Inadequate training has also been linked to higher burnout, stress and low self-efficacy in teachers in inclusive classrooms. (Forlin & Chambers, 2011; Scanlon & Barnes-Holmes, 2013). Scanlon and Barnes-Holmes (2013) explained that low self-efficacy resulted when teachers were not appropriately trained to deal with realistic behavior of children with special needs. This is because there is a mismatch between what teachers expect and feel prepared for and what actually occurs (Scanlon & Barnes-Holmes, 2013).

Inadequate preparation has been shown to have negative consequences for teachers and due to the fact that teachers are central to the success of inclusion, adequate training is of utmost importance. Florian and Linklater (2010) distinguished between teacher education as the preservice education that teachers receive at the tertiary level, while teacher training refers to training that teachers receive on an on-going basis as professional development. Research has revealed that teachers, very often, do not receive preservice training in inclusion and international bodies have called for reform in the initial teacher education programs (Florian & Linklater, 2010, Forlin & Chambers, 2011, Seçer, 2010; Symeonidou & Phytika, 2014). Additionally, inservice teacher training is not structured and tends to happen sporadically (Florian & Linklater, 2010). This means that many teachers are ill-equipped and a high quality of teaching using inclusive practices cannot be maintained. Forlin and Chambers (2011) stated that only 18% of newly graduated teachers felt their preservice education on children with special needs

was good or excellent. Additionally, 23.5% of these new graduates wanted training on behavior management.

A specific challenge in reforming teacher education and training is deciding what needs to be changed and how the change should be effected. Some researchers attest that a different pedagogy is not needed to teach children with special needs (Florian & Linklater, 2010; Symeonidou & Phtiaka, 2014). A separate pedagogy encourages the thinking that children with special needs must be taught separately. After all, the practices used in special education were birthed in mainstream education and are still used in these regular classrooms (Florian & Linklater, 2010). Instead of conceptualizing a different pedagogy for teacher training in inclusion, Symeonidou and Phtiaka (2014) stated that regular teacher education programs must now include three components to their normal structure: knowledge of inclusion, skills for implementing inclusion and positive values. The *values* component of the triad is often neglected and is quite possibly the most important part (Forlin & Chambers, 2011; Scanlon & Barnes-Holmes, 2013). This is so because research has shown that teachers who have received training that focused on knowledge as well as attitudes are more supportive of inclusion (Forlin & Chambers, 2011). The teaching of values and attitudes reinforces an ideology that inclusion is rooted in social justice and emphasizes the need for differentiation and advocacy by regular education teachers (Florian & Linklater, 2010; Symeonidou & Phtiaka, 2014). Teachers who embody this ideology from the inception of training, may be prepared for teaching in inclusive classrooms.

Notably, the delivery of teacher education and training in inclusive educational practices has much variability. Therefore, the results of the research on the effects of training have proved controversial results. Although citing promising programs in various European countries, Florian and Linklater (2010) acknowledged that these were not widespread enough to account for the degree of education reform that is needed. The programs offered varied from inclusion projects to compulsory modules on special needs education to one semester courses that provide knowledge as well as practical experience and research on special needs (Florian & Linklater, 2010). Seçer (2010) found that in-service training did not improve teachers' capabilities to manage an inclusive classroom, although it made them more knowledgeable and empathetic towards children with special needs. Forlin and Chambers (2011) introduced a unit of study for pre-service teachers over 13 weeks (39 hours). They also found an increase in the confidence and knowledge of the teachers but no positive change in the attitudes or a reduction of concerns towards children with special needs, which they stated was contradictory to the findings of other international studies. Stella et al. (2007) revealed marginally statistically significant results that a 20 hour module of in-service training could bring about positive change to the attitudes and confidence level of teachers as well as decreasing concerns and suggested that one module was not enough training. In fact, some researchers advocate for inclusive ideology and long-term training to be embedded across initial teacher education in order to change values and attitudes (Florian & Linklater, 2010; Stella et al., 2007). These studies have shown that countries vary in their delivery of inclusion

training, but results have shown that inclusion training mostly reaps positive (though sometimes marginal) results.

It is unclear if or how pre-service teachers are prepared for inclusion in Jamaica. Student teachers in Jamaica can choose from a variety of programs at the available universities in order to become teachers. This is because The Joint Board of Teacher Education (JBTE) is the organization responsible for the revision and approval of teacher programs at Jamaican universities and ultimately the certification of teachers (Joint Board of Teacher Education, 2013). The JBTE provides a program structure for each of five specializations: Early Childhood Education, Primary, Primary Specialist (such as a Spanish Teacher), Secondary or Special Education. Although the JBTE outlines a basic program structure, universities may augment their individual curricula (Joint Board of Teacher Education, 2013). Adding inclusion training may therefore be left up to individual university programs and it is unknown how many in-service teachers have received training in inclusion. Since research indicated that training has positive outcomes for teachers, this study examined whether the extent of teacher training in inclusion predict self-efficacy for inclusive practices.

### **Attitudes and Concerns towards Inclusion**

While training in inclusion is an important research variable, teachers' attitudes and concerns to inclusion are also important variables that may have an impact on teachers' self-efficacy. The classroom teacher is highlighted as having the most crucial role in the success of inclusion as the teacher has one-on-one interaction with this diverse



population of students on a daily basis and must make daily decisions to ensure that the needs of all students are met (Forlin & Chambers, 2011; Monsen et al., 2011; Oswald & Swart, 2011). This has drawn much attention to studying the attitude of teachers towards the policy of inclusion. Research literature has posited that not only is attitude one of the most important factors to the success of inclusion (Scanlon & Barnes-Holmes, 2013) but it may actually be the most important factor (Bhatnagar & Das, 2014; Forlin & Chambers, 2011; Seçer, 2010). This is so because a negative attitude by a classroom teacher towards inclusion is likely to result in a deleterious effect on the academic achievement and social functioning of all students, but in particular, those with special needs tend to be most negatively affected (Bhatnagar & Das, 2014).

Attitudes are constructs composed of three components: cognitive, affective, and behavioral (Engstrand & Roll-Pettersson, 2014; Vaz et al., 2015) and have been known to have a direct impact on resulting behavior. Therefore, if attitudes are negative, then negative behavior results and if attitudes are positive, then positive behavior results. This has been proven in the body of literature examining attitudes to inclusion. Teachers with negative attitudes have resulted in use of less effective teaching strategies (Bhatnagar and Das, 2014). Notably, the negative attitudes have also seen a correlation with negative consequences for the children such as decreased self-esteem and self-concept, decreased academic performance and students not achieving learning objectives (Bhatnagar & Das, 2014). On the other hand, positive attitudes have been associated with positive classroom learning environments (Monsen et al., 2011). Specifically, Monsen et al. (2011) found

that teachers and pupils rated their classroom to be more cohesive and expressed more satisfaction with classwork. On the other hand, less friction, less difficulty and less competition was related to the teachers with positive attitudes towards inclusion. Positive attitudes are also associated with increased enrolment, more participation in school activities and more effective teaching strategies (Bhatnagar & Das, 2014; Urton et al., 2014)

Researchers have stated that neither changing policies to support inclusion nor advocacy will stand alone in ensuring proper implementation of inclusion (Sharma, et al., 2009; Oswald & Swart, 2011; Vaz et al., 2015). Although some research findings have reported that teachers are generally inclined to have positive views towards inclusion (Beacham & Rouse, 2012; Bhatnagar & Das, 2014; Chmiliar, 2009; Oswald & Swart, 2011), other authors have found teachers to have negative views (Sharma et al., 2009). Focus must therefore be placed on promoting and sustaining positive views of teachers.

Given the importance of the attitudes of teachers towards inclusion, countries across the globe have focused on examining the factors that that may affect the attitude of teachers towards inclusion in order to improve chances of effective implementation. In particular, much interest has been placed on teacher variables such as age, gender and teaching experience. Bhatnagar and Das (2014) found that younger teachers in India had more positive views towards inclusion. The same results were found by Monsen et al. (2011) who studied the attitudes of teachers in the South East of England. This finding was also supported by Vaz et al. (2015) in Western Australia. On the other hand, there

have been mixed results regarding gender. While some researchers found that males had more positive attitudes towards inclusion (Bhatnagar & Das, 2014), others found them to be more negative (Vaz et al., 2015) and yet others found no relationship between gender and attitudes towards inclusion (Monsen et al., 2011). Teaching experience has also had mixed findings with regard to its relationship to attitudes to inclusion. While research has seen less experienced teachers as more positive of inclusion (Bhatnagar & Das, 2014), others have found no effect on attitudes to inclusion (Monsen et al., 2011). School attributes, such as class size and type of school, have had no effect upon teachers' attitudes to inclusion (Bhatnagar & Das, 2014; Monsen et al., 2011).

A very important variable that has been researched in respect to the relationship to teachers' attitude is training in inclusion. It is believed that in order to instill positive attitudes, this has to be done through teacher training (Vaz et al., 2015). In fact, special education teachers have been found to have more positive views of inclusion (Chmiliar, 2009) and therefore more regular education teacher programs are now including training in teaching children with special needs (Florian & Linklater, 2010, Forlin & Chambers, 2011, Oswald & Swart, 2011; Seçer, 2010; Symeonidou & Phytika, 2014). Results of the effect of training has revealed mixed results, but this may be due to the variety in training delivery options. Generally, the majority of results have revealed that teachers who have more training in inclusion have more positive attitudes (Bhatnagar & Das, 2014; Kraska & Boyle, 2014; Scanlon & Barnes-Holmes, 2013; Vaz et al., 2015). Results

also seem to suggest that long-term training as well as professional development training is necessary to affect attitudes (Seçer, 2010).

Interestingly, despite general positive feelings towards including children with special needs, educators have also simultaneously voiced many concerns. In fact, it has been noted that attitudes towards inclusion may decline over the course of training and that increased training and confidence also increases concerns (Bhatnagar & Das, 2014; Oswald & Swart, 2011; Sharma et al., 2009; Vaz et al., 2015). This may be because teachers become aware of the various factors required to ensure successful implementation. In a qualitative study in India, Bhatnagar and Das (2014) found that teachers were generally positive about inclusion and welcomed a new approach towards equality and diversity. However, they raised concerns about competence in teaching students with severe disabilities. In developing countries, concerns may be centered on the financial ability of the country to provide needed resources in classrooms that are already overcrowded (Sharma et al., 2009; Oswald & Swart, 2011). The existence of legislation has also seen an impact on concerns. Countries like Australia and Canada who have legislative support for inclusion have also reported less concerns from teachers than countries like Singapore, Brunei, and Hong Kong, who at the time of research did not have any legislation (Sharma et al., 2009).

Attitudes and concerns are well studied variables with respect to inclusion. Less attention has been given to the interaction among attitudes and concerns and self-efficacy. Many teachers attest to apprehension about their competence to implement

inclusion (Brackenreed, 2008). Oswald and Swart (2011) stated that in order to develop higher self-efficacy levels, the needs and concerns of teachers must be addressed in training. Urton et al. (2014) conducted a study in order to understand the relationship between the self-efficacy of principals and teaching staff on their attitudes towards inclusion. These researchers found that self-efficacy was a predictor of attitudes towards the inclusion of children with special needs in the regular classroom as well as their social integration. This was so for both individual and collective self-efficacy and therefore, principals and staff with higher self-efficacy have more favorable attitudes to inclusion. By studying the training of teaching to manage children with emotional and behavioral challenges in the mainstream classroom, Scanlon and Barnes-Holmes (2013) made the same deduction. Training in behavior and stress management resulted in increased self-efficacy and attitudes towards mainstreaming students with emotional and behavioral challenges.

Research in Jamaica is limited in this area. It is presently not known what the attitudes are by the teachers who are expected to carry out inclusive practices encouraged by the impending special education policy. Similarly, it is unknown what concerns they may have about implementing inclusive practices and if these concerns will be similar to those of other developing countries. Thus research in this area will present a clearer picture of the attitudes and concerns of Jamaican primary education teachers and indicate the potential success of inclusion based on the importance of the role of the teachers.

Additionally, findings from the study may present areas for improvement in order to best facilitate successful inclusion in Jamaican classrooms.

### **Teachers' Self-Efficacy**

Teachers' self-efficacy is a crucial variable to study because it has important implications for the success of inclusion. Self-efficacy is defined as one's belief about his or her abilities to handle the rigors of a given task (Bandura 1977; 1982). Self-efficacy is a belief or perception. As noted by Klassen and Chiu (2010), it focuses on what one "can" do and not what one "will" do. However, research has proven these beliefs or perceptions to have strong indications. The concept of self-efficacy has been applied to research in a wide variety of areas in order to assess predicted performance on specific tasks. In the educational and psychological fields, teacher self-efficacy relates to the teacher's appraisal of his/her abilities to instruct a diverse student population (Holzberger et al., 2013). The emphasis on teachers' self-efficacy is warranted due to the many outcomes that have been associated with it. It is commonly understood that self-efficacy has been determined to predict important teacher outcomes. Some research articles cite evidence of these teacher outcomes of high self-efficacy such as: better classroom management, an openness and flexible approach to teaching, less criticism of students' errors and increased persistence and motivation to teach (Leyser et al., 2011; Stipek, 2012). On the other hand, low self-efficacy has been cited in relation to increased stress and burnout, more difficulty with instruction and use of less effective strategies (Klassen & Chiu, 2010; Sharma et al., 2012). Research has also cited student outcomes related to

teachers' self-efficacy such as: higher self-esteem, higher student motivation and achievement in school (Klassen & Chiu, 2010; Stipek, 2012).

Holzberger et al. (2013) conducted a longitudinal study extending upon previous research to determine the reciprocal relationship between teachers' self-efficacy and instructional quality. Contrary to previous studies, instructional quality was rated by both students and teachers along three dimensions: cognitive activation, classroom management and individual learning supports. Results supported extant literature in the field that teachers with high self-efficacy predicted higher quality of instruction.

Olayiwola (2011) studied the effect of teacher self-efficacy on job performance. This researcher found that teachers with higher self-efficacy were also higher in job performance as rated by their heads of department. In fact, teachers with high self-efficacy were found to be motivated to perform their duties. On the other hand, low self-efficacy predicted low performance and these scores also correlated with low performance by their students. This also confirms the results of previous studies stating that teachers' self-efficacy had important student outcomes such as achievement and motivation. Additionally, research by Schwarzer and Hallum (2008) found that low teacher self-efficacy predicted high stress levels for teachers which eventually lead to burnout.

Researchers have also focused on the stability of self-efficacy over time, as well as discovering what variables will predict self-efficacy in inclusive environments. Some such studies have focused on teacher variables. For example, Leyser et al. (2011) found

that pre-service teachers who received some or much training in inclusion or training in teaching children with special needs performed higher on a four factor self-efficacy measure as compared to teachers without any training at all. A significant result was also found when examining the degree of experience with children with disabilities through field experience or out of school contact. Significant findings were also found for training and experience by Shaukat, Sharma, and Furlonger (2013) when studying Pakistani preservice teachers. However, when Leyser et al. (2011) examined whether self-efficacy changed over the course of teacher preparation, a significant result was only found on one factor of self-efficacy - the social domain - which investigates a teacher's ability to provide a supportive environment and foster positive peer interactions (Leyser et al. 2011). Teachers majoring in special education also had higher self-efficacy than general education majors (Leyser et al., 2011).

Years of experience has also been studied as another teacher variable in relation to self-efficacy. Klassen and Chiu (2010) found a nonlinear relationship between years of experience and teacher self-efficacy. Self-efficacy appeared to increase from early to mid-career and decline in the later stages of career (Klassen & Chiu, 2010). Teachers at the kindergarten to elementary grade levels also exhibited higher self-efficacy for classroom management and student engagement than those of higher grades (Klassen & Chiu, 2010). Female teachers were also significantly lower on self-efficacy for classroom management than their male counterparts. This is in contrast to Shaukat et al. (2013)



where it was found that females had higher self-efficacy beliefs than their male colleagues.

Stipek (2012) examined students' background as factors that may contribute to teacher's self-efficacy. This researcher did not find significant results for most aspects of students' background, with the exception of ethnicity, which surprisingly revealed lower self-efficacy when there was a higher proportion of white students. However, parents' ability to provide support to their children was found to be a better predictor of self-efficacy when compared to ethnicity (Stipek, 2012). This researcher also found administrative support to predict self-efficacy (Stipek, 2012).

Research on self-efficacy and inclusive education does reveal some gaps. Firstly, there is a shortage of information on the relationship between two of the most important variables for the success of inclusion – self-efficacy and attitudes towards inclusion. Most research studies focused on one or the other. It is possible that a positive relationship exists between the two variables. Montgomery and Mirenda (2014) found a weak but positive correlation between teachers' positive sentiments and attitudes towards inclusion and high self-efficacy for inclusive practices. These researchers also found a moderate negative correlation between concerns about inclusion and self-efficacy for inclusive practices. However, it is foreseeable that a teacher may support the concept of inclusion, but perceive his or her skills to be deficient. On the other hand, a teacher may feel efficacious at implementing inclusive practices, but reject the concept of inclusion. The relationship between self-efficacy and attitudes to inclusion is therefore worthy of study.

Another gap in research on self-efficacy is the way it is measured. Self-efficacy is task and content specific (Sharma et al., 2012). However, most research studies examined self-efficacy in regards to general teaching self-efficacy or personal teaching self-efficacy. There is very little research that specifically measures teachers' self-efficacy for inclusive practices. This information is needed to adequately assess teachers' beliefs in the tasks that would be specifically required in an inclusive classroom.

Since research on self-efficacy of primary teachers in Jamaica is lacking, this research study will contribute needed literature. High teacher self-efficacy has been proven to be an important indicator of successful inclusion while poor self-efficacy has been proven to have deleterious effects. Moreover, as posited by Bandura (1993), self-efficacy may be an even better predictor of performance than ability. Since research has shown that teacher self-efficacy has important outcomes for both students and teachers, this is an important variable to study in the Jamaican context. While many variables have been studied in relation to self-efficacy, no study has examined the combination of variables in this study: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion. It would be pertinent to know which variables would best predict the self-efficacy of these teachers so that information could guide educational practice and policy in Jamaica. Furthermore, self-efficacy was measured specifically in relation to tasks needed for implementing inclusive practices.

