

Essence of Education for Children with Disabilities in Developing Countries

**Survey of Tanzanian Regular Primary School
Teachers' Self-Efficacy, Attitudes towards and
Willingness to Include Pupils with Disabilities**

Mussa Shaffii Ngonyani



Thesis submitted for the degree of Philosophiae Doctor

Department of Special Needs Education

Faculty of Educational Sciences

University of Oslo

2018

© **Mussa Shaffii Ngonyani, 2019**

*Series of dissertations submitted to the
Faculty of Educational Sciences, University of Oslo*
No. 299

ISSN 1501-8962

All rights reserved. No part of this publication may be
reproduced or transmitted, in any form or by any means, without permission.

Cover: Hanne Baadsgaard Utigard.
Print production: Reprosentralen, University of Oslo.

ACKNOWLEDGEMENTS

The completion of this thesis was rendered possible by many individuals and organizations to which I am greatly indebted. Because I do not have sufficient space to mention all of them, I take this opportunity to acknowledge a few.

Without the financial support of the Norwegian government through the Quota Scheme Funding Programme (Lånekassen), which provided me with a scholarship for master's degree and PhD studies at the University of Oslo, I would not have been able to survive my education studies and research journey. I thank both the Norwegian government and the University of Oslo for immense support. I also want to thank the government of the United Republic of Tanzania and the Ministry of Education and Vocation Training for granting me a study leave of absence to enable me to pursue my studies in Norway.

My deepest gratitude goes to my supervisors, Associate Professor Christian Brandmo and Professor Solveig-Alma Halaas Lyster. You have both gone above and beyond duty, and your support has been invaluable. It has been an immense joy and privilege to have had such knowledgeable, skilled, and enthusiastic academic advice, valuable comments and encouragement from both of you. In short, your invaluable guidance rendered possible the accomplishment of this thesis that defines my life.

I particularly owe a special word of thanks to my earlier supervisor, Associate Professor Peer Møller Sørensen, who laid the foundation for the guidance for the training component and my research practices for my PhD studies. You tirelessly devoted your time to reading and re-reading my research proposal and examining the measures before data collection as well as the initial procedures following data collection – thank you very much.

I also extend my deepest gratitude to the educational officials in Tanzania, both at the Ministry of Education and Vocation Training, Ruvuma Region: Songea Municipal, Songea Rural, Namtumbo, mbinga; and the Mbeya region: Mbeya city. Further, my special thanks to the head teachers and classroom teachers in all of the visited schools for their cooperation during data collection. Needless to say, without your participation, this thesis could not have been written.

Moreover, I wish to offer a word of thanks to Michele Nysæter, Janne von Koss Torkildsen, Marika Vartun, Ona Bø Wie, Kathrine Hoegh-Omdal, Camilla Rake, Anett Kaale, Lynn

Josephson, and Jeanette Da Silva for their support and caring spirit. To all of you, thank you very much.

Finally, a heartfelt thanks goes to my family and friends, who have been extremely patient. I look forward to spending much more time with all of you. My mother and my late father have always been extremely supportive of my education. My mother Rehema Karimu Nchimbi and my late father Shaffii Abdallah Ngonyani worked extremely hard at farming, using a hand hoe to earn money to raise me and send me to school to get an education; without that dedication, I would not be where I am today. Special thanks should also go to my children, Rehema, Catherine, and Charles, for their understanding of my absences and for allowing me to be away from my home country for four years; their patience has made it possible for me to complete this thesis.

Oslo, October 2018

Mussa Shaffii Ngonyani

DEDICATION

This thesis is solely dedicated to my father, the late **Shaffii Abdallah Ngonyani**, who passed away on 5th January 2014, one week before I travelled to Oslo, Norway (14th January, 2014) to begin my PhD journey. It was an extremely difficult time for me. Your enduring love, caring spirit and tenderness remain in my heart forever. I miss you so much.

ABSTRACT

In today's world, countries are urged to provide for the basic learning needs of all people, both children and adults, because education is seen as a human right with intrinsic values, as well as a means of achieving other important rights. 'Education for All' (EFA) is currently accepted through out the world, including developing countries. Inclusive education is a right that is given to children with disabilities. Many challenges are met, however, in meeting the student needs and development, some of these are related to teachers' self-efficacy, attitudes and willingness to include pupils with disabilities in the regular education classroom, variables that may be important in the inclusion process as well as the learning process of students with disabilities. Understanding of these teacher related variables are important when we seek to learn how inclusion of children with disabilities best can be supported.

The present study seeks (i) to explore how teachers' gender, age, teaching experiences, grade level taught, class size and number of pupils with disabilities per classroom are related to teachers' self-efficacy, attitudes, and willingness to include pupils with disabilities in the regular education classroom; (ii) to examine the relations between teachers' professional development training in special needs education and their self-efficacy, attitudes, and willingness to include pupils with disabilities in the regular education classroom; (iii) to investigate whether the types of disabilities that pupils manifest in the classroom affect teachers' self-efficacy, willingness, and attitude towards their teachings activities; and (iv) to evaluate the extent to which teachers' self-efficacy and attitudes predict their willingness to include and work with pupils with severe learning disabilities in the regular education classroom.

This study was conducted in the southern highlands zone of Tanzania and included two different regions; within those two regions, five districts were selected for the study. A quantitative research method was employed in this study. The present study used a questionnaire to collect the data, and of the approximately 1500 teachers who received the questionnaire, 1264 responded by returning completed questionnaires (84.3%), all of which qualified for further analysis.

The findings of the present study demonstrated that independent variables such as number of pupils with disabilities per classroom, types of disabilities that pupils manifested in the classroom and professional development training in special needs education were the only

factors that demonstrated significant effects on teachers' self-efficacy, attitudes and willingness, while variables such as teachers' gender, age, years of teaching experience, grade level taught, and class size were determined not to have significant effects on teachers' self-efficacy, attitudes or willingness.

In addition, the findings of the present study confirmed the relation between teachers' self-efficacy and teachers' attitudes. The correlation between the two variables was small but significant. Moreover, the findings of the present study confirmed significant relations between teachers' self-efficacy and teachers' attitudes in predicting teachers' willingness to work with pupils with severe physical disabilities, cognitive disability and behaviour problems in the regular education classroom. However, the findings affirmed that teachers' attitudes are the best or strongest predictor of teachers' willingness to work with children with severe learning disabilities in the regular education classroom.

Recommendations are made for future research and changes in practice and policy. Inclusive education policy should be promoted from the national level to the school level (primary schools and the community level), particularly for parents who have disabled children enrolled in school. Effective follow-up strategies should come from the government; the ministry that is responsible for education must ensure the successful implementation of this inclusive education policy. Providing quality in-service training for teachers in the area of special needs education is paramount. It is hoped that the present study can contribute to a systematic plan to implement inclusion in the Tanzanian educational system to improve the training of Tanzanian primary school teachers and to ensure positive educational outcomes for pupils with disabilities in Tanzania.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	III
DEDICATION	V
ABSTRACT	VI
1.0 INTRODUCTION.....	1
1.1 Background of the study	1
1.2 Problem statement.....	3
1.3 Objectives of the study.....	5
1.4 Operationalization of terms	6
1.4.1 Self-efficacy	6
1.4.2 Teacher self-efficacy	7
1.4.3 Attitude	7
1.4.4 Willingness.....	7
1.4.5 Inclusive education.....	7
1.5 Variables.....	8
1.5.1 Dependent variables	8
1.5.2 Independent variables.....	8
1.6 Importance of the study	9
1.7 Organization of the study.....	11
2.0 RESEARCH CONTEXT	12
2.1 Introduction	12
2.2 Inclusive education	12
2.2.1 Development of inclusive education.....	13
2.2.2 Importance of research on inclusive education.....	14
2.3 Inclusive education in Northern-Western countries.....	15
2.4 Inclusive education in developing countries	23
2.5 Summary of the chapter.....	27
3.0 TEACHER SELF-EFFICACY	28
3.1 Introduction	28
3.2 What is self-efficacy?	28

3.2.1 Sources of self-efficacy.....	29
3.3 What is teacher self-efficacy?	31
3.3.1 Teacher self-efficacy and its importance in teaching.....	31
3.3.2 Effects of low teacher self-efficacy in teaching.....	34
3.4 Summary of the chapter.....	34
4.0 TEACHER ATTITUDES	36
4.1 Introduction	36
4.2 What is attitude?	36
4.2.1 Components of attitudes.....	36
4.3 Teachers' attitudes	38
4.3.1 Factors affecting teachers' attitudes towards inclusion.....	38
4.4 Summary of the chapter.....	45
5.0 TEACHER WILLINGNESS	47
5.1 Introduction	47
5.2 Willingness.....	47
5.2.1 Meaning of <i>willing</i> from dictionary.....	47
5.2.2 Philosophical perspectives of the term <i>willing</i>	47
5.2.3 Meaning of <i>willing</i> from the theory of planned behaviour.....	48
5.3 Previous studies concerning teachers' willingness to attempt inclusion.....	49
5.4 Summary of the chapter.....	52
6.0 SUMMARY OF CHAPTERS AND RESEARCH QUESTIONS.....	53
6.1 Introduction	53
6.2 Inclusive education	53
6.3 Research context and the importance of research in inclusive education	54
6.4 Teacher self-efficacy	56
6.5 Teachers' attitudes	57
6.6 Teacher willingness.....	58
6.7 Research questions.....	59
7.0 METHOD.....	61
7.1 Introduction	61
7.2 Research design	61
7.4 Demographic information of the sample	62
7.5 Measures.....	63

7.6 Validity and Reliability of the Measures.....	67
7.6.1 Validity.....	67
7.6.2 Reliability.....	69
7.7 Data collection.....	70
7.7.1 Ethical considerations.....	70
7.7.2 Data collection procedures.....	71
7.8 Data analysis.....	71
7.8.1 Descriptive statistics.....	71
7.8.2 Principal component analysis (PCA).....	71
7.8.2.1 Teacher self-efficacy scale.....	72
7.8.2.2 Teacher attitude scale.....	75
7.8.2.3 Teacher willingness sub-scales.....	76
7.8.3 Summary of the reliability coefficients of the scales.....	80
7.8.4 Correlation analysis.....	80
7.8.5 Analysis of Variance (One-way ANOVA).....	80
7.8.6 Independent samples <i>t</i> -test.....	81
7.8.7 Structural Equation Modelling.....	81
8.0 RESULTS.....	83
8.1 Introduction.....	83
8.2 Relation among the dependent variables.....	83
8.3 Results for research questions.....	84
8.3.1 Research question 1.....	84
8.4.2 Research Question 2.....	89
8.4.3 Research Question 3.....	96
8.4.4 Research Question 4.....	108
9.0 DISCUSSION.....	116
9.1 Introduction.....	116
9.2 Discussion of the findings.....	116
9.2.1 Relation between teachers' background and their self-efficacy, attitudes and willingness to consider the inclusion of children with disabilities in their classrooms.....	116
9.2.2 Training in special needs education.....	120
9.2.3 Types of disabilities.....	123

9.2.4 Relations between teachers' self-efficacy, attitudes and willingness to include children with disabilities in the regular education classroom	126
9.3 Summary of the main findings	128
9.4 Implications for further research and limitations	129
9.4.1 Limitations of the study	130
9.4.2 Implications for further research.....	130
9.5 Implication for practice and policy	132
9.5.1 Implications of research findings for practice at the school level or in teacher education	132
9.5.2 Implications of research findings for practice at the policy-making level..	132
9.6 Concluding remarks.....	134
REFERENCES	136
List of tables	145
List of figures	146
Appendices.....	147

1.0 INTRODUCTION

1.1 Background of the study

In recent decades, inclusive education has become a movement with a clear philosophy that emphasizes the use of dynamic approaches to respond positively to pupils' diversity and to perceive individual differences not as problem but as an opportunity to enrich learning (UNESCO, 2015b). As a consequence of this movement, we currently have schools that are educating children with disabilities in regular education settings instead of referring these children to special schools (de Boer, Pijl, & Minnaert, 2011). As a movement, inclusive education calls for the restructuring of mainstream schooling such that every school can accommodate every pupil irrespective of his/her disability and ensure that all pupils belong to the community (Avramidis & Norwich, 2002).

The United Nations Educational, Scientific and Cultural Organization (UNESCO) noted that the inclusive education movement achieved significant international recognition when the United Nations (UN) promoted the idea of 'Education for All' (EFA) at the world conference held in Thailand in 1990. Later, the idea was catalysed by another world conference held in Salamanca, Spain in 1994; the Spanish conference challenged nations, schools and educators to provide effective education for all children, including pupils with significant special educational needs (Khochen & Radford, 2012). Therefore, inclusive education has been actively promoted all over the world through the publication of various education materials, documents and papers (UNESCO, 2001, 2003, 2005, 2009).

Furthermore, the Salamanca Statement at the 1994 World Conference on Special Needs Education claimed that inclusive education leads children to learn together wherever possible, regardless of any difficulties and differences that children may have. Additionally, the Salamanca Statement declared that regular schools with inclusive orientations are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all schoolchildren. The Salamanca Statement claimed that regular schools with inclusive orientations can provide an effective education to the majority of children and therefore improve the efficiency and, ultimately, the cost effectiveness of the entire education system (UNESCO, 1994).

Eleweke and Rodda (2002) indicated that implementation of inclusive education in the regular education classroom allowed children to participate in appropriate educational programmes. These authors argued that these educational programmes could be designed to challenge and enhance pupils' capabilities and needs, as well as providing relevant support or assistance to pupils and their teachers for successful learning in inclusive settings. In addition, UNESCO (2009) postulated that inclusive education is a means by which education systems around the world can ensure high quality, and equitable education.

Accordingly, Oswald and Swart (2011) confirmed that inclusive education can engender fundamental changes to improve schools' responses to pupils' diversity and ensure quality education for all. However, Ainscow and Sandill (2010) demonstrated that education for children with disabilities in inclusive classrooms remains a major challenge to education systems all around the world. For example, research indicates that before the Salamanca Statement and Framework of Action (UNESCO, 1994), the majority of developed countries promoted the rights of children with disabilities in schools by 'integration' and more children with special needs were integrated into mainstream schools near their homes instead of going to special schools (Mittler, 2000). According to Mittler (2000), pupils with disabilities were 'integrated' to work alongside their peers without disabilities often without the necessary support that can enable disabled students to achieve full participation in classroom learning. However, the Salamanca Statement and the introduction of the concept inclusion and inclusive education was not immediately understood by the different school systems around the world as something very different from the concept intergration. Questions were put forward if inclusion was just another linguistic term for integration or a new educational policy agenda (Vislie, 2000). Also, the different agendas and theories behind inclusive and special education has continued to create debate. Vislie (2000) highlights the special education/inclusive education debate and underlines that 'the challenge for inclusion is to get free from the continuous focus on special education and become able to set its own agenda' (p. 32). On the other hand, Hornby (2015) has presented a theory of inclusive special education where different aspects of both inclusive and special education are combined. Even, though, inclusive education has taken on multiple meanings across the world there seems to be more consensus lately; that inclusion is more than access and also about quality and completion of schooling (Miles & Singal, 2010).

Nevertheless the challenges and differences in interpreting the concept inclusion, studies indicate that many countries around the world changed their methods of educating children with disabilities by enrolling them in regular schools after the Salamanca Statement and Framework of Action (de Boer et al., 2011; Parasuram, 2006). The delegation at the Salamanca Conference unanimously agreed that the implementation of inclusive education should challenge all exclusionary policies and practices in education and ensure the right of all school-aged children to obtain a common education in their local areas regardless of the children's background, achievement or disabilities. In addition, the delegation at the Salamanca Conference sought to provide quality education for all children in schools (UNESCO, 1994; Vislie, 2003).

1.2 Problem statement

In Tanzania, the rights of persons with disabilities can be traced back to the 1977 constitution and its amendments that prohibit all forms of discrimination. However, the Report on the Development of Education by the government of Tanzania in 2008 noted that by 1974, the country's first president, Mwalimu Julius Nyerere (Mwalimu in Swahili language means the teacher), stated that 'all citizens have the right to primary education, including persons with disabilities' (URT, 2008a, p. 20). Moreover, Tanzania signed and ratified the United Nations Convention on the Rights of Persons with Disabilities, including the Declaration of Human Rights (1948) and the United Nations Convention on the Rights of Persons with Disabilities (2006), which later resulted in the Persons with Disabilities Act of 2010.

The global education report indicated that Tanzania began offering free primary education to all school-aged children in 2002 which led to significant increases in enrolment (UNESCO, 2011). Furthermore, the National Strategy for Growth and Reduction of Poverty in Tanzania (2005-2010) recognized disability as a cross-cutting issue and therefore by 2010-2015 sought to address Education For All (EFA) goal 3: 'ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills programmes' by emphasizing children's rights, including the rights of pupils with disabilities (UNESCO, 2015a).

Moreover, the World Bank reports demonstrated that the government of Tanzania has been committed to Universal Primary Education since 1977, when enrolment rates reached 95%, although the economic hardships of the 1980s eroded these gains. However, the effect of the

introduction of free education in 2002 was evident in the increase in net enrolment rates from 58.6% in 2000 to 96.1% in 2006 (World Bank, 2010).

However, inclusive education initiatives in Tanzania officially began in 1997 with UNESCO support of two regular primary schools through the Ministry of Education and Culture. The initiative subsequently expanded to two additional regular primary schools and one special school for pupils with physical impairments. There were 9925 pupils (girls and boys) being educated in five schools, 192 of whom attended the special school. The number of pupils identified as having a disability who attended the four regular primary schools, including the special unit, was 289. This figure is barely over 2% of the school population identified as having impairments (Miles, 2011; Miles et al., 2003).

In addition, a total of 70 teachers were trained as part of the UNESCO project, and each of the project schools created two experimental inclusive classes which, under UNESCO's instructions, were to have only 35 pupils each, five of whom were those categorized as having special educational needs. Although UNESCO funding ended in 1999, the ministry continued to support the schools (Miles, 2011; URT, 2008b). The goal of the project was to introduce and pilot inclusive education to assess the process and outcomes and to expand to other districts and regions in the country. Thus, until 2013, Tanzania had a total of 21 special education primary schools and 377 inclusive primary schools located in different regions of the country (Lehtomäki, Tuomi, & Matonya, 2014).

According to the UNICEF Annual Report of 2013, in Tanzania, children's right to an education is guaranteed by the Convention on the Rights of the Child. Nevertheless, many children in Tanzania are not able to fully enjoy that right for a variety of reasons, including an absence of schools near home, lack of textbooks, lack of toilets and clean water, overcrowded classrooms, a shortage of teaching and learning resources, and a lack of qualified teachers because of poor training (UNICEF, 2013). Furthermore, the learning environments within and outside the classrooms are not friendly to pupils with disabilities. For example, in Tanzanian schools, children are seated in rows facing the teacher at the front of the class, and pupils who are experiencing difficulty in learning sit immediately behind the two front rows, which are occupied by visually impaired pupils (Mmbaga, 2002). Thus, the majority of the pupils who experience difficulties in school cannot easily be identified as "different" from their peers because their learning difficulties are not necessarily visible. Often it is the assistive devices that provide the clue: wheelchairs, crutches, hearing aids, white sticks and dark glasses.

However, the existence of the devices does not indicate that the pupils with disabilities are participating or achieving in the educational context. They could in fact be experiencing exclusion within the so-called inclusive classroom (Miles, 2011). The report indicated that examination results published in 2013 raised significant concerns in the country in which only 30.7 percent of pupils who sat for the primary school leaving examination in 2012 passed the test (UNICEF, 2013). Thus, 69% of the pupils who sat for the examination failed, and the situation was estimated to be worse for pupils with disabilities (UNICEF, 2013).

In summary, Tanzania, similar to any other sub-Saharan African countries, appears to demonstrate a clear awareness of inclusive education. The government attempted to develop policies and strategies to help strengthen the education provided to pupils with disabilities. Pupils with disabilities are included either in inclusive regular schools/classes, special education schools, or in the special education unit attached to the regular education school. However, Tanzanian primary school teachers face several problems and challenges in the implementation of inclusive education, such as (i) the difficulty of managing pupils with different disabilities in their classrooms, (ii) shortages of teaching and learning materials, (iii) teachers' lack of specific training in the area of special needs education, (iv) overcrowded classrooms and large numbers of pupils per classroom, (v) high student-teacher ratios, (vi) short teaching periods, (vii) poor government and parental support, (viii) poor working environments and (ix) difficulties in supporting pupils with disabilities in their classrooms (Hofman & Kilimo, 2014; Lehtomäki et al., 2014; Miles, 2011; UNESCO, 2015b; UNICEF, 2013).

1.3 Objectives of the study

Studies have shown that the attitude of teachers toward the ability of students with disabilities to learn and achieve higher-level thinking was found to predict proficient achievement scores for students with disabilities (Klehm, 2013). It was discovered that in line with theories of education and teacher change, there is interplay between beliefs and practices (Khamis, 2011). Therefore if teachers have poorly developed beliefs and attitudes towards inclusive education this may influence the children's school development in a negative way. Also, lack or shortage of resources could bring more challenges for teachers in developing their beliefs and attitudes towards children with disabilities because teachers may not have resources to plan their lessons to address the the needs of students with disabilities.

Therefore, this study focus on teachers' belief related to inclusive education. More specifically, this study focuses on the relations between personal and contextual factors in one hand and various beliefs on the other. Furthermore, with theoretical a point of departure, I want to examine the relations between various beliefs variables. A range of studies show that teachers beliefs as measured by their attitudes and willingness towards inclusive education, as well as their self-efficacy, are closely related to positive outcomes for inclusive education (Al-Zyoudi, 2006; Avramidis et al., 2000b; Gal et al., 2010; Khamis, 2011; Klehm, 2013; Mittler, 2000; Ojok & Wormnæs, 2013; Subban & Sharma, 2006).

To better understand these teachers factors the objectives of the present study were first to explore how teachers' gender, age, teaching experiences, grade level taught, class size and number of pupils with disabilities per classroom are related to their self-efficacy, attitudes, and willingness to include pupils with disabilities in the regular education classroom. Second, the study sought to examine the relations between teachers' professional development training in special needs education and their self-efficacy, attitudes, and willingness to include pupils with disabilities in the regular education classroom.

Third, the study intended to investigate whether the types of disabilities in the classroom affected teachers' self-efficacy, attitudes, and willingness to include pupils with disabilities in the regular education classroom. Finally, the study intended to evaluate the extent to which teachers' self-efficacy and attitudes predict their willingness to include and work with pupils with severe learning disabilities in the regular education classroom.

1.4 Operationalization of terms

In this section, the study presents the definitions of the terms and concepts that are central to the study. These definitions explain how these terms/concepts are used in the present study.

1.4.1 Self-efficacy

This concept was introduced by Albert Bandura in 1997 as 'the belief in one's capabilities to organize and execute the courses of action required to produce given attainments' (Bandura, 1997, p.3). Bandura considered self-efficacy to be something that can predict the behaviour and persistence of a person with regard to a certain task (Bandura, 1986). For example, in a school, a pupil with high self-efficacy towards a particular task generally participates more keenly in that task and is more confident in the ability to perform that task successfully compared with a student with low self-efficacy. According to Bandura (1986), a person can

be noticeable if he or she has either high self-efficacy or low self-efficacy in a situation if the task is difficult one.

1.4.2 Teacher self-efficacy

Teacher self-efficacy is the central concept that emerges from self-efficacy, which is defined as a teacher's judgement of his or her capabilities to affect student performance (Katz, & Stupel, 2015). According to Katz and Stupel (2015), teacher self-efficacy appears to have two functions: (i) to affect teachers' instruction, and (ii) to affect student achievement gains.

1.4.3 Attitude

In their influential text, *The Psychology of Attitudes*, Eagly and Chaiken (1993) defined an attitude as 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour' (p.1). This definition of attitude involves the expression of evaluative judgement towards an object. In other words, Maio and Haddock (2010) showed that reporting an attitude involves making a decision about liking or disliking or favouring or disfavouring a particular issue, object or person. As such, attitudes summarize different types of information about an issue, object, or person. That is, all of our relevant thoughts, feelings, and past experiences are combined in a single evaluative summary (p.4).

1.4.4 Willingness

According to the Oxford Dictionary of English (Stevenson, 2010), 'will' is a verb that expresses the future tense, expressing desire, consent, or willingness. Further, that dictionary defines 'willing' as an adjective that implies readiness, eagerness, or being prepared to do something. Finally, 'willingness' is a noun (mass noun) implying a quality or state of being prepared to do something, or readiness.

Therefore, based on the above definition of the concept, the present study uses the term 'willingness' to imply the readiness of regular primary school teachers to include and work with children with severe learning disabilities in their classrooms.

1.4.5 Inclusive education

Because there is no agreed international definition of inclusive education, the present study defines it as 'the process of increasing the presence, participation and achievement of all pupils in their local schools, with particular reference to those groups of pupils who are at risk of exclusion, marginalisation or underachievement' (Miles & Kaplan, 2005, p.77). Inclusive education is considered to be a central strategy in achieving social inclusion and is closely

linked to social justice, democracy and human rights. Booth, Ainscow, Kingston, and Centre for Studies on Inclusive (2006) demonstrated that inclusive education is about overcoming barriers to learning and development for all children. Therefore, inclusive education is more than an issue of disabled children's access to mainstream education.

1.5 Variables

The independent and dependent variables in the present study will be operationalized in the method chapter as the different measures will be presented and described there. The variables are also shortly described in the section below.

1.5.1 Dependent variables

The present study involved three dependent variables:

- (a) Teacher self-efficacy – This variable sought to measure teachers' perceived self-efficacy towards their teaching activities in the regular education classroom.
- (b) Teacher attitude – This variable sought to obtain information from teachers regarding their agreement or disagreement with the inclusion of disabled pupils in the regular education classroom.
- (c) Teacher willingness – This variable sought to obtain information from teachers regarding their willingness to include and work with disabled pupils who had been identified as having severe learning disabilities.

For more information regarding dependent variables, see Chapter 7 (Method) and Appendix 1.

1.5.2 Independent variables

In the present study, teachers' demographic and profile characteristics were studied as independent variables. The demographic variables that were examined in this study were gender, age, years of teaching experience, grade level taught, class size, and total number of pupils with disabilities per classroom. In addition, other variables included the type of disability that pupils have, teachers' professional development in special needs education, and the location of the school. The abovementioned variables were described as follows:

- i. *Gender* was defined as male or female.
- ii. *Age* was categorized from 21 – 30, 31 – 40, and above 40.

- iii. *Years of teaching experience* – Teachers were required to specify the number of years taught in school, e.g., less than one year, 1 – 4 years, 5 – 9 years, 10 – 14 years, and above 14 years.
- iv. *Grade level taught* – Teachers were requested to indicate the grade level taught, e.g., did they teach pupils in Grades 1, 2, 3, 4, 5, 6, or 7? Teachers were requested to select the appropriate grade level.
- v. *Class size* – Teachers were requested to specify the total number of pupils in their classroom.
- vi. *Total number of learners with disabilities per classroom* – Teachers were requested to specify the total number of learners with disabilities in their classrooms.
- vii. *Types of disabilities* – Teachers were requested to indicate whether they *did* or *did not* have pupils with speech/language delays, mild mental retardation, hearing impairment, visual impairment, physical disabilities, behavioural problems, autism, or gifted children in their classrooms. Therefore, a teacher selected either ‘yes’ or ‘no’.
- viii. *Teachers’ professional development in special needs education* – Teachers were requested to indicate the type of professional training in special needs education that they had attended (see Chapter 7, Method, for details).
- ix. *Location of the school* – Schools were categorized into three locations: village (rural areas), small town (urban area), and city (more populated area). Teachers were required to specify where their schools were located.

For more information regarding independent variables, see Chapter 7 (Method) and Appendix 1.

1.6 Importance of the study

The goal of the present study was to contribute to three domains, both in Tanzania and internationally. This study focuses on i) developing deeper knowledge to inform teacher preparation and development, ii) - providing new knowledge about the education of children with and without disabilities in the regular settings, and iii) providing knowledge about teachers’ skills, efficacy, attitudes and willingness in working with pupils with disabilities in the regular classrooms. Hopefully, this knowledge can be useful for teacher educators,

school administrator, and policymaker in their work on school development and improvement. Also, the present study is important because it will contribute to obtaining additional knowledge regarding how inclusion is succeeding in Tanzania.

It is believed that developed countries face several challenges implementing inclusive education but that there are even more challenges in developing countries. Therefore, because this is the first study to focus on the perceptions of regular primary school teachers regarding self-efficacy, attitudes and willingness to include disabled pupils in classrooms in the southern highlands of Tanzania, the results of the present study may expand our current understanding of the inclusion and understanding challenges related to inclusion in Tanzanian primary schools.

In addition, the study results may also provide new information that may be used to examine notions regarding inclusion in the Tanzanian educational context and other jurisdictions from the perspectives of the participants who were involved in the study.

Also, results from the present study may give us insight about teacher's perceptions regarding their self-efficacy, attitudes and willingness to include children with disabilities in the regular classroom that can support future efforts in planning and improving the quality of teacher training and educational preparation for the inclusion of disabled pupils in regular primary schools.

Moreover, the results from the present study may help more than 34 teacher education colleges and several universities in Tanzania under the Ministry of Education, Science and Technology to plan appropriate curriculum and sufficient training for both pre-service and in-service teachers to prepare them to work in inclusive school settings.

Finally, the results of the present study may contribute to improving service provision and appropriate support for regular primary school teachers. Moreover, this study may contribute to deepening the understanding of the support needs of teachers and the services required so that they can increase their efforts and improve the provision of education to all children, including disabled pupils in their classrooms.

1.7 Organization of the study

This thesis is organized into nine chapters. Chapter 2 presents the research context, focusing on inclusive education, the importance of research to inclusive education, inclusive education in the northern countries, and inclusive education in the southern countries.

Chapter 3 presents and discusses the concept of self-efficacy and sources of self-efficacy. The chapter describes the concept of teacher self-efficacy and its importance in teaching and learning in the classroom. Chapter 4 presents and discusses teacher attitudes. The chapter describes in detail the concepts of attitude, teachers' attitudes, and factors that affect teachers' attitudes towards the inclusion of pupils with disabilities in the regular education classroom. Chapter 5 addresses the concept of 'willingness' with regard to teachers' working with pupils with special needs in the regular education classroom. The chapter also presents previous studies related to teachers' willingness to include disabled pupils.

The summary of chapters and research questions appear in Chapter 6. Chapter 7 presents the research method employed in this study: details of the research design, sample, instruments, data collection process, ethical clearance, and details of data analysis, including data preparation. Chapter 8 presents the relations among the dependent variables and the findings of the four research questions investigated in this study. Chapter 9 discusses the findings and provides the summary, limitations, and implications for further research, implications for practice and policy, and the conclusions of the study.

2.0 RESEARCH CONTEXT

2.1 Introduction

The present study focuses on education for pupils with disabilities in developing countries. The study investigates perceived self-efficacy, attitudes and the willingness of regular primary school teachers to work with pupils with disabilities in Tanzania. First, this chapter presents a global overview of the inclusion of disabled children, specifically by examining developed countries (global north) and later examining inclusive education in developing countries (global south). The chapter begins by describing the concept of '*inclusive education*' in detail. Next, the chapter addresses the importance of research in inclusive education, particularly with regard to teachers to improve the provision of education to pupils with disabilities in inclusive settings. This chapter also provides an overview of inclusive education in northern-western countries, followed by the status of inclusive education in sub-Saharan Africa (developing countries). Finally, the summary of the chapter is provided.

2.2 Inclusive education

To date, there has been no agreed-upon international definition of inclusive education. Since the Salamanca Conference on Special Needs Education (UNESCO, 1994), the term 'inclusive education' has assumed multiple meanings across the globe. UNESCO (2009) defined inclusive education as 'a process of strengthening the capacity of the education system to reach out to all learners and can thus be understood as a key strategy to achieve Education for All' (p. 8). As an overall principle, UNESCO (2009) emphasized that 'inclusive education should guide all education policies and practices, starting from the fact that education is a basic human right and the foundation for a more justice and equal society' (p.8).

Ainscow, Booth, and Dyson (2006) developed a typology of six ways of thinking about inclusion:

- Inclusion as a concern regarding disabled students and others categorized as having special educational needs.
- Inclusion as a response to disciplinary exclusion.
- Inclusion in relation to all groups perceived as being vulnerable to exclusion.
- Inclusion as developing the school for all.
- Inclusion as Education for All.

- Inclusion as a principled approach to education and society.

Also, inclusive education is perceived as the concept that allows learners with disabilities to be placed in and receive instruction in regular classes being taught by regular teachers (Pijl, Meijer, & Hegarty, 1997). Inclusion is about acknowledging that all children and youth can learn together in the same classroom (OECD, 1999). Therefore, different interpretations of the concept of '*inclusive education*' indicate conceptual confusion surrounding this issue but perhaps also that it necessarily takes different forms, depending on contextual concerns. Nevertheless, inclusive education has been essentially perceived as a process of challenging exclusion in schools and communities and being vigilant regarding whatever threats to equity arise (Miles & Singal, 2010).

2.2.1 Development of inclusive education

The development of inclusive education can be traced back to the international conference 'World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs' held in Jomtien, Thailand (UNESCO, 1990). Later, the Salamanca Conference on Special Needs Education (UNESCO, 1994) considered the implications of the pledge made by the world community at Jomtien to include children with disabilities and other marginalized groups of learners in education. The Salamanca Statement and Framework for Action was signed by 192 participating countries, and some scholars have argued that it is the most influential document in inclusive education (Ainscow, 1999). The statement includes a strong focus on the development of inclusive schools in relation to the international goal of achieving education for all. It stated that

...schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities, and children from other disadvantaged or marginalized areas or groups. These conditions create a range of different challenges to school systems.

(UNESCO, 1994, p. 6)

Despite international commitments to provide every child, youth and adult with educational opportunities through Education for All, children continue to be marginalised from educational opportunities (DFID, 2000). Children from economically poor backgrounds, female children from nomadic and minority ethnic families and those affected by HIV/AIDS all face marginalisation from, and within, education. Children with disabilities may belong to

any one of these marginalized groups, and they tend to be identified internationally as a group of children who are disproportionately excluded from education: an out-of-school population (Mittler, 2005). By contrast, children with unrecognized learning difficulties tend to repeat classes and eventually drop out of school without ever having these difficulties recognized (Miles & Kaplan, 2005).

Thus, inclusive education is considered to be a central strategy in achieving social inclusion and is closely linked to social justice, democracy and human rights. *Inclusion* is more than the issue of children with disabilities gaining access to mainstream education (Miles & Kaplan, 2005). According to UNESCO (2009), inclusion is perceived as a process of addressing and responding to the diversity of needs of all children, youth and adults by increasing participation in learning, culture and communities and reducing and eliminating exclusion within and from education. Inclusion involves changes and modifications in content, approaches, structures and strategies, with a common vision that covers all children in the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children (p. 9).

2.2.2 Importance of research on inclusive education

Research indicates that the role of teachers in inclusive education diverges from its traditional role. For example, in the past, it was customary for educators to identify pupils who did not fit the curriculum to perhaps refer them to someone outside the school, special classes or to schools for special education (Hofman & Kilimo, 2014). However, serving pupils with disabilities in an inclusive classroom or regular education classroom requires major shifts in the roles and responsibilities of educators, intervention and special support services (Forlin, 2001). In addition, research suggests that teachers must adapt or modify the curriculum and their teaching methods using special teaching aids and making adjustments with regard to classroom management to support pupils with disabilities (Timperley & Robinson, 2001; UNESCO, 2009). Timperley and Robinson (2001) insisted that teachers must improve their existing skills and develop new ones to resolve challenges in inclusive classrooms, work collaboratively with team members and co-operate with parents of disabled children.

Moreover, Avramidis and Norwich (2002) demonstrated the importance of teachers in ensuring the success of the inclusive education policy because they are the ones who can provide views perspectives based on their beliefs on how to improve and achieve this goal.

For example, research studies on inclusive education demonstrate that the success of providing education to pupils with disabilities depends on the positive attitudes of teachers (Avramidis, Bayliss, & Burden, 2000b; Sari, Çeliköz, & Seçer, 2009). Teachers' positive attitudes are a critical factor for the successful implementation of inclusive education (Kalyva, Gojkovic, & Tsakiris, 2007; Ojok & Wormnæs, 2013).

Furthermore, research indicates that the success of inclusion depends on teachers' self-efficacy and willingness to include and work with children with disabilities in their classrooms (Sari et al., 2009). Teachers' self-efficacy has been determined to be an important factor that helps to determine the degree of effort teachers should exert; persistence in addressing obstacles; resilience when coping with failures, stress or depression; and coping with demanding situations (Bandura, 1997; Sari et al., 2009; Takahashi, 2011). Thus, it is essential to conduct research on inclusive education because it helps researchers, policy makers and other stakeholders in education acquire an overall understanding of teachers' perceptions, readiness and, most important, teachers' abilities to teach disabled children in inclusive settings.

A lack of specific training for teachers who work in inclusive settings has been identified in several studies (Campbell, Milbourne, Silverman, & Feller, 2005; Singal, 2008; Smith & Smith, 2000). Regular teachers must learn how to take care of pupils with disabilities in the classroom as inclusion become more common (Ocloo & Subbey, 2008). For example, a study by Frankel (2004) revealed that teachers' primary difficulties regarding implementing inclusive education were lack of training in special needs, inconsistency in the training curriculum, lack of practical experience in linking the theory and practice of inclusion, and lack of consistent training for resource teachers and itinerants. These problems were observed in all nations, both developed and developing countries. Thus, the subsequent sections will outline the status of inclusive education and some related research studies addressing both northern-western (developed) countries and sub-Saharan African (developing) countries.

2.3 Inclusive education in Northern-Western countries

Over the past decades, the perception of special education has gradually changed in Western societies. An ideology of integrated or inclusive education for students with disabilities has expanded and, in some cases, replaced the previous emphasis on education in separate special classes or schools. This ideology has led to new legislation and school reforms in many

Western countries (Avramidis, Bayliss, & Burden, 2000a; Avramidis & Norwich, 2002; Flem & Keller, 2000; Sari et al., 2009). On the other hand, comparative European studies (European Agency for Development in Special Needs Education 2008 and 2012) indicated that many education systems continue to place some students identified as having special educational needs outside mainstream classrooms and schools on the basis of their perceived differences from the established norm.

Research indicates that in some northern-western countries such as Italy and Norway, all students are taught together regardless of their disabling conditions. By contrast, countries such as Belgium, France, Germany and The Netherlands spatially separate regular and special education students in 'binary' systems of special and regular schools and largely continue to retain this pattern (Powell, 2014). The majority of the nation-states in Europe and North America, however, have reformed their systems so that a 'continuum' exists – from segregated to fully inclusive settings. Powell (2014) noted that change in most places has been gradual: from complete exclusion to full inclusion along a continuum from segregation (separation between buildings) to separation (separation within a building) to integration (mainstreaming: the majority of the school day in regular classes) up to fully inclusive classrooms that all students may access.

In Italy, D'Alessio (2012) indicated that there appears to be confusion and a lack of agreement across the country concerning the precise meaning of inclusion by distinguishing it from integration and *integrazione*. For example, in Italy integration generally refers to concepts of placement and the assimilation of disabled pupils into ordinary schools whereas *integrazione* refers to the process of changing curriculum, pedagogy and assessment practices to allow disabled pupils to participate in the process of learning in regular classrooms. Despite the confusion, the Italians go further by believing that 'inclusion is concerned with the transformation of the entire education system and not only with [the] educational process of adjusting and compensating for an individual need' (D'Alessio, 2012) .

Italy has been internationally credited with being one of the few countries in the world that has pursued the right to inclusive education for all pupils with disabilities in mainstream settings since the 1970s (D'Alessio, 2013). Research indicates that in Italy, the number of pupils in segregated settings is relatively limited (<1%) because Italy took a radical and unique step in 1977 by passing a piece of anti-discriminatory legislation known as '*integrazione scolastica*' (Simona D'Alessio & Watkins, 2009). As a consequence of this

policy, all pupils began to be welcomed into their neighbourhood schools regardless of socio-economic background or physical and intellectual impairment. Simultaneously, special schools have dramatically decreased in number and have been nearly completely dismantled. Since the enacting of this policy in Italy, the official position is that teaching and learning in ordinary schools seek to respond to all pupils' requirements, in particular, by drawing upon specialized forms of pedagogy and teaching methods (D'Alessio, 2012). Therefore, the Italian policy of *integrazione scolastica* appears to create an ideal legislative, educational, pedagogical, social and political context for the development of inclusive education.

D'Alessio (2013) reported that despite the Italian policy of *integrazione scolastica* appears to create the ideal context for the development of an inclusive school, especially when compared to other policy contexts in Europe in which special schooling is the only available option for learners with moderate and severe disabilities, evidence shows that in Italy teachers are still experiencing difficulties in educating learners with disabilities in regular schools, and that people with disabilities are struggling for their social integration.

In Germany, inclusive education has been developed and practised in some states for decades, and attendance in special schools continues to increase, particularly rapidly in East Germany. For example, in 2008, more students than ever before, 480,000, or 6% of all students of compulsory school age, received some special education support. Of those, 89,000 (18%) attended regular schools (Powell, 2014). With those statistics, Germany has one of the highest levels of school segregation in Europe and is among the countries that have made few changes towards inclusion because of the institutionalization of special schools, professional interests, and federal governance (Powell, 2014).

Powell (2014) reported that in the United States, there is a long tradition of special classes within regular schools; however, the literature indicates that the United States is one of the countries that first committed to achieving inclusive education by having a notably higher inclusion rate. For example, over half of all students with special educational needs spend the majority of their school day in regular classrooms, and fewer than 4% of students with special educational needs attend special schools or residential institutions. In other words, Germany has a special education system built upon interschool segregation, whereas the United States' system is organized around intraschool separation. However, comparing inclusive education practices in Germany and the United States, neither country's education system was

determined to be fully inclusive as per the United Convention on the Rights of People with Disabilities – UNCRPD mandates (Powell, 2014).

In Norway, Flem and Keller (2000), in a study called ‘Inclusion in Norway: A Study of Ideology in Practice’, reported that all participants (N = 27) were positive towards the ideology of inclusion although they noted that the greatest difficulty facing its implementation was social integration. This was perceived to be much more of a concern than curricular integration. Flem and Keller (2000) noted that most likely because of such challenges, schools continued to place students in separate settings. However, Flem and Keller (2000) reported that factors that affected inclusion in Norway included the characteristics of teachers, classroom environment, school climate, cooperation, attitudes, and support from people with competence .

Furthermore, Nes (2014) demonstrated that in Norway, inclusion in education is widely perceived to increase learning and participation for *all*. In a study called ‘Inclusive Education in Norway: Historical Roots and Present Challenges’, Nes (2014) reported that the notion of inclusive education was included in Norwegian policy documents in the mid-1990s after being influenced by the Salamanca Statement (UNESCO, 1994); however, the spirit of inclusion dates further back. With other Scandinavian countries, Norway has a history of universal schooling. According to Nes (2014), approximately 97% of all Norwegian students aged 6-16 attend the common, free mainstream schools run by the local education authorities. In that respect, the Norwegian school system is among the most inclusive in the world. No child, even if he or she is disabled, can be denied access to the local school. Girls and boys and high and low achievers from diverse socio-cultural backgrounds participate in lessons together, without permanent streaming according to ability. All children are the responsibility of the local school, and less than 1% are in special schools. Thus, despite some challenges and factors that appear to have affected the implementation of inclusive education in Norway in the last decade (Flem & Keller, 2000), in recent years, Norway appears to be a good example of implementing inclusion and increasing learning and participation for *all*(Nes, 2014).

In Poland, Starczewska, Hodkinson, and Adams (2012) interviewed 10 teachers employed in a mainstream school and a special school. The majority of the teachers defined inclusion as including children with disabilities into mainstream schools. Teachers were unclear about the meaning of inclusion both at the theoretic and practical levels. The study suggested that

children with mild and moderate intellectual disabilities had the best opportunity to be included in regular Polish schools, whereas those with severe intellectual and physical disabilities commonly remained excluded.

In Greece, in a study of teachers' belief systems regarding disability and inclusive education, Zoniou-Sideri and Vlachou (2006) demonstrated that Greek teachers held restrictive and conflicting beliefs regarding inclusive education. Teachers expressed the view that inclusion was not practical for all children. Although teachers believed that inclusive education was necessary to reduce marginalization and stigmatization, they felt that segregated special education was important as a means of providing a secure place for children with disabilities. Moreover, the majority of the teachers believed that socialization was the major benefit of inclusion; cognitive development was not considered.

A Greek study on the influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion included 155 general education primary teachers. In that study, Avramidis and Kalyva (2007) reported that the majority of teachers demonstrated positive attitudes towards the general concept of inclusion although they had different attitudes towards accommodating disabled children with different types of disabilities in mainstream classes. Most teachers who were actively involved in teaching pupils with special educational needs were shown to have more positive attitudes than their counterparts with little or no such experience. The authors concluded by emphasizing the importance of substantive long-term training for teachers to enhance the formation of positive attitudes towards inclusion.

Scruggs and Mastropieri (1996) investigated studies in the United States, New South Wales, Australia, and Canada regarding mainstreaming or inclusion between 1958 and 1996. Scruggs and Mastropieri (1996) observed that two-thirds of general classroom teachers supported the concept of mainstreaming or inclusion. Further, they observed that the majority of teachers were willing to include pupils with disabilities in their classrooms although their responses appeared to vary according to the disabling condition and the implicit obligation of the teacher. Therefore, the authors concluded that the majority of teachers were faced with numerous challenges, such as time constraints, lack of sufficient skills, teaching and learning resources, and training in special needs education to enable them to incorporate inclusion in practice; however, teachers nevertheless agreed with the general concept of inclusion and regarded it as an ideal towards which to strive.

In Turkey, Rakap and Kaczmarek (2010) investigated 194 general education teachers working in public elementary schools in seven towns regarding the inclusion of children with disabilities and their willingness to include students with more severe learning disabilities. These authors reported that the teachers had slightly negative attitudes towards the inclusion of students with disabilities. The teachers were asked about their willingness to include children with three types of severe disabilities: physical disabilities, cognitive disabilities and behavioural problems. Perhaps surprisingly, children with severe behavioural disabilities were regarded as the least demanding of the three groups. The teachers with in-service training and special education certificates and those who completed special education courses during college had relatively more positive attitudes towards inclusion. These results emphasized the importance of training in special education and its association with attitudes towards inclusion. Furthermore, Rakap and Kaczmarek (2010) demonstrated that teachers who had experienced inclusive practices and who had had children with disabilities in their classrooms were more likely to have a more positive attitude towards inclusion than teachers who had not had any children with disabilities in their classrooms. The results also suggested that when teachers had a small number of children with disabilities in their classrooms, they generally demonstrated more positive attitudes towards inclusion.

In Spain, in a study of inclusive education in Spain, 'How Do Skills, Resources, and Support Affect Regular Education Teachers' Perception of Inclusion?', Chiner and Cardona (2013) surveyed 336 general education teachers (68 kindergarten, 133 elementary, 135 secondary teachers). The findings indicated that the teachers accepted the principles of inclusion although their skills, time, material resources, and personal support for inclusion were reported to be insufficient. The participants viewed the advantages of including children with disabilities in regular classes in terms of practising favours and the development of tolerance and respect among students. By contrast, the teachers showed their unwillingness to include children with moderate and severe disabilities in regular education classrooms. The majority of the participants suggested working with other professionals, e.g., special education teachers and school psychologists, as important components of the team of regular teachers to enhance inclusion.

In Australia, inclusive education is a term that has been part of the educational discourse for nearly two decades. Although there is no overarching definition under which inclusive education operates in that country, it is accepted that the meaning behind the term has shifted

from being exclusively about students with disabilities to encompassing the delivery of a high-quality education to all students (Anderson & Boyle, 2015). The public education system is carrying the burden of an increasingly diverse student population, and as such, each of the eight educational jurisdictions responsible for the schools within their borders has developed education acts and policies, established its own agenda regarding the education of students with disabilities, and increased funding levels in the name of inclusive education (Anderson & Boyle, 2015; Forlin, 2006).

Westwood and Graham (2003) conducted the study 'Inclusion of Students with Special Needs: Benefits and Obstacles Perceived by Teachers in New South Wales (NSW) and South Australia'. The study compared the attitudes of primary teachers from South Australia and New South Wales on selected aspects of inclusive education. The questionnaire that was administered probed the following issues: (i) the numbers and types of students with special needs in inclusive classes, (ii) any benefits that occurred as a result of mainstreaming children with disabilities, (iii) the types of disabilities or 'special educational need' most difficult to address in the regular classroom, (iv) the teachers' level of satisfaction with the personal and material support available within their schools, and (v) the amount of special education training each teacher received during pre-service teacher training and in-service experience. The questionnaire was sent to a representative sample of schools listed in the Disadvantaged Schools and Country Areas Programmes in both states. Seventy-seven responses were analysed, and the overall pattern of responses from teachers in NSW and South Australia were similar. Approximately one-third of the teachers reported benefits associated with having students with disabilities enrolled in their classrooms. Teachers in both states identified students with emotional and behavioural difficulties as the most challenging students they had to cope with in the inclusive classroom. Students with autism and some with intellectual disabilities also presented teachers with difficult challenges, as did those with speech and language problems and learning difficulties. However, teachers in both states also reported that the major difficulties they encountered were lack of time combined with the difficulty of balancing the demands of all students. Specific obstacles to implementing inclusive practices included class size, lack of appropriate teaching resources, behaviour problems exhibited by some students (resulting in a need for constant behaviour management), and lack of appropriate professional training in inclusive methods.

Recently, Anderson and Boyle (2015) demonstrated that despite operating under the same national legislative acts, the eight educational jurisdictions in Australia were managing and enacting inclusive education in different manners, leading to inconsistent levels of access and educational outcomes for students. Rates of segregation and exclusion (through both the provision of ‘alternative’ education settings and disciplinary action) were increasing, with disproportionate representation of students from minority groups. This situation was exacerbated by the inception of a national testing regime, which some have argued violates the Disability Discrimination Act because it excludes participation by particular groups of students. Conversely, Anderson and Boyle (2015) concluded that for the first time, Australia had a consistent curriculum that included a set of outcomes for all students, and the gap between indigenous and non-indigenous students in the area of literacy and numeracy decreased. The authors insisted that much remains to be accomplished to enable the continued development of effective schooling for all students across Australia.

In summary, the goal of this section was to present the situation of inclusive education in the northern-western countries. The review demonstrated that the majority of the northern-western countries consider inclusive education to be a broad reform that supports and welcomes diversity among all school-aged children. The majority of the northern-western countries developed education acts and policies that led to the increased enrolment of school-aged children in regular/mainstream primary schools. The majority of the countries attempted to establish effective learning environments by considering the diverse needs of all learners in their schools. However, studies indicated that no country in the northern-western has implemented the full inclusion of school-aged children into regular primary schools. Countries such as United States, Italy, Germany, Spain, Australia, Poland, Norway, Turkey and Greece continued to maintain special schools, segregated classes or special units within or outside the mainstream schools to provide special care for disabled children who require special support because of their disabling conditions. Further, reviews have indicated that the disabling conditions or types of disabilities that school-aged children experience is the determining factor of where the child should go for schooling –in a school that is identified as inclusive (mainstream/regular schools) or in a special school, segregated classes or special unit to support the educational needs/diverse needs of children because of their disabling conditions.

Despite the success demonstrated by the majority of the northern-western countries in providing education to school-aged children with disabling conditions, specific factors such as social integration; teachers' characteristics; classroom environment; school climate; cooperation; support from people with competence; lack of time, combined with the difficulty of balancing the demands of all students; class size; lack of appropriate teaching resources; behaviour problems exhibited by some children in school (constant behaviour management), lack of appropriate professional training in inclusive education, e.g., inclusive methods; and attitudes currently appear to be challenging factors in developed countries. Notably, the review indicated that although teachers in mainstream/regular schools in northern-western countries retained restrictive conflicting beliefs regarding inclusive education, the majority of teachers and other educational practitioners were positive towards the ideology of inclusion. In the majority of the northern-western countries, studies indicated that teachers continued to believe that only a mainstream/inclusive setting can offer students with disabilities an opportunity to share in the same range and quality of educational and social experiences enjoyed by all other school-aged children. Generally, these findings are surprising because the present study expected that the rich countries in the global north would have had more success with fully inclusive education, with no special schools, separated classes, or special education units for disabled children.

2.4 Inclusive education in developing countries

The purpose of this section is to provide an overall understanding of how inclusive education is practised in developing countries, particularly in sub-Saharan Africa. The section provides the reader an opportunity to understand the challenges and problems that face teachers, pupils and governments in these countries with regard to providing education to disabled children in mainstream schools/inclusive settings. Tanzania, the country of focus in the present study, is located in sub-Saharan Africa and has similar characteristics to other sub-Saharan African countries.

In this section, the review highlights the development and status of inclusive education in the countries of Zimbabwe, South Africa, Swaziland, Ghana, Zambia, Uganda, Kenya and Tanzania. The highlights will help the reader understand the context of inclusive education in these countries and in sub-Saharan Africa in general. Further, the highlights will help the reader develop broad perspectives regarding inclusion in sub-Saharan African countries to make cross-comparisons of the status and development of inclusive education in developing

countries (particularly sub-Saharan Africa) and developed countries (northern-western countries).

Recently, a study by Majoko (2016) reported that in Zimbabwe, (i) teachers are professionally ill-prepared to handle inclusion in regular classrooms because the majority of teachers lack the relevant knowledge, skills, and confidence in their teaching ability; (ii) teachers are inadequately professionally prepared, including a lack of depth and breadth to meet the full range of needs of disabled children in inclusive pedagogical settings; and (iii) teachers experience a lack of teaching and learning resources including human, material, technological and financial resources.

In South Africa, research indicates that for many years, disadvantaged school-aged children received inadequate or no educational provisions (Kalenga & Fourie, 2012). Research demonstrated that specialized education and support services were only provided for a small percentage of pupils with disabilities within special schools and special classes. According to Kalenga and Fourie (2012), many school-aged children with disabilities were out of school, and few were mainstreamed by default.

In Swaziland, Pather and Nxumalo (2013) reported that the education system and the curriculum as a whole generally failed to respond to the diverse needs of the student population, leading to massive drop outs, push-outs and failure. This situation has led many schools and teachers to be faced with great challenges and difficulties in managing inclusive schooling.

Ametepee and Anastasiou (2015) reported that the special and inclusive education system in Ghana caters only to three types of disabilities: deafness, blindness, and intellectual disabilities after over three decades of being in existence. Alhassan and Abosi (2014) reported that the education system failed to effectively address the needs of children with learning difficulties (LDs) in regular classrooms, thus leading to the consequences of underachievement, school dropouts, street children, and antisocial behaviour.

Alhassan and Abosi (2014) claimed that teachers' lack of adequate competence in adaptive instruction was one of the fundamental reasons for the lack of success in including disabled children in mainstream schools. Therefore, in Ghana, disabled children continue to encounter challenges in accessing formal education and completing compulsory basic education. This

situation has contributed to the increase in repetition and dropout rates for pupils with learning difficulties in mainstream schools (Alhassan & Abosi, 2014; Ametepee & Anastasiou, 2015).

In Zambia, studies indicated that factors such as lack of teacher training, large class size (overcrowded classes) and a shortage of teachers affected the quality of teaching and the achievement of inclusive education. In addition, these studies observed that these factors affected the education systems' development of strategic planning, monitoring and support to schools and disabled school-aged children (Miles, 2011; Robson & Kanyanta, 2007).

Research indicates that in Uganda, the government has developed important initiatives towards inclusion since 1997 to ensure the right of all Ugandan children to obtain an education in a free and compulsory universal primary education programme (Ojok & Wormnæs, 2013). The Ugandan government sought to provide good quality education for all pupils in inclusive schools. Research indicates, however, that pupils who have severe disabilities, including hearing impairment or visual impairment, continued to receive their education in special schools for some time. In Uganda, special schools provide critical services to pupils who require intense levels of support although sometimes schools accommodate pupils who require much less support who ideally should have been in mainstream schools (Kristensen, Omagor-loican, Onen, & Okot, 2006).

Notably, research indicated that Uganda has an advanced programme for training teachers in special needs education from certificate to degree levels; however, the quality of education and educational materials in special schools and inclusive schools remains below the standard (Ojok & Wormnæs, 2013). This situation caused teachers in regular schools to have less than positive attitudes and limited willingness to teach pupils with disabilities (Ojok & Wormnæs, 2013). Kristensen et al. (2006) indicated that head teachers, teachers, and stakeholders wanted the so-called special schools to be used as resource centres in support of an inclusive educational system by running training workshops for teachers, producing teaching and learning materials, and assessing disabled children to strengthen inclusive education.

In Kenya, the movement towards educating children with disabilities began in 1975 with the Kenyan government establishing a Special Needs Education Section (SNES); in 1978, the first special needs education inspector was appointed (Lynch et al., 2011). Educational reports in Kenya indicated that over one million school-aged children with disabilities were excluded

from equitable educational opportunities (Elder, Damiani, & Oswago, 2016). Although there is evidence that the government is working hard to improve education for pupils with disabilities in special schools and special units attached to mainstream schools, the government is unable to accommodate the greater number of school-aged children with special needs entering the school system as a result of the Universal Primary Education Act (Lynch et al., 2011).

Furthermore, studies by Elder, Damiani, and Oswago (2015) and Lynch et al. (2011) indicated that the quality of teacher training, the supply of equipment to resource centres, advocacy, the creation of awareness, the provision of equipment and teaching/learning materials to the regular schools, the provision of grants to the schools and the provision of support to the resource centres were the key challenges in supporting inclusive education in Kenya. However, Elder et al. (2015) reported that the Kenyan government is seriously attempting to focus on these challenges and problems to address a wide range of learning needs of disabled children by having them study either in the mainstream schools, special education schools, or in the special education units attached to the mainstream schools.

Tanzania being a focus of the present study, similar to any other sub-Saharan African countries described above, appears to demonstrate a clear awareness of inclusive education. The government attempted to develop policies and strategies to help strengthen the education provided to pupils with disabilities. Pupils with disabilities are included either in inclusive regular schools/classes, special education schools, or in the special education unit attached to the regular education school. However, Tanzanian primary school teachers face several problems and challenges in the implementation of inclusive education, such as (i) the difficulty of managing pupils with different disabilities in their classrooms, (ii) shortages of teaching and learning materials, (iii) teachers' lack of specific training in the area of special needs education, (iv) overcrowded classrooms, (v) high student-teacher ratios, (vi) short teaching periods, (vii) poor government and parental support, (viii) poor working environments and (ix) difficulties in supporting pupils with disabilities in their classrooms (Hofman & Kilimo, 2014; Lehtomäki et al., 2014; Miles, 2011; UNESCO, 2015b; UNICEF, 2013).

In summary, the aim of this section was to present the situation of inclusive education in the Sub-Saharan Africa, including Tanzania as a focus of the present study. The review showed that some of the common problems and challenges that face the majority of developing

countries, particularly in Sub-Saharan Africa, are a lack of sufficient knowledge and teacher skills and the inability of teachers to handle teaching and supporting pupils with disabilities in the classroom. These problems have been attributed to several factors, including poor teacher training, a shortage of qualified teachers, overcrowded classes, shortages or a lack of teaching and learning materials, poor school infrastructure systems such as buildings and toilets, the absence of a school near home, and a lack of clean water. Teachers' lack of knowledge renders inclusion a great challenge.

2.5 Summary of the chapter

This chapter demonstrated that countries all over the world, whether they are developed or developing, consider the provision of education to children with disabilities. In both northern-western countries and sub-Saharan African countries, school-aged children with different types of disabilities are educated in either mainstream schools, special education schools, special education classes, or in special units attached to mainstream schools. Moreover, studies have indicated that in developed countries (northern-western countries), the majority of teachers and educational practitioners had positive attitudes towards the ideology of inclusion. Despite some challenges and problems that were observed in some of the northern-western countries with regard to the development and practice of inclusive education, the majority of the countries have considered inclusive education broadly as a reform that supports and welcomes diversity among all school-aged children, including disabled children.

Although not pervasive, numerous efforts have been made by the majority of the countries in sub-Saharan Africa to support education for children with disabilities. After the Salamanca Statement and Framework of Action (UNESCO, 1994), these sub-Saharan African countries developed inclusive education policies and implemented them in their schools, depending on the country's contexts. However, the majority of the countries lack sufficient resources to effectively support the provision of education to children with disabilities in the regular primary schools. Consequently, the majority of these countries continue to maintain special schools and special units attached to the mainstream schools as alternative manners in which to effectively support the educational needs of disabled children.

3.0 TEACHER SELF-EFFICACY

3.1 Introduction

One focus of this study is to investigate the perception of regular primary school teachers of their self-efficacy towards teaching activities in their classrooms/schools and towards the inclusion of learners with disabilities in the regular education classroom. Thus, this chapter focuses on providing the reader with an overall understanding of self-efficacy, sources of self-efficacy, and teacher self-efficacy.

3.2 What is self-efficacy?

The concept of self-efficacy was introduced by Albert Bandura to explain behavioural change (Bandura & Estes, 1977). He defined self-efficacy as ‘the belief in one’s capabilities to organize and execute the courses of action required to produce given attainments’ (Bandura, 1997, p.3). This author further claimed that a person’s self-efficacy was not a reflection of their actual skills, but a *perception* of what they could accomplish with the skills they did possess (Bandura, 1986).

The theory of self-efficacy (Bandura, 1997) espouses the belief that human beings have the ability to shape their own actions and that individual cognitive processes are the central mechanism of belief development. Moreover, in his social cognitive theory, Bandura (1986) affirmed that an individual’s social context, beliefs and behaviours exist in a state of mutual influence. According to Tschannen-Moran, Hoy, and Hoy (1998), Bandura’s social cognitive theory theorized that individual cognition is the site at which individual beliefs develop.

Efficacy expectations indicate whether one believes that he or she has the ability to effect desired outcomes (Bandura, 1997). Moreover, Bandura (2003) claimed that ‘efficacy beliefs influence whether people think erratically or strategically, optimistically or pessimistically; what courses of action they choose to pursue; the challenges and goals they set for themselves and their commitment to them; how much effort they put forth in given endeavours; the outcomes they expect their efforts to produce; how long they persevere in the face of obstacles; their resilience to adversity; how much stress and depression they experience in coping with taxing environmental demands; and the accomplishments they realize’ (Bandura, 2003, p. 5). Thus, well-developed efficacy beliefs would be very important for teachers to enhance their teaching activities in the classrooms.

Moreover, Albert Bandura (2008) claimed that ‘people with a low sense of efficacy think pessimistically and avoid difficult tasks, which they view as threats. They have low aspirations and weak commitment to their goals. They turn inward on their self-doubts instead of thinking about how to perform successfully. When faced with difficult tasks, they visualize failure scenarios that undermine performance. They dwell on obstacles, the consequences of failure, and their personal deficiencies. Failure makes them lose faith in themselves because they take [failure] as evidence of their inherent deficiencies. They slacken their efforts or give up in the face of difficulty, recover slowly from setbacks, and easily fall victim to stress and depression’ (Bandura, 2008, p. 4). One may wonder if teacher educators know how important when inclusive education is agreed upon in a school district. Inclusive education, depending somewhat on the disabilities the teachers are facing, is challenging. When teachers have low self-efficacy might make inclusive education even more challenging.

O'Neill and Stephenson (2011) concluded that self-efficacy beliefs are specific to tasks and situations and are a learned system of beliefs. Those authors claimed that when tasks vary in difficulty, self-efficacy judgements will also vary according to the level of skills and perseverance required to achieve a given task in specific context. Hoy and Spero (2005) argued that self-efficacy is based on what people believe can be accomplished with the skills that they possess rather than their actual level of competence. However, Albert Bandura (1986) claimed that the self-efficacy of an individual is determined by the interaction of personal, behavioural and environmental factors, which are mutually influential and significantly affect an individual's overall perceptions of his or her abilities. Bandura added that self-efficacy represents an important component within human agency because it influences choice of tasks, effort, and persistence (Bandura, 1986). By standing on Bandura's shoulders, Putman (2012) claimed that once self-efficacy beliefs are formed, they continuously affect aspirations, behaviours and beliefs with respect to ability.

3.2.1 Sources of self-efficacy

According to Bandura (1977, 1997), self-efficacy may result from four potential sources: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states. Each of these sources may play important roles in the development of self-efficacy, and according to Bandura, the formation of self-efficacy is based primarily on reflection and interpretation of past performance (Gabriele & Joram, 2007).

Bandura (1997) established that enactive mastery experiences serve as indicators of personal capability and that successes create a robust belief in one's personal efficacy. Mastery experiences compose actual performance based on personally experienced successes and failures. If people experience only easy successes, they come to expect quick results and subsequently become discouraged by failures. Thus, enactive mastery experiences are based on a resilient sense of efficacy in which experience is used to overcome obstacles by perseverance. Bandura (1997) also asserted that some difficulties and setbacks may serve a beneficial purpose in teaching the lesson that success generally requires sustainable effort. In addition, difficulties that people may experience provide an opportunity to learn how to turn failure into success by honing one's capabilities to exercise better control of events (Bandura, 1997). Bandura (1977) considered mastery of tasks to be the most valuable, authentic source for enhancing self-efficacy.

Vicarious experiences or observation of the modelling of a task by another was classified by Bandura as the second most powerful source of self-efficacy. This was particularly important if the observers perceived the person modelling the task to have similar abilities. According to Bandura (1997), observation of others leads a person to acquire much information about their own capabilities through the knowledge of how others perform. This author added that observing others succeed can increase the observer's self-efficacy and motivate him or her to attempt a task because a person may believe that if others can do it and succeed, then he or she can do it and succeed as well. However, Bandura (1997) considered that modelling was not as significant in building self-efficacy as actual experiences of success and failure.

Bandura's third source of self-efficacy was verbal persuasion, described as feedback that encourages an individual to make a greater effort to succeed. According to Bandura (1997), verbal persuasion and allied types of social influences serve as a means of strengthening people's belief that they possess the capabilities to achieve what they seek to achieve. Verbal persuasion renders it easier for a person to sustain a sense of efficacy, particularly when struggling with difficulties; simultaneously, one's colleagues develop a trust that he or she is capable of achieving what the person is struggling to achieve. However, if one's colleagues convey doubts towards a particular person, that person will likely fail to achieve the goal (Bandura, 1997). Thus, verbal persuasion may promote a positive perception of potential achievement.

The fourth source of self-efficacy is the physiological and affective state experienced by a person. Bandura (1997) noted that individuals acquire self-efficacy information from physiological and affective states. A positive emotional state should potentially increase the perception of self-efficacy (Bandura, 1997). In comparison, stress may have a negative effect on a person's perceived capability. Stress may function as a cue for people to doubt their ability to be successful. For example, when learners experience negative thoughts and fears about their capabilities (e.g., feeling nervous thinking about taking a test), those reactions can decrease self-efficacy and trigger additional stress (Schunk & DiBenedetto, 2015). Conversely, learners may feel more efficacious when they perceive that they are less nervous about academic outcomes (Bandura, 1997).

3.3 What is teacher self-efficacy?

Ashton (1984) described teaching efficacy as 'the extent to which teachers believe that they have the capacity to affect student performance' (p. 28). According to Ashton, the higher a teacher's perceived self-efficacy was for their role of teaching, the greater was their sense of accomplishment in their instructional skills. Specifically, teacher self-efficacy is defined as a 'teacher's judgement of his or her capabilities to affect student performances' (Katz & Stupel, 2015, p. 421).

Principally, teacher self-efficacy concerns the beliefs of the teacher in determining whether actions will be initiated, how much effort will be exerted, and how long that effort will be sustained in the face of obstacles and failures (Helms-Lorenz & Maulana, 2015). In addition, the literature indicates that teachers' self-efficacy is all about teachers' self-evaluation of their capabilities as a teacher (Kim, 2011), their ability to execute a certain course of action successfully (Bandura, 1997), and the degree to which they influence student engagement and learning to have the desired positive effect on student learning outcomes (Høigaard, Giske, & Sundsli, 2012; Megan Tschannen-Moran & Hoy, 2001).

3.3.1 Teacher self-efficacy and its importance in teaching

Research indicates that self-efficacy plays an important role in teaching and learning (Chan, 2008; Hoy & Spero, 2005; Takahashi, 2011). According to Tschannen-Moran et al. (1998), 'greater efficacy leads to greater effort and persistence, which leads to better performance' (p.233). In other words, the level of confidence people bring to specific tasks plays an important role in the success or failure of those tasks. Thus, teachers with high self-efficacy

will try harder in their teaching because they believe they are capable of performing the task. Hoy and Spero (2005) indicated that high self-efficacy not only enhances teachers' teaching but can also enhance students' learning because the higher the teachers' self-efficacy is for teaching, the more confidence teachers have in their ability to help learners learn. Also, teacher self-efficacy influence the students motivation and achievement (Mojavez & Tamiz, 2012).

Bandura (1997) argued that highly self-efficacious teachers had a stronger commitment to teaching than weakly self-efficacious teachers, which is demonstrated by their conscientious efforts in guiding students to learning. Furthermore, Gabriele and Joram (2007) indicated that self-efficacious teachers are more willing to attempt new teaching strategies to enhance learning. Putman (2012) argued that teachers' self-efficacy represents a powerful influence on the behaviours of teachers because of its effect on instructional choice, effort, and persistence and is quite useful in maintaining student engagement and learning.

Cheema and Skultety (2016) indicated that teachers' beliefs in self-efficacy can predict student academic performance and achievement in various subjects. Gibson, Dembo, and Ball (1984) affirmed that teachers with high self-efficacy are persistent during teaching situations. Putman (2012) demonstrated that teachers with high self-efficacy seek ways to improve their teaching methods by employing alternative methods of instruction and innovative instructional materials.

Soodak and Podell (1993) claimed that teachers with high self-efficacy exhibit more positive attitudes towards the placement of students with behavioural and learning difficulties in general education classrooms. Studies indicate that teachers with high self-efficacy are more open to new ideas and exhibit a greater variety of instructional strategies and higher levels of planning and organization (Allinder, Fuchs, & Witt, 1994; Høigaard et al., 2012; Megan Tschannen-Moran & Hoy, 2001). In addition, teachers with high self-efficacy have been observed to display greater enthusiasm and commitment towards their teaching (Coladarci, 1992; Guskey, 1984; Megan Tschannen-Moran & Hoy, 2001). Gibson et al. (1984) demonstrated that teachers with high self-efficacy are less critical of students when they make errors and work longer with students who are struggling.

Woolfolk Hoy (2006) noted that those teachers who feel efficacious about their instruction, management, and relations with students may have more cognitive and emotional resources

available to support students towards completing more complex tasks and developing deeper understanding. In a similar vein, Katz and Stupel (2015) argued that teachers with a high sense of efficacy are less afraid of student conflicts; are more likely to take greater intellectual and interpersonal risks in the classroom; are committed to their profession; have collaborative relations with colleagues, the school, and parents; and have the ability to influence school policies.

Furthermore, Bandura (1997) indicated that teachers who believed that they possessed the capability to succeed in teaching tended to display greater interest in their teaching work, persevere when confronted with difficult problems and put forth greater effort to complete work. This author added that teachers who demonstrated high levels of efficacy were more likely to implement effective methods of instruction. In addition, studies indicate that teachers with a high sense of self-efficacy are less inclined to refer difficult students to special education classrooms (Meijer & Foster, 1988; Podell & Soodak, 1993; Soodak & Podell, 1993).

The literature indicates that teachers with high self-efficacy believe that they are able to positively affect student learning, are more likely to put forth the effort to implement different pedagogical strategies and are more willing to keep trying even when faced with setbacks in their teaching (Bandura, 1997; Chan, 2008; Takahashi, 2011). Moreover, studies indicate that teachers' self-efficacy may affect motivation, quality of teaching, and cognitive problem solving (Martinez-Lopez, Sanchez, Alvarez, & Cruz, 2010; sari et al., 2009; Tschanne-Moran & Hoy, 2001).

Katz (2015) argued that high teacher self-efficacy beliefs are key to creating successful teaching and a better learning environment for learners with disabilities in regular education classrooms. High teacher self-efficacy has been observed to positively correlate with higher student academic achievement, effective teacher practices, increased family involvement, and decreased referral rates to special education (Viel-Ruma, Houchins, Jolivette, & Benson, 2010). Brownell and Pajares (1999) confirmed that teachers with strong efficacy beliefs are more likely to view themselves as successful in teaching learners with disabilities and experience more collegiality between general and special education colleagues.

Ross (1992) argued that teachers with high self-efficacy may promote learners' self-efficacy to learn because learners pick up cues from the teacher; such a teacher sends the message that

the student is able to learn. Coladarci (1992) indicated that teachers who demonstrated higher efficacy provided a greater academic focus in the classroom and exhibited different types of feedback than teachers who had lower expectations of their ability to influence student learning. In addition, research indicates that teachers with high efficacy are more devoted to their teaching profession than teachers with a low sense of efficacy (Glickman & Tamashiro, 1982; Sari et al., 2009).

To sum up, most researchers agree that teacher self-efficacy may promote their learners' self-efficacy and learning in the classroom.

3.3.2 Effects of low teacher self-efficacy in teaching

Teachers with low self-efficacy tend to have strict rules and negative sanctions to make learners conform, and these teachers are generally pessimistic about learners' ability to improve their learning outcomes (Bandura, 2003; Høigaard et al., 2012). Moreover, teachers with low self-efficacy have been observed to lack interest in collaborating with other teachers and have negative attitudes towards the inclusion of learners with disabilities (Leslie C. Soodak, Podell, & Lehman, 1998). The literature indicates that individuals with poor self-efficacy give up more easily and may potentially not begin an activity because of a lack of confidence in a successful performance (Bandura, 1997). In addition, Bandura (1997) demonstrated that teachers with low self-efficacy beliefs are likely to spend more time on non-academic activities, readily give up on students if they do not get quick results, and sometimes criticize students for their failures.

Furthermore, studies indicate that teachers with low self-efficacy are most likely to leave the profession (Glickman & Tamashiro, 1982), avoid addressing academic problems (Høigaard et al., 2012), turn their efforts inward to relieve their emotional distress (Bandura, 1997), display negative behavioural aspects in classroom planning and alternative ideas on scientific content (Brígido, Borrachero, Bermejo, & Mellado, 2013), and be unable to function effectively as classroom managers (O'Neill & Stephenson, 2011).

3.4 Summary of the chapter

The purpose of this chapter was to address the concepts of 'self-efficacy, Bandura's sources of self-efficacy, and teachers' self-efficacy'. The first section of the chapter introduced the entire focus of the chapter, followed by a presentation of the concept of self-efficacy and sources of self-efficacy. The third section of the chapter addressed the concept of teachers'

self-efficacy and its importance in teaching. The chapter concluded by explaining the effects of having low teacher self-efficacy in teaching. In summary, this chapter demonstrated that teachers' self-efficacy is an important tool to enhance teaching and support student learning. The literature indicates that teachers with high self-efficacy were more willing to take risks; were persistent in addressing difficulties and setbacks; improved learners' academic performance and achievement; exhibited high levels of instructional strategies, planning, and organizing; and displayed greater enthusiasm and commitment towards their teaching than teachers with low self-efficacy. Studies also demonstrated that teachers with high self-efficacy appeared less critical of learners when they made errors, worked longer with learners who were struggling, had higher academic focus in the classroom, exhibited different types of feedback, and above all were more devoted to their teaching profession than teachers with low self-efficacy.

Conversely, the chapter demonstrated that teachers with low self-efficacy lacked interest in collaborating with other teachers, had negative attitudes towards the inclusion of learners with disabilities, lacked confidence in teaching, and gave up more easily when faced with setbacks and challenges in their teaching activities. In addition, teachers with low self-efficacy tended to criticize learners for their failures, avoid addressing academic problems, turn their efforts inward to relieve the emotional distress, were unable to function effectively as classroom managers, and above all, were likely to leave the teaching profession.

The next chapter presents the concept of attitudes, the theory of attitudes, the concept of teachers' attitudes, and factors that affect teachers' attitudes towards teaching, particularly towards the inclusion of learners with disabilities.

4.0 TEACHER ATTITUDES

4.1 Introduction

The intention of this chapter is to present the reader with an overall understanding of the concepts of ‘attitude’ and “teacher attitude” and present some factors that affect teachers’ attitudes towards the inclusion of pupils with disabilities in the regular education classroom. The first section of the chapter addresses the meaning of the concept of ‘attitude’, followed by the theoretical components of attitude. The second section of the chapter presents the factors that affect teachers’ attitudes towards the inclusion of pupils with disabilities. The last portion provides concluding remarks.

4.2 What is attitude?

Eagly and Chaiken (1993) defined an attitude as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour” (p. 1). Therefore, based on Eagly and Chaiken (1993), reporting an attitude involves the expression of an evaluative judgement of an object. Maio and Haddock (2010) demonstrated that reporting an attitude involves the act of making a decision about either liking or disliking, favouring or disfavouring a particular issue, object, or person. According to Maio and Haddock (2010), attitudes differ in *valence*, or direction, e.g., holding some positive attitudes (liking or favouring something), negative attitudes (disliking or disfavouring something), and neutral attitudes (feeling average towards something). Further, Maio and Haddock (2010) indicated that attitudes differ in strength. For example, some people may feel less strongly whereas others feel more strongly about something.

4.2.1 Components of attitudes

The most influential model of attitude is the ‘multicomponent model’ (Eagly & Chaiken, 1993). According to the ‘multicomponent model of attitude’ (see Figure 4.1), attitudes are considered to be summary evaluations of an object that have cognitive, affective, and behavioural components (Maio & Haddock, 2010).