## Summary

Many countries are facing difficulty with the transition to inclusive education. This may be especially so in developing countries such as Jamaica which may slowly be making the transition. Historically, children with special needs have been educated in segregated, exclusive settings. Many had no access to appropriate education. Through development in social justice and human rights, it is now accepted that separate is inherently unequal. Spurred by the Salamanca conference in Spain, 1994, many nations have moved to include children with special needs in the regular classrooms with providing support accordingly (UNESCO, 1994). An evaluation of the Jamaican education system was done in 2004 and the findings of the Task Force reports that teachers were not trained adequately for inclusive practices (Task Force on Educational Reform Jamaica, 2004). What is worse, is that many children were unidentified and not appropriately placed in the educational system or receiving learning supports (Task Force on Educational Reform Jamaica, 2004). Since then, an educational system transformation program was put in place to bring the country in line with international standards for education (Ministry of Education Jamaica, 2015). One of the mandates of this program is to implement a special education policy which focusses on inclusion of children with special needs (Ministry of Education Jamaica, 2015).

Implementing inclusion depends on many factors, some of which rely on financial resources. This poses challenges to poorer countries as financial resources may be lacking to make systemic and infrastructural changes (Leyser et al., 2011). One important

factor, however, in effective inclusion is the role of the teachers as they interact with the children on a day-to-day basis. One way of measuring potential success of inclusion in Jamaica ahead of the implementation of the special education policy is to measure the teachers' perceived efficacy to implement these inclusive practices. Bandura coined the term self-efficacy while studying behavior change from a social learning perspective (Bandura, 1977). Perceived self-efficacy has proven to be an important indicator of actual performance. It is presently unknown how efficacious primary teachers in Jamaica perceive themselves to be in relation to conducting inclusive practices or which factors will best predict high self-efficacy. It is also unknown what their attitudes and concerns towards inclusion are. This study examined these areas as well as examined the best predictors of teachers' self-efficacy from the following variables: grade level, location of school, type of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion. All the variables have important implications for the success of inclusion. In Chapter 3, the methodology for the study is discussed which includes the research design, population, sampling procedures, recruitment and collection of data, instrumentation, data analysis and threats to validity.

## Chapter 3: Research Method

### **Introduction**

The purpose of this survey research study was to examine the extent to which there is a predictive relationship between the variables: grade level, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, location of school, type of school, attitudes to inclusion and teachers' ratings of self-efficacy for inclusive practices. The study also examined whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school).

This chapter begins with a discussion of the research design and the researcher's rationale for the chosen design. The target population is then described as well as the sampling strategy and specific procedures that were used to draw the sample. This study was based in Jamaica and as such, procedures were taken to ensure a representative sample of the target population based on the specific demographics of the island. A power analysis was done in order to determine the sample size and this is explained as well as the inclusion and exclusion criteria for the sample. The next section explains how participants were recruited, how informed consent was established, and how data was collected. Data collection in this study was a combination of test measures examining the concepts of: self-efficacy for inclusive practices, attitudes and concerns about inclusion, perceived school climate and teachers' pedagogical beliefs as well as demographic information. Each test measure was described and reliability and statistical information

was provided. A copy of each test measure and the demographic questionnaire is provided in the appendix of this study. The data analysis plan is then discussed before concluding with a discussion about the threats to the validity of the study and ethical procedures.

### **Research Design and Rationale**

Creswell (2009) posited that a research design is arrived at by the combination of three elements: the philosophical worldview, strategies of inquiry and research methods. The philosophical worldview of this study was post-positivist in nature, as are most quantitative studies (Creswell, 2009). This research was reductionist; the focus was on small but specific testable ideas that are based on behavior and attitudes but reduced to numeric data. These ideas being tested were based on established theories. As already stated, the concept of self-efficacy is well-established theoretically and numerous studies have tested this concept and its relationship to many other variables such as student outcomes, instructional outcomes and teacher characteristics and attitudes (Cudré-Mauroux, 2011; Holzberger et al., 2013; Lee & Low, 2013; Leyser et al., 2011). These studies have used similar correlational designs to examine the relationship between other variables and self-efficacy. Review of literature also revealed the strategies of inquiry of other researchers whereby established instruments for measuring the construct of self-efficacy are used as well as predetermined approaches to statistical analysis and interpretation (Cudré-Mauroux, 2011; Holzberger, Philipp, & Kunter, 2013; Lee & Low, 2013; Leyser et al., 2011). Furthermore, the research methods have involved numeric

data collected from closed ended-questions. The strategies of inquiry for this study involved the use of questionnaires and tests to measure the independent variables and teacher self-efficacy for inclusive practices. Multiple regression analysis was conducted to analyse the relationship between the variables. The triangulation of philosophical worldview, strategy of inquiry, and research methods suggested a quantitative correlational study.

The research project was a cross-sectional research study. The study was a correlational design where the data was collected from participants, assessing the independent and dependent variables, at one point in time and analysed. The aim of this design was to collect data from a representative sample of the intended population (Frankfort-Nachmias & Nachmias, 2008) which was general education teachers in primary schools in Jamaica. This correlational research design is usually used when the independent variables cannot be manipulated and variables are being assessed for a predictive relationship (Campbell & Stanley, 1963). Since there are no control and experimental groups whereby participants are randomly assigned and allocated under various conditions, it was not a true experiment. Additionally, only one group was examined with the emphasis placed on the relationship of the variables.

In this case, grade level, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, location of school, type of school and attitudes to inclusion were the independent variables. Self-efficacy for inclusive practices was the dependent variable. In the absence of manipulation of the independent variables,

statistical analysis was done to analyse the relationship between the variables. In essence, to what extent can the independent variables (grade level, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, location of school, type of school and attitudes to inclusion) predict the level of the dependent variable (self-efficacy for inclusive practices)? Multiple regression analysis was therefore conducted. For the second research question which examined the attitudes and concerns of the teachers by grade level, a one-way ANOVA was conducted. A survey packet was administered in order to collect demographic information, measures of the independent variables as well as opinions regarding self-efficacy for inclusive practices.

## **Methodology**

### **Population**

Jamaica is the third largest country in the Greater Antilles with a population size of approximately 2.7 million people (Jamaica Information Service, 2015). It is divided into fourteen parishes and Kingston city is its capital. The population of Kingston has spilled over into the neighboring St. Andrew parish. Therefore, the Kingston metropolitan area now encompasses all of Kingston parish and the suburban areas of the parish of St. Andrew (Statistical Institute of Jamaica, 2015). The parishes of Kingston and St. Andrew account for 24.6% of the total population and together are the most populated of the parishes (Census, 2011). Kingston and St. Andrew also share local government and account for a large part of the corporate area in the island.



Primary education in Jamaica begins at Grade 1 and ends in Grade 6 where students take the GSAT national exam in order to be placed in high school. There are four types of schools at the primary level in Jamaica: preparatory, primary, primary and junior high and all-age schools (Ministry of Education, 2015). Preparatory schools are private while primary schools are public (Ministry of Education, 2015). Junior high and all-age schools are also public, but in addition to Grades 1 through 6, they offer schooling at Grades 7, 8 and 9 (Ministry of Education, 2015). For this study, the schools will be categorized as private or public.

The sampling frame is described as all the units that comprise the population and from which a sample can be drawn (Frankfort-Nachmias & Nachmias, 2008). For this study, the sampling frame was the total number of teachers at all primary level schools in Jamaica. According to the Jamaica Directory of Educational Institutions (Ministry of Education, 2015), there are 247 private schools and 782 public schools at the primary level island-wide. The sampling frame, as reported in the Annual Schools Census, is approximately 10,064 teachers (Ministry of Education, 2014). This figure is approximate because the preparatory school teachers are not accounted for in the census, so the actual figure is higher. Because the focus of this research was on primary education in Jamaica, the sample was taken from the entire population of primary level teachers in the island.

### **Sampling and Sampling Procedures**

The sampling strategy was purposive nonprobability sampling. Purposive nonprobability sampling was selected because there was no single way to reach every

teacher in the sampling frame given the restrictions of time and resources. These included printing of materials, travel across parishes, financial resources to purchase token gifts and a timeline of data collection within the Jamaican schools' calendar year.

Additionally, many teachers may not have access to internet and/or use of an email address for business purposes, thereby inhibiting electronic data collection strategies. The electronic strategy likely would have biased the results by only receiving data from those who are able to access the questionnaires online. Instead, schools were selected for participation based on fitting demographics that are considered most representative of the population (Frankfort-Nachmias & Nachmias, 2008). Therefore, schools were chosen from urban and rural areas as well as from private and public schools.

Of the 247 private schools, and 782 public schools island-wide, 33.60% (83 schools) and 12.92% (101 schools) respectively are situated in Kingston & St. Andrew. Kingston and St. Andrew has the highest number of both private and public schools at the primary level across the island. Since Kingston and St. Andrew represents the most populated area in the island, and consists of mostly urban areas, this area was chosen for sampling. St. Thomas, another parish which consists of mainly rural areas, was also sampled. The population in St. Thomas accounts for 3.5% of the total population. There are 42 public schools at the primary level in St. Thomas and 10 private schools. A sample of both private and public schools were taken from Kingston and St. Andrew as well as St. Thomas.

Participants for the study were eligible so long as they were full-time teachers in a primary level school. They also had to be lead teachers in a grade from 1 to 6 in a general education setting. Part-time teachers, teachers of speciality subjects (such as drama or art), grade supervisors (who are not full-time teachers of a grade class), administrators, teacher's assistants, and teachers in resource/special education classes/units were not eligible for this study.

A G\* Power analysis was conducted for this study using the G\* software. Based on the relationship between the independent and dependent variables, a multiple linear regression was conducted. The *F* test was selected in the G\* power software. Linear Multiple Regression; Fixed model,  $R^2$  increase was selected from the dropdown. The type of power analysis selected was A priori: Compute required sample size – given  $\alpha$ , power and effect size. The input parameters were set as the following: power at .8 and  $\alpha$  of .05. Power was set at .8 because that is considered a standard in determining power (Laureate Education, 2009). The effect size ( $f^2$ ) was calculated at .04 after accounting for the individual predictor effect size. The number of tested predictors was 1. The total number of predictors was 10. The sample size calculated for this study was 198 participants.

### **Procedures for Recruitment, Participation, and Data Collection**

Permission and ethical clearance was requested from the Ministry of Education in Jamaica for access to the public schools (see Appendix A). A letter of cooperation was given to the principals of the participating schools requesting permission to conduct the study. A short memo (to inform the staff of the impending study) was also given to the

principals to distribute to teachers. A visit was made to each school after approximately a week and survey packets were given to the grade coordinators to distribute to staff that fit the inclusion criteria. The consent form informed teachers that they would be asked to complete some questionnaires on a variety of topics relevant to primary level teachers such as the inclusion of children with special needs. It also informed that the data would be used to better understand how teachers feel about the given topics. Teachers were informed of confidentiality, potential risks and benefits, as well as the approximate time to complete the questionnaires (this was known after sampling a number of teachers and recording time for completion). Participation was on a voluntary basis and withdrawal from the study could be done at any time. Teachers were informed that they would be given a small token of appreciation (a waterproof cellular phone pouch) for their participation in the project.

Participants were also informed that at the end of the study, results would be communicated to them via a 1-2 page summary. The researcher's contact details as well as her supervisor's contact details were also shared in case participants had questions or wanted to withdraw from the study. Consent was indicated by the return of a completed survey. No signatures or names were required. The five-part survey included test measures focussing on: perceived school climate, teacher pedagogical beliefs, attitudes and concerns about inclusion and teacher efficacy for inclusive practices. The last part of the survey required participants to provide demographic information. Participants

completed the survey packets at will and the researcher later returned to the school to collect the survey packets from teachers and distribute the token gifts.

Data was entered into the IBM SPSS statistical software program for analysis. A security password is needed to enter and access data. The original paper questionnaires will be stored in a secured cabinet. Both the questionnaires and the statistical data will be safely kept for the next 7 years.

### **Instrumentation and Operationalization of Constructs**

**Demographic information.** Demographic information was collected on the last page of the questionnaire (see Appendix C). Information included: age, gender, type of school, location of school, class size, years of experience, education level, and specialization (e.g., special education or general primary education). Some of the independent variables being assessed were measured in this part of the questionnaire such as the grade presently being taught by the teacher (Grades 1 through 6). Access to support resources was measured by the teacher indicating access to the number of supports from the following list: (a) math specialist, (b) reading specialist, (c) assistant teacher/aide, (d) special education teacher, (e) guidance counsellor, (f) resource room/pull-out services, (g) enrichment programme, (h) educational software (and computers), (i) remediation materials, (j) educational/school/clinical psychologist, (k) physical environment is accessible by those with physical disabilities (e.g., ramps or modified play equipment). Teachers were asked to rate the extent of inclusion training by indication the following: (a) none, (b) some, (c) much, (d) very much. Teachers were also asked how many

students in their class they perceive to need additional supports. Lastly, teachers were asked if they have any additional concerns about inclusion that were not addressed in the questionnaires.

**Teacher efficacy for inclusive practices (TEIP) scale.** Sharma, Loreman, and Forlin (2012) developed the Teacher Efficacy for Inclusive Practices (TEIP) scale (see Appendix D). The authors acknowledged that international trends in education have shifted from exclusive to inclusive practices. In order to determine if preservice teachers are equipped to teach in inclusive mainstream classrooms self-efficacy is usually measured. The development of a new scale was necessary because self-efficacy is a construct that is context and task specific (Sharma et al., 2012). Therefore, instead of being measured in a general sense, self-efficacy should be measured specifically as it relates to inclusion. Additionally, since self-efficacy for inclusion is a construct that is meaningful across many countries and cultures, there needs to be a measure that has cross-cultural utility (Sharma et al., 2012). The scale was tested on 609 preservice teachers across four participating countries: India, Hong Kong, Canada and Australia. Although the TEIP is a relatively new scale, it was chosen for this study because it is more specific as it focusses on self-efficacy for inclusion practices. Additionally, since content was cross-referenced with faculty across four countries and reliability was judged in the countries where the samples were chosen, the scale is deemed a useful tool to be measured cross-culturally.

**Scoring.** The TEIP consists of 18 items measured by a 6-point Likert scale in

three areas: self-efficacy for inclusive instructions, self-efficacy for collaboration and self-efficacy for managing behavior. Likert scales measure attitudes (Frankfort-Nachmias & Nachmias, 2008). A response of 1 indicates “strongly disagree” while a response of 6 indicates “strongly agree”. To score this measure, numbers are summed based on the responses circled. Summed scores can vary from 18 to 108, with higher scores being indicative of higher self-efficacy for inclusive practices and lower scores indicative of low self-efficacy for inclusive practices (Sokal, Woloshyn, & Funk-Unrau, 2013). The 6-point scale was decided upon so that there could be no neutral answer and therefore forces teachers to make a positive or negative response about their self-efficacy for each statement (Sharma et al., 2012). This measure takes approximately five minutes to complete. Permission for use of the test was requested and it was granted by the authors (see Appendix H). An example item from this scale is: “I am confident in my ability to prevent disruptive behaviour before it occurs.”

**Reliability and validity.** Reliability of the scales was assessed by calculating the Cronbach’s alpha for internal consistency of items. Items that were too highly inter-correlated were discarded. Three factors were generated for this measure: Efficacy to use Inclusive Instructions, Efficacy in Collaboration and Efficacy in Managing Behavior (Sharma et al., 2012). The alpha coefficients for the three factors were .93, .85 and .85 respectively. Items were retained as part of a factor if their factor coefficient loading was more than .40 as well as if the items was conceptually related to other items on the scales. If an item loaded on more than one factor, it was deleted. This scale started with 35 items

and was reduced to 26 by the process of checking for reliability. The scale was deemed a reliable construct judging for an overall reliability rating of .89 (Sharma et al., 2012). Alpha coefficients were also calculated for both the subscales and the overall scale, to determine if the scale was reliable in the four countries where samples were taken. Results were positive as overall the alpha values ranged from .84 to .91 (Sharma et al., 2012). Subscale alpha values ranged from .64 to .97 (Sharma et al., 2012).

Although the scale is relatively new, it has been used subsequently in international research. Sokal et al. (2013) used the TEIP in their study to see if confidence, concerns, and efficacy for inclusive classroom teaching were significantly different before and after a course on inclusive education. These authors found the reliability of the measure for their study to be .88 which is similar to that of the developers of the scale. Alpha values for the subscales ranged from .80 to .89. Alpha levels of .7 or higher are deemed acceptable for reliability (Field, 2013). Malinen et al. (2013) found high alpha coefficient reliabilities in all three countries studied (China, Finland and South Africa) ranging from .90 to .91. On the subscales, the alpha coefficient reliability ranged from .75 to .88.

Content validation was conducted using the Delphi approach. This means gaining consensus from persons considered experts on a particular topic. In this case, faculty in special and inclusive education, and educational psychology across four countries were asked their ratings on the usefulness of each item (Sharma et al., 2012). Items were developed from literature in the field of special education and psychology indicating the



necessary core skill areas to be effective at implementing inclusion in the classroom (Sharma et al., 2012). Items with low ratings were discarded and the final scale was sent a second time to experts for verification.

Construct validity was assessed by conducting an exploratory factor analysis. After reliability had been assessed, 26 items remained. After scree plot analysis and parallel analysis three factors were found. Then, factor structure was determined using principal component analysis with varimax rotation. To be included on a factor, items had to be both conceptually related to the other items on the scale as well as producing a factor coefficient above .40. Items were excluded if they loaded on more than one factor. In the end, 18 items were included in the scale explaining 64.5% of the variance. Confirmatory factor analysis was later conducted on the TEIP by Malinen et al. (2013) in China, Finland and South Africa and the three factor structure was confirmed. Cross validation was also conducted by Park, Dimitrov, Das and Gichuru (2016) in Kentucky, USA. Results of confirmatory factor analysis supported the three factor structure. The scale was also found to be unidimensional with three latent factors.