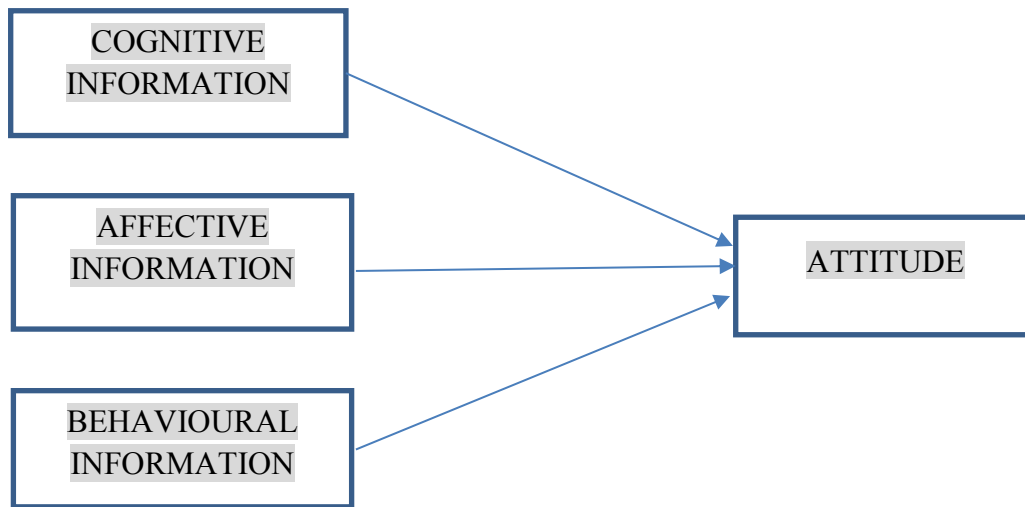


Figure 4.1 Multicomponent Model of Attitude (Source: Maio & Haddock, 2015, p.30).

The *cognitive* component of attitude refers to the beliefs, thoughts, and attributes we associate with an object. In many cases, a person’s attitude may be based primarily upon the positive and negative attributes he or she associates with an object. For example, an individual’s favourable attitude towards a particular politician may be based on the belief that the politician is charismatic, intelligent, and has economic policies that promote social equality (Maio & Haddock, 2010).

The *affective* component of attitude refers to feelings or emotions linked to an attitude object. Affective responses influence attitude in a number of ways. A primary manner in which feelings shape attitudes is through feelings that are aroused in response to the object of an attitude. For example, in school, teachers who use corporal punishment make students afraid of them; students feel scared when they see those teachers or are taught by those teachers. This negative affective response is likely to cause a negative attitude towards those teachers who use corporal punishment (Maio & Haddock, 2010).

The *behavioural* component of attitude refers to past behaviours or experiences regarding an object of an attitude. This indicates that people may intuit their attitudes from their previous actions and sometimes assume their attitudes by thinking about how they have behaved with respect to the attitude in the past (Maio & Haddock, 2010).

Breckler and Manis (1984) demonstrated that attitudes' components (cognitive, affective, and behavioural) are even more empirically distinct. Although Breckler and Manis (1984) provided strong evidence that cognitive, affective, and behavioural components of attitudes are not identical, Maio and Haddock (2010) argued that these differences do not mean that they are completely independent of one another because sometimes cognitive, affective and behavioural information all contribute to a person's positive or negative attitudes towards a particular issue, object, or person.

4.3 Teachers' attitudes

Teacher attitude is one of the most important variables in the education of children with disabilities (Parasuram, 2006). Attitudes are generally perceived to be relatively stable constructs containing, as discussed above, cognitive, affective and behavioural elements. Research indicates that even short-term training can have positive effects on attitudes (Savolainen, Engelbrecht, Nel, & Malinen, 2012). One of the early contributors to attitude research (Allport, 1967) said that when a group is established, stereotypical beliefs are attached to the group because stereotyping effects are inevitable products of human cognitive processing. Parasuram (2006) claimed that people with disabilities fall into a group; thus, powerful stereotypes are directed towards them.

Based on various studies (Allport, 1967; Breckler & Manis, 1984; Corsini, 1999; Maio & Haddock, 2010; Parasuram, 2006), teacher attitude may be defined as a 'teacher's report about his/her opinions or decision made about liking versus disliking or favouring versus disfavouring a particular object, issue or person related to education matters such as teaching, school curriculum, school administrators (principals, headmasters, head teachers), or their opinions towards inclusion of pupils with disabilities.' Generally, a teacher's attitude addresses the degree to which attitude guides the teacher's actions and behaviours towards a particular issue related to teaching activities or educational matters.

4.3.1 Factors affecting teachers' attitudes towards inclusion

Roberts and Smith (1999) argued that attitudes towards disabilities reflect beliefs about people with disabilities and as such guide behaviour towards individuals with disabilities. Everington and Stevens (1999) indicated that teachers are more willing to accept children with disabilities into their regular classes when teachers have either taken special education courses or have had some special education teaching experience. Ojok and Wormnæs (2013)

indicated that teachers who feel that their pre-service training has not prepared them for inclusive education appear to be pessimistic towards inclusion. Larrivee and Cook (1979) demonstrated that teachers who have been successful in teaching disabled children have more positive attitudes.

Studies indicate that teachers' attitudes towards the inclusion of pupils with disabilities in the classroom are affected by several factors, including the teacher's gender, age, years of teaching experience, experience with contact or working with children with special needs/disabilities, and class size. Other factors include the nature of the disabilities (type of disabilities) experienced by learners in the classroom, grade level taught, training in the area of special needs education, and the availability of teaching and learning resources in the school/classroom (Al-Zyoudi, 2006; Avramidis & Norwich, 2002; de Boer et al., 2011; Forlin, 1995; Forlin, Loreman, Sharma, & Earle, 2009; Gal, Schreur, & Engel-Yeger, 2010; Kalyva et al., 2007; Sari et al., 2009; Subban & Sharma, 2006). The following section briefly describes how these factors affect teachers' attitudes towards the inclusion of disabled children into mainstream schools/classes.

Gender

Al-Zyoudi (2006) observed that female teachers expressed more positive attitudes towards the idea of integrating children with behavioural problems than did male teachers. This is consistent with research studies that reported that the attitudes of male teachers towards integration were more negative than female teachers' (Avramidis et al., 2000b; Avramidis & Norwich, 2002; Dupoux, Hammond, Ingalls, & Wolman, 2006). Similarly, Alghazo and Gaad (2004) revealed significant differences between male and female teachers: male teachers were observed to have less positive attitudes towards inclusive education than female teachers.

Opdal, Wormnæs, and Habayeb (2001) observed that female teachers were more supportive of inclusion than male teachers. For example, of the sample ($n = 90$), approximately 59% of the male teachers supported the inclusion of learners with special needs whereas 69% of the female teachers supported the inclusion of learners with special needs. Surprisingly, another study that was conducted by using survey method ($N = 391$) to examine the attitudes of general educators towards disabilities and the inclusion of students in regular schools in the

city of Mumbai, India (Parasuram, 2006) indicated that there were no significant gender differences between male and female teachers.

Teachers' age and teaching experience

Teachers' age is a variable that was identified as affecting the attitudes of teachers towards the inclusion of pupils with disabilities. For example, Subban and Sharma (2006) observed that older and more experienced teachers appeared to foster less positive attitudes towards inclusion than younger teachers. Glaubman and Lifshitz (2001) conducted a study to investigate the attitudes of teachers towards the inclusion of pupils with special needs in regular classrooms; the results indicated that teachers with fewer years of teaching experience (1-10 years) were significantly more positive than their counterparts with more experience (11+ years). Forlin (1995) demonstrated that acceptance of a child with a physical disability was highest among educators with fewer than six years of teaching experience and declined with educators who had six to ten years of teaching experiences. The most experienced educators (more than 11 years of teaching) were the least accepting.

Research indicates that teachers' age may also determine the amount of training that teachers received in educating children with special educational needs. Only recently have special education courses been offered as a component of teacher education courses in the majority of teachers' colleges and universities. Research indicates that young teachers with fewer years of teaching experience may have attended specialized courses in special needs education that led them to have more positive attitudes towards inclusion than older teachers (Kalyva et al., 2007). Regarding teachers' age and experience, Avramidis and Norwich (2002) observed that younger teachers and teachers with fewer years of experience were more supportive of inclusion than older teachers and teachers with more teaching experience. This is consistent with Al-Zyoudi (2006), who reported that teachers with up to 14 years of teaching experience have significantly more positive attitudes towards inclusion than those teachers with more than 14 years' teaching experience.

Moreover, Alghazo and Naggar Gaad (2004) indicated that teachers with 1-5 years of teaching experience have significantly more positive attitudes towards the inclusion of pupils with special needs than teachers with 6-11 years of experience or those with 12+ years of experience (Alghazo & Naggar Gaad, 2004). Avramidis, Bayliss and Burden (2000) argued that teaching experience is consistently linked to teachers' attitudes towards inclusion. In a

survey of mainstream teachers' attitudes towards the inclusion of children with special needs in the ordinary schools in southwestern England, Avramidis, Bayliss and Burden (2000) observed that teachers who worked with children who had special educational needs in an inclusive setting tended to have more positive attitudes towards inclusion than teachers without such relevant experience.

Another study that investigated the attitudes of teachers towards the educational mainstreaming of special needs students in six nations, the United States of America, Germany, Israel, Ghana, Taiwan and the Philippines (Leyser, Kapperman, & Keller, 1994), indicated that teachers with up to 14 years' teaching experience had significantly higher positive scores on their attitudes towards integration than those teachers with more than 14 years' experience.

In conclusion, the review indicated that teachers' age and teaching experience contribute a great deal to making a difference in teachers' attitudes towards the inclusion of disabled children in mainstream schools/classes. Younger teachers with fewer years of teaching experience have more positive attitudes towards the inclusion of disabled pupils. Further, teachers with more experience in teaching disabled pupils in their classrooms have more positive attitudes towards the inclusion of disabled pupils.

Class size

Class size is a factor that affects teachers' attitudes towards inclusion. Kalyva et al. (2007), who conducted a study to investigate Serbian teachers' attitudes towards inclusion, suggested that reducing class size to 20 students would facilitate more positive attitudes towards inclusion. Subban and Sharma (2006) claimed teachers with more disabled pupils in their classrooms definitely perceived inclusion to be more difficult and stressful.

Experience with contact or with inclusive education

Several studies have presented results indicating that experience with special needs children or students affects teachers' attitudes towards inclusive education. For example, Leyser et al. (1994) determined that overall, teachers' contact and interactions with people with disabilities promoted positive attitudes towards integration. Avramidis and Kalyva (2007), who examined the influence of teaching experience and professional development on Greek teachers'

attitudes towards inclusion, observed a significant difference between schools that had much experience with inclusive education and those with little or no experience with it. Further, the results demonstrated that teachers with experience in inclusive education had significantly more positive attitudes towards inclusive education than teachers with little or no experience in inclusive education.

Moreover, research indicates that teachers with extensive experience with disabled children had significantly more favourable attitudes towards inclusion than teachers with little or no such experience. For example, Kalyva et al. (2007) observed that teachers with experience in teaching pupils with special educational needs were more positive than those without experience. Batsiou, Bebetos, Panteli, and Antoniou (2008) determined that teachers' attitudes were influenced by their previous experience with inclusive education.

Studies also indicate that prior contact with disabled children or people with disabilities can affect teachers' attitudes. For example, de Boer et al. (2011) and Parasuram (2006) reported that teachers who were acquainted with a person with a disability had more positive attitudes towards inclusion than teachers who were not acquainted with someone with a disability. This is consistent with Opdal et al. (2001) and Everington and Stevens (1999), who reported that teachers who had experience teaching pupils with special educational needs were more positive towards inclusion than teachers without such experience.

Grade level taught

Several studies have noted that the variable of grade level taught affected teachers' attitudes towards the inclusion of disabled pupils. For example, studies demonstrated that high school teachers display more positive attitudes towards integration/inclusion than elementary school teachers (Al-Zyoudi, 2006; Avramidis et al., 2000b; Leyser et al., 1994). In addition, studies noted that the primary school ethos is more holistic/inclusive whereas secondary school is more subject-based and that may negatively affect teachers' attitudes. According to Avramidis and Norwich (2002), when children are older, teachers become less amenable to inclusion. Avramidis and his colleague claimed that teachers of older children tended to focus more on subject matter and less on individual differences.

By contrast, Avramidis and Norwich (2002) noted that research studies conducted in the United States reported that elementary and secondary teachers differed in their views of integration and the types of classroom accommodations they made for integrated students. Elementary school teachers reported more positive attitudes towards integration and its possibilities than did their secondary counterparts (Avramidis & Norwich, 2002).

Nature and severity of disabilities

The literature demonstrates that the nature and severity of disabilities affects teachers' attitudes towards inclusion. Al-Zyoudi (2006) investigated teachers' attitudes towards inclusive education in Jordanian schools and observed that the acceptance of inclusion was lower for children with intellectual disabilities than for children with physical disabilities. Moreover, Kalyva et al. (2007) investigated Serbian teachers' attitudes towards inclusion and determined that the majority of teachers ranked the needs of children with emotional and behavioural difficulties as the most difficult to meet followed by children with learning difficulties, children with visual impairment and then children with hearing impairment.

Cook (2001) conducted research that used a nomination procedure to examine whether teachers' attitudes towards the inclusion of pupils with disabilities differed according to the severity of the disability and observed that children with specific learning disabilities, attention deficit hyperactivity disorder (AD/HD) or behavioural disorders were nominated significantly more often by teachers in the attitudinal category '*rejection*' than those with easy-to-notice disabilities such as mental retardation, orthopaedic, hearing, visual or multiple disabilities and autism. The results also indicated that if teachers could reduce their class size by one child, they would be relieved if it were a pupil with learning disabilities, AD/HD or behavioural problems (de Boer et al., 2011).

Glaubman and Lifshitz (2001) observed that teachers' attitudes changed according to the type of disability that students had. 'Ultra-Orthodox Jewish Teachers' Self-efficacy and Willingness to Include Pupils with Special Needs' noted that teachers demonstrated the greatest willingness to include pupils with physical disabilities or sensory impairments. Teachers' attitudes were determined to be more negative towards the inclusion of pupils with learning disabilities, mild emotional problems, mild mental retardation and pupils with medium and severe emotional problems and mental retardation. Similarly, Alghazo and Gaad

(2004) reported that teachers were most positive towards pupils with physical disabilities, pupils with specific learning difficulties and visually impaired pupils and were most negative towards the inclusion of pupils with mental disabilities, behavioural difficulties and hearing impairment.

A review conducted by Avramidis and Norwich (2002) referenced the study of Clough and Lindsay (1991), who demonstrated that the majority of the teachers surveyed ranked the needs of children with emotional and behavioural difficulties as the most difficult to meet, followed by children with learning difficulties. Ranked third were children with visual impairment, and fourth were children with a hearing impairment. Clough and Lindsay attributed the low ranking of children with sensory and physical impairments to the relatively infrequent existence at that time of these children in mainstream classes (Avramidis & Norwich, 2002).

Lifshitz, Glaubman, and Issawi (2004) conducted a study in Israel and Palestine to investigate attitudes of regular and special education teachers towards inclusion. Their findings indicated that teachers' attitudes differed according to the types of disabilities experienced by pupils. According to Lifshitz et al. (2004), teachers were more positive about the inclusion of pupils with learning disabilities, mild emotional disorders, and pupils with visual and hearing impairment than other types of disabilities. For example, those authors determined that teachers' attitudes were most negative towards pupils with mental retardation, moderate/severe behavioural and emotional disorders, and pupils who were blind and deaf.

Training in special needs education

Teacher training components in the area of special needs education have been identified by several researchers as a factor that affects teachers' attitudes towards the inclusion of disabled children in mainstream schools. For example, Avramidis and Norwich (2002) argued that without a coherent plan for teacher training in the educational needs of disabled children, attempts to include these children in mainstream classes would be difficult. Subban and Sharma (2006) indicated that the level of education or training in the field of special needs education can cause more positive or more negative attitudes towards the inclusion of pupils with disabilities. Subban and Sharma suggested that increasing teachers' training in special needs education has always been associated with more positive attitudes towards the inclusion of disabled pupils. This is consistent with Avramidis, Bayliss and Burden (2000), who reported that teachers with more training in special needs education perceived themselves to

be more confident in including pupils with disabilities and appeared to have more positive attitudes towards inclusive education than teachers with little or no training in the area of special needs education.

Avramidis and Kalyva (2007) conducted a survey study to investigate the effects of teaching experience and professional development on teachers' attitudes towards inclusion. They observed that teachers with long-term training in special needs education were significantly more positive towards statements regarding the general philosophy of inclusion than those teachers who had no training at all. Ghanizadeh, Bahredar, and Moeini (2006) conducted a study to investigate knowledge and attitudes towards attention deficit hyperactivity disorder among elementary school teachers. The results indicated that the more knowledge teachers had regarding AD/HD, the more positive their attitudes were towards the inclusion of pupils with this type of disability.

Dupoux et al. (2006) demonstrated that lack of knowledge about educating children with disabilities and lack of access to training programmes for special needs education may contribute to the negative attitudes of teachers. Batsiou et al. (2008) observed a significant relation between information and attitudes and knowledge and attitudes. Batsiou and his colleagues claimed that teacher attitudes were influenced by information and the knowledge that they possessed regarding the inclusion of disabled pupils in their mainstream classes.

Lifshitz et al. (2004) examined the influence of in-service training on teachers' attitudes, based on a course of 28 hours for regular teachers. The findings of the study indicated that after the intervention, the scores of the regular teachers on the attitudes questionnaire increased significantly. However, Wilkins and Nietfeld (2004), who conducted a study to investigate the effects of schoolwide inclusion training programmes on teachers' attitudes towards inclusion determined that there was no difference between the group who participated in an experimental group and the control group. According to Wilkins and Nietfeld (2004), the results indicated that the intervention did not influence teachers' attitudes towards inclusive education.

4.4 Summary of the chapter

This chapter demonstrated that attitudes are vital to understanding human thought and behaviour (Maio & Haddock, 2010). The chapter provided highlights by examining the meaning of an attitude, the components that form an attitude, what delineates the meaning of

teacher attitudes, and factors that can affect teachers' attitudes towards the inclusion of disabled pupils in mainstream schools or classes.

In summary, the review of various studies suggested that teacher attitudes are a result of the interplay among cognitive, affective and behavioural domains during teachers' teaching activities in the classroom. Generally, the interplay of these three domains (cognitive, affective and behavioural) have been determined to be a source of teacher's thoughts, feelings, and actions towards interaction with pupils with different disabilities in their mainstream schools or classrooms. Therefore, the indirect relations among the interplay of attitudes' components and teachers' demographic variables, such as gender, age, teaching experience, and other factors such as class size, grade level taught, previous contact with persons with disabilities, types of disabilities experienced by pupils, and teachers' participation in training programmes related to special needs education, are the primary determinants of the teachers' attitudes towards the inclusion of disabled pupils in mainstream schools/classrooms.

However, some research studies noted that teachers' attitudes towards the inclusion of disabled pupils in mainstream schools/classes are closely related to the internal readiness of the teacher (teacher's personal willingness). Therefore, the next chapter examines in detail the concepts of 'willingness' and 'teacher's willingness' and addresses the factors that can affect a teacher's willingness to work with pupils with disabilities in the mainstream/regular education classrooms.

5.0 TEACHER WILLINGNESS

5.1 Introduction

The question of whether teachers are willing to work with pupils with disabilities in the regular education classrooms is one of the research questions addressed by the present study. Thus, this chapter describes the concepts of ‘willingness’ and ‘teacher willingness’ with regard to working with pupils with learning disabilities. Section 5.2 describes the meaning of ‘willingness’ and ‘teacher willingness’. Previous studies regarding teachers’ willingness to include pupils with disabilities in the classroom are presented in Section 5.3. The summary of this chapter is provided in Section 5.4.

5.2 Willingness

The present study defines the term ‘*willingness*’ using three different perspectives to provide the reader with a wide understanding of the concept. First, the concept is defined using the Oxford dictionary. Second, the concept is defined based on philosophical perspectives, and finally, the term *willingness* is defined using the ‘theory of planned behaviour’ (psychological perspectives).

5.2.1 Meaning of *willing* from dictionary

According to the Oxford dictionary, *will* is a verb that expresses the future tense, expressing desire, consent, or willingness. *Willing* is an adjective meaning ready, eager, or prepared to do something. *Willingness* is a noun (mass noun) and refers to the quality or state of being prepared to do something; readiness (Stevenson, 2010).

5.2.2 Philosophical perspectives of the term *willing*

Philosophically, *will* is considered to be the source of all voluntary or intentional action and the general source of human action; thus, an act cannot be attributed to the agency of an individual at all unless it originates in his/her will (Hyman, 2015). Before the 19th century, the meaning of *will* was classically constructed as a semantic blend of impulse, instinct, tendency, desire, objective and inclination.

The Greeks, however, did not have a *separate* notion of ‘the will’ and considered human action to be closely integrated with the intellect and emotions: Plato believed that desires or appetites (*orexis*) were related to sensations whilst the will (*boulesis*) was linked to reasons and thoughts. Aristotle did not appear to have much interest in will and emotion but did

propose that appetite and will were involved in action. Thus, ‘the will’ is considered to be rational, calculated activity (Berrios & Gili, 1995). From this period onward, and based on the belief that volition is governed by intellect, a view of ‘the will’ as a ‘rational appetite’ has predominated. This perspective was also identified in Immanuel Kant’s work. Kant argued that ‘the will is conceived as a faculty of determining oneself to action in accordance with the conception of certain laws’ (Kant & Pluhar, 2002).

Considered in itself and independent of its causes or effects, an act is deemed to exist in either motion or thought, for example, the motion of a person’s legs when he/she walks or his/her lips when a person speaks or the thoughts that occur in a person’s mind when he/she does mental arithmetic or recites a sonnet (poem) in his/her head. The cause of the act is believed to be a type of conscious choosing or willing, generally called a ‘volition’ or ‘intention’, not merely a wish or desire or appetite or aversion, but a *sui generis* act or operation of the will (Hyman, 2015).

5.2.3 Meaning of *willing* from the theory of planned behaviour

Maio and Haddock (2010) demonstrated that the immediate predictor (or determinant) of individuals’ behaviour is their *intention*. Thus, teachers’ intentions or willingness to work with children with severe learning disabilities in the regular education classroom can be viewed from the perspective of the theory of planned behaviour. According to this theory of planned behaviour (Ajzen, 1991), perceived behavioural control is determined by *control beliefs* – individuals’ perceptions regarding whether they possess the resources and opportunities required to perform the behaviour (action). The theory suggests that perceived behavioural control influences behaviour because *it has a direct effect on behavioural intentions*; e.g., individuals’ intentions to engage in a particular behaviour (action) are affected by their confidence in their ability to perform the action. In other words, a teacher’s intention or willingness to engage in working with pupils with severe learning disabilities in the regular education classroom is affected by his/her confidence in his/her ability to perform the action (teach in the classroom). Thus, when applied to working with disabled children in regular education classrooms, application of the theory suggests that a teacher’s willingness to work with children with severe learning disabilities may be influenced by a teacher’s belief (control beliefs) that the inclusion of children with learning disabilities in regular education classrooms will be successful because of his or her effort.

5.3 Previous studies concerning teachers' willingness to attempt inclusion

The willingness of primary school teachers to teach pupils with disabilities in regular schools is a critical factor in the successful implementation of inclusive education (Avramidis & Kalyva, 2007; Ojok & Wormnæs, 2013). According to Scruggs and Mastropieri (1996), understanding general educators' willingness is central to the planning and implementation of inclusive education in the regular education classroom. Consistent with findings regarding attitudes, Rakap and Kaczmarek (2010) observed that general education teachers demonstrate different levels of acceptance for children with different types of disabilities in mainstream classrooms. In their studies on teachers' attitudes, Ojok and Wormnæs (2013) and Opdal et al. (2001) reported that teachers are more willing to support the inclusion of disabled children who have other types of disabilities than support the inclusion of children with intellectual disabilities (Ojok & Wormnæs, 2013; Opdal et al., 2001).

Scruggs and Mastropieri (1996) observed that good teachers' preparation, the availability of teaching and learning resources, and having sufficient time for lesson planning are among the factors that can positively contribute to the willingness of teachers to work with children with disabilities in the regular classroom. Ajzen (2005) indicated that the willingness of teachers to teach children with special needs or disabilities can be influenced by teachers' feelings of social support from others and by their feelings of being capable of teaching those children with special educational needs.

The nature and degree of the severity of the disabilities that children may experience in the classroom are among the factors that contribute to influencing teachers' willingness to work with disabled children in the regular education classroom. For example, Avramidis, Bayliss and Burden (2000) observed that pupils with emotional and behavioural disabilities are problematic for inclusion in the regular educational setting and therefore cause teachers to be less willing to include them in their classrooms. Rakap and Kaczmarek (2010) claimed that it is difficult for teachers to control the behaviour of pupils with different types of disabilities who are included in the same regular education classroom, particularly the ones with multiple disabilities and behaviour problems. Thus, teachers become unwilling to work with these children in their classes.

Research indicates that teachers are more willing to include pupils with physical disabilities, pupils with specific learning disabilities, and pupils with visual impairment; they are less willing to include pupils with intellectual disabilities, behavioural problems, and pupils with hearing impairment (Alghazo & Gaad, 2004; Forlin, 1995). However, Lifshitz et al. (2004) observed that teachers are more willing to include pupils with learning disabilities, mild emotional disorders, visual impairment and hearing impairment and demonstrate less willingness to include pupils with mental retardation, moderate or severe behavioural or emotional disorders, and pupils who are blind or deaf.

Glaubman and Lifshitz (2001) reported, consistent with findings regarding attitudes, that teachers demonstrated more willingness to include pupils with physical disabilities or sensory impairments and demonstrated less willingness to include pupils with learning disabilities, mild emotional problems, mild mental retardation and pupils with medium and severe emotional problems and mental retardation.

Studies indicate that teachers with substantial experience teaching disabled children are more willing to support inclusion than their colleagues with less experience (Avramidis et al., 2000b; Avramidis & Kalyva, 2007; Villa, Thousand, Meyers, & Nevin, 1996). Further, Avramidis and Norwich (2002) noted that young teachers and those with fewer years of experience were more willing to support the inclusion of disabled children in their classes.

Consistent with findings regarding attitudes, Forlin (1995) observed that the willingness of teachers to accept children with physical disabilities was higher among educators with fewer than six years of teaching experience and declined for those with six to ten years of teaching experience. Furthermore, studies indicated that teachers with one to five years of teaching experience were more willing to include disabled pupils than teachers with six to eleven years' experience or those with twelve or more years of teaching experience (Alghazo & Naggad, 2004; Glaubman & Lifshitz, 2001). Leyser et al. (1994) reported, consistent with findings regarding attitudes that teachers with up to 14 years' experience were more willing to integrate than teachers who had taught more than 14 years.

Avramidis and Kalyva (2007) noted significant differences between schools with much experience with inclusive education and schools with little or no experience with inclusive education. According to Avramidis and his colleague, teachers who had experience in inclusive education were observed to be more willing to support inclusion than teachers with

little or no experience. Moreover, findings from Mumbai, India indicated that prior contact with people with disabilities can influence the willingness of teachers to include disabled pupils (Parasuram, 2006). According to Parasuram (2006), teachers who were familiar with persons with disabilities were more willing to support inclusion than teachers who were not familiar with someone with a disability.

Consistent with findings regarding attitudes, studies indicate that female teachers appear to be more willing to include pupils with disabilities in inclusive settings than male teachers (Al-Zyoudi, 2006; Alghazo & Naggat Gaad, 2004; Opdal et al., 2001).

Concerning teachers' training in special needs education, Hofman and Kilimo (2014) noted that teacher training in special needs is an important factor in developing more favourable attitudes among teachers towards inclusion in their classrooms. Ghanizadeh et al. (2006) observed that the more knowledge teachers have regarding different types of disabilities, the more eager teachers become to support the inclusion of children with different type of disabilities in their classes.

Further, Batsiou et al. (2008) argued that information and knowledge regarding the inclusion of children with disabilities contribute to increasing teachers' willingness to include disabled students in their classrooms. Thus, increasing teachers' knowledge of types of disabilities and educating children with disabilities appears to help teachers develop positive attitudes towards the inclusion of disabled pupils in their classrooms.

Meijer, Pilj and Hegarty (1994) noted that appropriate in-service training is a key ingredient in the process of inclusive education that can accelerate development and keep teachers on track. Hofman and Kilimo (2014) and Rakap and Kaczmarek (2010) reported, consistent with other findings regarding attitudes, that teachers in inclusive schools require specific workshops that will render them more willing to work with pupils with disabilities in their classrooms. Studies have indicated that teachers with training in special needs education are sufficiently confident to include pupils with disabilities in their classroom and appear to be more amenable to inclusive education in regular education classrooms (Avramidis et al., 2000b; Avramidis & Norwich, 2002). Thus, training teachers in how to educate children with disabilities is paramount in enhancing teachers' willingness to include children with disabilities in their classrooms.

5.4 Summary of the chapter

The goal of this chapter was to provide the reader with an overall understanding of the concept of *willing* and to highlight some factors that contribute to enhancing teachers' willingness to include disabled children in regular education classrooms. The review noted that *willing* as a concept is broadly perceived to include readiness, eagerness, the expression of desire, consent, or state of being prepared to do something. In addition, philosophers have perceived the concept of *willing* to be rational, calculative activity or the faculty of determining the self to action whereas psychologists, using the theory of planned behaviour, perceive the concept of *willing* to be 'intentions to behaviour (action)' because they believe that intentions are an immediate antecedent to actual behaviour (action).

The chapter presented several factors that affect teachers' willingness to include children with disabilities in regular education classrooms. However, the highlighted factors are interrelated with factors that affect teachers' attitudes towards the inclusion of disabled pupils because attitudes and willingness are also interrelated concepts within the field of psychology. Thus, the addressed factors that affect teachers' willingness to work with children with disabilities in the regular education classroom are nearly identical to factors that affect teachers' attitudes towards the inclusion of children with disabilities in the regular education classroom.

In summary, these factors include (i) good teacher preparation, (ii) the availability of teaching and learning resources to support children with disabilities, (iii) the type of disabilities that pupils may have, including nature and degree of severity, (iv) teachers' gender, age and years of teaching experience, (v) prior contact with persons with disabilities, and (vi) teacher's participation in training courses or seminars/workshops on special needs education.

The next chapter presents the summary of the previous chapters and introduces the research questions of the present study to the reader.

6.0 SUMMARY OF CHAPTERS AND RESEARCH QUESTIONS

6.1 Introduction

This chapter summarizes the previous chapters by reminding the reader of the focus of the study as well as presenting the research questions of the study. The chapter summarizes about inclusive education as presented from Chapter 1 to Chapter 5 (Section 6.2) and later states the research questions for the study (Section 6.3).

6.2 Inclusive education

As presented in Chapter 1, inclusive education as a philosophy promises to more fully utilize the diversity of interests and abilities identified among all groups of children to develop each individual's intellectual and social competences. According to the Salamanca Statement and Framework of Action (UNESCO, 1994), inclusive education introduces new hope to children with disabilities to obtain an education in normal, regular schools in their communities regardless of the type of disability that they may have; thus, all pupils belong to the community.

Chapter 1 demonstrated that through inclusive education, children may receive appropriate educational programmes that are designed to meet the needs of pupils according to their capabilities. Further, the chapter addressed the concept that pupils with disabilities in inclusive classrooms receive the necessary support or assistance for successful learning because teachers are prepared to teach those children and overcome the challenges in their regular classrooms. Moreover, the chapter noted that many countries in the world changed their educational systems regarding educating children with disabilities in regular schools after the Salamanca Statement and Framework of Action. In Tanzania, the rights of persons with disabilities trace back to the 1977 constitution and their amendments that prohibited all forms of discrimination. The chapter explained that inclusive education in Tanzania began officially in 1997 under the Ministry of Education in collaboration with UNESCO. However, the chapter clearly noted that until recently, inclusive education in Tanzania faced numerous problems and challenges and was therefore difficult to implement effectively and successfully. Some of the problems and challenges included shortages of teaching and learning materials, overcrowded classrooms, and a lack of knowledge and skills in educating and managing pupils with different types of disabilities because of a lack of teachers trained

in special needs education. The chapter also noted that teachers are faced with numerous periods per day/week, a shortage of time per period, poor governmental and parental support, poor working environments for teachers and difficulties in supporting pupils with disabilities in their classrooms. Chapter 1 provided concluding remarks by addressing five objectives of the study and defining the key terms used in the study.

6.3 Research context and the importance of research in inclusive education

The research context and the importance of research in inclusive education were thoroughly addressed in Chapter 2, which began by presenting a global overview of inclusive education for school-aged children by specifically examining developed countries (global north) and later examining inclusive education in developing countries (global south). Chapter 2 emphasized that educating pupils with disabilities in the regular education classroom requires a major shift in the roles and responsibilities of educators, interventions and special support services. The chapter noted that for inclusive education to be successful in the regular education classroom, teachers must adapt or modify the curriculum and their teaching methods using various special teaching aids and making adjustments with regard to classroom management to support disabled children. Teachers were also advised to refine their existing skills and develop new ones to meet the challenges of inclusive classrooms, work collaboratively as a team and cooperate with parents.

Chapter 2 also noted that teachers are extremely important persons who have the primary responsibility for ensuring the success of inclusive education policies because they are the ones who can provide perspective regarding how to make inclusion occur more effectively and achieve inclusion's goals. Further, the chapter reported that studying inclusive education is important because it helps researchers and other stakeholders in education obtain an overall understanding of teachers' perceptions, readiness and their abilities to teach pupils with disabilities.

Chapter 2 also addressed research, practices and the development of inclusive education in developed countries (global north) and in developing countries. For example, the chapter noted that in developed countries, such as Italy and Norway, all students are taught together; however, countries such as Belgium, France, Germany and the Netherlands retain the spatial separation of regular and special education in 'binary' systems of special and regular schools.

Moreover, the chapter demonstrated that many research studies on inclusive education in developed countries were conducted in the past two decades as several countries have led the efforts to implement policies that foster integration and more recently, the inclusion of these pupils into the mainstream environment. The chapter noted that many nation-states in Europe and North America have reformed their systems so that a continuum exists from segregated to fully inclusive settings although change in many nation-states has been gradual. The continuum moves from complete exclusion to full inclusion, from segregation (separation of buildings) to separation (separation within a building) to integration (mainstreaming: the majority of the school day in regular classes) to fully inclusive classrooms that all students may access. In addition, Chapter 2 noted that research on inclusive education across developed countries indicated that the majority of teachers supported inclusive education and were willing to include pupils with disabilities in their classrooms although their willingness appeared to vary according to the pupils' disabling conditions.

Chapter 2 explained that despite the success achieved by the majority of the northern-western countries in the provision of education to school-aged children with disabling conditions, specific factors remain a challenge. These factors include social integration, the characteristics of teachers, classroom environment, school climate, cooperation, support from people with competence, lack of time combined with difficulty balancing the demands of all students, class size, lack of appropriate teaching resources, behaviour problems exhibited by some children in school (constant behaviour management), attitudes, and lack of appropriate professional training in inclusive education, such as training in inclusive methods. However, in the majority of the northern-western countries, teachers and other educational practitioners nevertheless believe that only a mainstream/inclusive setting can offer students with disabilities an opportunity to share in the same range and quality of education and social experiences enjoyed by all other school-aged children.

With regard to research, practices and the development of inclusive education in developing countries (global south), the chapter addressed the idea that many countries have initiated efforts towards policy formulation and the development and implementation of inclusive education. Although such advances cannot equal the gains in developed countries, the effort is there. For example, the chapter demonstrated that many developing countries, particularly in sub-Saharan Africa, began movements towards inclusive education after the Salamanca Statement and Framework of Action in 1994, and the majority of the countries faced similar

challenges with the implementation of inclusive education policy. Some of the challenges addressed by the chapter in many developing countries in sub-Saharan Africa were the failure of many nation-states to effectively address the diverse needs of pupils with learning difficulties, massive school dropouts, street children, the quality of teacher training, the provision of equipment and teaching/learning materials in special schools or regular schools, the provision of grants to schools, the provision of support to resource centres, overcrowded classrooms, poor school infrastructures such as buildings and toilets, the absence of a school near home, and the lack of clean water. However, the chapter noted that despite all of the problems and challenges summarized above, many nation-states in sub-Saharan Africa have exerted great efforts to address the wide range of learning needs of all pupils with disabilities either through special education schools, special units attached to regular schools, or in regular schools themselves.

6.4 Teacher self-efficacy

Teacher self-efficacy is one focus of this study and was addressed thoroughly in Chapter 3. The chapter began by providing the meaning of the concept *self-efficacy*, the belief in one's capabilities to organize and execute the courses of action required to produce given attainments. The meaning of self-efficacy was accompanied by a description of its sources. The chapter briefly addressed four potential sources of self-efficacy: mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states. Following the understanding of self-efficacy and its sources, the chapter presented the meaning of teacher self-efficacy. Teacher self-efficacy is the teacher's judgement of his or her ability to affect student performance and is principally concerned with the teacher's beliefs in determining whether actions will be initiated, how much effort will be expended, and how long that effort will be sustained in the face of obstacles and failures.

Chapter 3 also explained the importance of teacher self-efficacy in teaching. For example, the chapter addressed the idea that greater teacher efficacy leads to greater effort and persistence, which lead to better performance. Thus, teachers with high self-efficacy try harder in their teaching because they believe they can perform tasks. Moreover, the chapter showed that high self-efficacy not only enhances teachers' teaching but also enhances students' learning because the greater the teacher's self-efficacy, the more confidence teachers have in their ability to help their students learn.

In short, Chapter 3 demonstrated that teachers with high self-efficacy have a strong commitment to teaching, are more willing to try new teaching strategies in an attempt to enhance learning, are persistent during teaching situations, seek new ways to improve their teaching methods by employing alternative methods of instruction and innovative instructional materials, and exhibit more positive attitudes towards the placement of students with behavioural and learning difficulties in the general education classroom. Teachers with high self-efficacy have also been said to demonstrate greater enthusiasm and commitment to their teaching, are less critical of students when they make errors, work longer with students who are struggling, are more likely to view themselves as successful in teaching pupils with disabilities, demonstrate a greater academic focus in the classroom, exhibit different types of feedback to influence student learning, and expend greater effort to complete work.

Conversely, the chapter demonstrated that teachers with low self-efficacy are characterized as having strict regulations and negative sanctions to force pupils to study, lack interest in collaborating with other teachers, have negative views towards the inclusion of pupils with disabilities, give up more easily and do not begin an activity because of lack of confidence. The chapter also demonstrated that teachers with low self-efficacy may spend more time on non-academic activities, criticize students for their failures, are most likely to leave the profession, avoid addressing academic problems, turn their efforts inwards to relieve their emotional distress, and are unable to function effectively as classroom managers. The concluding remarks of the chapter reiterated the goals of the chapter, addressing the concepts of self-efficacy, Bandura's sources of self-efficacy, and teacher self-efficacy.

6.5 Teachers' attitudes

Chapter 4 addressed the meaning of attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. In short, the chapter demonstrated that a person's attitude involves making a decision about liking or disliking, favouring or disfavouring a particular issue, object, or person. In addition, the chapter provided three components of attitudes: the cognitive component, the affective component, and the behavioural component. The literature has indicated that attitudes' components (cognitive, affective, and behavioural) are empirically distinct. However, their being empirically distinct does not indicate that they are completely independent of one another

because occasionally, cognitive, affective, and behavioural information all contribute to a person's positive or negative attitudes towards a particular issue, object or person.

In addition, Chapter 4 provided the reader an understanding of teacher attitude, a teacher's report of his/her opinions or decisions regarding liking or disliking, favouring or disfavouring a particular issue related to education, such as teaching, school curriculum, school administrators (principals, headmasters, head teachers), or their opinions on the inclusion of pupils with disabilities (as is the case in the present study). In addition, Chapter 4 presented and discussed various factors that affect teachers' attitudes towards inclusion, such as demographic characteristics such as teacher's gender, age, and years of teaching experience. Other factors that were addressed that affect teachers' attitudes included class size, overcrowded classrooms, experience with contacting or working with pupils with disabilities or special needs, grade level taught (lower grades or higher grades), and teachers' professional development in special needs education. The chapter noted that when teachers receive good training in special needs education, such as participating in seminars, workshops, and school-based training regarding special needs education or taking courses in a college or university related to special needs education, teachers demonstrated positive attitudes towards the inclusion of pupils with disabilities in the regular education classroom. The concluding remarks reiterated that attitudes are vital in understanding human thoughts and behaviour. The chapter addressed the concept that teacher attitudes are extremely important in enhancing the inclusion of pupils with disabilities in inclusive classrooms.

6.6 Teacher willingness

The review of teacher willingness was addressed in Chapter 5. The chapter addressed the extent to which teachers were willing or unwilling to work with pupils with disabilities in the regular education classroom. The chapter began by providing the meaning of the term *willingness* based on the dictionary meaning, philosophy, and the meaning from the theory of planned behaviour. Willingness is a person's readiness to do something; it is a type of conscious choosing or a person's intention to engage in a particular behaviour.

Moreover, Chapter 5 noted several factors that contribute to determining the willingness of teachers to work with pupils with disabilities in the regular education classroom. However, the majority of the factors that contribute to determining teachers' willingness to support inclusion are closely related to factors that were addressed in Chapter 4 that affect teachers' attitudes towards inclusion. This is because the two concepts, attitudes and willingness, are

interrelated. The majority of the reviewed studies reported findings regarding teachers' willingness consistent with findings regarding teachers' attitudes. For example, some of the factors that were identified as contributing to determining the willingness of teachers to support the inclusion of pupils with disabilities in the regular education classrooms were teacher preparation and teaching resources; the nature and severity of the type of disabilities that children have in the classroom; teachers' demographic characteristics, such as gender, age, and teaching experiences; and teachers' training in special needs education, e.g., seminars, workshops, school-based training, or college courses. The chapter noted the factors that made teachers successful. Teachers who were trained in special needs education were more willing to work with and support children with disabilities in their classrooms than teachers without such training. The chapter concluded by providing the reader an overall summary of the chapter.

6.7 Research questions

Although earlier studies evaluated inclusive education with regard to teachers' self-efficacy, attitudes and willingness to include children with disabilities, no such studies were conducted in the sub-Saharan school context. Therefore, the present study seeks to enhance knowledge regarding how teachers in Tanzanian primary schools perceive and rate their a) self-efficacy, b) attitudes and c) willingness to work with pupils with disabilities in regular education classrooms.

The following four research questions guide this study:

1. How do teachers' gender, age, teaching experience, grade level taught, class size and number of pupils with disabilities per classroom relate to (a) teachers' self-efficacy, (b) teachers' attitudes and (c) teachers' willingness to include pupils with disabilities in the regular education classroom?
2. What is the relation between teachers' professional development in special needs education and teachers' (a) self-efficacy, (b) attitudes and (c) willingness to include pupils with disabilities in the regular education classroom?
3. Do the types of disabilities experienced in the regular education classroom affect teachers' (a) self-efficacy, (b) attitudes and (c) willingness?
4. Do teachers' self-efficacy and attitudes predict their willingness to work with pupils with severe learning disabilities in the regular education classroom?

As noted in Chapter 1, this study may be useful to the Ministry of Education, curriculum developers, policy makers, and other stakeholders in education in understanding self-efficacy, attitudes and the willingness of regular primary school teachers to include pupils with disabilities. In addition, the present study contributes to identifying pupils' needs and the importance of education to pupils with disabilities. Relevant authorities may take some major steps to resolve the practical challenges facing teachers and pupils, including more efforts to improve teachers' training and the general provision of education to pupils with disabilities in regular education classrooms. Further, the study can contribute to the limited literature on inclusive education, teachers' self-efficacy, attitudes and the willingness to embrace inclusion in developing countries, particularly in Tanzania.

The next chapter addresses the method used in the current study.

7.0 METHOD

7.1 Introduction

The method used in the present study is described in this chapter. First, the overall research design is presented in Section 7.2. Details of the population and sample are presented in 7.3. After that, 7.4 present the independent and dependent variables that are being studied, followed by a presentation of the instruments used in the current study in Section 7.5. The reliability of the scale is presented in Section 7.6. The data collection process, including ethical clearance, is presented in Section 7.7. The final section, Section 7.8, presents the details of data analysis – including data preparation.

7.2 Research design

A survey research design was employed in the present study. This approach was selected because survey research designs are procedures in quantitative research that allow the investigators to administer a survey to a sample or to an entire population of people to describe the attitudes, opinions, behaviours, or characteristics of that population (Creswell, 2012, p. 376). In this procedure, survey researchers collect quantitative data using questionnaires (e.g., mailed questionnaire) or interviews (e.g., one-on-one interview) and statistically analyse the data to describe trends in responses to questions and test research questions or hypotheses. Researchers also interpret the meaning of the data by relating the results of the statistical tests to previous research studies (Creswell, 2012).

7.3 Participants

Participants of the current study were 1264 primary school teachers from two regions, Ruvuma and Mbeya, in the southern highlands of Tanzania. According to the Tanzanian inclusive education policy, all public primary schools in Tanzania accept and enrol school-age children with disabilities to be included with children without disabilities. However, depending on the type of disability, some of these school-age children are enrolled either in regular primary schools; regular primary schools with a special education unit attached, called inclusive schools; or in a special education school that enrolls only pupils with a special type of disability (e.g., hearing impairments). Thus, this study involved teachers who were teaching either in regular primary schools or in primary schools that had a special education unit attached to it (inclusive schools). These particular districts (Namtumbo district, Songea

municipal, Songea rural, Mbinga district, and Mbeya city) that were involved in the study were selected because they contained rural areas, small towns, district towns, urban areas, municipal towns and cities and can be considered as representative for the variation of schools and teachers in Tanzania. Thus, a total of 142 primary schools were randomly selected from the list of primary schools that were given by the district education officer in every district and accepted to take part in the study. Also, the schools and the teachers employed in these schools were randomly sampled and solicited for participation. More specifically, I visited every school that was sampled in the entire region of Ruvuma (Namtumbo district, Mbinga district, Songea urban, Songea rural) and Mbeya region (Mbeya city). The questionnaires were distributed physically to the participants and they were collected after a week from head teachers who collected questionnaires from the participants in every school that was visited on my behalf.

Altogether, 1500 teachers received questionnaires while 1264 teachers responded by returning a completed questionnaire, which give a response rate of 84.3%. The remaining teachers (236) who received the questionnaire either did not return the questionnaires or returned an incomplete questionnaire.

7.4 Demographic information of the sample

The sample indicates that approximately 68.5% of the participants were female teachers. This finding reflects the general proportion distribution of male versus female teachers for the majority of the primary schools in Tanzania. The majority of the teachers (approximately 60%) were between 21 and 40 years of age whereas 40% were above the age of 40. This was also reflected in their teaching experience: 57% had been in the teaching profession for 15 years or more. Table 7.1 shows the demographic information regarding gender, age, teaching experience, grade level taught, class size, number of pupils with disabilities per classroom, and location of schools.

Table 7.1: Teachers' demographic information (N = 1264)

Demographic factor	Category	Frequency	Percentage
Gender	Female	866	68.5
	Male	398	31.5
Age	30 or under	320	25.3
	31 - 40	433	34.3
	Above 40	511	40.4
Teaching experience	Less than 1 year	74	5.9
	1 – 4 years	163	12.9
	5 – 9 years	240	19
	10 – 14 years	246	19.5
	More than 15	541	42.8
Grade level taught	1	120	9.5
	2	97	7.7
	3	241	19.1
	4	225	17.8
	5	217	17.2
	6	206	16.3
	7	158	12.5
Class size	Below 45	321	25.4
	46 - 85	625	49.4
	Above 86	318	25.2
Number of pupils with disabilities per classroom	0	441	34.9
	1 - 3	535	42.3
	Above 4	288	22.8
Location of schools	Village	504	39.9
	Small town	531	42
	City	229	18.1

Table 7.1 demonstrates a good representation of the sample and a good variation of variables.

7.5 Measures

The present study used a questionnaire comprising 71 items with closed-ended questions (see Appendix 1) and containing four sections. The first section requested teachers' background information: gender, age, years of teaching experience, grade level taught, class size, and number of pupils with disabilities per classroom. The first section also asked for the types of disabilities that pupils had in the classroom, teachers' participation in profession development in special needs education, and the location of the school.

The second section examined the teachers' self-efficacy in teaching. The third section concerned teachers' attitudes towards the inclusion of pupils with disabilities in the regular education classroom, and the final section of the questionnaire concerned teachers'

willingness to include and work with children with severe learning disabilities in their regular education classrooms.

The background information that was studied included the following:

- i. *Gender* was defined as male or female.
- ii. *Age* was categorized between 21 – 30 years, 31 – 40 years, and above 40 years.
- iii. *Teaching experience* – Teachers were required to specify the number of years they had taught, e.g., less than one year, 1 – 4 years, 5 – 9 years, 10 – 14 years, and above 14 years.
- iv. *Grade level taught* – Teachers were requested to indicate the grade level that they taught, Grade 1, 2, 3, 4, 5, 6 or 7.
- v. *Class size* – Teachers were required to specify the number of pupils in their classrooms.
- vi. *Total number of pupils with disabilities per classroom* – In this variable, teachers were required to specify the exact total number of pupils with disabilities in their classrooms.
- vii. *Types of disabilities* – Teachers were requested to indicate whether they did or did not have in class a learner with speech/language delay, mild mental retardation, hearing impairment, vision impairment, physical disabilities, behavioural problems, autism, or giftedness. The options were ‘yes’ or ‘no’.
- viii. *Participation in professional development* – Teachers were requested to indicate a type of professional training in special needs education that they had attended. To ensure that all teachers understood the meaning of professional development in special needs education, four levels of professional development were orally explained to them in a staff meeting, and the options for each were ‘yes’ or ‘no’. The choices were as follows:
 - (a) *Trained in special needs education* – In this instance, teachers were requested to indicate whether they had received any training in special needs education after completion of teacher education training and being employed.

- (b) *School-based in-service training* –teachers were requested to indicate whether they had received any training regarding special needs education at their schools.
 - (c) *Workshop (seminar)* – Teachers was requested to indicate whether they had participated in a seminar or workshop related to special needs education
 - (d) *College or university based training* – Teachers were requested to indicate whether they had participated in training courses related to special needs education at a Teachers’ Education College or university.
- ix. *Location of the school* – School locations were categorized into three areas: village (rural areas), small town (urban areas), and city (more populated areas). Teachers were requested to specify by selecting the appropriate area in which their schools were located.

To measure the dependent variables, the following measures were used:

a) Teacher Sense of Efficacy (TSES)

The measure of teacher self-efficacy was adapted from ‘Teacher Efficacy: Capturing an Elusive Construct’ (Megan Tschannen-Moran & Hoy, 2001). Permission to use this measure was obtained from the authors. This measure comprised 12 statements or questions that sought to measure teachers’ perceived self-efficacy, specifically to evaluate teachers’ capability in managing classroom behaviour, effective instructional strategies, and students’ engagement in learning activities. This measure has been recognized and accepted within the field and was validated with in-service and preservice teachers (Megan Tschannen-Moran & Hoy, 2001).

According to Megan Tschannen-Moran and Hoy (2001), two versions of TSES were developed: a long form, comprising 24 items, and a short form, comprising 12 items. For the present study, the short form was used. The measure (*TSES short form*) was reliable, $\alpha = .90$ (Tschannen-Moran & Hoy, 2001). In addition, this measure has demonstrated strong psychometric properties in several studies (Barouch Gilbert, Adesope, & Schroeder, 2013; Cheung, 2006; Mergler & Tangen, 2010; Woolfson & Brady, 2009).

Participants responded using a nine-point response scale ranging from 1 (*nothing*) to 9 (*a great deal*). Among the 12 item statements on the TSES short form, there were **4 item**

statements measuring how teachers were able to manage classroom behaviour (e.g., How much can you do to control disruptive behaviour in the classroom?), *4 item statements measuring how teachers were able to use effective instructional strategies in their classrooms* (e.g., To what extent can you provide an alternative explanation/example when students are confused?), and *4 item statements measuring how teachers were able to engage students in learning activities* (e.g., How much can you do to motivate students who show little interest in schoolwork?). See Appendix 1 for details.

b) Teacher Attitudes

To measure teacher attitudes, the present study adapted the instrument from the study ‘Teachers’ Attitudes towards Inclusion in Turkey’ (Rakap & Kaczmarek, 2010). Permission to use this measure was obtained from the authors. Originally, the instrument was used in a study entitled ‘Mainstreaming: A Study of the Variables Affecting Teacher Attitude’ (Larrivee & Cook, 1979); the instrument was later revised to ‘Psychometric Analysis and Revision of the Opinions Relative to Mainstreaming Scale’ (Antonak & Larrivee, 1995).

This measure comprised 25 statements and a six-point continuum ranging from -3 (*I completely disagree*) to +3 (*I completely agree*). In measuring teachers’ attitudes, the present study asked teachers about their agreement or disagreement with the inclusion of pupils with disabilities in regular education classrooms; e.g., ‘The pupil with a disability will most likely develop academic skills more rapidly in a regular classroom than in a special classroom’ or ‘Inclusion offers mixed group interaction that will foster understanding and acceptance of differences among pupils’ (*see Appendix 1 for details*). After an initial analysis of the data in the present study, a scale measuring teacher attitudes was developed using 9 of the 25 items in the adapted instrument.

c) Teacher Willingness

To measure teachers’ general willingness to work with children with severe learning difficulties, a measure called ‘Teachers’ Willingness to Work with Children with Severe Disabilities – TWSD’ (Rakap & Kaczmarek, 2010) was adapted. Permission to use this measure was obtained from the authors. This measure was developed and used for the first time in Turkey.

The measure TWSD comprised 24 statements from three vignettes (short stories) describing children with severe learning disabilities. Each vignette comprised 8 statements. Teachers were requested to score their level of willingness to work with these children with severe learning disabilities (e.g., physical disability, cognitive disability, and behavioural problems) in their regular classrooms by scoring on a 5-point Likert scale from strongly disagree (1) to strongly agree (5). See Appendix 1 for details. According to Rakap and Kaczmarek (2010), this measure is reliable, $\alpha = .90$.

7.6 Validity and Reliability of the Measures

Creswell (2012) noted that a researcher must select an instrument that reports individual scores that are reliable and valid. According to (Creswell, 2012), ‘Reliability and validity are bound together in complex ways. If scores are not reliable, they are not valid; scores need to be stable and consistent first before they can be meaningful. Additionally, the more reliable the scores from an instrument, the more valid the scores may be’ (p. 159).

7.6.1 Validity

According to Creswell (2012), ‘Validity is the development of sound evidence to demonstrate that the test interpretation (of scores about the concept or construct that the test is assumed to measure) matches its proposed use’ (p.159). Creswell (2012) noted that recently, validity has been considered to be a single unitary concept rather than three types (construct, criterion-referenced, and content). Thus, validity is the degree to which all of the evidence points to the interpretation of test scores for the proposed purpose. The focus is on the consequences of using the scores from the instrument (Creswell, 2012).

However, the present study gives special consideration to the issue of content validity. Content validity is often established using content experts to make judgements following a process based on alignment methodology (Webb, Alt, Ely, Cormier, & Vesperman, 2005). It is helpful to have the survey instrument reviewed by experts who have expertise and experience in a particular area of the instrument. Thus, obtaining their input on survey instruments in terms of specific question wording, response formats, and general layout and ordering is useful in making revisions (Berends, 2006).

To address the content validity, the questionnaire of the present study was checked by two teachers who were experts in the Swahili language. The original adopted instruments were in English. Therefore, the instruments were modified and translated into Swahili to fit the

Tanzanian context. Since the participants of the present study were primary school teachers, the researcher thought that it would be better if the questionnaire were translated into Swahili.

The researcher considered a translation to Swahili to ensure more valid responses. The participants would more easily understand the questions and answer more accurately. Prior to data collection, the researcher consulted two Tanzanian experts in education and the Swahili language (graduate teachers) to help translate the survey questionnaires (see Appendix 2). One of the experts was an assistant lecturer in linguistics (Kiswahili language) at Stella Maris Mtwara University College; the other expert was the college tutor teaching education subjects and the Kiswahili language at Songea Teachers' College. The goal of using these experts was (i) to ensure content validity because their translation considered content, grammar and understanding and (ii) to ensure the reliability of the questionnaire after completion of the translation by considering questions that were deemed confusing on their first reading. Another reason to use two experts to translate the instrument was to obtain their comments and compare them to determine whether variations in their translations could affect the participants' understanding.

The researcher communicated with all experts involved at different times regarding their translations. They reported that the questionnaire was fine and would not be confusing to the reader because the content, grammar and understanding would be clear. However, before the instrument was given to the experts, I translated it myself (researcher). I compared their translations with mine, considered their comments and realized that the two translations were 95% identical. There were extremely few conflicts in the translation; however, I decided to rely on their translation because I was not an expert in Swahili.

Therefore, after translation and suggestions from the experts, the content and structure of the instruments remained the same, and the instrument was piloted in two primary schools to determine whether it was readable, understandable and clear. Based on the experts' translation, their opinions regarding the questions on the questionnaires, and the pilot study, the researcher of the present study determined that the measures were valid as far as the translation was concerned; thus, the instrument was determined to be useful for the process of data collection.

The validity of studies as far as the generalizability of results is concerned is in many ways a difficult issue. Given the size of the sample and representativity of schools and teachers

involved in the present study, however, there is a possibility to generalize the results within the Tanzanian context. This issue will be further discussed in the discussion section of the thesis.

7.6.2 Reliability

Reliability means that ‘scores from an instrument are stable and consistent. Scores should be nearly identical when researchers administer the instrument multiple times at different times. Additionally, scores need to be consistent. When an individual answers certain questions one way, the individual should consistently answer closely related question in the same way’ (Creswell, 2012, p. 159).

Researchers can employ several approaches to determine the reliability of an instrument. Repeated measures (e.g., test-retest and parallel forms) and internal consistency (Kuder-Richardson formulas or coefficient alpha) are two of the most commonly used estimates of reliability (Mertens, 2010).

Generally, reliability is calculated using a statistic that compares performance by the same individuals at different times (e.g., test-retest or different parts of the instrument). When the instrument contains a range of possible answers for each item (e.g., agree-disagree) the coefficient alpha method is typically calculated as a measure of internal reliability (McMillan, 2008).

The reliability coefficient can range from -1 to +1, with 1 indicating perfect reliability. Researchers have suggested a value of .70 as an acceptable lower boundary for alpha (De Vaus, 2002). For the purpose of the present study, the coefficient alpha (Cronbach’s alpha) was utilized (Berends, 2006). For instruments in which there are subscales, a separate measure of internal consistency should be reported for each scale.

For the questionnaire used in the present study, the internal consistency coefficient (Cronbach’s alpha) for each section of the instrument was as follows: Section B Teachers’ Self-efficacy = 0.92; Section C Teachers’ Attitude = 0.76; and Section D Teachers’ Willingness – Physical Disability Subscale = 0.87, Cognitive Disability Subscale = 0.90, and Behavioural Problems Subscale = 0.91. The reliability of each component of the questionnaire of the present study was therefore acceptable when compared to acceptable benchmarks from the literature.

More information regarding the scales' quality – scale reliability (internal consistency measured with Cronbach's alpha) and usefulness – is presented in detail in Section 7.8 (Data analysis).

7.7 Data collection

In the present study, data collection was conducted by the researcher (myself) during his stay in Tanzania. The process of data collection began following approval from the Faculty of Educational Sciences, University of Oslo, through the Department of Special Needs Education. A formal introduction letter (see Appendix 6) was obtained from University of Oslo and was presented to the Ministry of Education and Vocational Training in Tanzania to obtain their co-operation to conduct the study. The letter from the University of Oslo contained the statement of introduction of the research project and requests for co-operation to enable the researcher to accomplish the collection of data collection for the project.

Mertens (2010) noted that good timing is extremely important, particularly with populations that arrange their time around a school calendar. Further, Mertens (2010) recommended avoiding sending questionnaires at the very beginning or end of a school year or near holiday periods. In the present study, data collection occurred over a period of six months, from July 2014 to December 2014. During that time, participants had begun their school year after finishing their school holiday in the month of June. Prior to data collection, the researcher met with the participants in the schools that were visited to inform them about the study. In addition, during the survey, anonymous questionnaires were used to protect the confidentiality of all participants.

7.7.1 Ethical considerations

Ethical approval for the study was obtained from the Privacy Ombudsman for Research, Norwegian Social Science Data Services (Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS) through the University of Oslo, Norway. All instruments were submitted for ethics approval. Information statements regarding this research project, including consent for primary school teachers, were also approved. The cover letter of the instruments (see Appendix 1) contained a general description of the project, proposed teacher involvement, and information regarding privacy and confidentiality.

Because the study was conducted in Tanzania, permission to conduct the survey was also obtained from the Ministry of Education and Vocational Training in Tanzania (see Appendix

6) to obtain access to the schools. Regional Educational Officers (REOs) and District Educational Officers (DEOs) of the surveyed areas granted permission to access their schools on behalf of the Ministry of Education and Vocational Training (see Appendix 6).

7.7.2 Data collection procedures

In the present study, schools were visited after obtaining a permission letter from District Education Officers (DEOs) to conduct the survey in their area; the schools were visited randomly. The survey questionnaires were handed to the participants in a staff room meeting chaired by the head teacher. In the staff room meeting, the researcher (myself) spoke to the participants (teachers), briefing them about the purpose of the study. In turn, the participants had the opportunity to ask some questions that required clarification before they began to fill out the questionnaires. Thereafter, teachers completed the survey questionnaires and returned them to the researcher either on the same day or to the head teacher after completion. Questionnaires were collected by the researcher within one week of distribution.

7.8 Data analysis

Initial analyses were conducted through IBM SPSS Statistics software (version 24) to ensure that no violation of the assumptions of normality occurred and whether necessary assumptions were maintained for further analysis.

7.8.1 Descriptive statistics

In the present study, descriptive statistics such as the means, standard deviations, frequencies and percentages were computed for the participants' demographic information such as gender, age, teaching experience, grade level taught, class size, number of pupils with disabilities per classroom, and location of schools.

7.8.2 Principal component analysis (PCA)

Principal component analysis (PCA) was used in the present study to locate the underlying dimensions of a data set. The purpose of using PCA was to deconstruct the original data into a set of linear variates for all three dependent variables (teachers' self-efficacy, teachers' attitudes, and teachers' willingness). Thus, the analyses by PCA helped to establish which linear components existed within the data of the teachers' self-efficacy scale, the teachers' attitudes scale, and the teachers' willingness subscales and how a particular variable in each scale contributed to a particular component (see Subsections 7.8.2.1 to 7.8.2.3 hereafter).

7.8.2.1 Teacher self-efficacy scale

The data in the present study underwent factorial analysis using the principal components method with varimax rotation. The values obtained from Kaiser-Meyer-Olkin's measure of sampling adequacy tests ($KMO = .957$) and Bartlett's test of sphericity (8059.4, sig. =.000) confirmed that the data were suitable for a factor analytic approach. One component was obtained with eigenvalues higher than the unity (6.62), which accounted for 55.16% of the variance of the scores obtained. A reliability analysis of this scale was conducted to determine the internal consistency (Cronbach's alpha). The reliability of the scale obtained as measured by Cronbach's alpha was .92 (see Table 7.2 for the factor loadings).

Table 7.2. Loadings for teacher self-efficacy items on the extracted and rotated component matrix

Items	Factor <i>I</i>
6. How much can you do to get children to follow classroom rules?	.81
5. To what extent can you craft good questions for your students?	.77
9. To what extent can you use a variety of assessment strategies?	.77
2. How much can you do to motivate students with little interest in schoolwork?	.76
4. How much can you do to help your students value learning?	.76
10. To what extent can you provide an alternative explanation when students are confused?	.75
8. How well can you establish a classroom management system with each group of students?	.75
3. How much can you do to cause students to believe they can do well in their schoolwork?	.73
7. How much can you do to calm a student who is disruptive or noisy?	.73
12. How well can you implement alternative strategies in your classroom?	.70
11. To what extent can you assist families in helping their children do well in school?	.69
1. How much can you do to control disruptive behaviour in the classroom?	.67

As seen in Table 7.2, the factor loadings do not vary excessively; the loadings for teacher self-efficacy items range from .67 to .81. Further, the above table indicates that there are good and

strong relations among the items. The presence of good relations among items most likely suggests that they measure the same concepts.

Normality and kurtosis challenge in teacher self-efficacy scale

When principal component analysis (PCA) was employed to locate underlying dimensions of the teachers' self-efficacy data set, the researcher discovered that despite having good reliability and internal validity and thus meeting the acceptable significance level of Cronbach's alpha (Mertens, 2010), this measure (TSES) faced the problem of normality of the variables (skewed data) and kurtosis. See the descriptive statistics (Table 7.3) and the histogram (Figure 7.1).

Table 7.3 and Figure 7.1 indicate that the variables are negatively skewed and peaked. However, Tabachnick and Fidell (2014) demonstrated that alpha levels (.01 or .001) are used to evaluate the significance of skewness and kurtosis with small to moderate samples. If the sample is large, however, they suggested examining the shape of the distribution instead of using a formal inference test. Moreover, Tabachnick and Fidell (2014) claimed that the standard errors for both skewness and kurtosis decrease with a large sample.

As seen in Table 7.3 below, the present study had 1264 participants. Thus, the negative skewness and peaked kurtosis of TSES may not have made a substantive difference in the analyses because in a large sample (as in the present study), a variable with statistically significant skewness often does not deviate sufficiently from normality to make a substantive difference in the analysis (Tabachnick & Fidell, 2014).

Table 7.3. Descriptive Statistics for TSES's Normality and Kurtosis (*N*= 1264)

N	Valid	1264
	Missing	0
Mean		8.13
Std. Deviation		1.03
Variance		1.06
Skewness		-2.20
Std. Error of Skewness		.069
Kurtosis		7.66
Std. Error of Kurtosis		.138
Minimum		1.00
Maximum		9.00

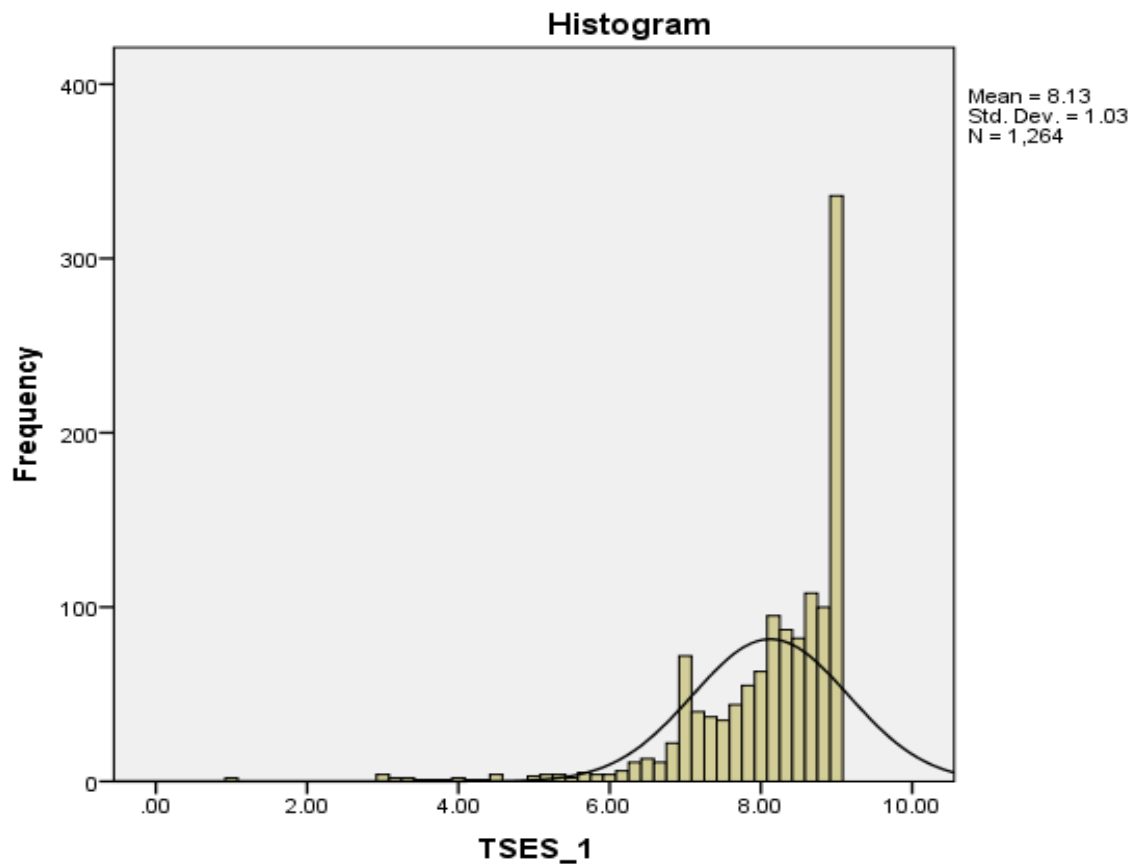


Figure 7.1. Histograms for TSES’s Normality and Kurtosis ($N= 1264$)

Tabachnick and Fidell (2014) demonstrated that in a large sample, the effect of departure from zero kurtosis diminishes. Further, they claimed that underestimates of variance associated with positive kurtosis disappear with samples of 100 or more cases whereas with a negative kurtosis, underestimation of variance disappears with samples of 200 or more (Tabachnick & Fidell, 2014).

Based on the scientific assumptions of Tabachnick and Fidell (2014), the present study had 1264 teachers as participants and exceeded the acceptable underestimation of variance associated with either positive kurtosis or negative skewness. Therefore, the sample of the present study is expected to overcome the challenge of normality and kurtosis and most likely will not make a substantive difference in the analysis

7.8.2.2 Teacher attitude scale

The data in the present study underwent factorial analysis using the principal components method with varimax rotation. Moreover, it was conducted reliability analysis to determine the internal consistency (Cronbach's alpha). The values obtained from Kaiser-Meyer-Olkin's measure of sampling adequacy tests ($KMO = .846$) and Bartlett's test of sphericity (4351.7, sig. =.000) were acceptable. The six yielded components had eigenvalues of 4.06, 2.35, 1.54, 1.10, 1.03, and 1.01, respectively, and accounted for 44.4% of the variance.

The content analysis of the component solutions indicated that not all factors were meaningful according to the conceptual framework (Larrivee & Cook, 1979). Moreover, some items yielded factorial weight in more than one dimension (double-loading) or the loading of the items was below .30. Using the scree plot to determine the most appropriate component for the study (Field, 2013; Stevens, 2002), sixteen of 25 items were therefore excluded from further analysis; thus, 9 items remained to compose Component 1 (see Table 7.4 below for details).

The final data (based on 9 items) underwent further factorial analysis using the principal components method with varimax rotation. The values obtained from Kaiser-Meyer-Olkin's measure of sampling adequacy tests ($KMO = .864$) and Bartlett's test of sphericity (1866.4, sig. =.000) confirmed the adequacy of the procedure. One component was obtained with eigenvalues higher than the unity (3.15), which accounted for 34.98% of the variance of the scores obtained. Although the percentage of the variance of the scores (34.98%) obtained was lower than recommended, that was the best option for the researcher to use in the present study. In addition, the option to use this one component was supported by the underlying dimensions of a data set of teachers' attitudes because the reliability index of this dimension (9 items, # 13, 5, 7, 17, 10, 14, 3, 24, and 25) as measured by Cronbach's alpha was .763 (see Table 7.4 for the factor loadings) and was acceptable (Mertens, 2010). Therefore, the reliability of the teachers' attitude scale in the present study was $\alpha = .76$, and it was utilized for further analysis of the data set.

Table 7.4. Loadings for teacher attitudes items on the extracted and rotated component matrix

Items		Factor
		<i>I</i>
13.	A disabled pupil will most likely develop academic skills more rapidly in a regular classroom than in a special classroom.	.73
5.	A pupil with a disability can be best served in a regular classroom.	.64
7.	The challenge of being in a regular classroom will promote the academic growth of the pupil with a disability.	.63
17.	The inclusion of disabled pupils can be beneficial to pupils without disabilities.	.61
10.	Regular classroom teachers have the necessary ability to work with pupils with disabilities.	.57
14.	Inclusion of a pupil with a disability will not promote his or her social independence.	.57
3.	Inclusion offers mixed group interaction that will foster understanding and acceptance of differences among pupils.	.56
24.	Isolation in a special classroom has a beneficial effect on the social and emotional development of the pupil with a disability.	.50
25.	The pupil with a disability will not be socially isolated in the regular classroom.	.49

Table 7.4 indicates that the factor loadings did not vary excessively; loadings for teacher attitudes items ranged from .49 to .73. In addition, the above table indicates that there was a good relation among the items. The presence of good relations among the items most likely implies that they measure the same concepts.

7.8.2.3 Teacher willingness sub-scales

The data in the present study underwent factorial analysis to identify the dimensionality of each subscale. The factorial analyses of the subscale for teacher willingness to work with pupils with physical disabilities, cognitive disabilities, and behavioural problems are respectively presented in the following subsection.

(a) Physical disability subscale

The data in the present study underwent factorial analysis using the principal components method with varimax rotation. The values obtained from Kaiser-Meyer-Olkin's measure of sampling adequacy tests (KMO = .901) and Bartlett's test of sphericity (4155.9, sig. =.000) confirmed that the data were appropriate for the factor analytic approach. One component was obtained with eigenvalues higher than the unity (4.26), which accounted for 53.25% of the variance of the scores obtained. In addition, a reliability analysis of this scale was conducted to determine the internal consistency (Cronbach's alpha), and the scale reliability obtained as measured by Cronbach's alpha was .87. See Table 7.5 for the factor loadings.

Table 7.5. Loadings for teacher willingness – physical disability items on the extracted and rotated component matrix

Items	Factor
	<i>I</i>
7. I would collaborate with John's parents to obtain useful information from them to help me in the classroom, and I would inform them of John's progress.	.81
8. I would assist other pupils in the classroom to better understand John and how to interact with him.	.80
5. I would constantly assess myself and my teaching practices and learn new instructional techniques that were needed to help John learn in my classroom.	.76
4. I would expand my knowledge of behaviour management to address any unusual behaviour that John might display.	.75
3. I would use the skills I learned in the workshop to assist John and other pupils similar to John who would be included in my classroom.	.73
1. I would support the idea of including John in my classroom.	.71
6. I would make accommodations and adaptations to the way I instruct all children so that John would be able to participate as well.	.68
2. I would participate in an in-service training programme to learn strategies that would help me teach John.	.55

Table 7.5 above indicates that the factor loadings did not vary excessively; loadings for teacher willingness – physical disability items ranged from .55 to 81. Moreover, as seen in the table above, there were good and strong relations among the items. The presence of good relations among items most likely suggests that they measured the same concepts.

(b) Cognitive disability subscale

The data in the present study underwent reliability analysis to determine the internal consistency (Cronbach's alpha) by factorial analysis using the principal components method with varimax rotation. The values obtained from Kaiser-Meyer-Olkin's measure of sampling adequacy tests (KMO = .923) and Bartlett's test of sphericity (5582.3, sig. =.000) were acceptable. One component was obtained with eigenvalues of 4.82 and accounted for 60.27% of the variance of the scores obtained. A reliability analysis of this subscale was conducted to determine the internal consistency (Cronbach's alpha), which was determined to be acceptable, $\alpha = .90$. See Table 7.6 for the factor loadings.

Table 7.6. Loadings for teacher willingness – cognitive disability items on the extracted and rotated component matrix

Items	Factor
	<i>I</i>
7. I would collaborate with Julia's parents to obtain useful information from them to help me in the classroom, and I would inform them of Julia's progress.	.86
5. I would constantly assess myself and my teaching practices and learn new instructional techniques that were necessary to help Julia learn in my classroom.	.84
8. I would assist other pupils in the classroom to better understand Julia and how to interact with her.	.83
3. I would use the skills I learned in the workshop to assist Julia and other pupils similar to Julia who would be included in my classroom.	.80
4. I would expand my knowledge of behaviour management to address any unusual behaviour that Julia might display.	.80
6. I would make accommodations and adaptations to the way I instruct all children so that Julia would be able to participate as well.	.71
2. I would participate in an in-service training programme to learn strategies that would help me teach Julia.	.68
1. I would support the idea of including Julia in my classroom.	.66

As seen in Table 7.6, the factor loadings did not vary excessively; loadings for teacher willingness – cognitive disability items ranged from .66 to .86. Further, Table 7.6 indicates that there are strong relations among the items. The presence of good relations among items most likely signifies that they measured the same concepts.

(c) Behavioural problem subscale

The data in the present study underwent factorial analysis using the principal components method with varimax rotation. The values obtained from Kaiser-Meyer-Olkin's measure of sampling adequacy tests ($KMO = .921$) and Bartlett's test of sphericity (6416.7, sig. =.000) confirmed that the data were appropriate for the factor analytic approach. One component was obtained with eigenvalues higher than the unity (5.09), which accounted for 63.66% of the variance of the scores obtained. A reliability test of this scale was conducted to determine the internal consistency (Cronbach's alpha), and the scale reliability obtained was $\alpha = .91$. See Table 7.7 for the factor loadings.

Table 7.7. Loadings for teacher willingness – behavioural problems items on the extracted and rotated component matrix.

Items	Factor
	<i>I</i>
8. I would assist other pupils in the classroom to better understand Max and how to interact with him.	.86
7. I would collaborate with Max's parents to obtain useful information from them to help me in the classroom, and I would inform them of Max's progress.	.86
5. I would constantly assess myself and my teaching practices and learn new instructional techniques that were necessary to help Max learn in my classroom.	.85
4. I would expand my knowledge of behaviour management to address any unusual behaviour that Max might display.	.84
3. I would use the skills I learned in the workshop to assist Max and other pupils similar to Max who would be included in my classroom.	.82
6. I would make accommodations and adaptations to the way I instruct all children so that Max would be able to participate as well.	.73
1. I would support the idea of including Max in my classroom.	.72
2. I would participate in an in-service training programme to learn strategies that would help me teach Max.	.69

As seen in Table 7.7, the factor loadings did not vary excessively; loadings for teacher willingness – behavioural problems items ranged from .69 to .86. In addition, Table 7.7 indicates that there are good and strong relations among the items. The presence of such good relations among items suggests that they measured the same concepts.

7.8.3 Summary of the reliability coefficients of the scales

Table 7.8 below presents the summary of the reliability coefficients of the scales, the number of the items in each scale, and the descriptive statistics information regarding teachers' self-efficacy, attitudes and willingness.