**Teacher beliefs survey.** This 21 item survey developed by Woolley, Benjamin, and Williams Woolley (2004) contains items in three hypothetical constructs: Traditional Management (TM), Constructivist Teaching (CT), and Traditional Teaching (TT) (see Appendix E). This survey instrument was an appropriate choice for this study as research has found that teachers' pedagogical beliefs play a significant role in the way they approach their lesson planning and how they conduct their lessons (Lim, & Chai, 2008).

Teachers' pedagogical beliefs can be categorized as traditional or constructivist, whereas constructivist beliefs lead to teaching that is more student-centred (Feng et al., 2014). The survey was developed by interviewing teachers about their teaching philosophies.

Interview responses were organized by themes as well. In addition, a review of literature was conducted regarding constructivist and traditional approaches. Both inservice and preservice teachers were used in the pilot study of the survey as the purpose of the instrument development was to be able to assess changes in teachers' beliefs as they moved from students to practicing teachers.

**Scoring.** On the Teacher Pedagogical Beliefs Survey, participants rate items from 1 to 6. A response of 1 indicates "strongly disagree" while a response of 6 indicates "strongly agree". Scores are then summed. The directions are geared towards student teachers. This was slightly modified since inservice teachers were used for this study. Therefore, instead of "Imagine how you will set up your own future classroom", it was replaced by "Imagine how you set up your own classroom". This measure takes approximately five minutes to complete. This test was retrieved through a search of the PyschTESTS database, where it was stated that the test could be used and reproduced for educational purposes without gaining written permission from the authors. An example item from this scale is: "It is more important for students to learn to obey rules than to make their own decisions."

**Reliability and validity.** Reliability was assessed and revealed that Cronbach's alpha coefficients ranged from .52 to .78 (Woolley et al., 2004). Validation was conducted

via exploratory factor analysis whereby a four factor structure was determined. It was further assessed by confirmatory factor analysis to test the hypothesized structure, but the four factor model was not confirmed. Elimination of items and further exploratory and confirmatory factor analysis was conducted. Further items and on factor were eliminated and confirmatory factor analysis found a better fit for the three factor model.

**Perceived school climate.** Teachers' perceptions of school climate was measured by the Perception of School Climate Scale (see Appendix G). Developed by Wolfe, Ray, and Harris (2004), this scale examines administrative support among staff, collegiality among staff and the ability of teachers to have access to the materials they need. These give a depiction of the atmosphere of the school and the interpersonal relationships. This scale was appropriate to the study as previous research has found school climate to predict teacher commitment, stress, job satisfaction and self-efficacy (Collie et al., 2011; Collie et al., 2012). However, no studies have studied the relationship between perceived school climate and self-efficacy for inclusive practices in the Jamaican context. If perceptions of a positive school climate can also positively affect teacher and student outcomes, then teachers' perception of school climate may also be related to their efficacy to teach in an inclusive way. This scale was also considered appropriate because it was developed based on data collected from the School and Staffing Survey (Wolfe et al., 2004). Large-scale databases in the United States are developed from surveys such as this and it is often used to examine issues related to educational policy. Using a collection of related questions in the survey, researchers often create their own measures for a

specific variable or construct. An area of focus in the surveys has to do with teachers' perceptions of the atmosphere in which they work.

**Scoring.** The Perception of School Climate Scale consists of 22 items rated from 1 to 4, where a response of 1 indicates “strongly agree” while a response of 4 indicates “strongly disagree”. Participants' responses are summed for scoring. Most items are negatively polarized and therefore a low rating indicates a better school climate. Five of the items are however positively polarized indicating a better school climate for a high rating. These items would require reverse scoring. This test takes approximately five minutes to complete. It was retrieved through a search of the PyschTESTS database, where it was stated that the test could be used and reproduced for educational purposes without gaining written permission from the authors. However, the author was contacted and permission was granted to make slight modifications to the wording of statements due to cultural reasons (see appendix H). In a statement where it referred to a “library media specialist/librarian”, librarian was used as the sole term as there are no library media specialists in Jamaica. The term “library media services” was replaced by “audio and visual services” for the same reason. An example item from this scale is: “I am generally satisfied with being a teacher at this school.”

**Reliability and validity.** The authors conducted a Rasch analysis of three areas of staff perceptions used in this national survey: perceptions of influence, students and school climate (Wolfe et al., 2004). The aim of the analysis was to assess the quality of the scales, developed from these surveys, in assessing the specific variables. Construction

of the scale was based on a representative sample of 42,086 elementary and secondary school teachers in the United States. The data used in the survey was based on a component of the School and Staffing Survey called the public school teacher survey of 1999-2000.

To check for internal consistency and to support the assumption of unidimensionality, principal component analysis was conducted. The results revealed that there was a fairly strong dimension with a variance of 44%, but only the existence of a second dimension at 8% variance. Authors reported the scale as internally consistent due to a fairly high level of reliability of separation ( $rel = .82$ ). When looking at the effectiveness of rating category and item quality, statistics revealed that the scale functions sufficiently. Item hierarchy and measure quality was examined and found that the items are rank-ordered themselves as would be expected. The scale was measured with considerable precision and demonstrated a wide range on the logit scale, but authors raised concern about misfit to the Rasch Rating Scale Model. Teachers used extreme of ratings more often than was predicted. Authors concluded that the measure was reliable and precise and demonstrated good measurement of the underlying construct (Wolfe et al., 2004). Though aspects of validity such as content, substantive, structural and generalizability were assessed in this study, consequential and external validity were suggested for future research (Wolfe et al., 2004).

**Attitudes and concerns about inclusion.** The Sentiment, Attitudes and Concerns about Inclusive Education Scale revised (SACIE-R) was developed to measure three

constructs related to inclusive education which are: Sentiments, Attitudes and Concerns (Forlin, Earle, Loreman, & Sharma, 2011) (see Appendix F). It was developed to measure pre-service teachers' (teachers-in-training) perceptions about inclusion and how it changes over the course of training (Forlin et al., 2011). The development of this scale was based on the three established but separate test measures. Authors expressed that research called for a shorter measure that included the three different constructs (Forlin et al., 2011). Sentiments measures the teacher's comfort level of engaging with individuals who have disabilities as this has been found to significantly affect their approach to inclusive classrooms. The second factor addresses attitudes or acceptance of learners with a variety of needs. The last factor looks at anxieties or concerns that the teacher may have about inclusion. The original SACIE scale was then revised to develop the SACIE-R. This scale was chosen for the study because it addressed both teachers' attitudes and concerns in a concise scale. It was also chosen because the development of this scale was based on other established measures on the concepts. Research has shown that teachers' attitudes are an important predictor to the success of inclusion because their attitudes are associated with the resulting behavior in the classroom (Urton et al., 2014). Concerns are equally important to assess because it can shed light on the specific areas of apprehension to inclusion so that these areas can be targeted as addressed (Forlin et al., 2011).

**Scoring.** The scale was tested on 542 pre-service teachers across four countries – U.S.A, Canada, Hong Kong and India. The final scale has 15 items, with 5 items allocated to each subscale. Scores are summed to attain an overall score. It is measured

on a 4 point Likert scale, ranging from strongly agree to strongly disagree. Only the subscales of attitudes and concerns were to be used in this study. This measure takes approximately five minutes to complete. An example item from this scale is: “Students who are inattentive should be in regular classes.”

**Reliability and validity.** The Cronbach's alpha coefficient for the overall scale was .74 (Forlin et al., 2011). The alpha coefficient for the Sentiments, Attitudes and Concerns subscales were .75, .67 and .65 respectively (Forlin et al., 2011). Validation was determined by using the original SACIE and conducting exploratory factor analysis, thereby reducing the final item count. The scale with reduced item count was then tested on another sample of pre-service teachers and principal component analysis was conducted. After analysis of these results, more items were added and again tested (Forlin et al., 2011).

### **Statistical Analysis**

Accuracy of data was ensured by double checking the data entered against the originals. Data was first screened by running frequencies on every variable (except for the ID number of the participant). This indicates if there is missing data and these can be corrected if omitted in error. Data cleaning was done by checking the assumptions of the test before conducting statistical analyses. Boxplots were used to determine the presence of outliers. Scatterplots and partial regression plots were examined in order to determine linearity between the independent variable and the dependent variables. Independence of observations was assessed by the Durban-Watson test. It was considered met if the value

was close to 2. Homoscedasticity was assessed by plotting a scatterplot of ZPRED versus ZRES and examining it for a random pattern. Normal distribution of the residuals was also assessed. Approximately 5% of cases should be higher than 2 and only 1% of cases should be greater than 2.5 (Field, 2013). Multicollinearity was examined by looking at the tolerance and variance inflation factors (VIF). Tolerance values should be less than .1 and VIF values should be more than 10 (Diebold, 2013).

The research questions for this study are restated as follows:

Research Question 1: What is the combined and relative extent to which the following variables predict the self-efficacy for inclusive practices of Jamaican primary education teachers in the regular classroom: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion?

$H_01$ : There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for inclusive instructions.

$H_11$ : There is a relationship between at least one of the variables and self-efficacy for inclusive instructions.

$H_02$ : There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate,



pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for collaboration.

*H<sub>12</sub>*: There is a relationship between at least one of the variables and self-efficacy for collaboration.

*H<sub>03</sub>*: There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for managing behaviour.

*H<sub>13</sub>*: There is a relationship between at least one of the variables and self-efficacy for managing behavior.

Research Question 2: What is the extent of difference in the attitudes and concerns about inclusion by the grade level taught?

*H<sub>04</sub>*: There are no significant differences in the attitudes and concerns about inclusion between lower school and upper school teachers (grade level).

*H<sub>14</sub>*: There are significant differences in the attitudes and concerns about inclusion between lower school and upper school teachers (grade level).

Descriptive analysis was first conducted. Frequencies were then reported for gender, age, grade taught in school, private versus public school, and the geographic region of the school: rural or urban. Means and standard deviations were reported for each independent variable.

In order to address the first research question, a multiple linear regression was conducted by using the forced entry (enter) method with the independent variables of and the dependent variable of self-efficacy for inclusive practices (measured by scores on the TEIP scale). Firstly, the overall model was tested for significance. The results of the  $F$  test,  $df$  and  $p$  values were reported. The effects size, which is determined by the adjusted  $R^2$ , was also reported. Then a report and interpretation of each predictor was done to determine which predictors are significant. If there were significant results, these were interpreted by describing the relationship or predictive ability of the variables (for example, as years of experience increased, self-efficacy was predicted to increase). A concluding statement was written based on the results as to whether to reject the null or fail to reject the null hypothesis. An APA table of means, standard deviations and inter-correlations was reported. As well, a standard regression summary was reported with values for  $B$ ,  $SE B$ ,  $\beta$  for each independent variable as well as the constant.

The second part of the analysis was a one-way ANOVA test which was run for significance between teachers' grade level and their attitudes and concerns about inclusion. The means, standard deviations, the  $F$  value, degrees of freedom and the significance value were reported. The effect size was also reported along with the means and their respective standard errors. A concluding statement was written based on the results as to whether to reject the null or fail to reject the null hypothesis.

### **Threats to Validity**

Research studies can be prone to many threats of validity. Although the researcher sought to minimize threats, a list of possible threats to both external and internal validity is discussed. Firstly, the use of self-administered surveys means that the researcher relies on participants to give honest responses. However, participants may experience some reactivity to test questions. For example, many of the questions ask participants to rate their behaviors, and attitudes. Participants may alter their responses in order to be perceived more favorably. In order to lessen the likelihood that this would occur, participant responses were confidential. The use of an identification number was used in order for a participant to withdraw his or her information after having completed the questionnaire as well as for checking data.

Another potential threat to validity relates to the choice of test measures. The test measures used in this study have not been normed in the Jamaican population. This is so because no other study has been found to examine these particular variables in the Jamaican population. However, great care was taken to choose instruments, where possible, with cross-cultural validity. Slight wording was also changed, where necessary to fit the Jamaican vernacular.

Threats to external validity include the generalizability of the study results. Purposive non-probability sampling was employed due to time and resource constraints on including every primary education teacher in Jamaica. Although the study did not use probability sampling, a representative sample was chosen from three parishes in Jamaica:

Kingston, St. Andrew and St. Thomas. These parishes were chosen as Kingston and St. Andrew represent the most populated and metropolitan area of the country. St. Thomas was included because it is a rural parish. The choice was taken to include, private and public and well as rural and urban primary schools. Additionally, only full-time lead teachers from grades one to six were included in this study. No specialist teachers, assistant teachers, administrators, or teachers in secondary or early childhood institutions were included in this study. Results therefore cannot be generalized to these populations.

### **Ethical Procedures**

In order to gain access to participants for data collection, approval was requested and received from the Institutional Review Board at Walden University. The approval number was 06-15-16-0365321. Permission was also received from the Ministry of Education in Jamaica (see Appendix A). Participants were briefed on the purpose of the study as well as the procedures. Token gifts were given in the form of waterproof cellular phone pouches to all participants, even those that withdraw from the study. Names of participants were not requested during data collection. Participants were given the consent form in case they wished to contact the researcher. Participants will receive a summary of the results of the completed study. Survey packets will be stored in a secured cabinet for seven years following the study before being destroyed. Access to the data entered in SPSS was secured by password. The electronic data will also be destroyed after a seven year period.

One of the important ethical components to research is that participation is voluntary. However, particular characteristics may be present in the participants who decide to volunteer for the study as opposed to those who do not and this may cause a bias in their responses. However, based on the principle of volunteerism in research, this cannot be prevented. In order to combat this issue, it was made clear to all participants that they were free to withdraw at any time without compromising their relationships in their workplace. In addition, token gifts were dispensed to all participants, even if they withdrew from the study.

### **Summary**

This was a quantitative, cross-sectional research study which used a correlational design. The purpose of this study was to examine the extent to which there is a predictive relationship between the variables: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, attitudes to inclusion and teachers' ratings of self-efficacy for inclusive practices. The study also examined whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school). The intended population of the study was primary level teachers in Jamaica. A representative sample was chosen by way of purposive non-probability sampling due to constraints in reaching the total population of primary level teachers. Teachers in the Kingston, St. Andrew and St. Thomas parishes comprised the sample as this showed a good

representation of urban metropolitan and rural schools. Public and private schools within these parishes were also included.

Data were collected via questionnaires. Permission for recruitment, participation and data collection was sought by the Ministry of Education in Jamaica for access to the public schools. Consent for cooperation was sought from all participating school principals. Upon agreement, the schools were visited to disburse questionnaires. Participants were given consent forms and informed about confidentiality, the risks and benefits of participation as well as the token gift for participation. Questionnaires were collected and entered into SPSS.

A multiple regression analysis was conducted to answer the first research question. The second research question required a one-way ANOVA. Concluding statements were written for all tests based on the results as to whether to reject the null or fail to reject the null hypothesis. Survey packets will be kept securely for a period of seven years before being destroyed. Participants will receive feedback from the researcher on the findings of the study. They were also free to withdraw from the study without consequence.

The next chapter, discusses how data was collected, the time frame for collection and the response rates. Any discrepancies in data collection from the proposed plan are discussed. Frequencies for demographic information are then presented. This is followed by statistical analyses of research findings to address research questions.

## Chapter 4: Results

### **Introduction**

In 2004, the Task Force on Educational Reform Jamaica conducted a review of the educational system. Findings included educational practices, such as exclusion, that are contrary to international standards and therefore recommendations were made to bring Jamaica into congruence with these standards (Task Force on Educational Reform Jamaica, 2004). As one of the initiatives of the education system transformation programme, a special education policy is presently in draft format which is geared towards an inclusive approach (Ministry of Education, 2015). Research has indicated that one of the most important indicators of success for inclusion is the teachers as they must enact such policies at the classroom level (Leyser et al., 2011; Olayiwola, 2011). Therefore, it is the self-efficacy of these teachers to enact these inclusion policies that is the subject of study in this research.

The purpose of the study was to examine whether there is a predictive relationship between the variables: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, attitudes to inclusion and teachers' ratings of self-efficacy for inclusive practices. The study also examined whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school).

The research questions and corresponding hypotheses for this study were as follows:

Research Question 1: What is the combined and relative extent to which the following variables predict the self-efficacy for inclusive practices of Jamaican primary education teachers in the regular classroom: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion?

$H_01$ : There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for inclusive instructions.

$H_11$ : There is a relationship between at least one of the variables and self-efficacy for inclusive instructions.

$H_02$ : There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for collaboration.

$H_12$ : There is a relationship between at least one of the variables and self-efficacy for collaboration.

$H_03$ : There is no individual or combined relationship between either grade level, type of school, location of school, access to support resources, perceived school climate,



pedagogical beliefs, extent of inclusion training, and attitudes to inclusion and self-efficacy for managing behaviour.

*H<sub>13</sub>*: There is a relationship between at least one of the variables and self-efficacy for managing behavior.

Research Question 2: What is the extent of difference in the attitudes and concerns about inclusion by the grade level taught?

*H<sub>04</sub>*: There are no significant differences in the attitudes and concerns about inclusion between lower school and upper school teachers (grade level).

*H<sub>14</sub>*: There are significant differences in the attitudes and concerns about inclusion between lower school and upper school teachers (grade level).

### **Data Collection**

Data was collected over a five week period between June and July 2016. The data collection period fell at the end of the school year for Jamaican Primary level schools and therefore, the beginning period of summer school was used to continue data collection. Data was collected via a five-part survey distributed in paper format to the participants. The following four scales were used: The Teacher Efficacy for Inclusive Practices (TEIP) Scale, Teacher Beliefs Survey, Perception of School Climate Scale, and the Sentiments, Attitudes and Concerns about Inclusive Education Scale revised (SACIE-R). In addition to the scales, demographic information was also collected. Three hundred and twenty-two surveys were distributed in primary level schools throughout the parishes of Kingston, St. Andrew and St. Thomas. Schools were selected for participation based on demographics

considered most representative of the population such as urban and rural locations as well as from private and public schools. Two hundred and eighteen surveys were collected yielding a response rate of 67.7%. The process for participant recruitment and collection of data is outlined below.