Table 7.8. Descriptive statistics and Cronbach's alpha of the scale of teachers' self-efficacy, attitudes and willingness ($N = 1264$)

Scale		No. of items	Range	Variance (%)	Mean (SD)	Skewness	Kurtosis	Cronbach's α
1. Teacher self-efficacy		12	8.00	55.15	8.13(1.03)	-2.20	7.66	.92
2. Teacher attitude		9	6.00	34.15	0.50(1.26)	-0.33	-0.49	.76
3. Teacher willingness subscales	Physical disability	8	4.00	53.25	3.91(0.78)	-1.06	0.93	.87
	Cognitive disability	8	4.00	60.27	3.69(0.93)	-0.93	0.26	.90
	Behavioural problems	8	4.00	63.66	3.83(0.88)	-1.29	1.42	.91

Table 7.8 indicates that the internal consistency (Cronbach's alpha) for all three scales (teacher self-efficacy, teacher attitude, and teacher willingness) was relatively high; thus, they were acceptable (Mertens, 2010) for utilization in further analyses of the data set.

7.8.4 Correlation analysis

In the present study, correlations (bivariate correlation) were employed to examine the relations that were identified among the dependent variables that were being studied (teachers' self-efficacy, teachers' attitude and teachers' willingness). The purpose of using this method (bivariate correlation) was to provide the reader with an understanding of how the measured outcome variables were related to one another: *positively* related, *not related* at all, or *negatively* related.

7.8.5 Analysis of Variance (One-way ANOVA)

The present study employed the use of one-way ANOVA to analyse the variables that had a mean score of more than two groups. This method was employed in the first research question of the present study to examine how teachers' demographic information, e.g., *teachers' age*, *teaching experience*, *grade level taught*, *class size*, and *number of pupils with disabilities per classroom* affected their self-efficacy, attitudes and willingness.

7.8.6 Independent samples *t*-test

In the present study, the independent-samples *t*-test was employed to analyse the data set. First, the *t*-tests were employed in the first research question to compare the perceived self-efficacy, attitudes and willingness of female and male teachers. Second, the *t*-tests were employed in the analysis of the data set for the second research question to compare the perceived self-efficacy, attitudes and willingness of teachers who had (i) received training in special needs education, (ii) undergone any school-based training regarding special needs education, (iii) attended a seminar or workshop regarding special needs education, and (iv) attended training in special needs education in teacher education colleges.

Moreover, this study used the independent-samples *t*-test to analyse the data set for the third research question. The goal was to compare the perceived self-efficacy, attitudes and willingness of teachers in relation to the different types of disabilities (eight types of disabilities) experienced by pupils in the classrooms.

The *t*-tests analyses were used for the second and third research question data sets because the data were dichotomous. In addition, during the *t*-test analyses, bootstrapping was employed because of the skewedness and kurtosis that were discovered in the data sets.

7.8.7 Structural Equation Modelling

Structural equation modelling was employed to analyse the data set for the fourth research question. The purpose of using this analysis technique were 1) to analyse the structural relation between measured variables and latent constructs by confirmatory factor analyses, and 2) to examine the relations between the latent constructs. The use of this proposed model, structural equation modelling, allowed the present study to consider measurement error that can be observed in the model. The analyses were conducted using *Mplus 7*. In the next chapter, the results of the study will be presented.

8.0 RESULTS

8.1 Introduction

This chapter presents the research findings. The overall purpose of the present study was to explore self-efficacy beliefs, attitudes and the willingness of primary school teachers to include pupils with disabilities in their regular education classrooms. Moreover, the study intended to identify factors that influenced teachers’ perceived self-efficacy, attitudes and willingness to examine their teaching activities to work with pupils with disabilities. In subsequent sections, the chapter addresses the answers to the four research questions. The chapter begins by addressing the results of the initial analyses that examined the relations among the dependent variables (teachers’ self-efficacy, attitudes and willingness). The latter portion of the chapter presents the answers to the four research questions.

8.2 Relation among the dependent variables

The relations among the dependent variables were examined using correlations analysis (bivariate correlations); the results obtained are presented in Table 8.1.

Table 8.1: Zero-order correlations among the outcome variables (N = 1264).

Variables	Correlation (<i>r</i>)				
	1	2	3	4	5
1. Teacher self-efficacy	1				
2. Teacher attitudes	.08**	1			
3. Teacher willingness-physical disabilities	.13**	.39**	1		
4. Teacher willingness-cognitive	.12**	.35**	.67**	1	
5. Teacher willingness-behavioural problems	.11**	.28**	.54**	.58**	1

** $p < .01$.

Table 8.1 indicates that teachers’ self-efficacy was observed to be positively and significantly related to teachers’ attitudes and teachers’ willingness to work with children with disabilities. This result suggests a positive relation between teachers’ self-efficacy and teachers’ attitudes and willingness to examine their teaching activities to include working with children with disabilities. For example, teacher with higher perceived self-efficacy tend to have more positive - attitudes and be more willing-to attempt inclusion.

The results of Table 8.1 also indicate that teachers' attitudes were observed to be positively and significantly related to teachers' willingness subscales. This suggests that there are positive relations among the attitudes that the teacher demonstrated in the classroom when working with children with disabilities and the teacher's willingness (readiness) to work with disabled children in his/her classroom. For example, the more positive attitudes demonstrated by teachers can most likely lead to more willingness on the part of teachers to work with children with severe learning disabilities.

8.3 Results for research questions

8.3.1 Research question 1

The goal of the first research question was to examine whether any of the variables, such as teacher's gender, age, teaching experience, grade level taught, class size, and number of pupils with disabilities per classroom, were related to perceived self-efficacy, attitudes, and willingness. The studied research question was stated as follows:

How do teachers' gender, age, teaching experience, grade level taught, class size and number of pupils with disabilities per classroom relate to (a) teachers' self-efficacy, (b) teachers' attitudes and (c) teachers' willingness to include pupils with disabilities in the regular education classroom?

This question was answered by performing *t*-test analysis for teachers' gender and a one-way ANOVA test for variables such as teachers' age, teaching experience, grade level taught, class size, and number of pupils with disabilities per classroom (*see the descriptive statistics for these independent variables in Chapter 7.4, Table 7.1*).

(a) Teachers' gender

In analysing data for the teachers' gender variable, bootstrapping was used because of skewed data. The results indicated that on average, male teachers had more perceived self-efficacy ($M = 8.16, SE = 0.05$) than female teachers ($M = 8.11, SE = 0.04$). However, the *t*-test indicated that the difference, 0.05, BCa 95% CI [-0.064, 0.165], was not significant $t(1262) = .83, p = .374$ and represented the smallest effect, $d = 0.05$. Thus, gender appears to be of no importance in predicting teachers' self-efficacy.

Moreover, the results indicated that on average, male teachers had more favourable attitudes towards the inclusion of pupils with disabilities in the regular education classroom ($M = 0.57$, $SE = 0.06$) than female teachers ($M = 0.46$, $SE = 0.04$). However, the t-test indicated that the difference, 0.11, BCa 95% CI [-0.045, 0.263], was not significant $t(1262) = 1.49$, $p = .133$. This was also demonstrated by an extremely small effect, $d = 0.09$.

Furthermore, the results indicated that on average, male teachers were observed to be more willing to work with pupils with severe physical disabilities in the regular education classroom ($M = 3.93$, $SE = 0.04$) than were female teachers ($M = 3.91$, $SE = 0.03$). However, the t-test indicated that the difference, 0.02, BCa 95% CI [-0.076, 0.114], was not significant $t(1264) = .46$, $p = .641$ and appears to have had no effect, $d = 0.03$.

Conversely, the results indicated that on average, female teachers were slightly more willing to work with pupils with severe cognitive disabilities in the regular education classroom ($M = 3.69$, $SE = 0.03$) than were male teachers ($M = 3.67$, $SE = 0.05$). This difference, -0.02, BCa 95% CI [-0.141, 0.087], was not significant $t(1262) = -.44$, $p = .657$ and appears to have had no effect, $d = 0.03$.

Similarly, the results indicated that on average, female teachers were slightly more willing to work with pupils with severe behavioural problems in the regular education classroom ($M = 3.84$, $SE = 0.03$) than were male teachers ($M = 3.3.82$, $SE = 0.05$). However, the t-test indicated that the difference, -0.02, BCa 95% CI [-0.130, 0.090], was not significant $t(1262) = .39$, $p = .706$ and had no effect, $d = 0.02$.

In conclusion, the results implied that gender appeared to be of no importance in determining teachers' self-efficacy, attitudes and willingness. In other words, the results suggested that being male or female did not make a difference in teachers' perceived self-efficacy, teachers' attitudes or teachers' willingness to teach pupils with disabilities in the regular education classroom.

(b) Teachers' age

Perceived teacher self-efficacy, attitudes and willingness to teach pupils with disabilities in the regular education classroom were related to teacher's age. The data of the present study delineated three teachers' age groups (30 or under, 31 - 40, above 40). The one-way ANOVA

was conducted to determine the effects of teachers' age on their perceived self-efficacy, attitudes and willingness.

The results of the ANOVA test indicated that there were no significant effects of teachers' age either on teachers' perceived self-efficacy, $F(2, 1261) = 1.23, p = .291$ or on teachers' attitudes, $F(2, 1261) = 2.07, p = .127$. The results further indicated that there was no significant effect of teachers' age on their willingness to work with pupils with severe physical learning disabilities, $F(2, 1261) = .76, p = .465$; to work with pupils with severe cognitive disabilities, $F(2, 1261) = 2.67, p = .069$, or to work with pupils with severe behavioural problems, $F(2, 1261) = 1.20, p = .301$.

In general, the results obtained for this variable suggested that the perceived self-efficacy, attitudes and willingness of teachers to work with pupils with disabilities in the regular education classroom may not be affected by a teacher's age.

(c) Teaching experience

This variable was studied to examine the effects of previous experience with working with pupils with disabilities in the regular education classroom. The data of the present study was divided into five groups of years of teaching experience (less than 1 year, 1-4 years, 5-9 years, 10-14 years, and above 15 years). The one-way ANOVA was employed to analyse the data, and the findings indicated that there was no significant effect of teaching experience on teachers' perceived self-efficacy, $F(4, 1259) = .88, p = .503$ or on teachers' attitudes, $F(4, 1259) = 1.70, p = .147$.

In addition, for these analyses, the ANOVA results indicated that there was no significant effect of teaching experience on the teachers' willingness – physical disabilities subscale $F(4, 1259) = .93, p = .444$, teachers' willingness – cognitive disabilities subscale $F(4, 1259) = 1.66, p = .158$, or on teachers' willingness – behavioural problems subscale $F(4, 1259) = .63, p = .638$.

Generally, this result suggested that teachers' years of teaching experience may not determine or affect the perceived self-efficacy, attitudes and willingness of teachers to work with pupils with disabilities in the regular education classroom.

(d) Teachers' grade level taught

The one-way ANOVA was performed to explore the effect of the grade level of pupils taught by the teacher. The data set of the present study had seven groups of grade level taught (Grade 1, 2, 3, 4, 5, 6, or 7). The results revealed that there was no significant effect of grade level taught on teachers' perceived self-efficacy $F(6, 1257) = 1.44, p = .227$ or on teachers' attitudes $F(6, 1257) = 1.00, p = .421$.

Regarding teachers' willingness to work with pupils with severe learning disabilities in the regular education classroom, the ANOVA results indicated that there was no significant effect of grade level taught on willingness to work with children with physical disabilities $F(6, 1257) = 1.27, p = .268$, willingness to work with children with cognitive disabilities $F(6, 1257) = .74, p = .617$, or willingness to work with children with behavioural problems $F(6, 1257) = .88, p = .511$.

This result indicated that the teachers' perceived self-efficacy, attitudes and willingness to teach pupils with disabilities in the regular education classroom may not be affected by the grade level taught.

(e) Class size

The study also used the ANOVA to examine the effect of class size on teachers' perceived self-efficacy, attitudes and willingness. There were three class sizes (classes with up to 45 pupils, 46-85 pupils, and above 85). The findings indicated that there was no significant effect of class size on teachers' perceived self-efficacy $F(2, 1261) = .56, p = .570$ or on teachers' attitudes $F(2, 1261) = .939, p = .391$.

In addition, the findings indicated that there was no significant effect of class size on teachers' willingness to work with pupils with physical disabilities $F(2, 1261) = 1.18, p = .148$, teachers' willingness to work with pupils with cognitive disabilities $F(2, 1261) = 2.02, p = .097$, or on teachers' willingness to work with pupils with behavioural problems $F(2, 1261) = 1.43, p = .239$.

Generally, this result indicates that the perceived self-efficacy of teachers, teachers' attitudes, and their willingness to work with pupils with disabilities in the regular education classroom may not be affected by class size, e.g., overcrowded classrooms.

(f) Total number of pupils with disabilities per classroom

The study also examined the effect of the total number of pupils with disabilities per classroom to determine whether the number of pupils with disabilities per classroom may affect the teachers' perceived self-efficacy, attitudes and willingness. There were three groups of the total number of pupils with disabilities per classroom (a class with no pupils with disabilities (0), 1 – 3 pupils, 4 and above). Thus, the ANOVA was conducted to explore the relations. The findings first indicated that there was a significant effect of the total number of pupils with disabilities per classroom on teachers' perceived self-efficacy $F(2, 1261) = 11.36$, $p < .001$. The *post hoc* follow-up tests were conducted using Tukey (Field, 2013) to determine which group of the total number of pupils with disabilities per classroom (0, 1 – 3, and 4 or more) contributed to the significant effect on teachers' perceived self-efficacy.

The *post hoc* results indicated that when teachers had 1 or more pupils with a disability in their classrooms, their score on the self-efficacy scale was higher than the score for teachers with no pupils with disabilities in their classrooms. Moreover, the *post hoc* test results indicated that there were significant differences in teachers' perceived self-efficacy between (i) the group of teachers who had no pupils with disabilities (0) in their classrooms and the group of teachers who had 1 to 3 pupils with disabilities in their classrooms, $p = .024$; (ii) the group of teachers who had no pupils with disabilities in their classroom and the group of teachers who had 4 or more pupils with disabilities in their classrooms, $p = <.001$; and (iii) the group of teachers who had 1 to 3 pupils with disabilities in their classrooms and the group of teachers who had 4 or more pupils with disabilities in their classrooms, $p = .025$.

The ANOVA test results indicated that the total number of pupils with disabilities per classroom significantly affected teachers' attitudes $F(2, 1261) = 14.04$, $p < .001$. Further, the *post hoc* tests as follow-up test analysis were conducted using Tukey to determine which group among the three (0, 1 – 3, and 4 or more) of the total number of pupils with disabilities per classroom contributed to the significant effect on teachers' attitudes.

The *post hoc* results indicated that when teachers had 1 or more pupils with disabilities in their classrooms, their score on the attitudes scale was higher than the scores of teachers with no pupils with disabilities in their classrooms. Moreover, the *post hoc* test results indicated that there were significant differences in the effect on teachers' attitudes between: (i) the group of teachers who had no pupils with disabilities in their classrooms and the group of teachers who had 1 – 3 pupils with disabilities in their classrooms, $p = <.001$ and (ii) the

group of teachers who had no pupils with disabilities in their classrooms and the group of teachers who had 4 or more pupils with disabilities in their classroom, $p = < .00$. However, the *post hoc* test results indicated that there were no significant differences between the group of teachers who had 1 – 3 pupils with disabilities in their classrooms and the group of teachers who had 4 or more pupils with disabilities, $p = .969$.

Finally, the ANOVA test results indicated that there was no significant effect of the total number of pupils with disabilities per classroom on teachers' willingness to work with pupils with physical disabilities, $F(2, 1261) = 2.61, p = .074$; teachers' willingness to work with pupils with cognitive disabilities, $F(2, 1261) = 2.45, p = .087$; or teachers' willingness to work with pupils with behavioural problems, $F(2, 1261) = .29, p = .745$.

In conclusion, the ANOVA results suggested that teachers' perceived self-efficacy and attitudes towards teaching pupils with disabilities in the regular education classroom may be affected by the total number of pupils with disabilities per classroom. For example, the results indicated that the higher the number of pupils with disabilities per classroom, the higher the teachers' perceived self-efficacy and the more positive the attitudes towards inclusion. More ANOVA tests results for this variable are presented in Appendix 4, and the multiple comparisons between groups for this variable are presented in Appendix 5.

8.4.2 Research Question 2

The purpose of the second research question was to investigate the relation between teachers' professional development training in special needs education and teachers' perceived self-efficacy, attitudes and willingness to include pupils with disabilities in the regular education classroom. The studied research question was stated as follows:

What is the relation between teachers' professional development in special needs education and (a) teachers' self-efficacy, (b) teachers' attitudes, and (c) teachers' willingness to include pupils with disabilities in the regular education classroom?

This research question was answered by performing *t*-test analyses for professional development training in the special needs education variable. This primary variable, '*professional development in special needs education*', was divided into four variables, and each of the four variables was dichotomous. To develop a response to this research question, participants were asked if they (i) had received any training in special needs education, (ii) had undergone any school-based training in special needs education, (iii) had attended any

seminar or workshop in special needs education, or (iv) had attended training in special needs education at a college/university (see Chapter 7.5 for more details regarding these four variables for professional development in special needs education). The descriptive statistics for this independent variable are provided in Table 8.2.

Table 8.2: The descriptive statistics for teachers’ professional development training in special needs education ($N = 1264$)

Variable	Frequency	Percentage	
Received any training in special needs education?	NO	885	70
	YES	379	30
Received school-based training in special needs education?	NO	1082	85.6
	YES	182	14.4
Attended seminar or workshop in special needs education?	NO	1169	92.5
	YES	95	7.5
Attended courses in special needs education at college/university?	NO	1161	91.9
	YES	103	8.1

Table 8.2 indicates that the majority of teachers (70%) had not received any training in special needs education; only 30% had received some training, either by participation in school-based in-service training, attending seminars and workshops or attending special needs education courses at a teacher education college/or university.

The following are the results of the *t*-test analyses that were conducted to explore the relations between the independent variables and the dependent variables (teachers’ perceived self-efficacy, attitudes, and willingness). Bootstrapping was used during the *t*-test analyses because of the skewed and kurtosis data.

8.4.2.1 Received any training in special needs education?

This variable was investigated to determine its effect on teachers’ perceived self-efficacy, attitudes and willingness to include pupils with disabilities in regular education classrooms.

First, the findings of the present study indicated that any training that teachers received in special needs education increased teachers’ perceived self-efficacy. For example, the *t*-test results indicated that on average, the mean score of teachers who had received any training in special needs education was higher on the teachers’ *perceived self-efficacy* scale ($M = 8.34$, $SE = .04$) than the score for teachers who had not received any training in special needs

education ($M = 8.04$, $SE = .04$). This difference, 0.30, BCa 95% CI [0.200, 0.412], was significant $t(1262) = 5.66$, $p = .001$ and represented a small effect, $d = 0.31$.

Second, the findings of the present study indicated that on average, the mean score of teachers who had received any training in special needs education was also higher on the *teachers' attitudes* scale ($M = 0.74$, $SE = .06$) than the score for teachers who did not receive any training in special needs education ($M = 0.39$, $SE = .04$). This difference, 0.39, BCa 95% CI [0.195, 0.496], was significant $t(1262) = 4.47$, $p = .001$ and represented a small effect, $d = 0.28$.

Third, regarding teachers' willingness to attempt inclusion, the t -test results indicated that on average, the mean score of teachers who had received any training in special needs education was higher on the *teachers' willingness – physical disability* subscale ($M = 4.07$, $SE = .04$) than the mean score teachers who had not received any training in special needs education ($M = 3.85$, $SE = .03$). This difference, 0.22, BCa 95% CI [0.127, 0.307], was significant $t(1262) = 4.38$, $p = .001$ and represented a small effect, $d = 0.29$.

Furthermore, the t -test results for teachers' willingness to attempt inclusion indicated that on average, the mean score of teachers who had received any training in special needs education was higher on the *teachers' willingness – cognitive disability* subscale ($M = 3.91$, $SE = .04$) than the mean score for teachers who had not received any training in special needs education ($M = 3.60$, $SE = .03$). This difference, 0.31, BCa 95% CI [0.205, 0.417], was significant $t(1262) = 5.73$, $p = .001$ and represented a small effect, $d = 0.35$.

Finally, with regard to teachers' willingness to attempt inclusion, the t -test results indicated that on average, the mean score of teachers who had received any training in special needs education was higher on the *teachers' willingness – behavioural problems* subscale ($M = 3.99$, $SE = .04$) than the score of teachers who had not received any training in special needs education ($M = 3.76$, $SE = .03$). This difference, 0.23, BCa 95% CI [0.119, 0.320], was significant, $t(1262) = 4.20$, $p = .001$ and represented a small effect $d = 0.26$.

In summary, the findings indicate that receiving any training in special needs education leads to a positive effect on teachers' perceived self-efficacy, attitudes and willingness to work with children with disabilities in the regular education classroom. In addition, the findings suggested that the more teachers have an opportunity to participate in any training in special needs education, the higher the teachers' perceived self-efficacy, the more positive the

teachers' attitudes, and the more willing the teachers are to work with pupils with disabilities in the regular education classroom.

8.4.2.2 Received school-based training in special needs education?

This variable determined the specific effects of school-based training in special needs education on teachers' perceived self-efficacy, attitudes, and willingness to include pupils with disabilities in the regular education classroom.

First, the *t*-test was performed to explore the effect on teachers' self-efficacy of receiving school-based training in special needs education. The *t*-test results indicated that on average, teachers who had received school-based training in special needs education demonstrated more *perceived self-efficacy* for teaching ($M = 8.36, SE = .05$) than teachers who had not received such training ($M = 8.08, SE = .03$). This difference, -0.28 , BCa 95% CI $[-0.397, -0.149]$, was significant $t(1262) = -4.39, p = .001$ and represented a small effect, $d = 0.31$. Comparing the results for teachers with school-based training with the rest of the teachers including those with other kinds of training have probably given the comparison group somewhat higher mean for their self-efficacy. However, this is not a high concern given the results we got. In addition, a higher *N* in the analyses also gives more power. The same way of grouping the teachers was also used for the next analyses.

Second, the *t*-test was performed to examine the effects on *teachers' attitudes* of receiving school-based training in special needs education. The findings of the *t*-test indicated that on average, teachers who had received school-based training in special needs education had more favourable *attitudes* towards inclusion ($M = 0.74, SE = .09$) than teachers who had not received such training ($M = 0.45, SE = .04$). This difference, -0.29 , BCa 95% CI $[-0.479, -0.089]$, was significant $t(1262) = -2.86, p = .005$ and represented a small effect, $d = 0.23$.

Third, the *t*-test was conducted to examine the effect of receiving school-based training in special needs education on teachers' willingness to work with pupils with *physical disabilities* in the regular education classroom. The *t*-test results indicated that on average, the mean score of teachers who had received school-based training related to special needs education was higher on *physical disability* subscale ($M = 4.09, SE = .02$) than the mean score of teachers who had not received school-based training related to special needs education ($M = 3.88, SE = .02$). This difference, -0.21 , BCa 95% CI $[-0.319, -0.080]$, was significant $t(1262) = -3.29, p = .004$ and represented a small effect, $d = 0.27$.

Regarding teachers' willingness to work with pupils with *cognitive disabilities*, the *t*-test results indicated that on average, the mean score of teachers who had received school based-training in special needs education was higher on *cognitive disability* subscale ($M = 3.91$, $SE = .06$) than the mean score of teachers who had not received school-based training in special needs education ($M = 3.65$, $SE = .03$). This difference, -0.26 , BCa 95% CI $[-0.396, -0.116]$, was significant $t(265) = -3.79$, $p = .001$ and represented a small effect, $d = 0.29$.

The *t*-test results also indicated that on average, teachers who had received school-based training related to special needs education demonstrated more willingness to work with pupils with *severe behavioural problems* ($M = 3.97$, $SE = .06$) than teachers who had not received school-based training in special needs education ($M = 3.80$, $SE = .03$). This difference, -0.17 , BCa 95% CI $[-0.291, -0.021]$, was significant $t(1262) = -2.34$, $p = .017$ and represented a small effect, $d = 0.18$.

Generally, the findings for this variable suggested that school-based training in special needs education has significant effects and contributes to improving teachers' self-efficacy and developing more positive attitudes and more willingness in teachers to work with pupils with disabilities in the regular education classroom. The findings also suggest that receiving school-based training related to special needs education helps to empower teachers' knowledge, skills and competences, hence increasing their self-efficacy, attitudes and willingness to include pupils with disabilities in their classrooms.

8.4.2.3 Attended seminar or workshop in special needs education?

The study investigated the specific effects of teachers' participation in seminars and workshops related to special needs education to determine whether such participation affected the teachers' perceived self-efficacy, attitudes and willingness to include pupils with disabilities in the regular education classroom. The *t*-test was used to analyse the data, and the findings indicated that on average, teachers who participated in seminars or workshops related to special needs education had a higher mean score on *perceived self-efficacy* ($M = 8.30$, $SE = .07$) than teachers who did not participate in such seminars or workshops ($M = 8.11$, $SE = .03$). This difference, -0.19 , BCa 95% CI $[-0.333, -0.037]$, was significant $t(131) = -2.40$, $p = .015$ and represented a small effect, $d = 0.21$.

In addition, the results indicated that on average, teachers who participated in seminars and workshops related to special needs education had a higher mean score on the *teachers'*

attitudes scale ($M = 0.59, SE = .13$) than teachers who did not participate in such seminars or workshops ($M = 0.49, SE = .04$). This mean difference, -0.10 , BCa $[-0.366, 0.159]$, was not significant $t(1262) = -.77, p = .440$ and represented the smallest effect, $d = 0.08$.

Regarding *teachers' willingness to work* with children with severe learning disabilities, the results indicated that on average, teachers who participated in workshops and seminars related to special needs education had a higher mean score on *willingness to work with pupils with severe physical disabilities* ($M = 4.10, SE = .07$) than teachers who had not attended such seminars and workshops ($M = 3.90, SE = .02$). This mean difference, -0.20 , BCa 95% CI $[-0.360, -0.042]$, was significant $t(1262) = -2.42, p = .011$ and represented a small effect, $d = 0.26$.

Furthermore, the results indicated that on average, teachers who participated in workshops and seminars related to special needs education had a higher mean score on *willingness to work with pupils with severe cognitive disabilities* ($M = 3.95, SE = .08$) than teachers who did not attend such seminars and workshops ($M = 3.67, SE = .03$). This mean difference, -0.28 , BCa 95% CI $[-0.458, -0.109]$, was significant $t(115) = -3.21, p = .002$ and represented a small effect, $d = 0.32$.

The results also indicated that on average, teachers who had attended seminars and workshops regarding special needs education had a higher mean score on *willingness to work with pupils with severe behavioural problems* ($M = 4.05, SE = .08$) than teachers who had not attended such seminars and workshops ($M = 3.81, SE = .03$). This difference, -0.24 , BCa 95% CI $[-0.397, -0.062]$, was significant $t(1262) = -2.48, p = .011$ and represented a small effect, $d = 0.28$.

The above results indicate that attending seminars and workshops on special needs education improves teachers' self-efficacy and willingness to work with pupils with disabilities in the regular education classroom. The results affirm that the more teachers participate in seminars and workshops on special needs education, the higher the teachers' self-efficacy and the more willing they are to work with pupils with disabilities in the regular education classroom. However, the results suggest that attending seminars and workshops on special needs education may not make any difference in teachers' attitudes towards inclusion of pupils with disabilities in the regular education classroom.

8.4.2.4 Attended courses in special needs education at a college/university?

This variable was studied to examine the effects of teachers' participation in special needs education courses at the college or university level on teaching pupils with disabilities in the regular education classroom. The *t*-test was performed to analyse the data, and the findings indicated that teachers who attended special needs education courses at a college/university scored higher on *perceived self-efficacy scale* ($M = 8.34, SE = .07$) than teachers who did not ($M = 8.10, SE = .03$). This difference, -0.24 , BCa 95% CI $[-0.386, -0.082]$, was significant $t(138) = -2.92, p = .008$ and represented a small effect, $d = 0.26$.

The results of the *teachers' attitudes scale* indicated that on average, the mean score of teachers who attended a special needs education course at the college level was higher ($M = 0.83, SE = .12$) than the mean score of teachers who did not attend such a course ($M = 0.46, SE = .04$). This difference, -0.37 , BCa 95% CI $[-0.607, -0.125]$, was significant $t(1262) = -2.84, p = .001$ and represented a small effect, $d = 0.30$.

The findings for the *teachers' willingness subscales* indicated that on average, the mean score of teachers who attended courses in special needs education at the college/university level had a higher mean score on the *teachers' willingness – physical disability subscale* ($M = 4.00, SE = .07$) than teachers who did not attend such courses ($M = 3.91, SE = .02$). This difference, -0.08 , BCa 95% CI $[-0.23, 0.05]$, was not significant $t(1262) = -1.10, p = .242$ and represented the smallest effect, $d = 0.12$.

The results demonstrated that on average, teachers who attended courses in special needs education at a college/university had a higher mean score on the *teachers' willingness-cognitive disability subscale* ($M = 3.381, SE = 0.08$) than teachers who did not attend such courses ($M = 3.67, SE = .02$). This difference, -0.13 , BCa 95% CI $[-0.31, 0.03]$, was not significant $t(1262) = -1.41, p = .123$ and represented the smallest effect, $d = 0.14$.

Finally, the results indicated that on average, teachers who attended special needs education courses at the college/university level had a higher mean score on the *teachers' willingness – behavioural problems subscale* ($M = 3.94, SE = 0.08$) than teachers who did not attend such courses ($M = 3.82, SE = .02$). This difference, -0.12 , BCa 95% CI $[-0.27, 0.08]$, was not significant $t(1262) = -1.37, p = .177$ and represented the smallest effect, $d = 0.15$.

Generally, these results indicated that when teachers attended courses in special needs education at the college/or university level, the teachers improved their self-efficacy towards

teaching activities in their classrooms and developed more positive attitudes and a willingness to work with disabled pupils in their regular education classrooms. The results also confirmed that the more teachers participated in courses in special needs education at the college/university level, the higher the teachers' self-efficacy is, and the more positive their attitudes are. Additionally, the results of the present study demonstrated that attending courses in special needs education at the college/university level may not affect teachers' willingness to work with children with severe learning disabilities in the regular education classroom.

8.4.3 Research Question 3

The goal of the third research question was to determine whether the types of disabilities experienced by pupils in the classroom affect teachers' perceived self-efficacy, attitudes and willingness. Thus, the third research question was stated as follows:

Do the types of disabilities that pupils bring to the regular education classroom affect (a) teachers' self-efficacy, (b) attitudes, and (c) willingness?

This question was answered by performing *t*-test analyses for eight types of special needs: (i) speech/language delay, (ii) mild mental retardation, (iii) hearing impairments, (iv) visual impairments, (v) physical disabilities, (vi) behavioural problems, (vii) autism, and (viii) giftedness. The *t*-test analysis was applied because the data for this question were dichotomous. In addition, during the *t*-test analyses, bootstrapping (Field, 2013) was used because of the skewed and kurtosis data.

Moreover, in the analyses of this research question, the way of grouping the teachers (participants) with intention of comparing teachers with one specific experience with teacher who have other kind of experiences (that may have an effect). Teachers with experience teaching pupils with speech/language delay may for example also have experience with other kinds of disabilities that affect their score. Therefore, the grouping variable for the following analyses may reveal questions. However, given the fact that the research question ask for the specific effects of the different specific experiences comparing the results for the rest of the teachers seems adequate, even though the comparison group had other kind of experiences concerning children with special needs. Table 8.3 presents the descriptive statistics of the independent variable studied.

Table 8.3 The descriptive statistics of the types of disabilities experienced in the classroom as reported by teachers ($N = 1264$)

Type of disability		Frequency	Percentage
1. Speech/language delay	YES	245	19.4
	NO	1019	80.6
2. Mild mental retardation	YES	397	31.4
	NO	867	68.6
3. Hearing impairment	YES	144	11.4
	NO	1120	88.6
4. Visual impairment	YES	137	10.8
	NO	1127	89.2
5. Physical disabilities	YES	324	25.6
	NO	940	74.4
6. Behavioural problems	YES	378	29.9
	NO	886	70.1
7. Autism	YES	107	8.5
	NO	1157	91.5
8. Giftedness	YES	160	12.7
	NO	1104	87.3

Table 8.3 displays eight types of special needs experienced by pupils as reported by teachers in their classrooms.

The following are the *t*-test results, which examined the relations between types of special needs that pupils brought to their classrooms and teachers' perceived self-efficacy, attitudes and willingness.

(a) Speech/language delay

Beginning with teachers' self-efficacy, the results indicated that on average, teachers who reported having pupils with speech/language delays in their classrooms had a higher mean score on the *perceived self-efficacy scale* ($M = 8.26$, $SE = .05$) than teachers who reported not having such pupils ($M = 8.09$, $SE = .03$). The *t*-test indicated that this difference, -0.16 , BCa 95% CI $[-0.279, -0.039]$, was significant $t(503) = -2.76$, $p = .006$ and represented a small effect, $d = 0.18$.

Regarding teachers' attitudes, the results indicated that on average, teachers who reported not having pupils with speech/language delays in their classrooms had a higher mean score on the *teachers' attitudes scale* ($M = 0.50, SE = .04$) than teachers who did have such pupils ($M = 0.46, SE = .08$). However, the t-test indicated that this difference, 0.04, BCa 95% CI [-0.12, 0.21], was not significant $t(1262) = .54, p = .611$ and had nearly no effect, $d = 0.03$.

With regard to teachers' willingness, first, the results indicated that on average, teachers who reported having pupils with speech/language delay in their classrooms had a higher mean score on the *teachers' willingness – physical disability subscale* ($M = 3.93, SE = .05$) than teachers who reported not having such pupils ($M = 3.91, SE = .02$). However, the t-test indicated that this difference, -0.02, BCa 95% CI [-0.12, 0.09], was not significant $t(1262) = -.36, p = .709$ and had nearly no effect, $d = 0.02$.

Second, the results indicated that on average, teachers who reported not having pupils with speech/language delay in their classrooms had a higher mean score on the *teachers' willingness – cognitive disability subscale* ($M = 3.69, SE = .02$) than teachers who did report having such pupils ($M = 3.67, SE = .06$). However, the t-test revealed that this difference, 0.02, BCa 95% CI [-.10, 0.15], was not significant $t(1262) = .31, p = .770$ and had nearly no effect, $d = 0.02$.

Third, the t-test results indicated that on average, teachers who reported not having pupils with speech/language delay in their classrooms had a higher mean score on the *teachers' willingness – behavioural problem subscale* ($M = 3.84, SE = .03$) than teachers who reported having such pupils ($M = 3.80, SD = .06$). However, the t-test indicated that this difference, 0.04, BCa 95% CI [-0.08, 0.16], was not significant $t(1262) = .60, p = .546$ and had nearly no effect, $d = 0.04$.

In summary, the findings on this variable indicated that teachers who experienced having pupils with speech and language disabilities in their classrooms appeared to have higher perceived self-efficacy than teachers who had not experienced pupils with speech and language disabilities in their classrooms. However, the findings indicated that teachers' attitudes and teachers' willingness to work with pupils with disabilities in the regular education classroom may not be affected by the presence of pupils with speech and language disabilities.

(b) Mild mental retardation

The *t*-test was conducted to determine the effects on teachers' self-efficacy, attitudes and willingness of having pupils with mild mental retardation in the regular education classroom.

Beginning with teachers' self-efficacy, the results indicated that on average, teachers who reported having pupils with mild mental retardation in their classrooms had a higher mean score on the *teachers' perceived self-efficacy scale* ($M = 8.26, SE = .04$) than teachers who reported not having such pupils ($M = 8.06, SE = .04$). The *t*-test revealed that this difference, -0.19 , BCa 95%CI $[-0.309, -0.077]$, was significant $t(1051) = -3.53, p = .002$ and represented a small effect, $d = 0.21$.

Regarding teachers' attitudes, the results indicated that on average, teachers who reported having pupils with mild mental retardation in their classrooms had a higher mean score on the *teachers' attitude scale* ($M = 0.53, SD = .06$) than teachers who reported not having such pupils ($M = 0.48, SD = .04$). However, the *t*-test indicated that this difference, -0.05 , BCa 95% CI $[-0.19, 0.10]$, was not significant $t(1262) = -.67, p = .490$ and had nearly no effect, $d = 0.04$.

Concerning teachers' willingness, the results indicated that on average, teachers who reported having pupils with mild mental retardation had the same mean score on the *teachers' willingness – physical disability subscale* ($M = 3.92, SE = .04$) as teachers who reported not having such pupils ($M = 3.92, SE = .03$). However, the *t*-test revealed that this difference, -0.00 , BCa 95% CI $[-0.09, 0.09]$, was not significant $t(1262) = -.00, p = .994$ and had no effect, $d = 0$.

In addition, the results indicated that teachers who reported having pupils with mild mental retardation in their classrooms had a higher mean score on the *teachers' cognitive disability subscale* ($M = 3.71, SE = .04$) than teachers who reported not having such pupils ($M = 3.68, SE = .03$). However, the *t*-test showed that this difference, -0.03 , BCa 95% CI $[-0.13, 0.07]$, was not significant $t(1262) = -.54, p = .591$ and had nearly no effect, $d = 0.03$.

Finally, the results indicated that on average, teachers who reported having pupils with mild mental retardation in their classrooms had a higher mean score on the *teachers' willingness – behavioural problems subscale* ($M = 3.82, SE = .05$) than teachers who reported not having such pupils ($M = 3.83, SE = .03$). However, the *t*-test indicated that this difference, 0.01 , BCa

95% CI [-0.10, 0.11], was not significant $t(1262) = .10, p = .921$ and had nearly no effect, $d = 0.01$.

In general, these findings indicated that of three main dependent variables studied; only teachers' self-efficacy was determined to be affected by the presence of pupils with mild mental retardation in the regular education classroom. The results confirmed that teachers who have experienced pupils with mild mental retardation in their classrooms appear to have higher perceived self-efficacy than teachers who have not experienced pupils with mild mental retardation in their classrooms. Further, the results affirmed that teachers' attitudes and teachers' willingness were not affected by the presence of pupils with mild mental retardation in the regular education classroom.

(c) Hearing impairments

The present study investigated the effects of having pupils with hearing impairments in the regular education classroom and whether the presence of pupils with hearing impairment affects teachers' self-efficacy, attitudes and willingness to include these pupils in the regular education classroom.

The results indicated that on average, teachers who reported having pupils with hearing impairments in their classroom demonstrated a higher mean score on the *perceived self-efficacy scale* ($M = 8.25, SE = .06$), than teachers who reported not having such pupils ($M = 8.11, SE = .03$). The t-test revealed that this difference, -0.14 , BCa 95% CI [-0.275, -0.015], was significant $t(225) = -2.07, p = .038$ and represented a small effect, $d = 0.15$.

Moreover, the results indicated that on average, teachers who reported having pupils with hearing impairments in their classrooms demonstrated a higher mean score on the *teachers' attitudes scale* ($M = 0.68, SE = .10$) than teachers who reported not having such pupils ($M = 0.47, SE = .04$). However, the t-test showed that this difference, -0.21 , BCa 95% CI [-0.41, 0.03], was not significant $t(1262) = -1.87, p = .059$ and represented a small effect, $d = 0.17$.

Regarding teacher willingness, the results demonstrated that on average, teachers who reported not having hearing-impaired pupils in their classrooms had a higher mean score on the *teachers' willingness – physical disabilities subscale* ($M = 3.92, SE = .02$) than teachers who reported having hearing-impaired pupils ($M = 3.90, SE = .07$). Again, the t-test indicated

that this difference, 0.02, BCa 95% CI [-0.13, 0.16], was not significant $t(1262) = .25, p = .825$ and had nearly no effect, $d = 0.02$.

The results indicated that on average, teachers who reported having hearing-impaired pupils in their classrooms had a higher mean score on the *teachers' willingness – cognitive disability subscale* ($M = 3.71, SE = .07$) than teachers who reported not having such pupils ($M = 3.68, SE = .03$). However, the t-test revealed that this difference, -0.03, BCa 95% CI [-0.19, 0.14], was not significant $t(1262) = .67, p = .757$ and had nearly no effect, $d = 0.03$.

Finally, the results indicated that on average, teachers who reported not having hearing-impaired pupils in their classrooms had a higher mean score on the *teachers' willingness – behavioural problems subscale* ($M = 3.84, SE = .03$) than teachers who reported having such pupils ($M = 3.76, SE = .08$). Again, the t-test showed that this difference, 0.08, BCa 95% CI [-0.09, 0.23], was not significant $t(1262) = .970, p = .389$ and had nearly no effect, $d = 0.09$.

To summarize, the findings above indicated that teachers' perceived self-efficacy can be affected by the presence of hearing-impaired pupils in the regular education classroom. It appears that teachers who experienced having pupils with hearing impairment in their classroom tended to develop higher self-efficacy than teachers who did not experience having hearing-impaired pupils in their classrooms. The results also confirmed that teachers' attitudes and teachers' willingness may not be affected by the presence of pupils with hearing impairment studying in the regular education classroom.

(d) Visual impairments

The present study also examined the effects on teachers' perceived self-efficacy, attitudes and willingness to have pupils with visual impairments in the regular education classroom.

First, the results indicated that on average, teachers who reported having visually impaired pupils in their classrooms had a higher mean score on the *teachers' perceived self-efficacy scale* ($M = 8.29, SE = .06$) than teachers who reported not having such pupils ($M = 8.10, SE = .03$). The t-test indicated that this difference, -0.19, BCa 95% CI [-0.33, -0.05], was significant $t(209) = -2.71, p = .011$ and represented a small effect, $d = 0.22$.

Second, the results indicated that on average, teachers who reported having pupils with visual impairments in their classroom had a higher mean score on the *teachers' attitudes scale* ($M =$

0.77, $SE = .09$) than teachers who reported not having such pupils ($M = 0.46$, $SE = .04$). Again, the t-test revealed that this difference, -0.31, BCa 95% CI [-0.50, -0.11], was determined to be significant $t(1262) = -2.71$, $p = .002$ and represented a small effect, $d = 0.26$.

Third, the results indicated that on average, teachers who reported having pupils with visual impairment in their classroom had a higher mean score on the *teachers' willingness – physical disability subscale* ($M = 4.03$, $SE = .06$) than teachers who reported not to having such pupils ($M = 3.91$, $SE = .02$). However, the t-test showed that this difference, -0.12, BCa 95% CI [-0.28, 0.05], was not significant $t(1262) = -1.72$, $p = .114$; and represented a small effect, $d = 0.16$.

Fourth, the results indicated that on average, teachers who reported having pupils with visual impairment in their classrooms had a higher mean score on the *teachers' willingness – cognitive disability subscale* ($M = 3.82$, $SE = .07$) than teachers who reported not having such pupils ($M = 3.67$, $SE = .03$). Again, the t-test indicated that this mean difference, -0.15, BCa 95% CI [-0.30, 0.01], was not significant $t(1262) = -1.83$, $p = .060$ and represented a small effect, $d = 0.17$.

Fifth, the results indicate that on average, teachers who reported having pupils with visual impairment in their classrooms had a higher mean score on the *teachers' willingness – behavioural problems subscale* ($M = 3.87$, $SE = .07$) than teachers who reported not having pupils with visual impairment in their classrooms ($M = 3.83$, $SE = .02$). However, the t-test indicated that this difference, -0.04, BCa 95% CI [-0.20, 0.11], was not significant $t(1262) = -.59$, $p = .590$ and had nearly no effect, $d = 0.04$.

In summary, these results confirm that teachers' self-efficacy and attitudes can be affected by the presence of pupils with visual impairments in their regular education classrooms. It was determined that teachers who have experienced having pupils with visual impairments in their classrooms appear to have higher self-efficacy and more positive attitudes than teachers not having such experiences.

However, the findings affirm that teachers' willingness to work with children with severe learning disabilities in the regular education classroom may not be affected by the presence of pupils with visual impairments.

(e) Physical disability

The present study investigated the effects on teachers' perceived self-efficacy, attitudes and willingness to have pupils with physical disabilities in the regular education classroom. The *t*-test was also performed on this variable to explore the relations.

The results indicated that on average, teachers who reported having pupils with physical disabilities in their classrooms had a higher mean score on the *perceived self-efficacy scale* ($M = 8.26, SE = .04$) than teachers who reported not having such pupils ($M = 8.08, SE = .03$). The *t*-test revealed that this difference, -0.18 , BCa 95% CI $[-0.30, -0.05]$, was significant $t(674) = -2.99, p = .001$; and represented a small effect, $d = 0.18$.

The results also indicated that on average, teachers who reported having pupils with physical disabilities in their classrooms had a higher mean score on the *teachers' attitude scale* ($M = 0.81, SE = .07$) than teachers who reported not having such pupils ($M = 0.39, SE = .04$). The *t*-test indicated that this difference, -0.42 , BCa 95% CI $[-0.57, -0.26]$, was significant $t(1262) = -5.25, p = .001$ and represented a small effect, $d = 0.34$.

Concerning teachers' willingness, the results indicated that on average, teachers who reported having pupils with physical disabilities in their classrooms had a higher mean score on the *teachers' willingness – physical disability subscale* ($M = 4.01, SE = .04$) than teachers who reported not having such pupils ($M = 3.89, SE = .03$). Again, the *t*-test revealed that this difference, -0.12 , BCa 95% CI $[-0.22, -0.01]$, was significant $t(1262) = -2.43, p = .023$ and represented an extremely small effect, $d = 0.15$.

The results also indicated that on average, teachers who reported having pupils with physical disabilities in their classrooms had a higher mean score on the *teachers' willingness – cognitive disabilities subscale* ($M = 3.79, SE = .04$) than teachers who reported not having such pupils ($M = 3.66, SE = .03$). The *t*-test showed that this difference, -0.13 , BCa 95% CI $[-0.24, -0.03]$, was significant $t(1262) = -2.19, p = .019$ and represented an extremely small effect, $d = 0.14$.

Finally, the results indicated that teachers who reported not having pupils with physical disabilities in their classrooms had a higher mean score on the *teachers' willingness – behavioural problems subscale* ($M = 3.83, SE = .03$) than teachers who reported having pupils with physical disabilities in their classrooms ($M = 3.82, SE = .05$). However, the *t*-test

indicated that this difference, 0.01, BCa 95% CI [-0.11, 0.13], was not significant $t(1262) = .13, p = .903$ and had nearly no effect, $d = 0.01$.

In general, these results confirmed that when teachers had pupils with severe physical disabilities in their regular education classrooms, they developed higher self-efficacy towards their teaching activities, developed more positive attitudes towards inclusion and became more willing to work with these children in their classrooms.

(f) Behavioural problems

This variable was studied to examine the effects on teachers' perceived self-efficacy, attitudes and willingness to have pupils with behavioural problems in the regular education classroom.

According to the analysis, the results indicated that on average, teachers who reported having pupils with behavioural problems in their classrooms had a higher mean score on the *perceived self-efficacy scale* ($M = 8.24, SE = .04$) than teachers who had no pupils with behavioural problems ($M = 8.08, SE = .04$). The t-test revealed that this difference, -0.16, BCa 95% CI [-0.27, -0.06], was significant $t(957) = -2.95, p = .003$ and represented a small effect, $d = 0.18$.

The results also indicated that on average, teachers who reported having pupils with behavioural problems in their classrooms had a higher mean score on the *teachers' attitudes scale* ($M = 0.53, SE = .06$) than teachers who reported not having pupils with behavioural problems ($M = 0.48, SE = .04$). However, the t-test showed that this difference, -0.05, BCa 95% CI [-0.18, 0.08], was not significant $t(1262) = -.72, p = .476$ and had nearly no effect, $d = 0.04$.

The results also indicated that on average, teachers who reported having pupils with behaviour problems in their classrooms had a higher mean score on the *teachers' willingness – physical disability subscale* ($M = 3.92 (SE = .04)$) than teachers who reported not having pupils with behaviour problems in their classrooms ($M = 3.91, SE = .03$). Again, the t-test showed that this difference, -0.01, BCa 95% CI [-0.10, 0.09], was not significant, $t(663) = -.17, p = .873$ and had scarcely any effect, $d = 0.01$.

In addition, the results indicated that on average, teachers who reported having pupils with behaviour problems in their classrooms had a higher mean score on the *teachers' willingness-*

cognitive disability subscale ($M = 3.74, SE = .05$) than teachers who reported not having such pupils ($M = 3.67, SE = .03$). However, the t-test indicated that this mean difference, -0.07 , BCa 95% CI $[-0.18, 0.04]$, was not significant $t(1262) = -1.25, p = .217$ and had almost nearly no effect, $d = 0.08$.

However, the results indicated that on average, teachers who reported not having pupils with behaviour problems in their classroom had a higher mean score on the *teachers' willingness – behavioural problems subscale* ($M = 3.85, SE = .03$) than teachers who reported having such pupils ($M = 3.77, SE = .05$). However, the t-test indicated that this mean difference, 0.08 , BCa 95% CI $[-0.03, 0.19]$, was not significant $t(630) = 1.39, p = .152$ and had nearly no effect, $d = 0.09$.

Generally, the results of this variable affirmed that teachers who experienced pupils with behaviour problems in their classrooms had higher self-efficacy than teachers who had not had such experiences. Further, the results confirmed that teachers' attitudes and willingness may not be affected if pupils with behaviour problems are included in their regular education classrooms.

(g) Autism

Autism was another variable in the present study, which explored the effect on perceived self-efficacy, attitudes and willingness of having pupils with autism in the regular education classroom.

The results revealed that on average, teachers who reported not having pupils with autism in their classroom had a higher mean score on the *teachers' self-efficacy scale* ($M = 8.12, SE = .03$) than teachers who reported having autistic pupils in their classrooms ($M = 8.11, SE = .10$). However, the t-test indicated that this difference, 0.01 , BCa 95% CI $[-0.17, 0.23]$, was not significant $t(1262) = .11, p = .932$ and had scarcely any effect, $d = 0$.

In addition, the results indicated that on average, teachers who reported not having pupils with autism in their classrooms had a higher mean score on the *teachers' attitude scale* ($M = 0.51, SE = .12$) than teachers who reported having pupils with autism in their classrooms ($M = 0.31, SE = .03$). Again, the t-test indicated that this difference, 0.20 , BCa 95% CI $[-0.06, 0.46]$, was not significant, $t(1262) = 1.59, p = .117$ and represented a small effect, $d = 0.16$.

The results also indicated that on average, teachers who reported not having pupils with autism in their classrooms had a higher mean score on the *teachers' willingness – physical disability subscale* ($M = 3.92, SE = .02$) than teachers who reported having autistic pupils in their classrooms ($M = 3.84, SE = .07$). However, the t-test revealed that difference, 0.08, BCa 95% CI [-0.07, 0.24], was not significant $t(1262) = 1.13, p = .268$ and had nearly no effect, $d = 0.10$.

In addition, the results indicated that on average, teachers who reported not having pupils with autism in their classrooms had a higher mean score on the *teachers' willingness-cognitive disability subscale* ($M = 3.71, SE = .03$) than teachers who reported having pupils with autism in their classrooms ($M = 3.50, SE = .09$). The t-test indicated that this mean difference, 0.20, BCa 95% CI [0.03, 0.40], was significant $t(1262) = 2.18, p = .034$ and represented a small effect, $d = 0.22$.

Finally, the results indicated that on average, teachers who reported not having pupils with autism in their classrooms had a higher mean score on the *teachers' willingness – behaviour problem subscale* ($M = 3.86, SE = .02$) than teachers who reported having pupils with autism in their classrooms ($M = 3.52, SE = .10$). Again, the t-test revealed that this difference, 0.34, BCa 95% CI [0.14, 0.56], was significant $t(119) = 3.29, p = .002$ and represented a small effect, $d = 0.36$.

These results confirmed that teachers who had not experienced autistic pupils in their classrooms appeared to be more willing to work with children with severe learning disabilities in their regular education classroom than teachers who had experience with autistic pupils. Further, the results confirmed that the presence of autistic pupils in the regular education classroom may not affect either teachers' self-efficacy or teachers' attitudes towards their teaching activities.

(h) Gifted children

The study examined the effects of having gifted children in the regular education classroom to determine whether their presence affected the teachers' perceived self-efficacy, attitudes and willingness.

First, the results indicated that on average, teachers who reported having gifted pupils in their classrooms had a higher mean score on the *teachers' self-efficacy scale* ($M = 8.35, SE = .05$)

than teachers who reported not having gifted pupils in their classrooms ($M = 8.09, SE = .03$). The t-test indicated that this difference, -0.26 , BCa 95% CI $[-0.38, -0.14]$, was significant $t(279) = -4.06, p = .001$ and represented a small effect, $d = 0.29$.

Second, the results indicated that on average, teachers who reported having gifted pupils in their classrooms had a higher mean score on the *teachers' attitudes scale* ($M = 0.74, SE = .09$) than teachers who reported not having gifted pupils in their classrooms ($M = 0.46, SE = .04$). Again, the t-test showed that this difference, -0.28 , BCa 95% CI $[-0.48, -0.07]$, was significant $t(1262) = -2.63, p = .009$ and represented a small effect, $d = 0.22$.

Third, the results indicated that on average, teachers who reported having gifted pupils in their classrooms had a higher mean score on the *teachers' willingness – physical disability subscale* ($M = 3.98, SE = .06$) than teachers who reported not having gifted pupils in their classrooms ($M = 3.91, SE = .02$). However, the t-test showed that this difference, -0.07 , BCa 95% CI $[-0.20, 0.05]$, was not significant $t(1262) = -1.12, p = .256$ and had nearly no effect, $d = 0.09$.

Fourth, the results indicated that on average, teachers who reported having gifted pupils in their classrooms had a higher mean score on the *teachers' willingness – cognitive disability subscale* ($M = 3.72, SE = .07$) than teachers who reported not having gifted pupils in their classrooms ($M = 3.69, SE = .03$). Again, the t-test indicated that this difference, -0.03 , BCa 95% CI $[-0.17, 0.12]$, was not significant $t(1262) = -.39, p = .711$ and had nearly no effect, $d = 0.04$.

Finally, the results indicated that teachers who reported not having gifted pupils in the classroom had a higher mean score on the *teachers' willingness – behavioural problem subscale* ($M = 3.83, SE = .03$) than teachers who reported having gifted pupils in their classrooms ($M = 3.82, SE = .07$). However, the t-test showed that this difference, 0.01 , BCa 95% CI $[-0.14, 0.15]$, was not significant $t(1262) = .08, p = .945$ and had nearly no effect, $d = 0.04$.

In general, these results affirmed that teachers who experienced gifted pupils in their classrooms appeared to have higher self-efficacy and developed more positive attitudes towards the inclusion of special needs pupils compared with teachers not having such experiences. Further, the results confirmed that the presence of gifted pupils in the regular

education classroom may not affect teachers' willingness to work with children with severe learning disabilities.

8.4.3.1 Summary of findings

Overall, the findings of the present study indicated that teachers' self-efficacy towards teaching activities in the regular education classroom may be affected when the classroom includes pupils with speech/language delays, mild mental retardation, hearing impairment, visual impairment, physical disabilities, behavioural problems or gifted children. The present study determined that teachers who reported having children with disabilities in their classrooms, particularly the abovementioned types of disabilities, demonstrated higher perceived self-efficacy than teachers who reported not having children with disabilities in their classrooms.

Second, the findings of the present study suggested that teachers' attitudes towards the inclusion of special needs pupils may be affected by the presence of pupils with visual impairment, physical disabilities, and giftedness in the regular education classroom. For example, the results indicated that teachers who reported having children with the abovementioned types of disabilities in their classrooms demonstrated more positive attitudes towards inclusion than the teachers who reported not having children with such disabilities in their classrooms.

Finally, the findings of the present study suggested that teachers' willingness to work with children with severe physical disabilities, severe cognitive disability or severe behaviour problems in the regular education classroom most likely are affected by the presence of either pupils with physical disabilities or autistic pupils in the regular education classroom. For example, the findings demonstrated that teachers' experience with physical disabilities goes together with more willingness while teachers' experience with autistic pupils goes together with less willingness.

8.4.4 Research Question 4

The review in the present study indicated that teachers' self-efficacy is one of the most important factors in determining their willingness towards teaching activities in the classroom. For example, studies noted that high teacher self-efficacy leads to greater effort and more self-confidence in teachers in their ability to help pupils learn, and teachers become more willing to employ new teaching strategies to enhance learning. In addition, high teacher

self-efficacy is an important factor in determining more positive attitudes towards the placement of students with behaviour and learning difficulties in the general education classroom.

Moreover, the review demonstrated that teachers' positive attitudes play an important role in determining their willingness to work with pupils with disabilities. For example, the review demonstrated a close relation between teachers' positive attitudes towards inclusion and teachers' increased willingness to work with children with various types of disabilities.

Thus, based on the review, the relations between the three constructs, teachers' self-efficacy, teachers' attitudes and teachers' willingness, and on the findings addressing Questions 1 to 3, the researcher extended the analysis by introducing the fourth research question to examine the effect of teachers' perceived self-efficacy and teachers' attitudes on predicting their willingness to work with children with severe learning difficulties in the regular education classroom. Based on the review and the results obtained for research Questions 1 to 3, therefore, the following fourth research question was introduced and studied:

Do teachers' self-efficacy and attitudes predict their willingness to work with pupils with severe learning disabilities in the regular education classroom?

As demonstrated in the review theory portion, teachers' self-efficacy and teachers' attitudes appear to explain or predict the variances in teachers' willingness to teach children with disabilities in the regular education classroom. In the initial analysis of the data (see Table 8.1), the results demonstrated that there is a significant positive relation between teachers' perceived self-efficacy and teachers' attitudes. Thus, in responding to the above research question, the following two hypotheses were developed:

- *Hypothesis 1:* Teachers' self-efficacy is a positive predictor of teachers' willingness to work with children with severe learning disabilities (physical disability, cognitive disability, behavioural problems) in the regular education classroom.
- *Hypothesis 2:* Teachers' attitudes are a positive predictor of teachers' willingness to work with children with severe learning disabilities (physical disability, cognitive disability, behaviour problems) in the regular education classroom.

Structural equation modeling was used to analyse data for this research question. I decided to use structural equation modeling because I wanted to confirm the results that I used in Principal Component Analysis (PCA). I used the results for PCA as a basis for confirmatory factor analysis. This proposed model provided an opportunity to concurrently test

theoretically derived models, including multiple constructs and their interrelations. In addition, this proposed model allows researchers to consider measurement error in their models (Byrne, 2012; Kline, 2011). Therefore, the data in the present study underwent structural equation modelling analyses using *Mplus 7*.

Because chi-square statistics have been severely criticized as being extensively affected by sample size (Bollen, 1989; Kline, 1998), a number of alternative fit indices, including comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean residual (SRMR), were used to assess the model fit of the analysed data for this question, while a robust maximum likelihood estimator was used due to challenges with non-normal scores. Non-significant chi-square statistics, a CFI value of .95 or higher, an RMSEA value of .06 or lower and an SRMR value of .08 or lower suggest the adequacy of the model fit (Byrne, 2012; Hu & Bentler, 1999; Kline, 2011).

As a first step in the analytical approach, a measurement model for the willingness measure was calculated. In the measurement model, the 24 items assessing teachers' willingness to work with children with severe learning disabilities (physical disability, cognitive disability, behavioural disability) in regular education classrooms were loaded onto the Teachers' Willingness: Physical, Cognitive, and Behaviour latent factors. The measurement model demonstrated adequate support for data fit and the model with the following fit indices: [$\chi^2(270) = 848.71, p < .001$; CFI = .954; RMSEA = .041; SRMR = .076. All factor loadings were significant, ranging from .49 to .77 for teachers' willingness – physical disability, .60 to .84 for teachers' willingness – cognitive disability, and .64 to .84 for teachers' willingness – behaviour problems (see Figure 8.1).

Measurement Model

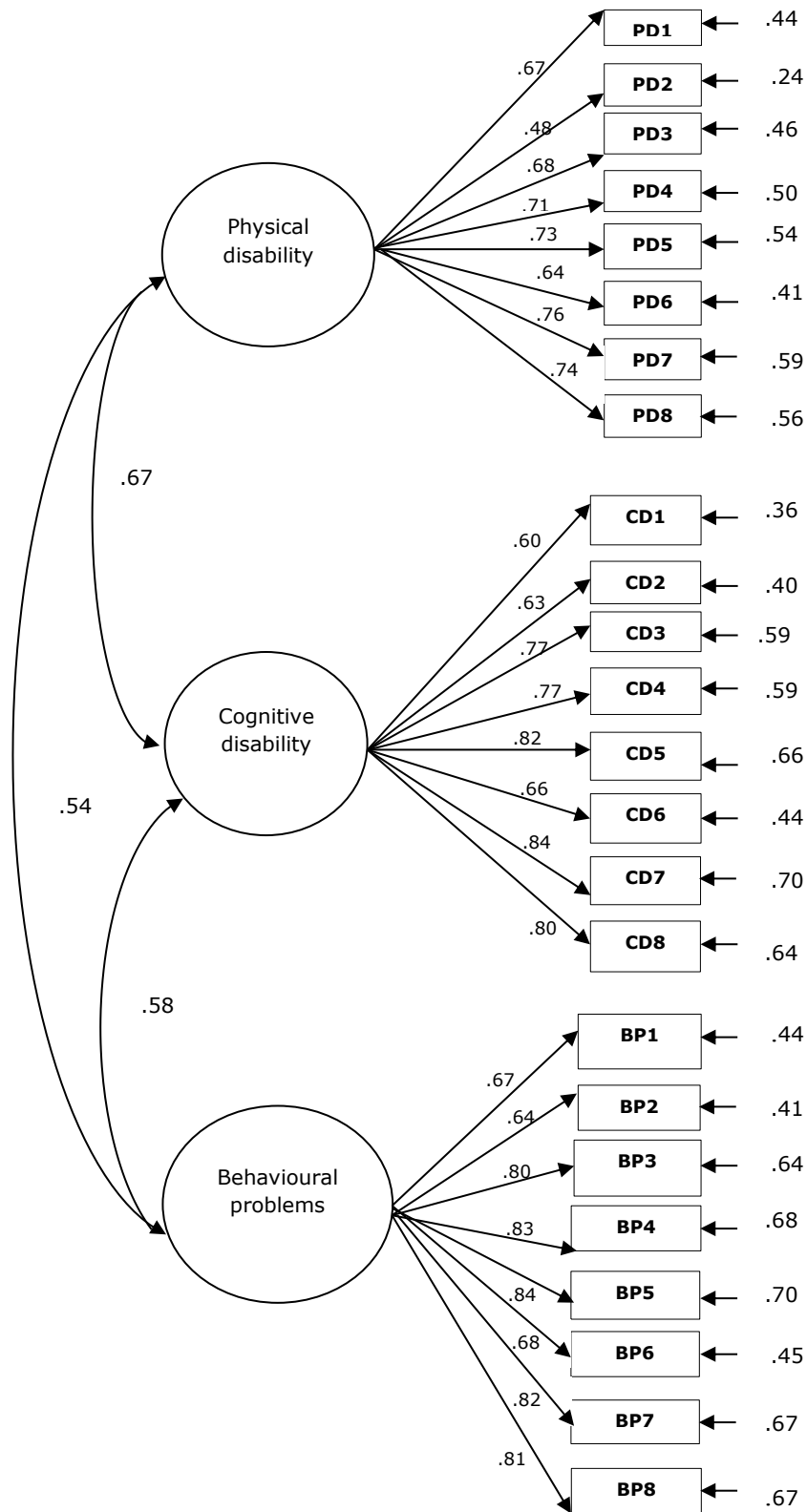


Figure 8.1 Measurement model for teachers' willingness to work with children with severe learning disabilities in the regular education classroom.

The second step in the analytical approach, a measurement model for the self-efficacy measure was calculated. In the measurement model, the 12 items assessing teachers' self-efficacy to teach pupils in the regular education classroom were loaded onto the Teachers' Self-efficacy latent factors. The measurement model demonstrated adequate support for data fit and the model with the following fit indices: [$\chi^2 (54) = 225.32, p < .001$; CFI = .956; RMSEA = .050; SRMR = .034. All factor loadings were significant, ranging from .64 to .79 (see Figure 8.2).

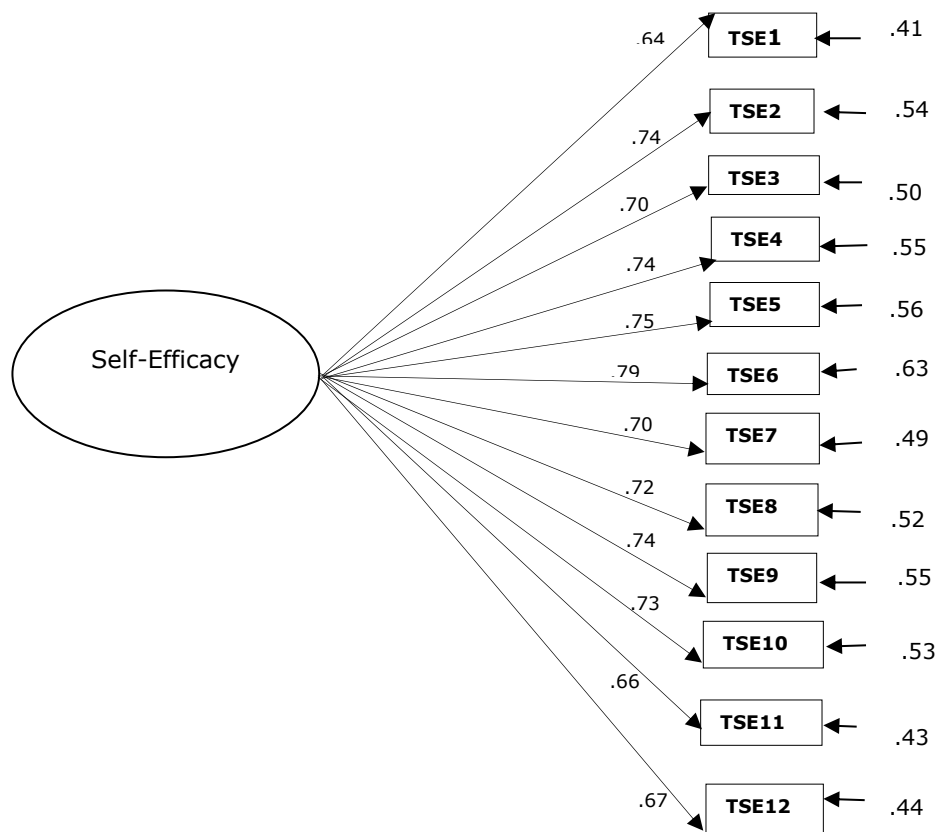


Figure 8.2 Measurement model for teachers' self-efficacy to teach pupils in the regular education classroom.

Finally in the analytical approach, a measurement model for the attitude measure was calculated. In the measurement model, the 9 items assessing teachers' attitudes towards working with children with disabilities in the regular education classroom were loaded onto latent factors. The measurement model demonstrated adequate support for data fit and the model with the following fit indices: [$\chi^2 (27) = 86.35, p < .001$; CFI = .961; RMSEA = .042; SRMR = .029. All factor loadings were significant, ranging from .41 to .68 (See Figure 8.3).

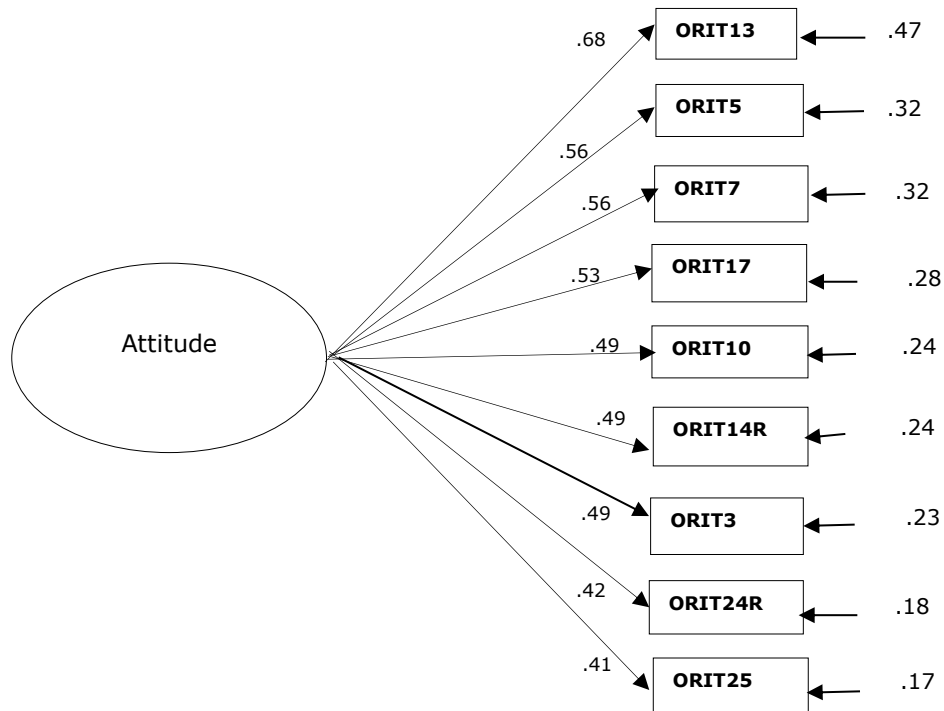


Figure 8.3 Measurement model for teachers' attitude towards working with children with disabilities in the regular education classroom.

Based on the three measurement model above, a structural model was developed. The purpose of developing the structural model was first to confirm the relation that was identified between teachers' perceived self-efficacy and teachers' attitude criterion variables (see Table 8.1); secondly, the structural model was intended to test the prediction of teachers' self-efficacy on teachers' willingness to work with children with severe learning disabilities (physical, cognitive, and behavioural) in regular education classrooms; and third, the structural model tested the prediction of teachers' attitudes and their teachers' willingness to work with children with severe learning disabilities (physical, cognitive and behavioural) in regular classrooms (see Figure 8.4).

Estimator: MLR = Maximum Likelihood Robust.

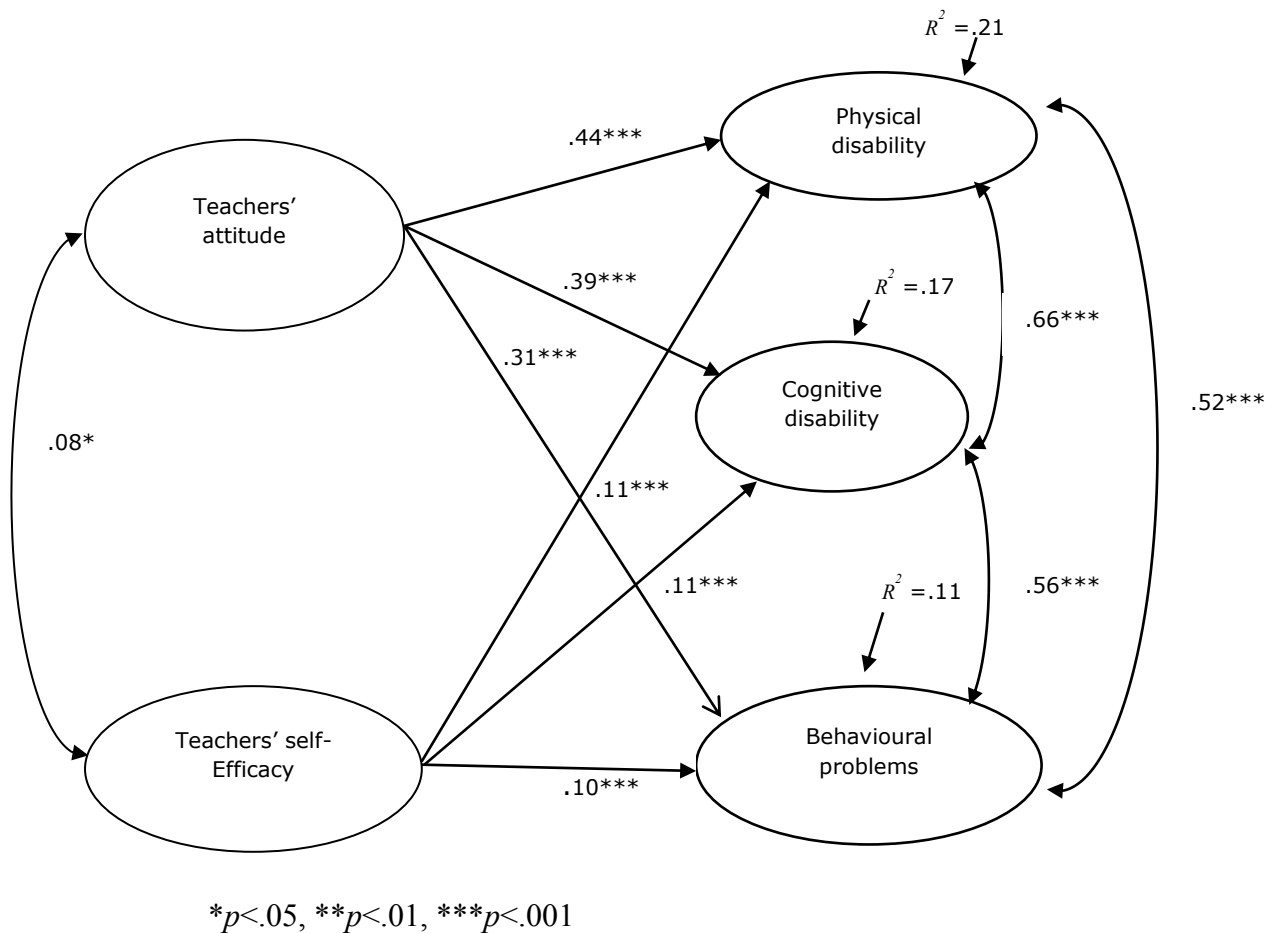


Figure 8.4 Full structural model of teachers' self-efficacy and teachers' attitudes in predicting teachers' willingness to work with children with severe learning disabilities in regular classrooms. There are 'standardized coefficients' reported.

The models demonstrated good fit $\chi^2(908) = 1863, p < .001$; CFI = .958; RMSEA = .029; SRMR = .036. Although the χ^2 statistics were significant, the other three fit indices met their respective cut-off levels. As reported in Figure 8.4, the relation between teachers' perceived self-efficacy and teachers' attitudes was confirmed; teachers' self-efficacy was determined to be weakly positive but significantly correlated with teachers' attitudes ($r = .08, p < .01$).

For Hypotheses 1 and 2, the results indicated a significant relation between teachers' self-efficacy and teachers' attitudes in predicting teachers' willingness to work with children with severe physical disabilities, cognitive disabilities and behavioural problems in regular classrooms. The results demonstrated that teachers' self-efficacy significantly predicted teachers' willingness to work with children with severe learning disabilities with small

strength (physical disability, $\beta = .11$; cognitive disability, $\beta = .11$; and behavioural problems, $\beta = .10$). In addition, teacher attitude was determined to be a significant moderate predictor of teachers' willingness to work with children with severe physical disabilities ($\beta = .44$), cognitive disabilities ($\beta = .39$), and behavioural problems ($\beta = .31$).

In conclusion, the results indicated that teachers' attitudes are the best and strongest predictor of teachers' willingness to work with children with severe learning disabilities in the regular education classroom. Consistent with this finding, the results indicated that there was not a great difference in the strength of teachers' attitudes in predicting their willingness to work with the various types of severe learning disabilities that were investigated (physical disability, cognitive disability, and behaviour problems). However, the findings revealed that teachers' perceived self-efficacy is a weaker predictor of teachers' willingness to work with children with severe learning disabilities in the regular education classroom. The results also indicated that there was not a large difference in the strength of teachers' perceived self-efficacy in predicting teachers' willingness to include students with severe learning disabilities.

9.0 DISCUSSION

9.1 Introduction

The overall purpose of the present study was 1) to investigate whether regular primary school teachers have sufficient expertise in classroom management, instructional strategies, and the engagement of pupils in their classrooms; 2) to examine the attitudes of regular primary school teachers towards the inclusion of pupils with disabilities in their classrooms; and 3) to explore the willingness of regular primary school teachers to teach children with severe learning disabilities in their classrooms. In this discussion chapter, the following will be addressed: first, the findings of each research question and then a discussion of the findings as they relate to the theoretical portion of the present study; second, a summary of the primary findings of the study, followed by the implications of the findings; and third, addressing some limitations of the study and presenting concluding remarks.

9.2 Discussion of the findings

9.2.1 Relation between teachers' background and their self-efficacy, attitudes and willingness to consider the inclusion of children with disabilities in their classrooms

The first research question investigated the interrelation among teachers' perceived self-efficacy, attitudes and willingness and teacher, school and pupil variables such as teacher's gender, age, teaching experience, class size, grade level, and number of pupils with disabilities per classroom. The reviewed literature indicated that these mentioned variables are of great importance in determining teachers' self-efficacy, attitudes and willingness to teach pupils with disabilities in the regular education classroom.

Gender

The results of the present study revealed that the effects of teachers' gender were not consistent with the results obtained in previous research studies. The results of the present study indicated that being a male or female teacher did not affect either perceptions of teachers' perceived self-efficacy, teachers' attitudes or teachers' willingness to teach pupils with disabilities in the regular education classroom. This is not consistent with results from previous studies, which observed that female teachers expressed more positive attitudes towards inclusion than male teachers (Al-Zyoudi, 2006; Alhazo & Gaad, 2004; Avramidis et

al., 2000; Avramidis & Norwich, 2002; Dupoux et al., 2006). Moreover, previous studies indicated that female teachers appeared to be more willing to support children with disabilities in an inclusive setting than male teachers (Al-Zyoudi, 2006; Alghazo & Naggar Gaad, 2004; Opdal et al., 2001).

Age

The present study did not observe that teachers' age significantly influenced teachers' self-efficacy, teachers' attitudes or teachers' willingness to include and teach pupils with disabilities in the regular education classroom. These findings are not consistent with previous studies, which indicated that teachers' age is a significant variable affecting the attitudes of teachers towards teaching pupils with disabilities in inclusive classrooms. Previous studies indicated that younger teachers have significantly more positive attitudes towards inclusion than older teachers (Alghazo & Gaad, 2004; Avramidis & Norwich, 2002; Forlin, 1995). Kalyva et al. (2007) noted that teachers' age may determine the amount of training that they had received in educating children with special educational needs because in recent years, special needs education courses have begun to be offered as a component of the university curriculum. Thus, younger teachers with less teaching experience may have attended specialized courses, leading to the development of more positive attitudes towards inclusion than are observed in older teachers.

A possible explanation for the inconsistency of the findings is that the majority of the teachers who participated in the present study were not young teachers; most (75%) were in the categories of 31 to 40 years and older.