Firstly, a letter of cooperation was sent to the Ministry of Education in Jamaica. Permission was granted to conduct the study in the parishes of Kingston, St. Andrew and St. Thomas. Then, a request for permission to use the TEIP and the SACIE-R was sent to Dr. Sharma and subsequently received. Although the remaining measures (the Teacher Pedagogical Beliefs Survey and Perception of School Climate Scale) did not require permission for use for educational purposes, a few questions needed to be reworded for cultural reasons. Dr. Wolfe was contacted and permission was received to make the changes.

School principals of all participating schools were independently contacted for permission. The letter of cooperation was given to the principals of the participating schools requesting permission to conduct the study. A short memo (to inform the staff of the impending study) was also given to the principals to distribute to teachers. After approximately a week, the researcher returned to each school. Survey packets were given to the grade coordinators to distribute to staff that fit the inclusion criteria. The survey packet included the consent form and research surveys. The consent form discussed the study, potential risks and benefits, and compensation (a waterproof cellular phone pouch). It also addressed confidentiality and anonymity as well as the approximate time

to complete the questionnaires. Participants were informed that participation was voluntary and withdrawal from the study could be done at any time.

Participants completed the survey packets at will and the researcher later returned to the school (after approximately one week) to collect the survey packets from teachers and distribute the token gifts. On many occasions, repeat visits had to be made to schools as teachers had not found time to complete the surveys. Once survey packets were collected, the data were entered into the IBM SPSS statistical software program for analysis. At the end of the study, a summary of the results will be communicated to the various stakeholders (e.g., the Ministry of Education, the participating schools and all teachers).

## **Findings**

### **Data Cleaning**

There were 218 participants who returned surveys, however, some participants did not complete every question. Twenty-three cases were excluded from analysis due to incomplete data for the key variables assessed. In cases where two or less items were missing on computed subscales, case-mean substitution was used to complete the missing data. The Perception of School Climate scale, and subscales on the SACIE-R, Teacher Beliefs Survey, and TEIP were screened for multivariate outliers using Mahalanobis distance. The maximum Mahalanobis distance for Chi square ( $df=10$ ,  $\alpha = .001$ ) is 29.588 and resulted in three cases being excluded. Additional multivariate screening was conducted with the scales along with the other 5 key predictors and this resulted with one

more case being excluded. In total, the responses of 191 participants were used for analysis. Demographic information is discussed below, although, it must be noted that in some instances, there was missing data for non-key variables as participants did not answer all questions. Therefore, percentage totals may not always equal to 100.

### **Participant Demographics**

Demographic data was collected on age, sex, type of school (private, public), location of school (rural, urban), highest educational level, area of training, grade level (upper, lower), class size, years of teaching experience, amount of training in inclusion, access to additional support resources needed for inclusion and number of children perceived to need additional support resources. Participants consisted of majority females ( $n = 173$ , 91.15) and minority males ( $n = 17$ , 8.9%), with a mean age of 39.37 years. Teachers' age ranged from 23 to 65 years old. However, some participants ( $n = 32$ , 16.8%) did not report their age. Of the total sample, most teachers were employed in public schools ( $n = 129$ , 67.5%), while the remainder ( $n = 62$ , 32.5%) were employed in private schools. The location of participants' schools in the sample were 57.6% urban and 42.2% rural. A frequency distribution for categorical variables is presented in Table 1.

Table 1

*Frequency Distribution for Categorical Variables*

Variable		Frequency	Percent
Sex			
	Female	173	91.1
	Male	17	8.9
Type of School			
	Private	62	32.5
	Public	129	67.5
Location of School			
	Urban	110	57.6
	Rural	81	42.4
Highest Education Level			
	High School	2	1.0
	Vocational Training	2	1.0
	Teaching Diploma	47	24.6
	Bachelor's Degree	118	61.8
	Master's Degree	21	11.0
	Doctoral Degree	0	0.0
	Other	1	.5
Trained Teacher			
	Yes	183	95.8
	No	6	3.1
Area of Training			
	Early Childhood Education	38	19.9
	General Primary Education	131	68.6
	Special Education	7	3.7
	Other	31	16.2
Grade Level			
	Lower level (grades 1-3)	97	50.8
	Upper level (grades 4-6)	94	49.2
Extent of Training in Inclusion			
	None	50	26.2
	Some	90	47.1
	Much	34	17.8
	Very Much	17	8.9

The vast majority of teachers completed a bachelor's degree ( $n = 118$ , 61.8%), while approximately a quarter of the sample ( $n = 47$ , 24.6%) completed a teaching diploma, and a small number ( $n = 21$ , 11%) completed Master's degrees. The remaining teachers ( $n = 5$ , 2.5%) had high school, vocational or teaching certificate education. Most ( $n = 183$ , 95.8%) participants were trained teachers. Participants' area of training was mainly in general primary education ( $n = 131$ , 68.6%), while others were trained in early childhood education ( $n = 38$ , 19.9%) and special education ( $n = 7$ , 3.7%). The remaining teachers ( $n = 31$ , 16.2%) reported having other areas of training (e.g. secondary education, language and literacy, school management and leadership). Some teachers had more than one area of training.

In response to training in inclusion, a little less than half of the sample ( $n = 90$ , 47.1%) responded to have had "some" training, while approximately a quarter of the sample ( $n = 50$ , 26.2%) had no training. A small number of participants ( $n = 34$ , 17.8%) felt they had "much" training and few ( $n = 17$ , 8.9%) participants responded to having had "very much" training. Teachers acquired their training in inclusion through various means. Approximately half of the sample ( $n = 97$ , 50.8%) acquired training through a course on inclusion, while other participants ( $n = 43$ , 22.5%) responded positively to completing a module or unit on inclusion or attending a professional development course ( $n = 73$ , 38.2%). A few participants ( $n = 6$ , 3.1%) cited other means of inclusion training such as: reading and research, workshops and seminars, working with children with special needs or a management course.

Participants were given a list of 11 additional support resources that may be needed for the implementation of inclusion and they were asked to indicate which ones they have access to. Participants reported access to a mean of 3.81 ( $SD = 2.22$ ) support resources, with a minimum of zero resources and a maximum of 11. Most teachers reported having access to a guidance counselor ( $n = 138, 72.3\%$ ), followed by a resource room/pull-out/small-group intervention ( $n = 98, 51.3\%$ ) and a reading specialist ( $n = 104, 54.5\%$ ). A little less than half of the sample had access to educational software and computers ( $n = 94, 49.2\%$ ) and most did not have access to a math specialist ( $n = 71, 37.2\%$ ), a special education teacher ( $n = 68, 35.6\%$ ), an assistant teacher/aide ( $n = 43, 22.5\%$ ), remediation materials ( $n = 22, 11.5\%$ ), an educational/school/clinical psychologist ( $n = 22, 11.5\%$ ), or a physical environment accessible by those with physical disabilities ( $n = 7, 3.7\%$ ). Teachers reported a mean of 7.52 ( $SD = 7.47$ ) students needing additional support resources with a minimum of zero and a maximum of 46 students reported as needing these resources.

Grade level was split almost evenly with 97 (50.8 %) participants presently teaching in lower grades (grades 1 to 3) and 94 (49.2%) teaching in the upper grades (grades 4 to 6). The mean class size for participants was 29.70 ( $SD = 8.89$ ) with the smallest class size at 10 students and the largest class at 48 students. Teachers represented in the sample have been teaching for a mean of 15.33 ( $SD = 9.18$ ) years, the least experienced of which has been teaching for under a year and the most experienced

which has been teaching for 40 years. A summary of descriptive statistics for continuous variables is presented in Table 2.

Table 2

*Descriptive Statistics for Continuous Variables*

Variable	<i>M</i>	<i>SD</i>	Minimum	Maximum
Age	39.37	9.85	23	65
Class Size	29.70	8.89	10	48
Years of Teaching	15.33	9.18	0	40
Access to Support Resources	3.81	2.22	0	11
Number of children perceived to need additional support resources	7.52	7.47	0	46

### **Descriptive Statistics of the Scales**

**Teacher efficacy for inclusive practices scale (TEIP).** The TEIP scale consists of 18 items measured by a 6-point Likert scale in three areas: Self-efficacy for Inclusive Instructions, Self-efficacy for Collaboration and Self-efficacy for Managing Behavior. Higher scores are indicative of higher self-efficacy. The overall scale consists of 18 items with each subscale consisting of 6 items. A response of 1 indicates “strongly disagree” while a response of 6 indicates “strongly agree.” Results revealed a mean of 4.79 ( $SD = .55$ ) for the total scale, which indicates that teachers view themselves as efficacious for inclusive practices. The range of scores varied from 2.72 to 5.83. Table 3 shows the descriptive statistics for each of the scales used.

A comparison of the three subscales revealed that scores were highest for the Self-efficacy for Inclusive Instructions subscale ( $M = 5.00$ ,  $SD = .58$ , range = 2.67 to 6), while the other two subscales were a bit lower but still considered high in efficacy. Self-



efficacy for Collaboration had a mean of 4.62 ( $SD = .71$ ) with a minimum score of 1.83 and a maximum of 5.83. Self-efficacy for managing behavior revealed a mean of 4.62 ( $SD = .71$ ) with scores ranging from 2.67 to 6.0. The distribution for each of the subscales as well as the overall scale was normal. The subscales, as well as the overall scale, showed good reliability. Cronbach's Alpha for the total scale was .879. The Cronbach's alpha for the efficacy subscales (inclusive instructions, collaboration and managing behavior) were .730, .745 and .760 respectively.

**Teacher beliefs survey.** The Teacher Beliefs Survey is a 21 item survey that examines teachers' pedagogical beliefs in three areas: Traditional Management (TM), Constructivist Teaching (CT), and Traditional Teaching (TT). Items are scored on a 6-point Likert scale where a response of 1 indicates "strongly disagree" while a response of 6 indicates "strongly agree." The Traditional Management subscale consists of 5 items and teachers' responses revealed a mean score of 4.76 ( $SD = .55$ ) indicating that teachers agreed somewhat with traditional management in their classrooms. The Constructivist Teaching subscale consists of 9 items and teachers' responses were also high with a mean score of 4.60 ( $SD = .55$ ). Overall scores on the final subscale (7 items) indicated lower beliefs regarding Traditional Teaching ( $M = 3.93$ ,  $SD = .85$ ), but still a positive overall result. Each subscale had a normal distribution. All three subscales were assessed for internal reliability. The Traditional Teaching subscale was found to have an acceptable reliability ( $\alpha = .732$ ), while reliability on the Constructivist Teaching subscale was

questionable ( $\alpha = .638$ ). The Traditional Management subscale was found to be unreliable ( $\alpha = .382$ ) and therefore was not used for statistical analysis.

**Sentiments, attitudes and concerns about inclusive education scale revised (SACIE-R).** This scale has 15 items in total, with 5 items allocated to each subscale: Sentiments, Attitudes and Concerns. Each item is scored on a 4 point Likert scale. A response of 1 indicates “strongly disagree” while a response of 4 indicates “strongly agree.” with a score of 4 indicating strong agreement. Scores on the overall scale reveal that Jamaican primary teachers have slightly positive views towards these constructs related to inclusion ( $M = 2.44, SD = .55$ ).

For analysis of the total and subscales, the negatively worded items were recoded so that a high score indicates more positive views towards these three constructs related to inclusive education. The results revealed that scores on the Sentiments subscale ( $M = 2.98, SD = .57$ ) were higher than both the Attitudes ( $M = 2.11, SD = .53$ ) and Concerns ( $M = 2.21, SD = .55$ ) subscales. This means that teachers had more positive sentiments towards persons with disabilities in a general sense. However, as it related to an inclusive classroom, they had less positive attitudes and slight concerns. Normal distributions were found for the three subscales and the overall scale. However, all subscales were not found to have acceptable reliability, therefore the total SACIE-R scale score was used for statistical analysis. The Cronbach’s alpha for the total SACIE-R was .702, while the Cronbach’s alpha for the Sentiments, Attitudes and Concerns subscales were .647, .601 and .579 respectively.

**Perception of school climate scale.** The Perception of School Climate scale consists of 22 items rated on a 4-point Likert scale with a low score indicative of a better school climate. A response of 1 indicates “strongly agree” while a response of 6 indicates “strongly disagree.” Five of the items are however positively polarized indicating a better school climate for a high rating and these items were recoded for analysis. The mean for the total scale was 2.24 ( $SD = .35$ ) indicating a slightly negative perception of school climate. The Perception of School Climate scale had a normal distribution and an acceptable Cronbach’s alpha of .775.

Table 3

*Table Showing Descriptive Statistics of the Scales*

Scale	Cronbach's Alpha	Number of Items	<i>M</i>	<i>SD</i>	Minimum	Median	Maximum	Skewness	Kurtosis
TEIP: Total	.879	18	4.79	0.55	2.72	4.89	5.83	-0.71	1.06
TEIP: Inclusive Instructions	.730	6	5.00	0.58	2.67	5.00	6.00	-0.78	1.35
TEIP: Collaboration	.745	6	4.61	0.71	1.83	4.67	5.83	-0.86	1.44
TEIP: Managing Behavior	.760	6	4.76	0.64	2.67	4.83	6.00	-0.40	-0.07
Pedagogical Beliefs: Traditional Management	.382	5	4.95	0.55	2.80	5.00	6.00	-0.78	1.33
Pedagogical Beliefs: Constructivist Teaching	.638	9	4.60	0.55	2.78	4.67	5.78	-0.43	-0.11
Pedagogical Beliefs: Traditional Beliefs	.732	7	3.93	0.85	1.43	4.00	6.00	-0.23	-0.16
SACIE-R: Total	.702	15	2.45	0.39	1.47	2.47	3.73	0.19	0.72
SACIE-R: Sentiments	.647	5	2.98	0.57	1.40	3.00	4.00	-0.45	0.05
SACIE-R: Attitudes	.601	5	2.11	0.53	1.00	2.20	3.60	0.13	-0.14
SACIE-R: Concerns	.579	5	2.21	0.55	1.00	2.20	4.00	0.23	0.32
Perception of School Climate Scale	.775	22	2.24	0.35	1.32	2.23	3.32	0.11	0.25

**Correlation.** Table 4 shows the correlation matrix results for each independent variable and the three subscales of self-efficacy: Self-efficacy for Inclusive Instructions, Self-efficacy for Collaboration and Self-efficacy for Managing Behavior. There was a statistically significant bivariate relationship between Self-efficacy for Inclusive Instructions and five variables. There was a moderate positive correlation between constructivist teaching and Self-efficacy for Inclusive Instructions ( $r = .371, p < .001$ ). Small positive correlations were found between the extent of inclusion training ( $r = .279, p < .001$ ), SACIE-R ( $r = .232, p = .001$ ), traditional teaching ( $r = .144, p = .046$ ) and Self-efficacy for Inclusive Instructions. This means that as these variables increased, Self-efficacy for Inclusive Instructions also increased. Additionally, there was an inverse relationship between Self-efficacy for Inclusive Instructions and Perception of School Climate ( $r = -.211, p = .003$ ) indicating that as scores on the Perception of School Climate scale increased, Self-efficacy for Inclusive Instructions tended to decrease. The strength of the correlation was small. High scores on the Perception of School Climate Scale indicate a negative perception of school climate.

Statistically significant bivariate relationships were also found between Self-efficacy for Collaboration and six variables. The strongest positive correlation was found with constructivist teaching ( $r = .470, p < .001$ ), while small positive correlations were found with extent of inclusion training ( $r = .249, p = .001$ ), SACIE-R ( $r = .234, p = .001$ ), traditional beliefs ( $r = .233, p = .001$ ) and grade level ( $r = .140, p = .053$ ). There was a

small inverse relationship between Self-efficacy for Inclusive Instructions and Perception of School Climate ( $r = -.224, p = .002$ ).

There were statistically significant bivariate relationships found between Self-efficacy for Managing Behavior and four variables. A moderate positive correlation was found with constructivist teaching ( $r = .332, p < .001$ ). Small positive correlations were found with extent of inclusion training ( $r = .269, p < .001$ ) and SACIE-R ( $r = .197, p = .006$ ). On the other hand, an inverse relationship was found between Self-efficacy for Managing Behavior and scores on the Perception of School Climate Scale ( $r = -.184, p = .011$ ). The strength of the correlation was small.

Table 4

*Correlation Matrix for Independent Variables and Self-Efficacy for Inclusive Instructions, Collaboration and Managing Behavior*

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Self-efficacy for Inclusive Instructions		.653	.653	-.211	.232	.144	.371	.078	.279	.048	-.037	-.072
2. Self-efficacy for Collaboration	<.001		.563	-.224	.234	.233	.470	.055	.249	.140	-.126	-.075
3. Self-efficacy for Managing Behavior	<.001	<.001		-.184	.197	.120	.332	.046	.269	.100	-.017	-.059
4. Perception of School Climate	.003	.002	.011		-.218	-.072	-.105	-.022	-.064	.077	.172	.145
5. SACIE-R Total	.001	.001	.006	.002		-.138	.098	.162	.082	-.003	.014	-.008
6. Pedagogical Beliefs: Traditional Teaching	.046	.001	.099	.319	.058		.207	-.056	-.102	.092	-.182	-.068
7. Pedagogical Beliefs: Constructivist Beliefs	<.001	<.001	<.001	.149	.177	.004		.012	.214	.060	-.064	-.038
8. Access to Support Resources	.284	.454	.528	.758	.026	.445	.868		.113	-.056	-.204	-.101
9. Extent of Inclusion Training	<.001	.001	<.001	.377	.257	.158	.003	.121		.025	.023	-.079
10. Grade Level	.508	.053	.168	.290	.962	.207	.409	.445	.728		-.078	-.018
11. Type of School	.615	.082	.814	.018	.842	.012	.382	.005	.750	.284		.346
12. Location of School	.326	.300	.421	.046	.913	.353	.603	.164	.276	.802	<.001	

Note: Upper diagonal contains correlation coefficients. Lower diagonal contains *p* values

## Research Questions and Hypothesis Testing

To address the first research question, three sets of multiple regression were conducted as Self-efficacy for Inclusive Practices was operationalized as per the three subscales on the TEIP (Self-efficacy for Inclusive instructions, Self-efficacy for Collaboration, and Self-efficacy for Managing Behavior). In this section, each multiple regression is reported and analyzed.

**Regression 1.** A standard multiple regression (Tabachnick & Fidell, 2007) was conducted to examine the combined and relative effects of grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion in predicting self-efficacy for inclusive instructions. Data was first screened for violation of assumptions. There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.88. Linearity was assessed by scatter plots and partial regression plots. . Homoscedasticity was assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values where there was no specific pattern, and the assumption was upheld. There was no evidence of multicollinearity as tolerance values were greater than .1 and VIF values were less than 10. Additionally, examination of the correlations between independent variables showed that no variables were highly correlated ( $r < .7$ ). Less than 1% of cases had residuals greater than  $\pm 3$  thereby indicating normal distribution of residuals. Assumption of normality was assessed by Q-Q plot and revealed that the assumption of normality was met.



The multiple correlation coefficient ( $R = .50$ ) indicated a moderate linear association between the independent variables and Self-efficacy for Inclusive Instructions. The combined effect of all the independent variables accounted for 24.7% of variance in self-efficacy for inclusive instructions  $F(9,181) = 6.61, p < .001, \text{adj. } R^2 = .21$ . This significant combined relationship between grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion as predictors of Self-efficacy for Inclusive Instructions, thereby means rejecting the null hypothesis. Standard regression summary results are reported in Table 5 below.

Table 5

*Standard Multiple Regression Summary Table for the Independent Variables Predicting Self-Efficacy for Inclusive Instructions*

	B	95% CI	<i>sr</i>	$\beta$	<i>p</i>
Constant	2.87	[1.82, 3.91]			
Grade Level	0.03	[-0.11, 0.18]	.03	.03	.650
Type of School	0.05	[-0.13, 0.22]	.03	.04	.614
Location of School	-0.03	[-0.19, 0.13]	-.02	-.03	.716
Access to Support Resources	0.01	[-0.03, 0.04]	.03	.04	.611
Perception of School Climate	-0.21	[-0.44, 0.01]	-.12	-.13	.065
Pedagogical Beliefs:					
Constructivist Teaching	0.28	[0.14, 0.42]	.25	.27	<.001
Pedagogical Beliefs:					
Traditional Teaching	0.09	[-0.01, 0.18]	.12	.13	.064
Extent of Inclusion Training	0.13	[0.05, 0.22]	.20	.21	.003
SACIE-R	0.26	[0.06, 0.46]	.16	.17	.013

Note: CI = Confidence interval; *sr* = semipartial correlation (part correlation)

While holding the effects of other independent variables constant, constructivist teaching was found to be highly statistically significant in predicting Self-efficacy for

Inclusive Instructions,  $t(181) = 3.93, p < .001, sr^2 = .065$ , and uniquely accounted for 6.5% of the variance in Self-efficacy for Inclusive Instructions. For each 1 point increase in constructivist teaching, scores on Self-efficacy for Inclusive Instructions were expected to increase .281 points (95% CI from 0.14 to 0.42).

Significant positive relationships were also found between Self-efficacy for Inclusive Instructions and the following variables: extent of inclusion training,  $t(181) = 3.03, p = .003, sr^2 = .038$  and SACIE-R,  $t(181) = 2.52, p = .013, sr^2 = .026$ , while holding the effects of other independent variables constant. Extent of inclusion training accounted for 3.8% of the variance in Self-efficacy for Inclusive Instructions, while SACIE-R accounted for 2.6%. For each 1 point increase in extent of inclusion training, scores on Self-efficacy for Inclusive Instructions were expected to increase by .133 points (95% CI from 0.05 to 0.22). For each 1 point increase in SACIE-R scores, scores on self-efficacy for inclusive instructions were expected to increase .256 points (95% CI from 0.06 to 0.46).

While holding the effects of other independent variables constant, traditional teaching was found to approach significance in predicting Self-efficacy for Inclusive Instructions,  $t(181) = 1.86, p = .064, sr^2 = .014$ , and uniquely accounted for 1.4% of the variance in Self-efficacy for Inclusive Instructions. For each 1 point increase in traditional teaching, scores on Self-efficacy for Inclusive Instructions were expected to increase .087 points (95% CI from -0.01 to 0.18).

An inverse predictive relationship, which approached significance, was found between the Perception of School Climate scale and Self-efficacy for Inclusive

Instructions  $t(181) = -1.86, p = .065, sr^2 = .014$ . Perception of School Climate accounted for 1.4% of the variance in the overall score on Self-Efficacy for Inclusive Instructions. For each 1 point increase in Perception of School Climate, scores on Self-efficacy for Inclusive Instructions were expected to decrease .211 points (95% CI from -0.44 to 0.01). Based on semipartial correlations, constructivist teaching was the most important predictor followed by extent of inclusion training, and SACIE-R scores. Lastly, traditional teaching and perception of school climate show equal importance. Although there was a combined effect, as well as individual relationships between these variables discussed and Self-Efficacy for Inclusive Instructions, there was no individual relationship between Self-efficacy for Inclusive Instructions and the variables: grade level, type of school, location of school or access to support resources, thereby accepting the null hypothesis.

**Regression 2.** A standard multiple regression (Tabachnick & Fidell, 2007) was conducted to examine the combined and relative effects of grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion in predicting Self-efficacy for Collaboration. Data was first screened for violation of assumptions. There was independence of residuals, as assessed by a Durbin-Watson statistic of 1.77. Linearity was assessed by scatter plots and partial regression plots. Homoscedasticity was assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values where there was no specific pattern and the assumption was upheld. There was no evidence of multicollinearity as tolerance values were greater than .1 and VIF values

were less than 10. Additionally, examination of the correlations between independent variables showed that no variables were highly correlated ( $r < .7$ ). Less than 1% of cases had residuals greater than  $\pm 3$  thereby indicating normal distribution of residuals. Assumption of normality was assessed by Q-Q plot and revealed that the assumption of normality was met.

The multiple correlation coefficient ( $R = .58$ ) indicates a strong linear association between the independent variables and Self-efficacy for Collaboration. The combined effect of all the independent variables accounted for 34.1% of variance in Self-efficacy for Collaboration  $F(9,181) = 10.43, p < .001, \text{adj. } R^2 = .31$ . This significant combined relationship between grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion as predictors of Self-efficacy for Collaboration, thereby indicated rejecting the null hypothesis. Standard regression summary results are reported in Table 6 below.

Table 6

*Standard Multiple Regression Summary Table for the Independent Variables Predicting Self-Efficacy for Collaboration*

	B	95% CI	<i>sr</i>	$\beta$	<i>p</i>
Constant	1.38	[0.19, 2.58]			
Grade Level	0.15	[-0.02, 0.32]	.10	.11	.087
Type of School	-0.07	[-0.27, 0.13]	-.04	-.05	.475
Location of School	<0.01	[-0.18, 0.19]	<.01	<.01	.983
Access to Support Resources	<0.01	[-0.04, 0.04]	.01	.01	.935
Perception of School Climate	-0.25	[-0.51, 0.01]	-.12	-.12	.056
Pedagogical Beliefs:					
Constructivist Teaching	0.46	[0.30, 0.62]	.34	.36	<.001
Pedagogical Beliefs: Traditional Teaching	0.14	[0.04, 0.25]	.16	.17	.008
Extent of Inclusion Training	0.13	[0.03, 0.23]	.16	.17	.010
SACIE-R	0.33	[0.10, 0.56]	.17	.18	.005

Note: CI = Confidence interval; *sr* = semipartial correlation (part correlation)

While holding the effects of other independent variables constant, constructivist teaching was found to be highly statistically significant in predicting Self-efficacy for Collaboration,  $t(181) = 5.59, p < .001, sr^2 = .114$ , and uniquely accounted for 11.4% of the variance in Self-efficacy for Collaboration. For each 1 point increase in constructivist teaching, scores on Self-efficacy for Collaboration were expected to increase .458 points (95% CI from 0.30 to 0.62).

Significant positive relationships were also found between Self-efficacy for Collaboration and the following variables: SACIE-R,  $t(181) = 2.86, p = .005, sr^2 = .030$ , traditional teaching,  $t(181) = 2.70, p = .008, sr^2 = .027$ , and extent of inclusion training,  $t(181) = 2.61, p = .010, sr^2 = .025$ , while holding the effects of other independent variables constant. SACIE-R accounted for 3% of overall variance on Self-efficacy for Collaboration while traditional teaching and extent of inclusion training accounted for

2.7% and 2.5% respectively. For each 1 point increase in SACIE-R, scores on Self-efficacy for Collaboration were expected to increase by .333 points (95% CI from 0.10 to 0.56). For each 1 point increase in traditional teaching, scores on Self-efficacy for Collaboration were expected to increase by .144 points (95% CI from 0.04, 0.25). For each 1 point increase in extent of inclusion training, scores on Self-efficacy for Collaboration were expected to increase .131 points (95% CI from 0.03 to 0.23).

While holding the effects of other independent variables constant, grade level was found to approach significance in predicting Self-efficacy for Collaboration,  $t(181) = 1.72, p = .087, sr^2 = .011$ , uniquely accounting for 1.1% of the variance in Self-efficacy for Collaboration. Predicted Self-efficacy for Collaboration scores for upper school teachers were .149 points greater than that predicted for lower school teachers.

An inverse predictive relationship approached significance between Perception of School Climate Scale and Self-efficacy for Collaboration  $t(181) = -1.93, p = .056, sr^2 = .013$ . Perception of School Climate accounted for 1.3% of the variance in Self-Efficacy for Collaboration. For each 1 point increase in Perception of School Climate, scores on Self-efficacy for Collaboration were expected to decrease .251 points (95% CI from -0.51 to 0.01). Based on semipartial correlations, constructivist teaching was the most important predictor followed by SACIE-R, traditional teaching, extent of inclusion training, Perception of School Climate and lastly, grade level. Although there was a combined effect, as well as individual relationships between the variables discussed and Self-efficacy for Collaboration, there was no individual relationship between Self-

efficacy for Collaboration and the variables: type of school and location of school or access to support resources, thereby accepting the null hypothesis.

**Regression 3.** A standard multiple regression (Tabachnick & Fidell, 2007) was conducted to examine the combined and relative effects of grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes to inclusion in predicting Self-efficacy for Managing Behavior. Data was first screened for violation of assumptions. There was independence of residuals, as assessed by a Durbin-Watson statistic of 2.04. Linearity was assessed by scatter plots and partial regression plots. Homoscedasticity was assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values where there was no specific pattern and the assumption was upheld. There was no evidence of multicollinearity as tolerance values were greater than .1 and VIF values were less than 10. Additionally, examination of the correlations between independent variables showed that no variables were highly correlated ( $r < .7$ ). Less than 1% of cases had residuals greater than  $\pm 3$  thereby indicating normal distribution of residuals. Assumption of normality was assessed by Q-Q plot and revealed that the assumption of normality was met.

The multiple correlation coefficient ( $R = .45$ ) indicated a moderate linear association between the independent variables and Self-efficacy for Collaboration. The combined effect of all the independent variables accounted for 20.5% of variance in Self-efficacy for Managing Behavior  $F(9,181) = 5.19, p < .001, \text{adj. } R^2 = .17$ . This significant combined relationship between grade level, type of school, location of school, access to

support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes as predictors of Self-efficacy for Managing Behavior, thereby indicated rejecting the null hypothesis. Standard regression summary results are reported in Table 7 below.

Table 7

*Standard Multiple Regression Summary Table for the Independent Variables Predicting Self-Efficacy for Managing Behavior*

	B	95% CI	<i>sr</i>	B	<i>p</i>
Constant	2.69	[1.50, 3.89]			
Grade Level	0.11	[-0.06, 0.28]	.08	.09	.208
Type of School	0.06	[-0.14, 0.26]	.04	.05	.530
Location of School	-0.03	[-0.21, 0.15]	-.02	-.02	.761
Access to Support Resources	<.01	[-0.04, 0.04]	.01	.01	.861
Perception of School Climate	-0.22	[-0.48, 0.04]	-.11	-.12	.094
Pedagogical Beliefs: Constructivist Teaching	0.28	[0.11, 0.44]	.22	.24	.001
Pedagogical Beliefs: Traditional Teaching	0.08	[-0.03, 0.18]	.10	.10	.150
Extent of Inclusion Training	0.15	[0.05, 0.25]	.19	.20	.004
SACIE-R	0.24	[0.01, 0.47]	.14	.14	.044

Note: CI = Confidence interval; *sr* = semipartial correlation (part correlation)

While holding the effects of other independent variables constant, constructivist teaching was found to be highly statistically significant in positively predicting Self-efficacy for Managing Behavior,  $t(181) = 3.37, p = .001, sr^2 = .050$ , uniquely accounting for 5% of the variance in Self-efficacy for Managing Behavior. A statistically significant result was also found for the extent of inclusion training in positively predicting Self-efficacy for Managing Behavior,  $t(181) = 2.93, p = .004, sr^2 = .038$ , when holding all other independent variables constant. The extent of inclusion training uniquely accounted



for 3.8% of the variance in Self-efficacy for Managing Behavior. For each 1 point increase in constructivist teaching, scores on Self-efficacy for Collaboration were expected to increase .276 points (95% CI from 0.11 to 0.44), while for each 1 point increase in extent of inclusion training, scores on Self-efficacy for Collaboration were expected to increase .147 points (95% CI from 0.05 to 0.25).

While holding the effects of other independent variables constant, scores on SACIE-R were found to approach significance in positively predicting Self-efficacy for Managing Behavior,  $t(181) = 2.03$ ,  $p = .044$ ,  $sr^2 = .018$ , and uniquely accounted for 1.8% of the variance in Self-efficacy for Managing Behavior. For each 1 point increase in SACIE-R scores, scores on Self-efficacy for Managing Behavior were expected to increase .237 points (95% CI from 0.01 to 0.47).

An inverse predictive relationship approached significance between the Perception of School Climate scale and Self-efficacy for Managing Behavior  $t(181) = -1.69$ ,  $p = .094$ ,  $sr^2 = .013$ . Perception of school climate accounted for 1.3% of the variance in Self-Efficacy for Managing Behavior. For each 1 point increase in Perception of School Climate, scores on Self-efficacy for Managing Behavior were expected to decrease .219 points (95% CI from -0.48 to 0.04). Based on semipartial correlations, constructivist teaching is the most important predictor followed by extent of inclusion training, SACIE-R, and lastly, Perception of School Climate Scale. Although there was a combined effect, as well as individual relationships between the variables discussed and Self-efficacy for Managing Behavior, there was no individual relationship between Self-efficacy for Managing Behavior and the variables: grade level, type of school, location of

school, traditional teaching or access to support resources, thereby accepting the null hypothesis.

To address the second research question, the original plan for statistical analysis was to run two independent samples  $t$  tests. The test would be run for significance between teachers' grade level and their attitudes to inclusion. Another  $t$  test would be run for significance between teachers' grade level and their concerns about inclusion. However, since all the SACIE-R scales did not meet satisfactory reliability, the total scale was used. A one-way ANOVA was therefore run between grade level and SACIE-R scores to examine the extent of difference in the attitudes and concerns about inclusion by the grade level taught.

Data was first screened for violation of assumptions. There was independence of observations since teachers in each group have no relationship as different participants are in each group. There were no outliers detected as assessed by box plot. The assumption of normality was met as skewness and kurtosis were less than 2 for both samples. There was homogeneity of variances of SACIE-R scores for upper and lower school teachers, as assessed by Levene's test for equality of variances  $F(1, 189) = 0.003$ ,  $p = .958$ .

There were 97 lower school teachers and 94 upper school teachers. SACIE-R scores were slightly higher for lower school teachers ( $M = 2.44$ ,  $SD = 0.39$ ) than upper school teachers ( $M = 2.43$ ,  $SD = 0.39$ ), however, the difference was not significant  $F(1, 189) = .002$ ,  $p = .962$ ,  $\eta_p^2 = .000$ ,  $\eta^2 = .000$ . Therefore, we fail to reject the null hypothesis

that there are no significant differences in the sentiments, attitudes, and concerns about inclusion between lower school and upper school teachers (grade level).

### **Summary**

The purpose of this study was to examine whether there is a predictive relationship between the variables: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, attitudes to inclusion and teachers' ratings of Self-efficacy for Inclusive Practices. The study also examined whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school).

The first research question was addressed by conducting three sets of standard multiple regressions for each component of Self-efficacy for Inclusive Practices (Self-efficacy for Inclusive Instructions, Self-efficacy for Collaboration, and Self-efficacy for Managing Behavior). Each set of standard multiple regression revealed statistically significant results.

Results of the first regression found a significant combined relationship between the independent variables as predictors of Self-efficacy for Inclusive Instructions. Specifically, a significant positive predictive relationship between the variables: constructivist teaching, extent of inclusion training, SACIE-R, traditional teaching (marginally) and Self-efficacy for Inclusive Instructions was found, while a marginally significant negative predictive relationship between perceived school climate and Self-efficacy for Inclusive Instructions was also found. There was no individual relationship between Self-efficacy for Inclusive Instructions and the variables: grade level, type of

school, location of school or access to support resources. This means that teachers who endorsed constructivist beliefs, had more training in inclusion, had more positive sentiments and attitudes and less concerns towards inclusion were more likely to have higher Self-efficacy for Inclusive Instructions. A weaker relationship was found with traditional teaching and perception of school climate. Results indicated that teachers who endorsed traditional beliefs were more likely to have higher Self-efficacy for Inclusive Instructions, while a negative school climate predicted less Self-efficacy for Inclusive Instructions.