Another factor that may have contributed to the inconsistency of the findings between the present study and previous studies is a lack of training in special needs education for the majority of the participants. In Tanzania, the curriculum for the basic teacher education training course (preservice teachers at the certificate level in teachers' education colleges) does not include courses related to special needs education. After basic teacher education training, in-service teachers may decide to take special needs education courses voluntarily in one of the teachers' education colleges, such as Patandi Teachers' College, which offers courses in special needs education at the certificate and diploma levels. However, one of the challenges regarding teachers' participation in such courses is that teachers are required to pay the tuition fee themselves in addition to other costs to finance their studies. This has led many

teachers to choose not to participate in special needs education training. Consequently, the majority of teachers in Tanzania are not receiving training in educating children with disabilities. This may be another explanation why teachers' age did not significantly affect the teachers' self-efficacy, attitudes or willingness to teach pupils with disabilities in the regular education classroom.

Teachers' training experience

The findings of the present study indicated that teaching experience does not significantly affect teachers' self-efficacy, attitudes and willingness to include and teach pupils with disabilities in the regular education classroom. The results demonstrated that more than half of the teachers (62%) had more than 10 years' teaching experience whereas 38% reported having less than 10 years' teaching experience. However, previous studies on inclusion indicated that teaching experience is consistently linked to the teachers' attitudes. For example, studies indicated that younger teachers and those teachers with little teaching experience were more supportive of inclusion than older and more experienced teachers (Al-Zyoudi, 2006; Glaubman & Lifshitz, 2001; Subban & Sharma, 2006).

Thus, the inconsistency of the findings between the present study and previous studies regarding teaching experience may be attributed to the fact that more than half of the participants (62%) were in the categories of 31 to 40 years or above. The majority had more than ten years of teaching experience.

Grade level taught

In the present study, the findings indicated that the grade level taught had no significant effects on teachers' perceived self-efficacy, teachers' attitudes or teachers' willingness to include and teach pupils with disabilities in the regular education classroom. The findings of the present study are not consistent with the results of previous studies, which reported that elementary school teachers expressed more positive attitudes towards inclusion. Thus, the findings of the present study were expected to demonstrate different results with regard to grade level taught (Avramidis & Norwich, 2002). Further, previous studies show that when children became older (children's age determines their grade level), teachers' attitudes became less positive towards inclusion because teachers who taught children at higher grade levels were more concerned with subject matter than individual differences (Al-Zyoudi, 2006;

Avramidis et al., 2000; Leyser et al., 1994). Notably, in the present study, participants were teachers who taught pupils from grades one to seven, and none of the grade levels taught appeared to have a specific effect on the teachers' self-efficacy, attitudes or willingness compared to other levels.

One possible explanation for this inconsistency between the previous studies and the findings of the present study is that the majority of teachers (70%) in this study had not received any training related to special needs education.

Class size and total number of pupils with disabilities per classroom

The results of the present study indicated that class size may not affect teachers' self-efficacy, teachers' attitudes or teachers' willingness to teach pupils with disabilities in the regular education classroom.

This is not consistent with results from the studies reviewed, which indicated that the size of the class may affect teachers' attitudes towards the inclusion of pupils with disabilities. For example, general educators reported that reducing class size to 20 pupils per classroom would facilitate teachers' having more positive attitudes. Large class sizes, which are the situation in Tanzania, may lead to teachers' developing negative attitudes towards inclusion (Kalyva et al., 2007).

Conversely, the findings of the present study indicated that the total number of pupils with disabilities per classroom negatively affected teachers' perceived self-efficacy and teachers' attitudes. This finding is consistent with previous studies, which noted that when teachers have pupils with disabilities in their classrooms, they view inclusion as difficult and stressful (Subban & Sharma, 2006). The findings of the present study are also confirmed by Forlin (1995), who observed that the inclusion of pupils with disabilities is viewed by some educators as increasing teacher workload.

In conclusion, because of the nature of schools and the working environment of teachers in Tanzania, the results of the present study are supported by previous studies (Forlin, 1995; Kalyva et al., 2007; Subban & Sharma, 2006). The sizes of the classes were large, and the majority of teachers (65%) reported having pupils with disabilities in their classrooms. Although a reduction to 20 pupils per classroom might positively affect teachers' self-efficacy, attitudes and willingness to include children with disabilities in their classrooms,

such a reduction is currently impossible in Tanzania. Even a reduction of class size from 60 to 40 may not have the same effect as a reduction from, for example, 30 to 20.

9.2.2 Training in special needs education

In the present study, the second research question addressed whether teachers' perceived self-efficacy, attitudes and willingness were related to their professional development training in the area of special needs education.

Teachers' self-efficacy

The findings of the present study indicated that teachers' professional development in special needs education had a positive and significant effect on the teachers' perceived self-efficacy scale. This implies that receiving training in educating children with special educational needs in their classrooms increases teachers' ability to handle children with special needs. Being more educated in special needs education most likely increases teachers' ability to determine what actions should be taken to teach children with disabilities. These findings are consistent with previous study results (Gabriele & Joram, 2007; Helms-Lorenz & Maulana, 2015).

Notably, the findings of the present study indicated that teachers' participation in professional development related to special needs education, e.g., attending seminars/workshops, school-based training, or participation by taking courses in special needs education at a teacher education college/university, had significant effects on teachers' self-efficacy towards teaching activities in the classroom. Such findings are clearly supported by Bandura (1997), who claimed that teachers who believed that they possessed the capability to succeed in teaching tended to show greater interest in their teaching work, persevere when confronted with difficult problems and put greater effort into completing work.

The findings of the present study affirm that teachers' participating in professional development, particularly when related to special needs education, may have significant effects on their self-efficacy, hence improving their classroom teaching (see Coladarci, 1992; Gibson et al., 1984; Hoy & Spero, 2005; Tschannen-Moran & Hoy, 2001; Podell & Soodak, 1993; Soodak & Podell, 1993; & Ross, 1992). One manner of interpreting the data in the present study is that professional development within the field of special education may have instilled more confidence in teachers in how to handle and teach children with special needs in their classrooms.

Teachers' attitudes

The results of the present study demonstrated significant effects of professional development in special needs education on the teachers' attitudes scale. For example, the findings demonstrated that teachers who received school-based training and college-based training in special needs education had a significantly higher mean score than teachers who were untrained. Thus, the results generally imply that training in special needs education can affect teachers' attitudes towards teaching pupils with disabilities in the regular education classroom. These findings were confirmed by Avramidis and Norwich (2002), who argued that without a coherent plan for training in the educational needs of children with special educational needs, the attempts to mainstream these children would be difficult (see also Dupoux et al., 2006).

Further, the findings of the present study indicate the importance of providing more opportunities for Tanzanian teachers to participate in professional development related to special needs education. For example, the results indicated that in Tanzania, the majority of teachers (70%) did not receive any training related to special needs education. However, previous studies suggested that increased training in special needs education leads to more positive attitudes because such training helps teachers feel more confident when including pupils with disabilities in their classrooms (Avramidis et al., 2000; Ghanizadeh et al., 2006; Kalyva et al., 2007). In addition, the present findings affirm that knowledge regarding educating children with disabilities in the regular classroom is important. The findings of the present study suggested that in-service training creates more knowledgeable teachers who are more effective in their teaching and consequently enhances positive attitudes towards inclusion (see, Al-Zyoudi, 2006).

Teachers' willingness

The final sub-research question investigated whether teachers' willingness to work with pupils with disabilities in the regular education classroom was related to the teacher's professional development training in special needs education. The findings of the present study revealed that professional development training in special needs education had a positive and significant effect on teachers' willingness sub-scales. These findings suggest that teachers who receive professional development training in special needs education are more positive towards the idea of having children with disabilities in their classrooms. This finding

was confirmed by previous findings that suggested that an understanding of teachers' willingness should be central to the planning and implementation of inclusion in regular schools because such an understanding positively enhances the willingness of teachers to include disabled pupils in their classrooms (Ojok & Wormnæs, 2013; Scruggs & Mastropieri, 1996).

Some research studies described the attitudes and willingness of primary school teachers to teach pupils with disabilities in regular schools to be one of the most prominent factors in the successful implementation of inclusive education. Soodak, Podell, and Lehman (1998) indicated that teachers' willingness to integrate a student with a disability depends on the nature and severity of the student's disability. Soodak and colleagues noted that teachers are more willing to integrate pupils with learning disabilities and less willing to integrate pupils with severe disabilities or mental retardation.

The results of this study indicated that teachers who underwent professional development training had a higher mean score on willingness to work with pupils with severe physical disabilities, followed by pupils with severe behavioural problems, and finally, they were willing to work with pupils with severe cognitive (intellectual) disabilities. This finding is consistent with previous studies. For example, Opdal et al. (2001) determined that teachers were less willing to support the inclusion of children with intellectual disabilities than children with other types of disabilities. Avramidis and Norwich (2002) observed that the willingness of teachers to support children with disabilities in their classrooms was more strongly influenced by the nature and severity of students' disabling conditions (child-related variables) and less by teacher-related variables (gender, age, teaching experience, etc.). Teachers' self-efficacy, attitudes and willingness to include children with different types of disabilities are discussed further below (see 9.2.3).

In conclusion, the findings of the present study demonstrated that the majority (70%) of teachers had not received any training in how to educate children with disabilities within regular education classrooms but nevertheless demonstrated a willingness to try. The findings of the present study were supported by Ajzen (2005), who argued that the willingness of teachers to work with pupils with disabilities likely influenced teachers' feelings of social support from others and their feelings of being capable of teaching children with special needs. Therefore, the findings of the present study, in addition to the argument provided by Ajzen (2005), suggested that teachers' professional development in special needs education

plays an important role in enhancing teachers' feelings (attitudes) and their ability (self-efficacy), which in turn, lead to teachers' increased willingness to work with children with disabilities in their regular education classrooms.

9.2.3 Types of disabilities

Another interesting research question was to examine the effects of the types of disability and their severity on teachers' perceived self-efficacy, attitudes, and willingness scales.

Teachers' self-efficacy

The findings of the present study demonstrated significant effects of the types of disabilities on the teachers' self-efficacy scale. For example, the findings indicated that teachers who had pupils with physical disabilities in their classrooms had a higher mean score on average on the perceived self-efficacy scale than teachers who had no pupils with disabilities in their classrooms. All eight types of disabilities were observed to have significant effects on the teachers' self-efficacy scale. Teachers who had experienced pupils with disabilities in their classrooms may have felt success that engendered confidence. In addition, they may have learned from this experience how to handle and teach children with disabilities in a manner that supported their perceived self-efficacy. This supposition is consistent with Takahashi (2011), who argued that if teachers believe they can positively affect students' learning, they are more likely to expend the effort to implement various pedagogical strategies and continue trying even when faced with setbacks in teaching and learning. Brownell and Pajares (1999) claimed that teachers with a higher sense of efficacy are more likely to view themselves as successful in teaching pupils with disabilities, and Katz (2015) affirmed that higher teachers' self-efficacy beliefs are a key ingredient in creating successful teaching and creating a better learning environment for pupils with disabilities. Although it is difficult to understand exactly how experience with teaching children with disabilities supported teachers' perceived self-efficacy, this experience appears to have provided them with some knowledge of how to handle and teach children with special needs. Formal educational courses within the field of special needs education may be important for teaching children with special needs; however, experience may also provide important knowledge and support teachers' belief in themselves.

Moreover, the findings of the present study indicated that the majority of teachers were not trained in any course related to the teaching of pupils with disabilities after they graduated from their preservice teachers' training programmes. Surprisingly, teachers demonstrated

higher self-efficacy if they had experience teaching pupils with disabilities. For example, personally experiencing successes and failures in their teaching activities most likely contributed to teachers' believing that they could overcome obstacles through perseverance (Bandura, 1997). Having children with disabilities in the classroom may provide teachers with experience in how to handle these children and how they can believe themselves into success. Although experience with different disability types had a significant positive effect on the teachers' self-efficacy scale, the findings appeared to be of negligible practical importance because of their small effect size.

Teachers' attitudes

The findings of the present study indicated that types of pupils' disabilities significantly affected the teachers' attitudes scale. Teachers who reported having pupils with visual impairments, physical disabilities, autism, and giftedness had a significantly higher mean score on the teachers' attitudes scale than teachers who reported not having had such pupils. This finding is consistent with findings reported in previous studies (Al-Zyoudi, 2006; Alghazo & Gaad, 2004; Forlin, 1995; Kalyva et al., 2007).

Some research studies concluded that the type of disability and its degree of severity were among the most important factors affecting a teacher's attitude towards integration or inclusion. Consistent with findings in the present study, Al-Zyoudi (2006) concluded that the acceptance of inclusion was lower for children with intellectual disabilities than for children with physical disabilities.

In addition, studies have indicated that when teachers' perceptions of severity increase, their positivity decreases. Teachers are more disposed to accept pupils with a mild disability than pupils with behavioural/emotional disabilities (Avramidis et al., 2000; Dupoux, 2006; Cook, 2001; de Boer et al., 2011; Lifshitz et al., 2004). The present study observed that there was no significant effect among these types of disabilities: speech/language delay, mild mental retardation, hearing impairment, behavioural problems, and the teachers' attitudes scale. Although the results were not significant in these variables, teachers who reported having pupils with such types of disabilities in their classrooms demonstrated more positive attitudes than teachers who reported not having pupils with those types of disabilities in their classes. An explanation for this may be the higher perceived self-efficacy demonstrated by teachers in the present study; other studies illustrated that a good teacher is one who demonstrates both

sufficient knowledge and skills and becomes more enthusiastic about including those pupils with difficulties or special educational needs (Avramidis et al., 2000; Sari et al., 2009; Tschannen-Moran & Hoy, 2001).

Teachers' willingness

The findings of the present study demonstrated a significant effect of teachers' experience with pupils with physical disabilities on teachers' willingness subscales. Teachers who reported having pupils with physical disabilities in their classrooms scored significantly higher on the teachers' willingness scale than teachers who reported not having pupils with physical disabilities in their classrooms. This finding is consistent with findings from previous studies (e.g., Alghazo & Gaad, 2004; Glaubman & Lifshitz, 2001; Opdal et al., 2001). A possible explanation may be that the higher perceived self-efficacy (enactive mastery experiences) and attitudes of the participants may contribute to these scores; the argument was supported by previous studies (Bandura, 1997; Sari et al., 2009; Tschannen-Moran & Hoy, 2001).

Moreover, the findings of the present study revealed the significant effect of autism on teachers' willingness subscales. The results of the present study indicated that teachers who reported not having autistic pupils in their classrooms scored significantly higher on the teachers' willingness scale (e.g., cognitive disability sub-scale and behavioural problems sub-scale) than teachers who reported having pupils with autism in their classrooms. This finding is supported by Scruggs and Mastropieri (1996), who claimed that teachers' willingness to work with children with disabilities varies widely depending on the type of disability experienced by pupils in the classrooms (also see Alghazo & Gaad, 2004; Avramidis & Norwich, 2002; Glaubman & Lifshitz, 2001; Lifshitz et al., 2004; Soodak et al., 1998).

With regard to experience with speech/language delay, mild mental retardation, hearing impairment, visual impairment, behavioural problems, and giftedness, the findings of the present study indicated that there were no significant effects on teachers' willingness subscales. Notably, there was no significant effect of speech/language delay, mild mental retardation, hearing impairment, visual impairment, behavioural problems, or giftedness as types of special needs on teachers' willingness subscales. The findings of the present study may be attributed to factors such as information and knowledge that teachers had regarding inclusion (Batsiou et al., 2008; Ghanizadeh et al., 2006), teachers' experience (Kalyva et al.,

2007; Parasuram, 2006), or child-related variables such as nature and the severity of the disabling conditions as observed by the teachers in their classrooms (Al-Zyoudi, 2006; Alghazo & Gaad, 2004; Avramidis et al., 2000; Avramidis & Norwich, 2002; Opdal et al., 2001; Scruggs & Mastropieri, 1996; Soodak, Podell, & Lehman, 1998; West, Denzer, Wildman, & Anhalt, 2013).

9.2.4 Relations between teachers' self-efficacy, attitudes and willingness to include children with disabilities in the regular education classroom

The findings of the present study (results for Questions 1 to 3) demonstrated that not all variables included as independent variables were significantly related to teachers' self-efficacy, teachers' attitudes, or teachers' willingness. For example, variables such as teachers' gender, age, years of teaching experience, grade level taught, and class size were determined to have insignificant effects on teachers' self-efficacy, attitudes and willingness. Further, variables such as number of pupils with disability per classroom, types of disabilities that pupils had in the classroom and teachers' professional development training in special needs education were the only factors that significantly affected teachers' self-efficacy, teachers' attitudes, and teachers' willingness.

However, the review of previous studies indicated that self-efficacy, attitudes, and the willingness of teachers to teach pupils with disabilities in the regular education classroom may be affected by several variables, including teacher's gender, age, teaching experiences, grade levels taught, class size, number of pupils with disabilities per classroom, types of disabilities, and teacher's professional development training in special needs education (Al-Zyoudi, 2006; Alghazo & Gaad, 2004; Avramidis et al., 2000b; Batsiou et al., 2008; Cook, 2001; de Boer et al., 2011; Dupoux et al., 2006; Forlin, 1995; Ghanizadeh et al., 2006; Glaubman & Lifshitz, 2001; Kalyva et al., 2007; Lifshitz, Glaubman, & Issawi, 2004; Opdal et al., 2001; Parasuram, 2006; Sari et al., 2009; Scruggs & Mastropieri, 1996; Subban & Sharma, 2006).

Thus, Question 4 focused on the relation among teachers' self-efficacy, attitudes, and willingness and determining how teachers' perceived self-efficacy and attitudes may predict teachers' willingness to teach pupils with disabilities in the regular education classroom. Modelling the relations among the dependent variables confirmed the relation between teachers' self-efficacy and attitudes. The correlation between the two variables was small but significant, as seen in the correlations presented in Table 8.1. The significant correlation

implied that there is a reciprocal relation between teachers' self-efficacy and teachers' attitudes towards teaching activities, particularly towards teaching pupils with disabilities in the regular education classroom. This finding is well supported by studies that indicated that self-efficacy and attitudes are crucial factors that shape people's lives, including believing in their ability to determine their own actions (behavioural), thoughts (cognitive), and feelings (affective) that may change over time (Bandura, 1997; Maio & Haddock, 2010; Tschannen-Moran, 1998). Therefore, this finding confirmed that the interrelation of teachers' self-efficacy and attitudes can most likely contribute to better teaching of pupils with disabilities in the regular education classroom.

Moreover, the findings of the present study confirmed a significant relation between teachers' self-efficacy and teachers' attitudes in predicting teachers' willingness to work with pupils with severe physical disabilities, cognitive disabilities and behaviour problems as proposed in Hypothesis 1 and Hypothesis 2. These findings are consistent with the findings of Ojok and Wormnæs (2013), who indicated that the extent to which children with disabilities are included in the regular classroom (e.g., because of teachers' self-efficacy and attitudes) is affected by the extent to which teachers are willing to support those pupils in their classrooms. In addition, the findings of the present study supports Hyman's study(2015), who demonstrated that a person's will is the source of all voluntary or intentional action and that an act cannot be attributed to the agency of an individual at all unless it originates in the person's will. This suggests that the willingness of teachers to work with pupils with disabilities in the regular education classroom cannot be complete without the teachers having the ability to teach (self-efficacy) and having appropriate attitudes (actions – behavioural, thoughts – cognitive, and feelings – affective) towards including pupils with disabilities. A possible explanation for this finding may be teachers' level of professional development training in special needs education. For example, the majority of teachers (70%) reported not having undergone any training related to special needs education. However, the findings demonstrated that school-based training and college-based training related to special needs education significantly contributed to strengthening the relation between teachers' attitudes and teachers' willingness to work with pupils with severe physical disabilities, cognitive disabilities and behaviour problems in the regular education classroom.

9.3 Summary of the main findings

The purpose of the present study was to investigate teachers' perceived self-efficacy, attitudes and willingness to work with pupils with disabilities in the regular education classroom. The independent variables that were investigated include: teachers' gender, age, teaching experiences, class size, grade level taught, and number of pupils with disabilities per classroom. Other variables were teachers' professional development training in special needs education (e.g., seminar/workshops, school-based training, and college/university-based training), and types of special needs (speech/language delay, mild mental retardation, hearing impairments, visual impairments, physical disabilities, behaviour problems, autism and giftedness). In addition, the present study developed two hypotheses to examine teachers' self-efficacy and attitudes in predicting teachers' willingness to work with children with severe disabilities in the regular education classroom. The following are the main points of the findings:

- i. The study demonstrated that the number of pupils with disabilities per classroom significantly affected teachers' perceived self-efficacy and teachers' attitudes but did not significantly affect teachers' willingness. Other teachers' background variables, such as gender, age, teaching experience, class size, and grade level taught did not significantly affect teachers' perceived self-efficacy, attitudes or willingness. Thus, the findings indicate that the number of pupils with disabilities per classroom significantly determines teachers' self-efficacy and teachers' attitudes towards their teaching in the regular education classroom.
- ii. The findings demonstrated that teachers' participation in professional development programmes related to special needs education, such as attending seminars or workshops, school-based training, or attending courses in special needs education at a teacher education college or at university, contributes significantly to improving teachers' self-efficacy towards teaching activities in the regular education classroom and increasing teachers' willingness to work with children with severe learning disabilities in the regular education classroom.

In addition, school-based training and attending courses in special needs education at teacher education colleges or at university have been determined to significantly affect teachers' attitudes towards the inclusion of pupils with disabilities in the regular education classroom.

The findings of the present study confirmed that professional development in special needs education is a crucial factor or determinant in enhancing teachers' self-efficacy, attitudes and willingness to modify their teaching activities in the regular education classroom.

- iii. Concerning types of disabilities, the findings of the present study indicated that in seven types of special needs that were studied – speech/language delay, mild mental retardation, hearing impairment, vision impairment, physical disabilities, behaviour problems, and giftedness – teachers who reported having pupils with such disabilities in their classrooms had a higher mean score on the teachers' self-efficacy scale than teachers who had no such experience in their classrooms. This appears to be a significant positive effect in inclusion. However, the results indicated that teachers who reported having pupils with autism in their classrooms had a lower mean score on the teachers' self-efficacy scale than teachers who reported not having pupils with autism in their classrooms, and there was a significant but negative effect on inclusion in the regular education classroom.
- iv. Regarding teachers' attitudes, the findings indicated that four types of special needs, visual impairments, physical disabilities, autism and giftedness, demonstrated significant effects on the teachers' attitudes scale whereas only two types of disabilities, physical disability and autism, were observed to significantly affect the teachers' willingness sub-scales.
- v. Finally, the findings of the present study indicated that teachers' self-efficacy and teachers' attitudes were significantly interrelated with regard to teaching activities in the regular education classroom. Further, the findings demonstrated that teachers' perceived self-efficacy can be a predictor of teachers' willingness to work with pupils with severe learning disabilities (physical disabilities, cognitive disabilities, and behaviour problems) in the regular education classroom. Above all, the findings of the present study confirmed that teachers' attitudes can be the best predictor of teachers' willingness to work with pupils with severe learning disabilities (physical disabilities, cognitive disabilities, and behaviour problems) in the regular education classroom.

9.4 Implications for further research and limitations

The following section presents suggestions regarding future research and addresses some limitations of the present study. First, the section presents limitation of the study followed by implications for further research.

9.4.1 Limitations of the study

Several limitations were identified. The first limitation is concerning the selection of the sample. The sample of selected primary schools in this study was limited to public/government schools. This did not provide an opportunity to include teachers who were working in private primary schools; thus, the study lacks their perspectives.

Second, the language of the original instrument and its translation are considered to be another limitation of the present study. For example, although the survey instrument was translated using feedback from two Swahili language experts, it was not formally piloted, which should be recognized as a limitation.

Third, due to the cross-sectional research design (all variables measured at the sametime) the statistical relations revealed between variables in the current study cannot be interpreted as causal relations. This could be considered as another limitation of the present study.

Fourth, the interpretation of the participating teachers' self-efficacy, attitudes and willingness was based on self-reports on the questionnaire. Some teachers may have reported as they believed they should respond instead of reporting what they in fact do. This may be considered another limitation of the present study.

Finally, given the big sample and the sampling method (Creswell, 2012; Field, 2013), it is assumed that the results of the current study is representative of teachers within similar schooltypes in Tanzania. The results may also be relevant to other countries, most likely in sub-Saharan Africa. However, generalization to other groups and countries should be done with cautiousness that the culture and practice vary.

9.4.2 Implications for further research

The present study has contributed to the field of inclusive education and to understanding teachers' self-efficacy, and teachers' attitudes and willingness towards inclusive education by focusing a large and representative sample of a specific group of teachers in Tanzania. More studies, however, should be conducted in other areas of Tanzania to investigate perceived self-efficacy, attitudes and the willingness of primary school teachers to include pupils with disabilities in the regular education classroom. Data and findings from various regions and districts could provide more precise information and elucidate the current situation across the entire country. Moreover, a comparison between primary school teachers in the so-called 'inclusive schools' and regular primary schools should be conducted to compare their views.

Teachers who teach in public/government primary schools and teachers who teach in private primary schools could also be compared.

Second, the present study employed a quantitative method to gather data from teachers, and the information was based entirely on teachers' self-report. In future studies, data on inclusive education in regular education classroom practices should be collected by qualitative research methods as well, preferably by observing the teaching activities of the regular primary school teachers in their classrooms. In addition, the attitudes of head teachers, parents, education administrators such as ward education officers, district education officers and possibly regional education officers towards inclusion should be investigated.

Third, there was scant literature addressing teachers' willingness to consider inclusion. Thus, the defined variables in the present study were limited by the available literature. Most likely, other important factors/variables that could function as predictors of teachers' self-efficacy, attitudes and willingness were not included. In future research, other factors should be studied to achieve a wider understanding of the issues influencing teachers' self-efficacy towards teaching activities in the regular education classroom. Similarly, other factors should be studied to achieve a wider understanding of the issues influencing teachers' attitudes and willingness, such as teachers' knowledge of policy and law and whether the teachers have a family member with a disability.

Fourth, the present study has demonstrated that the majority (70%) of teachers did not receive any training in special needs education. Therefore, the present study assumes that their knowledge base may be insufficient to provide the practical knowledge regarding inclusion. Because training in special needs education generated positive effects on teachers' self-efficacy and attitudes towards inclusion, future research should compose and test a special needs education training model for the Tanzanian education system.

Finally, the present study encourages more research studies to be conducted with a focus on pre-service teachers in teachers' training colleges or universities that offer training programmes in special needs education. Such studies would explore the pre-service teachers' self-efficacy, attitudes and willingness to consider inclusion before they embark on a teaching career. The comparison can also be conducted between pre-service teachers and in-service teachers who work in the regular primary schools.

9.5 Implication for practice and policy

The findings of the present study may have several practical implications at the school level, in which teachers are the key players in implementing the educational policies, up to the policy level, in which politicians formulate the educational policies that govern the country's education system.

9.5.1 Implications of research findings for practice at the school level or in teacher education

The findings of the present study indicated that the majority (70%) of teachers were not trained at all in special needs education. This finding calls for serious consideration of the arrangement of the training programmes for in-service teachers as a possible means of equipping teachers with the basic knowledge and skills for teaching pupils with disabilities in the regular education classroom. Strategies to help teachers improve their skills and develop more self-efficacy, attitudes and willingness to consider inclusion may include providing teachers with well-planned and organized in-service training programmes such as workshops and seminars at the ward or district level, school-based training, or participation in training at the teachers' college level. In addition, essential materials and personal supports should be provided for teachers who teach pupils with disabilities. Perhaps this may help to stimulate and strengthen their teaching abilities and encourage and motivate them to believe that every child can learn despite the disabilities they may experience.

9.5.2 Implications of research findings for practice at the policy-making level

First, although the policy of inclusion has been implemented in Tanzanian primary schools since 1997, inclusion policy and support should span the wider educational system to address the needs of young children. According to the findings of the present study, there is a need for the government to help promote the idea of inclusive education by highlighting its advantages to the public. This wider policy scope should provide primary school teachers with the opportunity to consult education administrators in their area such as head teachers, ward education officers or district education administrators – those responsible for special needs education to improve the implementation of inclusive education, particularly for children with disabilities.

Second, the present study calls for the government to formulate education and training policies that will lead to the development of training programmes to enable pre-service

teachers to obtain adequate knowledge and skills to educate pupils with disabilities. Teacher-training policy should be developed to ensure specialization among teacher trainees in the area of special education. Practical experience with pupils with disabilities should be an essential component of such training. This will guarantee that pre-service teachers will be equipped with basic knowledge and skills and will familiarize themselves with practical techniques to use with pupils with disabilities before they begin their teaching careers.

Third, the results from the data analyses indicated that teachers' self-efficacy and teachers' attitudes were significantly affected by the total number of pupils with disabilities per classroom as well as by the types of disabilities experienced by pupils. This finding indicates that it could be important for policy makers and curriculum developers to focus attention on the total number of pupils with disabilities per classroom as one step in approaching the challenges that many teachers face in inclusive classrooms in Tanzania despite considering the type of disabilities that pupils bring to the classroom or school.

Fourth, the findings of the present study call for the Ministry of Education through curriculum developers, to design and develop a flexible primary school curriculum to enable teachers to feel less stress and to relieve the workload (burden) when they are teaching disabled students in the regular education classroom. This is due to the overcrowding of pupils (pupils with and without disabilities) in the classroom in most of the schools studied. Thus, designing and developing flexible school curriculum content to make lessons pupil-centred may help teachers provide additional help and instructional support to pupils with disabilities. Further, the Ministry of Education (policy makers) should be precise regarding the total number of pupils with disabilities in each classroom: a minimum and a maximum number. Such regulations for inclusive classrooms will enable teachers to practice good management and control all teaching activities with all pupils regardless of the different types of disabilities that pupils may have. Reducing the total number of pupils with disabilities in each classroom whenever possible and providing adequate classroom space may be valuable in creating successful inclusive programmes.

Fifth, the results from the confirmatory factor analyses indicated that teachers' attitudes are the best predictor of teachers' willingness to work with pupils with severe learning disabilities in the regular education classroom. Notably, school-based and college-based training have been determined to be significant factors affecting teachers' attitudes towards inclusion in the regular education classroom. Therefore, the Ministry of Education, education administrators,

policy makers, teacher educators and practitioners must consider and address these factors because working on them may help to increase teachers' willingness to work with pupils with disabilities in the regular education classroom. The results of this study indicated that the more teachers develop positive attitudes after receiving school-based and college-based training in special needs education, the more teachers' willingness to work with pupils with severe learning disabilities in the regular education classroom can be predicted.

Finally, some pupils without disabilities in the regular education classroom may in fact require some preparation so that they would be more willing to accept their disabled classmates as friends. Such preparation would minimize the rejection of pupils with disabilities and maximize their acceptance. Thus, to help teachers accomplish this goal, information regarding disabilities and people with disabilities might be added to the current primary school curriculum and presented to the pupils to help in the creation of a society that embraces everybody. For example, life-skills courses could perhaps incorporate appropriate explanations of what disability means, how disability affects individuals and their families, and what can be done to accommodate people or pupils with disabilities. In this manner, greater disability awareness may be developed in Tanzania.

9.6 Concluding remarks

There are many challenges in developing quality inclusive education in developing countries, as also still is the case in many developed countries. Also, the focus of the present study focus on the teacher factors only. The findings, however, are in line with findings in previous studies. Some types of disabilities, more than others, and also the number of of children with special needs in the classroom seems to be reflected in teachers' attitudes and willingness in a negative way. On the other hand, professional training or/ and pre-service and in-service special needs educational courses seems to strengthen both teachers self-efficacy, attitudes towards inclusive education and willingness to include pupils with disabilities in the regular education classroom. There may be different ways for the government and local authorities to support teachers and teacher students in developing their knowledge in a way that support these important aspects in developing quality education for all.

In Tanzania, the government mandated a movement towards the inclusion of pupils with disabilities in regular education classrooms. Therefore, regular primary school teachers are responsible for teaching all pupils, regardless of their disabilities, in the same regular education classroom. It is hoped that the findings of the present study will expand people's

current understanding of the inclusion of children with disabilities in Tanzanian primary schools. Moreover, the findings of the present study provide new information that will be helpful in critiquing the broader movement of inclusion in the Tanzanian educational context based on the perspectives and experiences of those who were involved in the study.

The results of the present study may be used to form the basis for more extensive planning, organization and improvement in the quality of pre-service and in-service teacher training as well as educational preparation for inclusive education for primary school children with disabilities. Additionally, data from this study may be utilized to plan an appropriate curriculum and sufficient training for both regular primary school teachers and student teachers who may specialize in special education to prepare to work in inclusive settings. Many steps may be necessary to meet the challenges faced by the inclusion of children with special needs in Tanzania. Better education of teachers and in-service training will be one important step to take.

Finally, the findings of the present study indicated that teachers' professional development training in special needs education and the types of pupils' disabilities in the classroom are predictors of Tanzanian regular primary school teachers' self-efficacy, attitudes and willingness to include children with disabilities. However, teachers' attitudes were determined to be the best predictor of teachers' willingness. Therefore, it is hoped that this study can contribute to better planning to facilitate the implementation of inclusion in the Tanzanian education system and thus improve the quality of training and professional development for Tanzanian regular primary school teachers and enhance positive educational outcomes for pupils with disabilities in Tanzania.

REFERENCES

- Ainscow, M. (1999). *Understanding the development of inclusive schools*. London: Falmer Press.
- Ainscow, M., Booth, T., & Dyson, A. (2006). *Improving schools, developing inclusion*. London: Routledge.
- Ainscow, M., & Sandill, A. (2010). Developing inclusive education systems: the role of organisational cultures and leadership. *International Journal of Inclusive Education*, 14(4), 401-416. doi:10.1080/13603110802504903
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. doi:10.1016/0749-5978(91)90020-T
- Ajzen, I. (2005). *Attitudes, personality and behavior* (2nd ed. ed.). Maidenhead: Open University Press.
- Al-Zyoudi, M. (2006). Teachers' attitudes towards inclusive education in Jordanian schools. *International Journal of Special Education*, 21(2), 55-62.
- Alghazo, E. M., & Naggat Gaad, E. E. (2004). General Education Teachers in the United Arab Emirates and Their Acceptance of the Inclusion of Students with Disabilities. *British Journal of Special Education*, 31(2), 94-99. doi:10.1111/j.0952-3383.2004.00335.x
- Alhassan, A.-R. K., & Abosi, O. C. (2014). Teacher Effectiveness in Adapting Instruction to the Needs of Pupils With Learning Difficulties in Regular Primary Schools in Ghana. *SAGE Open*, 4(1). doi:10.1177/2158244013518929
- Allinder, R. M., Fuchs, L. S., & Witt, J. C. (1994). Alternative Ways of Analyzing Effects of a Short School Break on Students With and Without Disabilities. *School Psychology Quarterly*, 9(2), 145-160. doi:10.1037/h0088851
- Allport, G. (1967). Attitudes, in M.Fisherbein (Ed.) Readings in attitude theory and measurement. *New York, John Wiley & Sons*
- Ametepee, L. K., & Anastasiou, D. (2015). Special and inclusive education in Ghana: Status and progress, challenges and implications. *International Journal of Educational Development*, 41, 143-152. doi:10.1016/j.ijedudev.2015.02.007
- Anderson, J., & Boyle, C. (2015). Inclusive Education in Australia: Rhetoric, Reality and the Road Ahead. *Support for Learning*, 30(1), 4-22. doi:10.1111/1467-9604.12074
- Ashton, P. (1984). Teacher Efficacy: A Motivational Paradigm for Effective Teacher Education. *Journal of Teacher Education*, 35(5), 28-32. doi:10.1177/002248718403500507
- Avramidis, E., Bayliss, P., & Burden, R. (2000a). Student teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school. *Teaching and Teacher Education*, 16(3), 277-293. doi:10.1016/S0742-051X(99)00062-1
- Avramidis, E., Bayliss, P., & Burden, R. (2000b). A Survey into Mainstream Teachers' Attitudes Towards the Inclusion of Children with Special Educational Needs in the Ordinary School in one Local Education Authority. *Educational Psychology*, 20(2), 191-211. doi:10.1080/713663717
- Avramidis, E., & Kalyva, E. (2007). The influence of teaching experience and professional development on Greek teachers' attitudes towards inclusion. *European Journal of Special Needs Education*, 22(4), 367-389. doi:10.1080/08856250701649989
- Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration / inclusion: a review of the literature. *European Journal of Special Needs Education*, 17(2), 129-147. doi:10.1080/08856250210129056

- Bandura, A. (1986). *Social foundations of thought and action : a social cognitive theory*. Englewood Cliffs, N.J: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy : the exercise of control*. New York: Freeman.
- Bandura, A. (2003). Self-Efficacy. doi:10.4135/9780857025753.n178
- Bandura, A. (2008). Self-Efficacy. doi:10.4135/9781412956246.n479
- Bandura, A., & Estes, W. K. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. doi:10.1037/0033-295X.84.2.191
- Batsiou, S., Bebetos, E., Panteli, P., & Antoniou, P. (2008). Attitudes and intention of Greek and Cypriot primary education teachers towards teaching pupils with special educational needs in mainstream schools. *International Journal of Inclusive Education*, 12(2), 201-219. doi:10.1080/13603110600855739
- Berends, M. (2006). Survey methods in educational research. In J. L. Green, G. Camilli, P. B. Elmore, A. Skukauskaitė, & E. Grace (Eds.), *Handbook of complementary methods in education research* (pp. 623-640). Mahwah, N.J: Lawrence Erlbaum.
- Berrios, G., & Gili, M. (1995). Will and its disorders: a conceptual history. *History of Psychiatry*, 6(1), 87-104.
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Booth, T., Ainscow, M., Kingston, D., & Centre for Studies on Inclusive, E. (2006). *Index for inclusion : developing play, learning and participation in early years and childcare* (revised. ed.). Bristol: Centre for Studies on Inclusive Education.
- Breckler, S. J., & Manis, M. (1984). Empirical validation of affect, behavior, and cognition as distinct components of attitude. *Journal of Personality and Social Psychology*, 47(6), 1191-1205. doi:10.1037/0022-3514.47.6.1191
- Brígido, M., Borrachero, A. B., Bermejo, M. L., & Mellado, V. (2013). Prospective primary teachers' self-efficacy and emotions in science teaching. *European Journal of Teacher Education*, 36(2), 200-217. doi:10.1080/02619768.2012.686993
- Brownell, M. T., & Pajares, F. (1999). Teacher Efficacy and Perceived Success in Mainstreaming Students with Learning and Behavior Problems. *Teacher Education and Special Education*, 22(3), 154-164.
- Byrne, B. M. (2012). *Structural equation modeling with Mplus : basic concepts, applications, and programming*. New York: Routledge.
- Campbell, P., Milbourne, S., Silverman, C., & Feller, N. (2005). Promoting Inclusion by Improving Child Care Quality in Inner-City Programs. In (Vol. 28, pp. 65-79).
- Chan, D. W. (2008). Dimensions of teacher self- efficacy among Chinese secondary school teachers in Hong Kong. *Educational Psychology*, 28(2), 181-194. doi:10.1080/01443410701491833
- Cheema, J. R., & Skultety, L. S. (2016). Self-efficacy and literacy: a paired difference approach to estimation of over-/under-confidence in mathematics- and science-related tasks. *Educational Psychology*, 1-14. doi:10.1080/01443410.2015.1127329
- Chiner, E., & Cardona, M. C. (2013). Inclusive education in Spain: how do skills, resources, and supports affect regular education teachers' perceptions of inclusion? *International Journal of Inclusive Education*, 17(5), 526-541. doi:10.1080/13603116.2012.689864
- Coladarci, T. (1992). Teachers' Sense of Efficacy and Commitment to Teaching. *The Journal of Experimental Education*, 60(4), 323-337. doi:10.1080/00220973.1992.9943869
- Cook, B. G. (2001). A Comparison of Teachers' Attitudes Toward Their Included Students with Mild and Severe Disabilities.(Statistical Data Included). *Journal of Special Education*, 34(4), 203.
- Corsini, R. J. (1999). *The dictionary of psychology*. Philadelphia: Brunner/Mazel.
- Creswell, J. W. (2012). *Educational research : planning, conducting, and evaluating quantitative and qualitative research* (4th ed. ed.). Boston, Mass: Pearson.