Results of the second regression found a significant combined relationship between the independent variables as predictors of Self-efficacy for Collaboration. Specifically, there was a significant positive predictive relationship between the variables: constructivist teaching, SACIE-R, traditional teaching, extent of inclusion training, grade level (marginally) and Self-efficacy for Collaboration. A marginally significant negative predictive relationship was found between perceived school climate and Self-efficacy for Collaboration. However, there was no individual relationship between Self-efficacy for Collaboration and the variables: type of school, location of school, or access to support resources. This means that teachers who endorsed constructivist or traditional beliefs, had more training in inclusion, had more positive sentiments and attitudes and less concerns towards inclusion were more likely to have higher Self-efficacy for Collaboration. A weaker relationship was found with grade level and perception of school climate. Results indicated that teachers in upper grade levels

were more likely to have higher Self-efficacy for Inclusive Instructions than lower school teachers, while a negative school climate predicted less Self-efficacy for Collaboration.

Results of the third regression revealed a significant combined relationship between grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, and attitudes as predictors of Self-efficacy for Managing Behavior. Specifically, significant positive predictive relationships were found between the variables: constructivist teaching, extent of inclusion training, SACIE-R (marginally) and Self-efficacy for Managing Behavior. A marginally significant negative predictive relationship was found between perceived school climate and Self-efficacy for Managing Behavior. There was no relationship between self-efficacy for Managing Behavior and the variables: grade level, type of school, location of school, traditional teaching or access to support resources. This means that teachers who endorsed constructivist beliefs and who had more training in inclusion were more likely to have higher Self-efficacy for Managing Behavior. A weaker relationship was found with sentiments, attitudes and concerns as well as perception of school climate. Results indicate that teachers with more positive sentiments, attitudes and less concerns toward inclusion were more likely to have higher Self-efficacy for Managing Behavior, while a negative school climate predicts less Self-efficacy for Managing Behavior.

The second research question was addressed by conducting a one-way ANOVA between grade level and SACIE-R scores. However, no statistically significant results

were found. This means that teacher in upper and lower grades did not differ significantly in respect to their sentiments, attitudes and concerns towards inclusion.

In Chapter 5, the significant findings of the study are discussed and interpreted. The limitations of the study are then discussed before focusing on recommendations for further research and potential impact for positive social change.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

The purpose of this survey research study was to examine whether there was a predictive relationship between the variables: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, attitudes to inclusion, and teachers' ratings of self-efficacy for inclusive practices. The study also examined whether there are differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school). This study is crucial in understanding the attitudes of Jamaican primary educators towards inclusion as well as how efficacious they perceive themselves and what concerns they have in effecting these inclusive practices.

A quantitative research design was chosen for this study due to the combination of the philosophical worldview of the researcher, strategies of inquiry, and research methods. The philosophical worldview for this study was post-positivist as the focus was on the cause and effect relationships between variables (Creswell, 2009). Based on the research questions, the decision was made to use instruments (which reduce the opinions and beliefs of participants to numeric data) which could then be collected and analyzed statistically. The strategy of inquiry chosen was a cross-sectional, correlational survey research study. Since the research questions could not be answered with a true experiment, this was ruled out and a non-experimental method was chosen.

This study was conducted to shed some light on an area that has seen little published research in Jamaica, although there has been much focus on this area

internationally. Because Jamaica is in the process of transforming the educational system, it is timely to conduct research on inclusion which may aid in the country's implementation of its special education policy. Since self-efficacy has been associated with positive teacher and student outcomes (Holzberger et al., 2013; Leyser et al., 2011; Urton et al., 2014), the study was conducted to examine which variables would predict higher self-efficacy. The study was also conducted to examine if attitudes and concerns about inclusion differed significantly by grade level taught.

### **Summary of Findings**

Data was collected over a five-week period between June 2016 and July 2016 via a five-part survey distributed in paper format to the participants. The following four scales were used: The Teacher Efficacy for Inclusive Practices (TEIP) Scale, Teacher Beliefs Survey, Perception of School Climate Scale, and the Sentiments, Attitudes, and Concerns about Inclusive Education Scale revised (SACIE-R). In addition to the scales, demographic information was also collected.

The sample size was 191 after screening for outliers. Participants were primary level teachers in three parishes in Jamaica (Kingston, St. Andrew and St. Thomas). Participants were mainly female and approximately 40 years of age. The sample was mostly comprised of public school teachers and almost evenly split between rural and urban locations. Most teachers were educated at the Bachelor's level and have been teaching for about 15 years. A little less than half of the sample had "some" training in inclusion and approximately a quarter of the sample had no training in inclusion. Class size averaged at 30 students. Participants had access to about 4 additional support



resources out of a list of 11 resources that may be needed for the implementation of inclusion. Teachers further reported that approximately 8 students needed these resources. Results of the TEIP scales revealed that Jamaican primary teachers perceive of themselves as efficacious for conducting inclusive practices in the classroom. Scores on the overall SACIE-R scale indicated that Jamaican primary teachers have slightly positive views towards these constructs related to inclusive inclusion. However, when looking at the subscale scores, it was revealed that scores on the Sentiments subscale were higher than both the Attitudes and Concerns subscales. This means that teachers had more positive sentiments towards persons with disabilities in a general sense. However, as it related to an inclusive classroom, they had less positive attitudes and slight concerns. Teachers positively endorsed Traditional Management and Constructivist Teaching as it related to their pedagogical beliefs. Results indicated lower beliefs regarding Traditional Teaching although the overall results were still positive. Teachers rated their school climates as slightly negative.

The first research question was addressed by conducting three sets of standard multiple regressions for each component of Self-efficacy for Inclusive Practices (Self-efficacy for Inclusive Instructions, Self-efficacy for Collaboration, and Self-efficacy for Managing Behavior). Each standard multiple regression revealed statistically significant results. Three variables were found to positively predict the three components of self-efficacy: constructivist teaching, extent of inclusion training, and SACIE-R, while perceived school climate was found to have an inverse relationship. This means that teachers who endorse constructivist beliefs, have more training in inclusion, have more

positive sentiments and attitudes and less concerns towards inclusion, and experience more positive school climates are more likely to have higher self-efficacy for inclusive practices. Traditional teaching positively predicted Self-efficacy for Inclusive Instructions and Self-efficacy for Collaboration, while grade level positively predicted Self-efficacy for Collaboration.

The second research question was addressed by conducting a one-way ANOVA between grade level and SACIE-R scores. However, no statistically significant results were found. This means that teachers in upper and lower grades did not differ significantly in respect to their sentiments, attitudes, and concerns towards inclusion.

### **Interpretation of Findings**

The theoretical framework of this study is based on Albert Bandura's Social Learning Theory which focused on the social process of learning (Bandura, 1979). Bandura (1977; 1982) discussed self-efficacy in relation to behavior change and stated that humans tend to appraise their capabilities and adjust behaviors accordingly. For example, level of self-efficacy can determine one's motivation to overcome obstacles associated with the skill one is evaluating. In fact, Bandura found that self-efficacy can be a more important indicator of successful performance and positive attitudes than actual ability (Bandura, 1993). In relation to teacher efficacy, both positive teacher and student outcomes have been reported. However, self-efficacy is task specific. Therefore, it was imperative in this research study to assess Jamaican primary teachers' self-efficacy as it pertains specifically to including children with special needs in the regular classroom, and examine the variables that best predict high self-efficacy.

Across the three components of Self-efficacy for Inclusive Practices (Self-efficacy for Inclusive Instructions, Self-efficacy for Collaboration, and Self-efficacy for Managing Behavior), constructivist teaching was found to be the most important predictor. No previous research was found examining the relationship between pedagogical beliefs and self-efficacy. However, it was noted that teachers' beliefs had great impact on their classroom practices and while they may support inclusion, they have different pedagogical beliefs which may in turn affect instruction (Berry, 2006).

Constructivist teaching has been found in this study to have a positive predictive relationship with self-efficacy. Constructivist teaching differs from traditional teaching because it is flexible in nature and the teacher is responsive to students in deciding what and how to learn (Feng et al., 2014). Additionally, constructivism promotes active participation and making sense of information (Feng et al., 2014; Lee Yuen, 2010). While the teacher structures the environment to promote this active learning, the teacher does not dictate how information should be learnt (Feng et al., 2014). Constructivist teaching is important because it promotes autonomy and student thinking drives the lessons (Lee Yuen, 2010).

Other important components to constructivist teaching include the fact that it encourages collaborative learning through social interaction as well as reliance on real-world or applied strategies (Loyens, Rikers, & Schmidt, 2009). Because of the advantages of constructivism, it has been greatly encouraged in classrooms as part of educational reform in America because it promotes differentiated instruction and teaching to a diverse classroom (Lee Yuen, 2010).

Inclusion also emphasizes the use of differentiated instruction as the ideology driving inclusion is rooted in social justice and equal rights for all (Florian & Linklater, 2010; Symeonidou & Phtiaka, 2014). Furthermore, inclusive education supports the involvement of all students as much as possible in the regular classroom students with needed supports as a means of supporting and catering to diversity in the classroom environment (UNESCO, 1994). The overlaps between constructivist teaching beliefs and inclusion suggest that the tenets of constructivist beliefs may be in line with the skill set needed for inclusive education. This may explain the positive correlation found in this study between teachers who endorsed constructivist beliefs and high scores for all three components of self-efficacy for inclusive practices.

Education reform in subjects such as science and information and communication technology (ICT) had focused research on pedagogical beliefs. Research in the field has found that teachers' epistemic beliefs predicted their pedagogical beliefs and these pedagogical beliefs in turn predicted their use of ICT in the classroom (Feng et al., 2014). Specifically, Feng et al. (2014) found that teachers' constructivist beliefs predicted the use of information and communication technology in the classroom. Traditional beliefs, on the other hand were not found to predict the use of information and communication technology. Lee Yuen (2010) exposed new science teachers to a preparation program that focused on constructivism and results showed that when constructivism was modelled, teachers integrated these beliefs into the way they practiced. Inclusive education can be considered another type of education reform based on meeting the needs of all students. Therefore, adaptability of content and process is important. Since results of this study

show a linear relationship between constructivist beliefs and self-efficacy for inclusive practices, this may imply that this student-centered philosophy of constructionism is congruent with the concept of inclusive education.

Another variable that was found to have significant findings across all three components of Self-efficacy for Inclusive Practices was the extent of inclusion training. Results of this study revealed that as training in inclusion increased, self-efficacy was predicted to increase and vice versa. This finding is in keeping with research that revealed that teachers with inadequate training were also low in self-efficacy (Scanlon & Barnes-Holmes, 2013). It should be noted that only approximately one quarter of the sample reported "much" or "very much" training. One quarter of the sample also reported no training in inclusion. This is also in keeping with research that states that teachers are generally unprepared to teach in inclusive classrooms (Brackenreed, 2008) and there are negative consequences for this such as high teacher drop-out rate, burnout, and stress (Forlin & Chambers, 2011; Scanlon & Barnes-Holmes, 2013). Emphasis should therefore be placed on training in inclusion. Similar to research in the field, inclusion training for Jamaican teachers appeared to have much variability. While most persons reported having a course on inclusion, others were only exposed to professional development training or self-directed research. However, results solidify that even with variability in delivery of inclusion training, the more training a teacher receives, the more likely self-efficacy is predicted to increase.

The sentiments, attitudes, and concerns of teachers towards inclusion was found to have a significant positive relationship with Self-efficacy for Inclusive Instructions and

Self-efficacy for Collaboration. A marginal positive relationship was found with Self-efficacy for Managing Behavior. Although research has revealed conflicting results regarding teachers' attitudes towards inclusion, many studies have reported generally positive feelings (Beacham & Rouse, 2012; Bhatnagar & Das, 2014; Chmiliar, 2009; Oswald & Swart, 2011). However, research has also revealed that over the duration of training, teachers endorsed more concerns (Oswald & Swart, 2011; Sharma et al., 2009). Additionally, teachers in developing countries tend to express more concerns about financial ability to provide resources (Sharma et al., 2009; Oswald & Swart, 2011). The results of this study revealed that teachers had more positive sentiments towards persons with disabilities in a general sense. However, as it related to an inclusive classroom, they had less positive attitudes and slight concerns. Overall scores on the SACIE-R may have been impacted by mostly positive scores on the sentiments component. Teachers had less positive attitudes about including some students with special needs in the classroom. For example, teachers did not have favorable attitudes towards including students who frequently fail exams, those that require communicative technologies, or those who need an individualized academic program. They also had concerns about an increase in workload, lack of knowledge and skills for teaching children with disabilities, and difficulty giving appropriate attention to all students in an inclusive classroom. Teacher preferences for including some children with special needs as opposed to others may be indicative of lacking skills in including these children in the regular classroom. The same may be said about their concerns. The linear positive relationship on SACIE-R scores and self-efficacy demonstrates the importance of investing in promoting positive sentiments

and attitudes in these teachers through teacher training while addressing and lessening concerns because, in keeping with research in the field, those teachers with positive sentiments and attitudes and less concerns had higher self-efficacy scores (Oswald & Swart, 2011; Urton et al., 2014).

Perception of school climate was revealed to have a marginally significant relationship across all three components of self-efficacy. Results revealed that a negative school climate was associated with lower self-efficacy for inclusive practices. No previous research has been found linking school climate to self-efficacy specifically as it pertains to inclusion. However, school climate has been found to foster positive student outcomes (Cohen et al., 2009; O'Malley et al., 2015). In particular, administrative support and collaboration among staff have been singled out as having positive effects (Collie et al., 2011; 2012). The results of this study extend previous research in the field where staff collaboration was found to increase general teacher self-efficacy (Collie et al., 2012).

Teachers in this study rated their school climate as slightly negative for a variety of reasons. Most notably on the perception of school climate scale, teachers were dissatisfied with their salaries. Teachers also did not plan with the librarian to integrate audio visual information. However, it must be noted that some teachers indicated that their school does not have a librarian. This may explain the high negative rating for that statement. Teachers also reported not receiving the support needed to teach children with special needs. Other items contributing to a negative school climate included a lack of parent support, lack of necessary materials needed, and lack of discussions with the

principal about the teachers' instructional practices. These results suggest that teachers rely on the support and strong interpersonal relationships in their environment in their assessment of efficacy as it relates to inclusion. Negative outcomes of a poor school climate are linked to stress, poor student-teacher relations, low job satisfaction, and these may in turn affect their efficacy (Collie et al., 2012). Improvement in school climate must be addressed since results have shown that a better school climate is likely to predict a better self-efficacy for inclusion.

A surprising finding was that traditional teaching was found to have a significant positive linear relationship with Self-efficacy for Inclusive Instructions and a marginally significant positive relationship with Self-efficacy for Collaboration. Traditional teaching is didactic in nature, where the teacher assumes authority and learning is viewed as a passive process. The traditional teacher is seen as authority and has control of content (Feng et al., 2014). Research has found that teachers' beliefs predicted their use of information and communication technology (ICT) in the classroom whereby traditional teachers did not use ICT in their instruction (Feng et al., 2014). Educational reform in science, ICT and math have emphasized the need for constructivist strategies. Although no research was found examining the relationship between pedagogical beliefs and inclusion, the tenets of traditional teaching appear to contradict those of inclusive education. As discussed above, constructivist teaching is student-driven and the teacher requires flexibility in delivery as well as the ability to adapt the content to suit the needs of the learners. It was also discussed that the tenets of constructivist teaching appear to be



in tandem with the skills set required for inclusive education as they both encourage differentiation and teaching to a diverse population of students.

Researchers Lim and Chai (2008), however, found that although teachers identified as constructivist in belief, in the classroom they practiced in didactic and traditional ways due to the context of the environment. It was thought that schools were focused on a set curriculum with importance placed on examinations, and therefore teachers tended to ignore the use of ICT although identifying as constructivist in belief. Results of this research indicate that the context and the role of teachers within the system may play a crucial part in determining which type of strategies teachers use irrespective of the type of pedagogical beliefs endorsed. In Jamaica, much emphasis is placed on curriculum and summative assessments. Children in the Jamaican primary schools are assessed nationwide at grades one, three, four and six. Teachers may therefore have endorsed statements relating to both constructivist and traditional pedagogical beliefs. This may be so because teachers might endorse what they believe to be correct, but may also endorse practices that are dictated by the environment. In the Jamaican context, covering the curriculum for these exams within strict timelines is significant as it has important consequences such as the placement of the children into the high school system based on quality of grades. Although teachers may endorse using formative assessment and adapting the curriculum, environmental factors such as these national exams, as well as the number of children in the classroom, may also play a part. While environment and context may be one of the explanations of why teachers may endorse both pedagogical beliefs, another explanation may be that traditional and

constructivist beliefs may not be polar opposites or mutually exclusive. Instead, it is possible that pedagogical beliefs are best understood as a spectrum as teachers may endorse both pedagogical beliefs to different degrees. For example, teachers may be flexible in the teaching and learning process, but may also rely heavily on summative assessment and curriculum content.

Another possible explanation as to why both pedagogical beliefs had a positive relationship with self-efficacy for inclusive practices may be that although teachers may learn about constructivism, teachers tend to teach how they were taught (Cross, 2009; Lim & Chai, 2008). Therefore, there tends to be a conflict between their theoretical knowledge and the application in a real-world context. In this study, teachers may have endorsed both pedagogical beliefs as a means of conflict between their theoretical knowledge and how they were taught. Authors have argued that educational reform on instructional practices cannot solely rely on theory (Cross, 2009; Lim & Chai, 2008). Instead, modelling throughout training is necessary in order to change pedagogical beliefs (Cross, 2009; Lim & Chai, 2008). For the variety of reasons discussed, the endorsement of traditional teaching beliefs may be thought to be effective in the classroom. These teachers also rated themselves as efficacious for inclusive practices.

Overall, this study has indicated that both pedagogical beliefs are positively related to self-efficacy for inclusive instructions and self-efficacy for collaboration. Although the tenets of traditional teaching beliefs do not appear to be in tandem with inclusive education, it is possible that teachers who endorse traditional beliefs view themselves as effective teachers. They also therefore rated themselves as efficacious for

inclusive practices. As discussed above, teachers may have endorsed some constructivist as well as traditional beliefs at the same time. However, it is important to note that traditional beliefs was not found to have a relationship with one component of self-efficacy, which is self-efficacy for managing behavior. This indicates that the tenets of traditional beliefs may not align with the skills sets for managing behavior in an inclusive classroom. Additionally, this study has revealed that while both pedagogical beliefs had a linear relationship with two component of self-efficacy, endorsement of constructivist beliefs had a stronger relationship with all three components of self-efficacy for inclusive practices.

It was thought that there may be differences in self-efficacy, attitudes and concerns in the Jamaican sample due to different requirements of teachers according to grade level. The preparation for the Jamaican GSAT exam begins in grade four and much extra time in the school day is allocated for this preparation between grades four and six. It was thought that this exam preparation may negatively affect the teachers' self-efficacy, attitudes, and concerns, but this was not found across all concepts.

Although the variable grade level did not have any significant findings with Self-Efficacy for Inclusive Instructions and Self-Efficacy for Managing Behavior, there was a weak, but significant relationship between grade level and Self-Efficacy for Collaboration. Specifically, upper school teachers rated higher Self-Efficacy for Collaboration than lower school teachers. Upper school teachers in Jamaican primary schools are mainly engaged in preparing children for the national exams. These teachers may rate themselves as more efficacious for collaboration because it is at this point where

many teachers identify which children have deficits in ability when preparing for the exams. It is also at this point where referrals are made for accommodations or modifications in sitting these exams as schools may decide whether students should sit the exam or repeat the grade. Teachers therefore may collaborate more with students, families and outside professionals to strengthen the abilities of the students in order to gain the best score when the students take the exam. The finding that upper school teachers were more conducive to Self-Efficacy for Collaboration may also indicate the need at the upper grades for more support staff for including children with special needs.

When examining attitudes and concerns by grade level, no significant findings were revealed. Some research findings have revealed that teachers of the lower grades, such as pre-school, and those teaching younger children have had more favorable views towards inclusion (Klassen & Chiu, 2010). It was thought that teachers at the lower grades in Jamaica would have early childhood education training and this may make a difference with regards to their attitudes and concerns. However, results revealed that less than half of teachers at the lower grades had early childhood education training. Most had general primary education training, while two of these teachers had secondary education training. It is possible that primary and secondary education in Jamaica focuses less on inclusion in preservice training. Since there were very few early childhood trained teachers, this may have affected the results with regards to attitudes and concerns. It may also be possible that other factors, other than grade level taught or type of training, were more important in determining the attitudes and concerns to inclusion of these teachers. For example, results revealed large class sizes and few supports for inclusion.

Additionally, only a small percentage of the sample indicated having “very much training” in inclusion. As these are more pervasive factors, they may have played a more crucial part in the attitudes and concerns towards inclusion irrespective of grade level taught.

### **Limitations of the Study**

There were some limitations in the current study. Firstly, it must be noted that although measures were taken to choose appropriate scales for the study, none of the scales used in the study were validated in the Jamaican population. Slight changes had to be made to some of the scales for cultural reasons. Additionally, some subscales were found to be unreliable after conducting descriptive analysis and could not be used for further statistical analysis. For example, the Traditional Management subscale was not used. Although the Constructivist Teaching subscale was found to have significant findings for three components of Self-efficacy for inclusive practices, the reliability was found to be questionable and therefore results should be interpreted with caution. Also, the total SACIE-R scale was used instead of the three sub-scales. This was done because the sub-scales in isolation were not as reliable as the total SACIE-R score. This prevented separate analysis by the three components of the scale: sentiments, attitudes, and concerns. As was noted in the previous section, the overall positive result on the scale was aided by generally positive sentiments.

Other limitations of the study are as a result of the study design and choice to use self-report surveys. Survey responses may be prone to confounding variables affecting participants’ responses. Because the study is not a true experiment, it is not possible to

say whether other unknown variables may have affected the outcome. Additionally, because the study was correlational, only the relationships could be analysed and causation may not be assumed. This design was, however, felt to be the best fit as the independent variables could not be manipulated as in the case of true experiments. Additionally, since the data was collected by self-report, it is possible that participants may have skewed their answers to what they believe may have been more socially acceptable responses. There are also generalizability concerns as probability sampling of the entire population of primary education teachers was not employed due to time and resource constraints. However, a representative sample of an adequate sample size was chosen from three parishes representing urban and rural areas. Private and public schools were also included in the sample. However, only lead primary education teachers were included in the sample. Results therefore cannot be generalized to secondary, early childhood or special education settings. Administrators, specialist teachers and assistant teachers were also not included in this study.

### **Recommendations**

Results of this study provide important information upon which recommendations can be made. Firstly, it is imperative to address the pedagogical beliefs of primary school teachers. Results have shown that constructivist beliefs positively predict self-efficacy in all the areas needed for inclusive classrooms. Since research has shown that beliefs also impact strategies used in the classroom (Cross, 2009; Feng, Ching Sing, Chin-Chung, & Min-Hsien, 2014; Lim & Chai, 2008), emphasis should be placed on shaping these beliefs throughout teacher training and continue through inservice teaching by way of

professional development. Similarly, the extent of teacher training as well as teachers' sentiments, attitudes and concerns must be addressed through education as these have been found to predict self-efficacy for inclusive practices. Research has shown that teaching theory alone does not result in a change of pedagogical belief (Cross, 2009; Lim & Chai, 2008) or attitude and therefore theoretical knowledge will not result in change of actual behavior and practices within the classroom. In fact, teachers tend to teach in the manner in which they were taught (Cross, 2009; Lim & Chai, 2008). Therefore, instruction in teachers' college must model how teachers are expected to teach in the inclusive classroom (Cross, 2009) and infuse theory teaching towards values, attitudes, and beliefs.

Additionally, since the extent of training has important implications for self-efficacy, teacher programs should be evaluated to ensure that they are in line with what is expected in an inclusive environment. There was great variability with teachers' training in inclusion, and teachers who are already in-service, will also be expected to adjust to inclusive classrooms. Therefore, impetus for training and development in this area is crucial. Symeonidou and Phtiaka (2014) suggested that regular teacher education programs should include the triad of: knowledge of inclusion, skills for implementing inclusion, and positive values. Many researchers have noted that the "values" component, which may be the most important part of the triad, is often neglected (Forlin & Chambers, 2011; Scanlon & Barnes-Holmes, 2013) and in so doing educators do not accomplish the goal of gaining support for inclusion. The teaching of values presents a foundation or ideology upon which to understand inclusion (Florian & Linklater, 2010;

Symeonidou & Phtiaka, 2014). This ideology, when infused from the outset of training, may impact teachers' attitudes and beliefs.

Teachers in this study who received training in inclusion mostly cited receiving training through a course, while others reported a module/unit or professional development course. While this is a start, it is recommended that these core values are a standard part of every course in teacher training programs, so that inclusive practices are not only associated with special education, but considered a foundation of general education. This can further be impacted in schools by enacting values and attitudes campaigns and workshops where teachers can benefit from learning about best practices in inclusive classrooms.

Additionally, teacher training must not only involve modeling but also practical components. Leyser et al. (2011) found that those teachers who had more experiences or training with children with learning disabilities also had higher levels of self-efficacy. Therefore, teachers should undergo practicum and other field-based experiences in inclusive settings during pre-service training.

This research has also highlighted a slightly negative school climate which marginally predicts lower self-efficacy for inclusive practices. Recommendations include addressing areas of weakness in school climates in order to strengthen schools' effectiveness at implementing inclusion. This may be done by initiatives through the Ministry of Education to inform and educate how to improve school climate. At the school level, schools may improve climate by devising their own interventions. Research has highlighted that a core tenet of school climate is belonging and connectedness (Odom



et al., 2011; O'Malley et al., 2015). This is true for both students and teachers. Therefore, schools may do in-house assessments to ascertain the needs of both students and teachers before devising a school-wide plan towards improvement. Relationships between staff and administration may be improved by better communication and support for staff in serving the students (especially those with special needs). Staff members may better communicate through sharing best practices and fostering a more collaborative approach to teaching and learning. Outreach within the community by the schools may also foster better parent involvement. Staff-student relations may also be improved by continual internal professional development, support and assessment.

### **Further Research**

Notably, this study was conducted by self-reported surveys where teachers made assertions about their perceptions of efficacy. While the TEIP asked teachers to rate themselves on their perceived efficacy of various core skills needed for inclusion, it is unknown whether the teachers in the primary system are actually equipped to carry out such skills. For example, The TEIP examined their efficacy at collaboration with other professionals such as itinerant teachers or speech pathologists. However, teachers also reported only having access to approximately 4 additional support resources which included support professional staff and adequate accessible infrastructure. Less than a quarter of the sample reported having access to a psychologist, special education teacher, or assistant teacher, with class sizes that averaged at approximately 30 students, but had at maximum 48 students. Teachers also reported an average of approximately 8 students in each class needing additional support resources. So, although teachers may view

themselves as efficacious, there may be other macro or micro level factors that could affect actually implementing these inclusive practices. This warrants further research in the Jamaican context to understand what the barriers to inclusive education may be.

The delimitations as outlined in Chapter 1 included the fact that the research will only be generalizable to general education teachers in Jamaica who teach in primary education. Results of this research cannot be applied to any other teachers within the educational system. Another delimitation involved the choice of independent variables. Although this study examined the relationship between the chosen independent variables and the dependent variable of self-efficacy, it should not be assumed that these are the only predictors of self-efficacy. However, these delimitations also suggest areas for future research. The study of self-efficacy in Jamaican teachers should eventually be expanded to include early childhood, secondary education and special education in order to have a comprehensive view of self-efficacy for inclusive practices across the entire educational system. Additionally, the study of other variables as predictors of self-efficacy will also help develop educational policy. For example, it was noted that there was a wide range in class size (from 10 students to 48 students) with an average of 30 students. This is a possible predictor of self-efficacy because the number of students in the class may affect how efficient the teacher can be at inclusion.

Further research should also examine the attitudes and concerns about inclusion with separate measures which may allow for more detailed information. It is important to note that while teachers generally rated themselves positively on the TEIP, they also expressed some negativity when including specific children with special needs, and also

expressed concerns about inclusion. This means that while they may perceive of having the core skills, they also have some negative attitudes and concerns. Additionally, some teachers responded to an open-ended question at the end of the survey asking whether there were any additional concerns about inclusion which may not have been addressed. Responses addressed stigma, lack of resources, and the need for assessment of children with special needs. Research can also examine more deeply which categories of special needs teachers have adverse attitudes towards including and why. Separate measures would also allow more in-depth information to be garnered about the teachers' specific concerns. A mixed methods study would help integrate qualitative information for attitudes and concerns in the Jamaican context. This will give more in-depth information which may help to devise Jamaican measurement instruments. More detailed information from a Jamaican perspective may also better inform policy and interventions.

### **Implications for Social Change**

This study is significant because there is a dearth of research on inclusion and children with mild disabilities in Jamaica. Against the backdrop of a changing educational system to be more in tandem with international standards of education, this study presents important information from the perspective of the teachers who are one of the most important factors of successful inclusion. The examination of self-efficacy, attitudes, and concerns have provided crucial information that may be able to guide the gradual implementation of an inclusive approach in the Jamaican educational system. Additionally, results of the study revealed which variables were better predictors of self-efficacy and this information may inform teacher training both at the pre-service and in-

service levels, as well as initiatives to improve the school climate within primary schools. Education is a vehicle for social change. Therefore, the use of this information has the potential to improve the educational system and thereby, the lives of those children with special needs. Positive school climate has been shown to have positive outcomes for students such as better academic achievement, improved mental health and the avoidance of negative and disruptive behavior (O'Malley et al., 2015; Collie et al., 2012). Initiatives to improve school climate may also create social change by improving the lives of all children.

### **Conclusion**

The Salamanca conference in 1994 by the UNESCO has been largely regarded as the catalyst for international changes in education (Monsen, Ewing, & Kwoka, 2011; Stella, Forlin, & Lan, 2007). One outcome of this conference was the drafting of a statement that spoke to including children with diverse needs as much as possible in regular classrooms. This was agreed upon by 92 countries and 25 international organizations and since then, many countries have moved towards implementing inclusive education (UNESCO, 1994). While some countries have done so by full inclusion, other countries have implemented inclusion along a spectrum. Other countries, like Jamaica are in the infancy stages of implementing inclusion.

A review of the literature revealed that there has not been much recent research on inclusion in Jamaica. A task force study conducted in 2004 revealed, among other things, that Jamaica's education system was not in compliance with international standards. Exclusion was being practiced and many children with special needs were not being

identified, assessed and appropriately educated (Task Force on Educational Reform Jamaica, 2004). Since then, the education system transformation programme has been instituted, and among other things, has produced a draft of a new special education policy which is geared towards inclusion.

Although macro-level factors, such as infrastructure and funding are crucial, an important responsibility for the success of the new initiative towards inclusion remains with the general education teachers (Leyser et al., 2011; Olayiwola, 2011). The self-efficacy concept coined by Albert Bandura (1977; 1982) was chosen for study because research has shown positive teacher and student outcomes associated with high self-efficacy (Klassen & Chiu, 2010; Stipek, 2012; Tschannen-Moran & McMaster, 2009). According to research by Bandura (1993), self-efficacy is task specific and can be a better predictor of success than actual ability. Self-efficacy for inclusive practices was therefore examined in this study.

Due to the dearth of information on this topic in Jamaica, this study provided insight into the self-efficacy, attitudes and concerns towards inclusion by Jamaican primary education teachers. A survey research study was used to examine whether there was a predictive relationship between the variables: grade level, type of school, location of school, access to support resources, perceived school climate, pedagogical beliefs, extent of inclusion training, attitudes to inclusion and teachers' ratings of self-efficacy for inclusive practices. The study also examined whether there were differences in attitudes and concerns about inclusion by grade level taught (upper school versus lower school).

Multiple regression analysis revealed significant findings for some of the variables. Constructivist teaching, extent of inclusion training, SACIE-R and traditional teaching were found to have a positive predictive relationship with self-efficacy for inclusive practices. Additionally, a perceived negative school climate was found to decrease self-efficacy for inclusive practices. Attitudes and concerns were examined by grade level. A one way ANOVA revealed no significant findings.

Results of the study imply that the tenets of constructivist beliefs may be in line with the skill set needed for inclusive education. Constructivism is student-centered and encourages diversity as does inclusive practices. Traditional teaching was also found to have a positive relationship with inclusive instructions and collaboration in the inclusive classroom. Study results also indicate that the more training teachers have in inclusion, the more likely they are to increase their self-efficacy for inclusion. Additionally, positive sentiments, attitudes and less concerns about inclusion result in increased self-efficacy. Teachers of upper school grades have higher self-efficacy for collaboration. Finally, teachers who are dissatisfied with their school climate are more likely to have low self-efficacy for inclusive practices.

Recommendations of the study included infusing positive attitudes, beliefs, values and knowledge towards inclusion at the pre-service level with an emphasis on constructivist teaching. Additionally, interventions for improving school climate at the school and governmental level were suggested. These included assessment at the school-level with a plan to address weak areas. Systematic intervention by the Ministry of

Education may include workshops and training in best practices in promoting positive school climates.

Limitations of the study included the fact that the instruments were not validated in the Jamaican population. Some subscales had to be substituted for the total scale for statistical analysis because the total scale had better reliability. Additionally, the Constructivist Teaching subscale had questionable reliability. Other limitations of the study are central to the use of self-report surveys as they may be prone to confounding variables and social desirability bias. The study concluded with suggestions for future research such as examining the barriers to inclusive education, using separate measures for attitudes and concerns and using a mixed method approach.

Many developing countries, like Jamaica, struggle to meet international standards for education such as inclusion due to infrastructural challenges, lack of resources, negative attitudes and inadequate training (Leyser et al., 2011). Jamaica is at the beginning stages of implementation of inclusion in its educational system as previous research has highlighted that exclusionary practices still exist (Task Force on Educational Reform Jamaica, 2004). There is still no structured referral and identification process. The process of educational placement is therefore fragmented. This research is significant as the implications for social change include integrating the information in teacher training programmes, professional development, policy development and further research. This study has contributed needed information to the relevant literature by examining the self-efficacy, attitudes and concerns of the nation's most crucial

contributor to the success of inclusion - its teachers. This is hopefully a stepping stone to the betterment of the lives of children with special needs in Jamaican primary institutions.



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## Appendix A: Letter of Permission from the Ministry of Education

January 12, 2016

Jillian Samms  
[REDACTED]

[REDACTED]  
Chief Education Officer  
Ministry of Education  
2 National Heroes Circle  
Kingston 4

Dear [REDACTED]:

I am writing to request your permission to conduct a research study within some of the schools under the jurisdiction of the Ministry of Education. I am a PhD student in the Clinical Psychology program at Walden University. My dissertation study is entitled *Inclusion in Jamaican Primary Schools: Teachers' Self-Efficacy, Attitudes and Concerns*. The research study will examine the relationship between particular school and teacher variables and teachers' self-efficacy for inclusive practices. The study will also examine differences in attitudes and concerns about inclusion by grade level taught. Data will be collected by a selection of questionnaires.

Participants for this study will consist of class teachers in both private and public primary level institutions in the parishes of Kingston, St. Andrew and St. Thomas. Participants will be recruited by informational visits and flyers in the schools. Agreements will be made with school principals as to an appropriate time to administer the questionnaires in a group format. Participation is voluntary and participants have the right to withdraw at any time. Consent forms will be given to each participant and confidentiality of responses will be upheld. There are no foreseeable risks or costs to the participant. Each participant will be given a token gift for participation and, if they so choose, a summary of the study after its completion.

Your approval for participant recruitment, data collection and any results dissemination activities will be greatly appreciated. If you agree, kindly sign below. Alternatively, you may provide a letter of permission on your organization's letterhead acknowledging your approval. I can be contacted at [REDACTED] or [REDACTED]. This research

study is being supervised by Dr. Arcella Trimble and she can be contacted at [REDACTED] if needed.

Sincerely,

Jillian Samms  
PhD student  
Walden University

Approved by:

\_\_\_\_\_

Name

\_\_\_\_\_

Title

\_\_\_\_\_

Signature

\_\_\_\_\_

Date



## Appendix B: Letter of Permission from School Principals

Dear Principal:

I am writing to request your permission to conduct a research study at your preparatory school. I am a PhD student in the Clinical Psychology program at Walden University. My dissertation study is entitled *Inclusion in Jamaican Primary Schools: Teachers' Self-Efficacy, Attitudes and Concerns*. The research study will examine the relationship between particular school and teacher variables and teachers' self-efficacy for inclusive practices. The study will also examine differences in attitudes and concerns about inclusion by grade level taught. Data will be collected by a selection of questionnaires.

Participants for this study will consist of class teachers in both private and public primary level institutions in the parishes of Kingston, St. Andrew and St. Thomas. Participants will be recruited by informational visits and flyers in the schools. Agreements will be made with school principals as to an appropriate time to administer the questionnaires in a group format. Participation is voluntary and participants have the right to withdraw at any time. Consent forms will be given to each participant and confidentiality of responses will be upheld. There are no foreseeable risks or costs to the participant. Each participant will be given a token gift for participation and, if they so choose, a summary of the study after its completion.

Your approval for participant recruitment, data collection and any results dissemination activities will be greatly appreciated. If you agree, kindly sign below. Alternatively, you may provide a letter of permission on your organization's letterhead acknowledging your approval. I can be contacted at [REDACTED] or [REDACTED]. This research study is being supervised by Dr. Arcella Trimble and she can be contacted at [REDACTED] if needed.

Sincerely,

Jillian Samms  
PhD student  
Walden University

---

Approved by:

---

Name

---

Title

---

Signature

---

Date

---

Name of School

## Appendix C: Teacher Demographic Information

Please complete the following:

- 1) Age: \_\_\_\_\_ years old
- 2) Gender:  male  
 female
- 3) Type of school:  private  
 public
- 4) Parish that school is located in:  Kingston  
 St. Andrew  
 St. Thomas
- 5) Please check your **highest** education level:  
 high school  
 vocational training (e.g., HEART training)  
 teaching diploma  
 bachelor's degree  
 master's degree  
 doctoral degree  
 other: \_\_\_\_\_
- 6) Are you a trained teacher?  Yes  
 No
- 7) If **yes**, are you trained in :  
 early childhood education  
 general primary education  
 special education  
 other specialization: \_\_\_\_\_
- 8) What grade do you teach? \_\_\_\_\_
- 9) What is your class size? \_\_\_\_\_ students
- 10) How many years have you been teaching? \_\_\_\_\_ years
- 11) How much training in inclusion would you say that you have had? (Check one)  
 none       some       much       very much



## Appendix D: Teacher Efficacy for Inclusive Practices 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 support available to teachers and students.**

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

Please attempt each question

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6



	SD	D	DS	A S	A	S A
I can make my expectations clear about student behaviour	1	2	3	4	5	6
I am able to calm a student who is disruptive or noisy	1	2	3	4	5	6
I can make parents feel comfortable coming to school	1	2	3	4	5	6
I can assist families in helping their children to do well in school	1	2	3	4	5	6
I can accurately gauge student comprehension of what I have taught	1	2	3	4	5	6
I can provide appropriate challenges for very capable students	1	2	3	4	5	6
I am confident in my ability to prevent disruptive behaviour before it occurs	1	2	3	4	5	6
I can control disruptive behaviour in the classroom	1	2	3	4	5	6
I am confident in my ability to get parents involved in school activities of their children with disabilities	1	2	3	4	5	6
I am confident in designing learning tasks so that the individual needs of students with disabilities are accommodated	1	2	3	4	5	6
I am able to get children to follow classroom rules	1	2	3	4	5	6
I can collaborate with other professional (e.g., itinerant teachers or speech pathologists) in designing educational plans for students with disabilities	1	2	3	4	5	6
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
I am confident in my ability to get students to work together <i>in pairs or in small groups</i>	1	2	3	4	5	6
I can use a variety of assessment strategies (e.g., portfolio assessment, modified tests, performance-based assessment, etc.).	1	2	3	4	5	6
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
I am confident when dealing with students who are physically aggressive.	1	2	3	4	5	6
I am able to provide an alternate explanation or example when students are confused.	1	2	3	4	5	6

## Appendix E: Teacher Beliefs Survey

Imagine how you set up your own\* classroom as you read each of the following survey statements. As you think about your classroom, circle a number beside each statement to indicate how much you disagree or agree with the statement on a scale ranging from 1 (strongly disagree) to 6 (strongly agree).

Strongly Disagree	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Strongly Agree
1	2	3	4	5	6



	SD	D	DS	AS	A	SA
It is important that I establish classroom control before I become too friendly with students	1	2	3	4	5	6
I believe that expanding on students' ideas is an effective way to build my curriculum	1	2	3	4	5	6
I prefer to cluster students' desks or use tables so they can work together	1	2	3	4	5	6
I invite students to create many of my bulletin boards	1	2	3	4	5	6
I like to make curriculum choices for students because they can't know what they need to learn	1	2	3	4	5	6
I base students' grades primarily on homework, quizzes and tests	1	2	3	4	5	6
An essential part of my teacher role is supporting a student's family when problems are interfering with a student's learning	1	2	3	4	5	6
To be sure that I teach students all the necessary content and skills, I follow a textbook or workbook	1	2	3	4	5	6
I teach subjects separately, although I am aware of the overlap of content and skills	1	2	3	4	5	6
I involve students in evaluating their own work and setting their own goals	1	2	3	4	5	6
When there is a dispute between students in my classroom, I try to intervene immediately to resolve the problem	1	2	3	4	5	6
I believe students learn best when there is a fixed schedule	1	2	3	4	5	6
I make it a priority in my classroom to give students time to work together when I am not directing them	1	2	3	4	5	6
I make it easy for parent to contact me at school or home	1	2	3	4	5	6
For assessment purposes, I am interested in what students can do independently	1	2	3	4	5	6
I invite parents to volunteer in or visit my classroom almost anytime	1	2	3	4	5	6
I generally use the teacher's guide to lead classroom discussions of a story or text	1	2	3	4	5	6
I prefer to assess students informally through observations and conferences	1	2	3	4	5	6
I find that textbooks and other published materials are the best sources for creating my curriculum	1	2	3	4	5	6
It is more important for students to learn to obey rules than to make their own decisions	1	2	3	4	5	6
I often create thematic units based on the students' interests and ideas	1	2	3	4	5	6

\*indicates wording changed from the original scale

## Appendix F: Sentiments, Attitudes and Concerns to Inclusion (revised)

The following statements pertain to **inclusive education which involves students from a wide range of diverse backgrounds and abilities learning with their peers in regular school that adapt and change the way they work in order to meet the needs of all.**

Please circle the response which best applies to you

<b>Strongly Disagree</b> <b>1</b> ☹	<b>Disagree</b> <b>2</b>	<b>Agree</b> <b>3</b>	<b>Strongly Agree</b> <b>4</b> ☺
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	SD	D	A	SA
I am concerned that students with disabilities will not be accepted by the rest of the class	1	2	3	4
I dread the thought that I could eventually end up with a disability	1	2	3	4
Students who have difficulty expressing their thoughts verbally should be in regular classes	1	2	3	4
I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom	1	2	3	4
I tend to make contacts with people with disabilities brief and I finish them as quickly as possible	1	2	3	4
Students who are inattentive should be in regular classes	1	2	3	4
I am concerned that my workload will increase if I have students with disabilities in my class	1	2	3	4
Students who require communicative technologies (e.g. Braille/sign language) should be in regular classes	1	2	3	4
I would feel terrible if I had a disability	1	2	3	4
I am concerned that I will be more stressed if I have students with disabilities in my class	1	2	3	4
I am afraid to look directly at a person with a disability	1	2	3	4
Students who frequently fail exams should be in regular classes	1	2	3	4
I find it difficult to overcome my initial shock when meeting people with severe physical disabilities	1	2	3	4
I am concerned that I do not have the knowledge and skills required to teach students with disabilities	1	2	3	4
Student who need an individualized academic program should be in regular classes	1	2	3	4

## Appendix G: Perception of School Climate Scale

**IMPORTANT: PLEASE NOTE THAT SCORING OF THIS FINAL SCALE IS DIFFERENT FROM THE PREVIOUS ONES. PLEASE READ THE SCORING RULES CAREFULLY.**

Do you agree or disagree with each of the following statements?

<b>Strongly Agree</b> <b>1</b> ☺	<b>Agree</b> <b>2</b>	<b>Disagree</b> <b>3</b>	<b>Strongly Disagree</b> <b>4</b> ☹
			SA   A   D   SD
			1   2   3   4
The principal lets staff members know what is expected of them			1   2   3   4
The school administration's behavior towards the staff is supportive and encouraging			1   2   3   4
I am satisfied with my teaching salary			1   2   3   4
The level of student misbehavior (such as noise, horseplay, or fighting in the halls, cafeteria or student lounge) in this school interferes with my teaching			1   2   3   4
I receive a great deal of support from parents for the work I do			1   2   3   4
Necessary materials such as textbooks, supplies and copy machines are available as needed by the staff			1   2   3   4
Routine duties and paperwork interfere with my job of teaching			1   2   3   4
My principal enforces school rules for student conduct and backs me up when I need it			1   2   3   4
The principal talks with me frequently about my instructional practices			1   2   3   4
Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes			1   2   3   4
Most of my colleagues share my beliefs and values about that the central mission of the school should be			1   2   3   4
The principal knows what kind of school he or she wants and has communicated it to the staff			1   2   3   4
There is a great deal of cooperative effort among the staff members			1   2   3   4
In this school, staff members are recognized for a job well done			1   2   3   4
I worry about the security of my job because of the performance of my students on national* or local tests			1   2   3   4
I am given the support I need to teach children with special needs			1   2   3   4
I am satisfied with my class size(s)			1   2   3   4
I make a conscious effort to coordinate the content of my courses with that of other teachers			1   2   3   4
The amount of student tardiness and class cutting in this school interferes with my teaching			1   2   3   4
I sometimes feel it is a waste of time to try to do my best as a teacher			1   2   3   4
I plan with the librarian* for the integration of audio and visual* services into my teaching			1   2   3   4
I am generally satisfied with being a teacher at this school			1   2   3   4

\*indicates wording changed from the original scale

## Appendix H: Permission to use the TEIP, SACIE and Perceived School Climate Scale

**Jillian Samms** <jillian.samms3@waldenu.edu**9/16/2015**

to Umesh.Sharma

Hello Dr. Sharma,

My name is Jillian Samms. I am a Phd Clinical Psychology student at Walden University. My dissertation topic will focus on the self-efficacy, attitudes and concerns of in-service teachers in Primary Education level in Jamaica. I am a national of Jamaica, currently residing there and as a country there are talks in the Ministry of Education to move towards an inclusive model of education.

I am seeking your permission in using CIES and the SACIE-R and gaining statistical information on the measures. While I was able to see a copy of the SACIE-R, I was not able to see a copy of the CIES and therefore would like to decide which would be best in measuring concerns about inclusion in the Jamaican context.

Thank You.

Sincerely,  
Jillian Samms**Jillian Samms****9/17/2015**

to Umesh.Sharma

Dr. Sharma,

I am also requesting permission to use the Teacher Efficacy for Inclusive Practices Scale for my dissertation.

Sincerely,  
Jillian Samms**Umesh Sharma****9/16/2015**

to me

Hi Jillian,

You are most welcome to use our scales. I will forward you an email with information on SACIE-R and TEIP. I have attached CIES and a few papers that might be relevant for your research. My personal preference would be to use CIES if you are keen to measure concerns.

It would be great if you can send us a brief report at the conclusion of your project. I wish you all the best with your research.

Regards,  
Umesh



**Umesh Sharma**

**9/16/2015**

to me

Dear Jillian,

We are very happy for you to use the questionnaires and we would appreciate a copy of your final scale if you make any changes to it for our records.

Please note that it is important that the scales are referenced appropriately whenever they are used or cited in publications due to the copyright agreements of the journals.

Please reference the SACIE-R as (Forlin, Earle, Loreman & Sharma, 2011).

Please reference the TEIP as (Sharma, Loreman & Forlin, 2012).

If you make a translation of the scale please add your own reference for the translation only.

Full references are:

Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The *Sentiments, Attitudes and Concerns about Inclusive Education Revised (SACIE-R)* scale for measuring pre-service teachers' perceptions about inclusion. *Exceptionality Education International*, 21(2 & 3), 50-65.

Sharma, U., Loreman, T. & Forlin, C. (2012). Measuring teacher efficacy to implement inclusive practices. *Journal of Research in Special Educational, Needs*, 12(1), 12-21: doi: 10.1111/j.1471-3802.2011.01200.x

You may wish to set the scales up electronically through one of the web surveys as this saves considerable time and improves accuracy for entering the data.

When analyzing the data you will need to recode all of the negative items in the SACIE so that the higher the number on the item the more positive the responses. This would include all concerns and all sentiments items ie 1, 2, 4, 5, 7, 9, 10, 11, 13, 14. The attitudes items recording which students they think should be included are already in the positive.

The TEIP does not require any recoding.

There are several recent papers which should help you with your write up. I attach the two validation papers for you.

You may also wish to read the following papers:

Forlin, C., Loreman, T., & Sharma, U. (2014). A system-wide professional learning approach about inclusion for teachers in Hong Kong. *Asia-Pacific Journal of teacher Education*, 42(3), 247-260.

Forlin, C., Sharma, U., & Loreman, T. (2013). Predictors of improved teaching efficacy following basic training for inclusion in Hong Kong. *International Journal of Inclusive Education* doi: 10.1080/13603116.2013.819941

Loreman, T., Sharma, U., & Forlin, C. (2013). Do pre-service teachers feel ready to teach in inclusive classrooms? A four-country study of teaching self-efficacy. *Australian Journal of Teacher Education*, 38 (1), Article 3. Available at: <http://ro.ecu.edu.au/ajte/vol38/iss1/3>

Forlin, C., Loreman, T., Sharma, U., & Earle, C. (2009). Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education*, 13(2), 195-209.

- Sharma, U., Forlin, C., & Loreman, T. (2008). Impact of training on pre-service teachers' attitudes and concerns about inclusive education and sentiments about persons with disabilities. *Disability & Society*, 23(7), 773-785.
- Sharma, U., Loreman, T., & Forlin, C., (2007). What concerns pre-service teachers about inclusive education: An international viewpoint. *KEDI Journal of Educational Policy*, 4(2), 95-114.
- Loreman, T., Earle, C., Sharma, U., & Forlin, C. (2007). The development of an instrument for measuring pre-service teachers' sentiments, attitudes, and concerns about inclusive education. *International Journal of Special Education*, 22(2), 150-159.
- Loreman, T., Forlin, C., & Sharma, U. (2007). An international comparison of pre-service teacher attitudes towards inclusive education. *Disability Studies Quarterly*, 27(4). Available at <http://www.dsqsds.org/article/view/53/53> <<http://www.dsqsds.org/article/view/53/53>>
- Sharma, U., Forlin, C., Loreman, T., & Earle, C. (2006). Pre-service teachers' attitudes, concerns and sentiments about inclusive education: An international comparison of the novice pre-service teacher. *International Journal of Special Education*, 21(2), 80-93.

The TEIP has been used internationally and you will find many articles citing it. e.g.

Mi-Hwa Park, Dimitrov, D., Ajay D., and Gichuru M. (2013). The teacher efficacy for inclusive practices (TEIP) scale: dimensionality and factor structure. *JORSEN*, doi: 10.1111/1471-3802.12047 (attached).

Malinen O., Savolainen, H., Engelbrecht, P., Xu, J., Mirna Nel, M., Nel, N. & Tlale, D. (2013). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching & Teacher Education*, 33, 34-44. (attached).

We have already had it translated into the following languages and some publications are now in press from these countries. e.g.

- Forlin, C., Kawai, N., & Higushi, S. (2014). Educational Reform in Japan towards Inclusion: Are we training teachers for success? *International Journal of Inclusive Education*, 18(7), 718-730.
- Romero-Contreras, S., Garcia-Cedillo, I., Forlin, C., & Karla Abril Lomeli-Hernández, K. (2013). Preparing Teachers for Inclusion in Mexico: How Effective are we? *Journal of Education for Teaching*, <http://dx.doi.org/10.1080/02607476.2013.836340>.

Bangla (TEIP only)

Chinese

Czech

Finish

Hindi

German

Greek

Italian

Japanese

Spanish

South African

Taiwanese

Turkish (in progress)

Portuguese

Good luck with your research. We look forward to reading your research when it is published.

Best Regards

Professor Chris Forlin

International Inclusive Education Consultant

**Jillian Samms**  
to ed.wolfe

**1/14/2016**

Hello Dr. Wolfe,

My name is Jillian Samms. I am a Phd Clinical Psychology student at Walden University . My dissertation topic will focus on the self-efficacy, attitudes and concerns of in-service teachers in Primary Education level in Jamaica. I am a national of Jamaica, currently residing there and as a country there are talks in the Ministry of Education to move towards an inclusive model of education. I am particularly interested in examining teachers' perception of school climate in predicting self-efficacy for inclusion and would like to use the Perception of School Climate Scale for my study.

I am seeking your permission to change the wording slightly for one of the statements. In Jamaica, there are no library media specialists and schools do not have librarians either. I would like to re-word as "I plan with the librarian for the integration of audio and visual services into my teaching". Also, if there are no librarians in that school, should the teachers just leave this question blank?

Please let me know if this is acceptable. Additionally, I am interested in gaining reliability and validity information on the Perception of School Climate Scale and any additional articles on the scale which may be helpful. Looking forward to your response.

Thank You.

Sincerely,  
Jillian Samms

**Ed Wolfe**

**1/14/2016**

to me

I think that both of those changes are fine.

Edward W. Wolfe  
Principal Research Scientist  
Pearson