- D'Alessio, S. (2012). Integrazione scolastica and the development of inclusion in Italy: does space matter? *International Journal of Inclusive Education*, 16(5-6), 519-534. doi:10.1080/13603116.2012.655495
- D'Alessio, S. (2013). Inclusive education in Italy: A reply to Giangreco, Doyle and Suter (2012). *Life Span and Disability*, 16(1), 95-120.
- D'Alessio, S., & Watkins, A. (2009). International Comparisons of Inclusive Policy and Practice: Are We Talking about the Same Thing? *Research in Comparative and International Education*, 4(3), 233-249. doi:10.2304/rcie.2009.4.3.233
- de Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: a review of the literature. *International Journal of Inclusive Education*, 15(3), 331-353. doi:10.1080/13603110903030089
- De Vaus, D. A. (2002). *Social surveys : Vol. 3* (Vol. Vol. 3). London: Sage.
- DFID. (2000). Education for All: The Challenge of Universal Primary Education. . *Department of International Development, London*.
- Dupoux, E., Hammond, H., Ingalls, L., & Wolman, C. (2006). Teachers' attitudes toward students with disabilities in Haïti. *International Journal of Special Education*, 21(3), 1-14.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, Tex: Harcourt Brace Jovanovich.
- Education, E. A. f. D. i. S. N. (2008). *Special Education Country data*. Retrieved from Brussels: https://www.european-agency.org/sites/default/files/special-needs-education-country-data-2008_SNE-Data-2008.pdf
- Education, E. A. f. D. i. S. N. (2012). *Special Education Country data*. Retrieved from Brussels: https://www.european-agency.org/sites/default/files/special-needs-education-country-data-2008_SNE-Data-2008.pdf
- Elder, B. C., Damiani, M. L., & Oswago, B. O. (2015). From attitudes to practice: utilising inclusive teaching strategies in Kenyan primary schools. *International Journal of Inclusive Education*, 1-22. doi:10.1080/13603116.2015.1082648
- Elder, B. C., Damiani, M. L., & Oswago, B. O. (2016). From attitudes to practice: utilising inclusive teaching strategies in Kenyan primary schools. *International Journal of Inclusive Education*, 20(4), 413-434. doi:10.1080/13603116.2015.1082648
- Eleweke, C. J., & Rodda, M. (2002). The challenge of enhancing inclusive education in developing countries. *International Journal of Inclusive Education*, 6(2), 113-126. doi:10.1080/13603110110067190
- Everington, C., & Stevens, B. (1999). Teachers' attitudes, felt competence, and need of support for implementation of inclusive educational programs.(Statistical Data Included). *Psychological Reports*, 85(1), 331.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics : and sex and drugs and rock 'n' roll* (4th ed. ed.). Los Angeles: SAGE.
- Flem, A., & Keller, C. (2000). Inclusion in Norway: a study of ideology in practice. *European Journal of Special Needs Education*, 15(2), 188-205. doi:10.1080/088562500361619
- Forlin, C. (1995). Educators' beliefs about inclusive practices in Western Australia. *British Journal of Special Education*, 22(4), 179-185. doi:10.1111/j.1467-8578.1995.tb00932.x
- Forlin, C. (2001). Inclusion: identifying potential stressors for regular class teachers. *Educational Research*, 43(3), 235-245. doi:10.1080/00131880110081017
- Forlin, C. (2006). Inclusive Education in Australia Ten Years after Salamanca. *European Journal of Psychology of Education*, 21(3), 265-277. doi:10.1007/BF03173415
- 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.
doi:10.1080/13603110701365356
- Frankel, E. B. (2004). Supporting Inclusive Care and Education for Young Children with Special Needs and Their Families; an International Perspective. *Childhood Education*, 80(6), 310. doi:10.1080/00094056.2004.10521277
- Gabriele, A. J., & Joram, E. (2007). Teachers' Reflections on Their Reform-Based Teaching in Mathematics: Implications for the Development of Teacher Self-Efficacy. *Action in Teacher Education*, 29(3), 60-74. doi:10.1080/01626620.2007.10463461
- Gal, E., Schreur, N., & Engel-Yeger, B. (2010). Inclusion of children with disabilities: Teachers attitudes and requirements for environmental accommodations. *International Journal of Special Education*, 25(2), 89.
- Ghanizadeh, A., Bahredar, M. J., & Moeini, S. R. (2006). Knowledge and attitudes towards attention deficit hyperactivity disorder among elementary school teachers. *Patient Education and Counseling*, 63(1), 84-88. doi:10.1016/j.pec.2005.09.002
- Gibson, S., Dembo, M. H., & Ball, S. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 569-582. doi:10.1037/0022-0663.76.4.569
- Glaubman, R., & Lifshitz, H. (2001). Ultra-orthodox Jewish teachers' self-efficacy and willingness for inclusion of pupils with special needs. *European Journal of Special Needs Education*, 16(3), 207-223. doi:10.1080/08856250110074373
- Glickman, C. D., & Tamashiro, R. T. (1982). A comparison of first- year, fifth- year, and former teachers on efficacy, ego development, and problem solving. *Psychology in the Schools*, 19(4), 558-562. doi:10.1002/1520-6807(198210)19:4<558::AID-PITS2310190426>3.0.CO;2-F
- Guskey, T. R. (1984). The Influence of Change in Instructional Effectiveness upon the Affective Characteristics of Teachers. *American Educational Research Journal*, 21(2), 245-259.
- Helms-Lorenz, M., & Maulana, R. (2015). Influencing the psychological well-being of beginning teachers across three years of teaching: self-efficacy, stress causes, job tension and job discontent. *Educational Psychology*, 1-26.
doi:10.1080/01443410.2015.1008403
- Hofman, R. H., & Kilimo, J. S. (2014). Teachers' Attitudes and Self-Efficacy Towards Inclusion of Pupils With Disabilities in Tanzanian Schools. *Journal of Education and Training*, 1(2), 177. doi:10.5296/jet.v1i2.5760
- Hornby, G. (2015). Inclusive special education: development of a new theory for the education of children with special educational needs and disabilities. *British Journal of Special Education*, 42, 234-256. <https://doi.org/10.1111/1467-8578.12101>
- Hoy, A. W., & Spero, R. B. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education*, 21(4), 343-356. doi:10.1016/j.tate.2005.01.007
- Hu, L. T., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. doi:10.1080/10705519909540118
- Hyman, J. (2015). *The Modern Theory of the Will*: Oxford University Press.
- Høigaard, R., Giske, R., & Sundslø, K. (2012). Newly qualified teachers' work engagement and teacher efficacy influences on job satisfaction, burnout, and the intention to quit. *European Journal of Teacher Education*, 35(3), 347-357.
doi:10.1080/02619768.2011.633993
- Kalenga, R. C., & Fourie, E. (2012). Trekking back to mainstream for inclusive education, is it there? *Educational Studies*, 38(2), 175-187. doi:10.1080/03055698.2011.599998

- Kalyva, E., Gojkovic, D., & Tsakiris, V. (2007). Serbian Teachers' Attitudes towards Inclusion. *International Journal of Special Education*, 22(3), 31-36.
- Kant, I., & Pluhar, W. S. (2002). *Critique of practical reason*. Indianapolis: Hackett publishing company.
- Katz, J. (2015). Implementing the Three Block Model of Universal Design for Learning: effects on teachers' self-efficacy, stress, and job satisfaction in inclusive classrooms K-12. *International Journal of Inclusive Education*, 19(1), 1-20. doi:10.1080/13603116.2014.881569
- Katz, S., & Stupel, M. (2015). Enhancing elementary-school mathematics teachers' efficacy beliefs: a qualitative action research. *International Journal of Mathematical Education in Science and Technology*, 47(3), 421-439. doi:10.1080/0020739x.2015.1080314
- Khamis, G. (2011) Teachers' Beliefs and Practices Observed in Inclusive Classes. *Electronic Journal of Inclusive Education*, 2 (8).
- Khochen, M., & Radford, J. (2012). Attitudes of teachers and headteachers towards inclusion in Lebanon. *International Journal of Inclusive Education*, 16(2), 139-153. doi:10.1080/13603111003671665
- Killoran, I., Woronko, D., & Zaretsky, H. (2013). Exploring preservice teachers' attitudes towards inclusion. *International Journal of Inclusive Education*, 18(4), 427-442. doi:10.1080/13603116.2013.784367
- Kim, Y. H. (2011). Prospective early childhood educators' meta-cognitive knowledge and teacher self-efficacy: exploring domain-specific associations. *Educational Psychology*, 31(6), 707-721. doi:10.1080/01443410.2011.599924
- Klehm, M. (2013). Teacher attitudes: The Effect of Teacher Beliefs on Teaching Practices and Achievement of Students with Disabilities. *Open Access Dissertations.Paper 2*. http://digitalcommons.uri.edu/oa_diss/2
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed. ed.). New York: Guilford Press.
- Kristensen, K., Omagor- loican, M., Onen, N., & Okot, D. (2006). Opportunities for inclusion? The education of learners with special educational needs and disabilities in special schools in Uganda. *British Journal of Special Education*, 33(3), 139-147. doi:10.1111/j.1467-8578.2006.00429.x
- Larrivee, B., & Cook, L. (1979). Mainstreaming: a Study of the Variables Affecting Teacher Attitude. *The Journal of Special Education*, 13(3), 315-324. doi:10.1177/002246697901300310
- Lehtomäki, E., Tuomi, M. T., & Matonya, M. (2014). Educational research from Tanzania 1998–2008 concerning persons with disabilities: What can we learn? *International Journal of Educational Research*, 64, 32-39. doi:10.1016/j.ijer.2013.10.005
- Leyser, Y., Kapperman, G., & Keller, R. (1994). Teacher attitudes toward mainstreaming: a cross- cultural study in six nations. *European Journal of Special Needs Education*, 9(1), 1-15. doi:10.1080/0885625940090101
- Lifshitz, H., Glaubman, R., & Issawi, R. (2004). Attitudes towards inclusion: the case of Israeli and Palestinian regular and special education teachers. *European Journal of Special Needs Education*, 19(2), 171-190. doi:10.1080/08856250410001678478
- Lynch, P., McCall, S., Douglas, G., McLinden, M., Mogesa, B., Mwaura, M., . . . Njoroge, M. (2011). Inclusive Educational Practices in Kenya: Evidencing Practice of Itinerant Teachers Who Work with Children with Visual Impairment in Local Mainstream Schools. *International Journal of Educational Development*, 31(5), 478-488. doi:10.1016/j.ijedudev.2010.08.006

- Maio, G. R., & Haddock, G. (2010). *The psychology of attitudes and attitude change*. Los Angeles: SAGE.
- Majoko, T. (2016). Mainstream Early Childhood Education teacher preparation for inclusion in Zimbabwe. *Early Child Development and Care*, 1-17.
doi:10.1080/03004430.2016.1180292
- Martinez-Lopez, E., Zagalaz Sanchez, M., Ramos Alvarez, M., & de la Torre Cruz, M. (2010). Self-efficacy expectations in teacher trainees and the perceived role of schools and their physical education department in the educational treatment of overweight students. *European Physical Education Review*, 16(3), 251-266.
doi:10.1177/1356336x10385044
- McMillan, J. H. (2008). *Educational research : fundamentals for the consumer* (5th ed. ed.). Boston: Pearson.
- Meijer, C. J. W., & Foster, S. F. (1988). THE EFFECT OF TEACHER SELF-EFFICACY ON REFERRAL CHANCE. *Journal of special education*, 22(3), 378-385.
- Meijer, C. J. W., Pijl, S. J., & Hegarty, S. (1994). *New perspectives in special education : a six-country study of integration*. London: Routledge.
- Mertens, D. M. (2010). *Research and evaluation in education and psychology : integrating diversity with quantitative, qualitative and mixed methods* (3rd ed. ed.). Los Angeles: SAGE.
- Miles, S. (2011). Exploring understandings of inclusion in schools in Zambia and Tanzania using reflective writing and photography. *International Journal of Inclusive Education*, 15(10), 1087-1102. doi:10.1080/13603116.2011.555072
- Miles, S., & Kaplan, I. (2005). Using Images to Promote Reflection: An Action Research Study in Zambia and Tanzania. *Journal of Research in Special Educational Needs*, 5(2), 77-83. doi:10.1111/J.1471-3802.2005.00045.x
- Miles, S., & Singal, N. (2010). The Education for All and inclusive education debate: conflict, contradiction or opportunity? *International Journal of Inclusive Education*, 14(1), 1-15. doi:10.1080/13603110802265125
- Mittler, P. J. (2000). *Working towards inclusive education : social contexts*. London: David Fulton.
- Mittler, P. J. (2005). *The global context of inclusive education: The role of the United Nations*. In *Contextualising inclusive education*. (D. Mitchell Ed.). London: Routledge/Falmer.
- Mmbaga, D. R. (2002). *The inclusive classroom in Tanzania : dream or reality?* (59), Institute of International Education, Stockholm University, Stockholm.
- Nes, K. (2014). Inclusive Education in Norway: Historical Roots and Present Challenges. doi:10.6033/specialeducation.2.81
- O'Neill, S. C., & Stephenson, J. (2011). The measurement of classroom management self-efficacy: a review of measurement instrument development and influences. *Educational Psychology*, 31(3), 261-299. doi:10.1080/01443410.2010.545344
- Ocloo, M. A., & Subbey, M. (2008). Perception of Basic Education School Teachers towards Inclusive Education in the Hohoe District of Ghana. *International Journal of Inclusive Education*, 12, 639-636), p.639-650. doi:10.1080/13603110802377680
- OECD. (1999). *Inclusive Education at Work. Students with Disabilities in Mainstream Schools*. Paris, OECD.
- Ojok, P., & Wormnæs, S. (2013). Inclusion of pupils with intellectual disabilities: primary school teachers' attitudes and willingness in a rural area in Uganda. *International Journal of Inclusive Education*, 17(9), 1003-1021.
doi:10.1080/13603116.2012.728251

- Opdal, L. R., Wormnæs, S., & Habayeb, A. (2001). Teachers' Opinions about Inclusion: A pilot study in a Palestinian context. *International Journal of Disability, Development and Education*, 48(2), 143-162. doi:10.1080/10349120120053630
- Oswald, M., & Swart, E. (2011). Addressing South African Pre-service Teachers' Sentiments, Attitudes and Concerns Regarding Inclusive Education. *International Journal of Disability, Development and Education*, 58(4), 389-403. doi:10.1080/1034912x.2011.626665
- Parasuram, K. (2006). Variables that affect teachers' attitudes towards disability and inclusive education in Mumbai, India. *Disability & Society*, 21(3), 231-242. doi:10.1080/09687590600617352
- Pather, S., & Nxumalo, C. P. (2013). Challenging understandings of inclusive education policy development in Southern Africa through comparative reflection. *International Journal of Inclusive Education*, 17(4), 420-434. doi:10.1080/13603116.2011.651821
- Pijl, S. J., Meijer, C. J. W., & Hegarty, S. (1997). *Inclusive education : a global agenda*. London: Routledge.
- Podell, D., & Soodak, L. (1993). Teacher Efficacy and Bias in Special Education Referrals. *The Journal of Educational Research*, 86(4), 247-253. doi:10.1080/00220671.1993.9941836
- Powell, J. J. W. (2014). Comparative and International Perspectives on Special Education. In (pp. 335-349).
- Putman, S. M. (2012). Investigating Teacher Efficacy: Comparing Preservice and Inservice Teachers with Different Levels of Experience. *Action in Teacher Education*, 34(1), 26-40. doi:10.1080/01626620.2012.642285
- Rakap, S., & Kaczmarek, L. (2010). Teachers' attitudes towards inclusion in Turkey. *European Journal of Special Needs Education*, 25(1), 59-75. doi:10.1080/08856250903450848
- Roberts, C., & Smith, P. (1999). Attitudes and Behaviour of Children Toward Peers with Disabilities. *International Journal of Disability, Development and Education*, 46(1), 35-50. doi:10.1080/103491299100713
- Robson, S., & Kanyanta, S. B. (2007). Moving towards inclusive education policies and practices? Basic education for AIDS orphans and other vulnerable children in Zambia. *International Journal of Inclusive Education*, 11(4), 417-430. doi:10.1080/13603110701391386
- Ross, J. A. (1992). Teacher Efficacy and the Effects of Coaching on Student Achievement. *Canadian Journal of Education*, 17(1), 51-65.
- Sari, H., Çeliköz, N., & Seçer, Z. (2009). An analysis of pre-school teachers' and student teachers' attitudes to inclusion and their self-efficacy. *International Journal of Special Education*, 24(3), 29-44.
- Savolainen, H., Engelbrecht, P., Nel, M., & Malinen, O.-P. (2012). Understanding teachers' attitudes and self-efficacy in inclusive education: implications for pre-service and in-service teacher education. *European Journal of Special Needs Education*, 27(1), 51-68. doi:10.1080/08856257.2011.613603
- Schunk, D. H., & DiBenedetto, M. K. (2015). *Self-Efficacy: Education Aspects*: Elsevier Ltd.
- Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: a research synthesis. *Exceptional Children*, 63(1), 59.
- Seçer, Z. (2010). An analysis of the effects of in- service teacher training on Turkish preschool teachers' attitudes towards inclusion. *International Journal of Early Years Education*, 18(1), 43-53. doi:10.1080/09669761003693959

- Singal, N. (2008). Working towards Inclusion: Reflections from the Classroom. *Teaching and Teacher Education: An International Journal of Research and Studies*, 24(6), 1516-1529. doi:10.1016/j.tate.2008.01.008
- Smith, M. K., & Smith, K. (2000). "I Believe in Inclusion, But...": Regular Education Early Childhood Teachers' Perceptions of Successful Inclusion. *Journal of Research in Childhood Education*, 14(2), 161-180.
- Soodak, L. C., & Podell, D. M. (1993). Teacher Efficacy and Student Problem as Factors in Special Education Referral. *The Journal of Special Education*, 27(1), 66-81. doi:10.1177/002246699302700105
- Soodak, L. C., Podell, D. M., & Lehman, L. R. (1998). Teacher, Student, and School Attributes as Predictors of Teachers' Responses to Inclusion. *Journal of Special Education*, 31(4), 480-497.
- Starczewska, A., Hodkinson, A., & Adams, G. (2012). Conceptions of inclusion and inclusive education: a critical examination of the perspectives and practices of teachers in Poland. *Journal of Research in Special Educational Needs*, 12(3), 162-169. doi:10.1111/j.1471-3802.2011.01209.x
- Stevens, J. (2002). *Applied multivariate statistics for the social sciences* (4th ed. ed.). Mahwah, N.J: Erlbaum.
- Stevenson, A. (2010). *Oxford dictionary of English*. In *English, The Oxford Dictionary of*.
- Subban, P., & Sharma, U. (2006). Primary school teachers' perceptions of inclusive education in Victoria, Australia. *International Journal of Special Education*, 21(1).
- Tabachnick, B. G., & Fidell, L. S. (2014). *Using multivariate statistics* (6th ed., new international ed. ed.). Harlow: Pearson.
- Takahashi, S. (2011). Co-constructing efficacy: A "communities of practice" perspective on teachers' efficacy beliefs. *Teaching and Teacher Education*, 27(4), 732-741. doi:10.1016/j.tate.2010.12.002
- Timperley, H., & Robinson, V. (2001). Achieving School Improvement through Challenging and Changing Teachers' Schema. *Journal of Educational Change*, 2(4), 281-300. doi:10.1023/A:1014646624263
- Tschannen-Moran, M., Hoy, A., & Hoy, W. (1998). Teacher efficacy: Its meaning and measure. In *Rev. Educ. Res.* (Vol. 68, pp. 202-248).
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: capturing an elusive construct. *Teaching and Teacher Education*, 17(7), 783-805. doi:10.1016/s0742-051x(01)00036-1
- UNESCO. (1990). *World Declaration on Education for All*. Retrieved from <http://unesdoc.unesco.org/images/0012/001275/127583e.pdf>
- UNESCO. (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. Retrieved from http://www.unesco.org/education/pdf/SALAMA_E.PDF
- UNESCO. (2001). *The Open files on inclusive education*. Retrieved from <http://unesdoc.unesco.org/images/0012/001252/125237eo.pdf>
- UNESCO. (2003, 14/05/2016). Overcoming Exclusion through Inclusive Approaches in Education. Retrieved from <http://unesdoc.unesco.org/images/0013/001347/134785e.pdf>
- UNESCO. (2005, 14/05/2016). Guidelines for Inclusion: Ensuring Access to Education for All. Paris: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0014/001402/140224e.pdf>
- UNESCO. (2009). Policy Guidelines on Inclusion in Education. Paris: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0017/001778/177849e.pdf>
- UNESCO. (2011). *Tanzania Education Sector Analysis : Beyond Primary Education, the Quest for Balanced and Efficient Policy Choices for Human Development and*

- Economic Growth*. Retrieved from
<http://unesdoc.unesco.org/images/0021/002152/215247e.pdf>
- UNESCO. (2015a). *EDUCATION FOR ALL (EFA) REPORT FOR TANZANIA MAINLAND*. Retrieved from <http://unesdoc.unesco.org/images/0023/002314/231484e.pdf>
- UNESCO. (2015b). *EDUCATION FOR ALL 2000 - 2015: ACHIEVEMENTS AND CHALLENGES*. Retrieved from
<http://unesdoc.unesco.org/images/0023/002322/232205e.pdf>
- UNICEF. (2013). *TANZANIA ANNUAL REPORT 2013*. Retrieved from
[https://www.unicef.org/about/annualreport/files/Tanzania_\(United_Republic_of\)_COAR_2013.pdf](https://www.unicef.org/about/annualreport/files/Tanzania_(United_Republic_of)_COAR_2013.pdf)
- URT. (2008a). *Tanzania Educational Report: Education Sector Development Programme, 2008 - 2017; Revised Edition*. Retrieved from
<http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/tanzania-esdp-2008-2017.pdf>
- URT. (2008b). *Tanzania Educational Report: Education Sector Development Programme, 2008. MOEVT, Dar es Salaam, Tanzania*.
- Viel-Ruma, K., Houchins, D., Jolivet, K., & Benson, G. (2010). Efficacy Beliefs of Special Educators: The Relationships Among Collective Efficacy, Teacher Self-Efficacy, and Job Satisfaction. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 33(3), 225-233. doi:10.1177/0888406409360129
- Villa, R., Thousand, J., Meyers, H., & Nevin, A. (1996). Teacher and administrator perceptions of heterogeneous education. *Exceptional Children*, 63(1), 29.
- Vislie, L. (2003). From integration to inclusion: focusing global trends and changes in the western European societies. *European Journal of Special Needs Education*, 18(1), 17-35. doi:10.1080/0885625082000042294
- Webb, N. L., Alt, M., Ely, R., Cormier, M., and Vesperman, B. (2005). *The WEB alignment tool: Development, refinement, and dissemination*. Washington, DC: Council of Chief State School Officers.
- Westwood, P., & Graham, L. (2003). Inclusion of students with special needs: Benefits and obstacles perceived by teachers in new South Wales and South Australia. *Australian Journal of Learning Disabilities*, 8(1), 3-15. doi:10.1080/19404150309546718
- Wilkins, T., & Nietfeld, J. L. (2004). The effect of a school- wide inclusion training programme upon teachers' attitudes about inclusion. *Journal of Research in Special Educational Needs*, 4(3), 115-121. doi:10.1111/j.1471-3802.2004.00026.x
- Woolfolk Hoy, A. D., H; & Pape, S.J. (2006). Teacher knowledge and beliefs. In P.A. Alexander & P.H. Winne (Eds.), *Handbook of Educational Psychology, 2nd Edition*, 715 - 737.
- Zoniou-Sideri, A., & Vlachou, A. (2006). Greek Teachers' Belief Systems about Disability and Inclusive Education. *International Journal of Inclusive Education*, 10, 379-375), p.379-394. doi:10.1080/13603110500430690

List of tables

- Table 7:1 *Teachers' demographic information*
- Table 7:2 *Loadings for teacher self-efficacy items on the extracted and rotated components matrix*
- Table 7:3 *Descriptive statistics for teachers' self-efficacy scale's Normality and Kurtosis.*
- Table 7:4 *Loadings for teacher attitudes items on the extracted and rotated components matrix.*
- Table 7:5 *Loadings for teacher willingness – physical disability items on the extracted and rotated components matrix.*
- Table 7:6 *Loadings for teacher willingness – cognitive disability items on the extracted and rotated components matrix.*
- Table 7:7 *Loadings for teacher willingness – behavioural problems items on the extracted and rotated component matrix.*
- Table 7:8 *Descriptive statistics and Cronbach's alpha of the scale of teachers' self-efficacy, attitudes, and willingness.*
- Table 8:1 *Zero-Order correlations among the outcome (dependent) variables.*
- Table 8:2 *The descriptive statistics for teachers' professional development training in special needs education.*
- Table 8:3 *The descriptive statistics of the types of disabilities experienced in the classroom as reported by teachers.*

List of figures

- Figure 4.1 Multicomponent Model of Attitude.
- Figure 7.1 Histogram for teacher self-efficacy scale's Normality and Kurtosis.
- Figure 8.1 Measurement model for teachers' willingness to work with children with severe learning in the regular education classroom.
- Figure 8.2 Measurement model for teachers' self-efficacy to teach pupils in the regular education classroom.
- Figure 8.3 Measurement model for teachers' attitudes towards working with children with disabilities in the regular education classroom.
- Figure 8.4 Full structural model of teachers' self-efficacy and teachers' attitudes in predicting teachers' willingness to work with children with severe learning disabilities in regular education classroom.

Appendices

Appendix 1

A Survey questionnaire about teachers' self-efficacy, attitudes and willingness to the inclusion of pupils with disabilities into regular education classrooms

[English version-questionnaire]

Dear Teachers,

The purpose of this research is to find out the opinions of regular education teachers in Tanzania regarding the inclusion of pupils with disabilities into regular education classrooms and teachers' beliefs about their effectiveness in teaching pupils with disabilities. In addition, this study is designed to evaluate general education teachers' willingness to include pupils with more severe learning disabilities into their classrooms.

For that reason, we will be surveying regular education teachers and ask them to complete a questionnaire which approximately takes 30 minutes to complete. If you are willing to participate, this questionnaire will ask you about background information (e.g., gender, age, teaching experience), opinion regarding your teaching efficacy, as well as opinions about inclusive education and willingness of teaching pupils with disabilities in your classroom.



There are no foreseeable risks associated with this project, nor are there any direct benefits to you.

This is entirely anonymous questionnaire, and so your responses will not be identifiable in any way. All responses are confidential and results will be kept under lock and key. Your participation is voluntary.

This study is being conducted by Mussa Shaffii Ngonyani, who can be reached at +255 762 184 501, if you have any questions.

Thank you very much for your collaboration!

SECTION A: Background Variables

Please complete or circle [put a tick] your response to the following items:

1. Gender

- 1. Male
- 2. Female

2. Age

- 1. 21 – 30
- 2. 30 – 40
- 3. 40+

3. Teaching experience

- 1. Less than one year
- 2. 1 - 4 years
- 3. 4 - 9 years
- 4. 10 - 14 years
- 5. 14+ years

4. Grade level taught

- 1. First 2. Second 3. Third
- 4. Fourth Fifth 6. Sixth
- 7. Seventh

5. Number of pupils in your class

Total:.....
With disabilities:

6. Types of disabilities that pupils in your classroom have:

[Please *tick*: 1 if YES, 0 if NO]

- a. Speech language delay 0 1
- b. Mild mental retardation 0 1
- c. Hearing impairment 0 1
- d. Visual impairment 0 1
- e. Physical disability 0 1
- f. Behavioral problems 0 1
- g. Autism 0 1
- h. Gifted children 0 1

7. Please indicate your professional

development in the area of special needs education:

- 1. None
- 2. School based in-service
- 3. Workshops (seminar)
- 4. University/college based

8. Types of disabilities you feel comfortable to work with:

Please tick 1 if YES, or 0 if NO

- a. Speech language delay 0 1
- b. Mild mental retardation 0 1
- c. Hearing impairment 0 1
- d. Visual impairment 0 1
- e. Physical disability 0 1
- f. Behavioral problems 0 1
- g. Autism 0 1
- h. Gifted children 0 1

9. Where is the school that you work is located?

- 1. In a village?
- 2. In a small town?
- 3. In a city?

SECTION B: Teachers' Self-Efficacy Opinion

Teacher Beliefs

How much can you do?

Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.

	Nothing		Very Little		Some Influence		Quite A Bit		A Great Deal
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. How much can you do to control disruptive behavior in the classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. How much can you do to motivate students who show low interest in school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. How much can you do to get students to believe they can do well in the school work?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. How much can you do to help your students' value learning?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. To what extent can you craft good questions for your students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. How much can you do get children to follow classroom rules?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. How much can you do to calm a student who is disruptive or noisy?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. How well can you establish a classroom management system with each group of students?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
9. How much can you use a variety of assessment strategies?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
10. To what extent can you provide an alternative explanation / example when students are confused?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
11. How much can you assist families in helping their children do well in school?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
12. How well can you implement alternative strategies in your classroom?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

SECTION C: Teachers' Opinions about Inclusion of Pupils with Disabilities in a Regular Education Classroom

General Directions:

Educators have long realized that one of the most important influences on a child's educational progress is the classroom teacher. The purpose of this questionnaire is to obtain information that will aid school system in increasing the classroom teacher's effectiveness with pupil with disabilities placed into his or her classroom. Please circle the number to the left of each item that best describes your agreement or disagreement with the statement. There are no correct answers: the best answers are those that honestly reflect your feelings. There is no time limit, but you should work as quickly as you can.

Please circle the every statement

KEY

-3: I disagree very much
-2: I disagree pretty much
-1: I disagree a little

+1: I agree a little
+2: I agree pretty much
+3: I agree very much

- | | |
|-------------------|--|
| -3 -2 -1 +1 +2 +3 | 1. Most pupils with disabilities will make adequate attempt to complete their assignments. |
| -3 -2 -1 +1 +2 +3 | 2. Inclusion of pupils with disabilities will necessitate extensive retraining of regular classroom teachers. |
| -3 -2 -1 +1 +2 +3 | 3. Inclusion offers mixed group interaction that will foster understanding and acceptance of differences among pupils. |
| -3 -2 -1 +1 +2 +3 | 4. It is likely that the pupil with a disability will exhibit behavior problems in a regular classroom. |
| -3 -2 -1 +1 +2 +3 | 5. Pupils with disabilities can best be served in regular education classrooms. |
| -3 -2 -1 +1 +2 +3 | 6. The extra attention that pupils with disabilities require will be to the detriment of the other pupils. |
| -3 -2 -1 +1 +2 +3 | 7. The challenge of being in a regular classroom will promote the academic growth of the pupil with a disability. |
| -3 -2 -1 +1 +2 +3 | 8. Inclusion of pupils with disabilities will require significant changes in regular classroom procedures. |
| -3 -2 -1 +1 +2 +3 | 9. Increased freedom in the regular classroom creates too much confusion for the pupil with a disability. |
| -3 -2 -1 +1 +2 +3 | 10. Regular classroom teacher have the ability necessary to work with pupils with disabilities. |

- | | |
|-------------------|--|
| -3 -2 -1 +1 +2 +3 | 11. The presence of pupils with disabilities will not promote acceptance of differences on the part of pupils without disabilities. |
| -3 -2 -1 +1 +2 +3 | 12. The behavior of pupil with disabilities will set a bad example for pupils without disabilities. |
| -3 -2 -1 +1 +2 +3 | 13. The pupil with a disability will probably develop academic skills more rapidly in a regular classroom than in a special classroom. |
| -3 -2 -1 +1 +2 +3 | 14. Inclusion of the pupils with a disability will not promote his or her social independence. |
| -3 -2 -1 +1 +2 +3 | 15. It is not more difficult to maintain order in a regular classroom that contains a pupil with a disability than in one that does not contain a student with disability. |
| -3 -2 -1 +1 +2 +3 | 16. Pupils with disabilities will not monopolize the regular education classroom teacher's time. |
| -3 -2 -1 +1 +2 +3 | 17. The inclusion of pupils with disabilities can be beneficial for pupils without disabilities. |
| -3 -2 -1 +1 +2 +3 | 18. Pupils with disabilities are likely to create confusion in the regular classroom. |
| -3 -2 -1 +1 +2 +3 | 19. Regular classroom teachers have sufficient training to teach students with disabilities. |
| -3 -2 -1 +1 +2 +3 | 20. Inclusion will likely have a negative effect on the emotional development of the pupil with a disability. |
| -3 -2 -1 +1 +2 +3 | 21. Pupils with disabilities should be given every opportunity to function in the regular classroom where possible. |
| -3 -2 -1 +1 +2 +3 | 22. The classroom behavior of the pupil with a disability generally does not require more patient from the teacher than does the classroom behavior of the pupil without a disability. |
| -3 -2 -1 +1 +2 +3 | 23. Teaching pupils with disabilities is better done by special education teachers than regular education teachers. |
| -3 -2 -1 +1 +2 +3 | 24. Isolation in a special classroom has a beneficial effect on the social and emotional development of the pupil with a disability. |
| -3 -2 -1 +1 +2 +3 | 25. The pupil with a disability will not be socially isolated in the regular classroom. |

SECTION D: Teacher's Willingness to Work with Pupils with Severe Disabilities

Please read the each vignette and then respond to the questions following each vignette by circling the number under the column that best describes your agreement or disagreement with the following statements. There are no correct answers; the best answers are those that honestly reflect your feelings.

SD =Strongly Disagree	D = Disagree	U = Undecided	A = Agree	SA = Strongly Agree
------------------------------	---------------------	----------------------	------------------	----------------------------

Vignette 1

John is a pupil with severe physical disabilities who is about to join your classroom. His motor functioning is very limited; he gets around in a special wheelchair; he is only able to move his head a few degrees in each direction; he has functional use of his right arm and hand only. Luckily your classroom is on the first floor of the school and there is enough room in your classroom so that John can move around in his wheelchair. Although John does not talk, he seems very bright and communicates by pointing to pictures. He has a good sense of humor and laughs at jokes and funny situations when they occur. John's demeanor is friendly and other pupils like to spend time with him. Sometimes John can be very silly and in so doing he is likely to distract other pupils from their work.

	Statements	SD	D	U	A	SA
1.	I would support the idea of including John in my classroom.	1	2	3	4	5
2.	I would participate in an in-service training program to learn strategies that would help me teach John.	1	2	3	4	5
3.	I would use the skills I learned in the workshop to assist John and other pupils like John who would be included in my classroom.	1	2	3	4	5
4.	I would expand my knowledge of behaviour management in order to deal any unusual behaviour that John might display.	1	2	3	4	5
5.	I would constantly assess myself and my teaching practices, and learn new instructional techniques that were needed to help John learn in my classroom	1	2	3	4	5

6.	I would make accommodations and adaptations to the way I instruct all children so that John would be able to participate as well.	1	2	3	4	5
7.	I would collaborate with John's parent to be able to get useful information from them to help me in the classroom and to inform them of John's progress.	1	2	3	4	5
8.	I would assist other pupils in the classroom to better understand John and how to interact with him.	1	2	3	4	5

Vignette 2

Julia is a pupil with severe cognitive disabilities who is about to join your classroom. Her overall performance in spelling, reading and writing is equal to pupils who are two years younger than she. Although she recognizes most of the letters in the alphabet and numbers, she is not capable of reproducing letters and numbers legibly. She even finds it harder to copy a given set of letters and to write. Her academic performance in math is three years below her peers. She has difficulty in memorization, fine motor coordination, and remembering basic facts.

It takes longer for her to learn new concepts than other pupils do and she either completes assigned tasks later than others or does not finish them at all. Julia listens to directions and follows the lead of other children. It seems unlikely that she would disrupt the class. Julia is quiet, but friendly when others approach her. Other pupils generally like her but they think of her more as a baby requiring their help than as a peer. Julia likes the attention when she can get it and seems content to be on her own when other children ignore her.

	Statements	SD	D	U	A	SA
1.	I would support the idea of including Julia in my classroom.	1	2	3	4	5
2.	I would participate in an in-service training program to learn strategies that would help me teach Julia.	1	2	3	4	5
3.	I would use the skills I learned in the workshop to assist Julia and other pupils like her who would be included in my classroom.	1	2	3	4	5
4.	I would expand my knowledge of behaviour management in order to deal any unusual behaviours that Julia might display.	1	2	3	4	5

5.	I would constantly assess myself and my teaching practices, and learn new instructional techniques that were needed to help Julia learn in my classroom.	1	2	3	4	5
6.	I would make accommodations and adaptations to the way I instruct all children so that Julia would be able to participate as well.	1	2	3	4	5
7.	I would collaborate with Julia's parent to be able to get useful information from them to help me in the classroom and to inform them of Julia's progress.	1	2	3	4	5
8.	I would assist other children in the classroom to better understand Julia and how to interact with her.	1	2	3	4	5

Vignette 3

Max is a pupil with severe behavioral problems who might be included into your classroom. He is of below average in his schoolwork. There are times when he becomes engaged in his schoolwork and works as well as any other pupil in the class. However, at other times (at least once a day), he does not pay attention or listen. On these occasions, he usually forgets the rules and does not follow the teacher's instructions. He often disturbs others by talking out loud, taking items belonging to other children, and throwing them, causing general turmoil (confusion) in classroom. During these outbursts, he refuses to join in-class activities, and becomes very distracted. In the classroom and outside, he quickly gets angry and is ready to fight with other pupils when he does not get his own way. When other pupils are playing and he wants to join them, he tends to take their toys or push them. The pupils tend to avoid Max once they experience a bad interaction with him.

	Statements	SD	D	U	A	SA
1.	I would support the idea of including Max in my classroom.	1	2	3	4	5
2.	I would participate in an in-service training program to learn strategies that would help me teach Max.	1	2	3	4	5
3.	I would use the skills I learned in the workshop to assist Max and other pupils like him who would be included in my classroom.	1	2	3	4	5
4.	I would expand my knowledge of behaviour management in order to deal any unusual behaviors that Max might display.	1	2	3	4	5

5.	I would constantly assess myself and my teaching practices, and learn new instructional techniques that were needed to help Max learn in my classroom	1	2	3	4	5
6.	I would make accommodations and adaptations to the way I instruct all pupils so that Max would be able to participate as well.	1	2	3	4	5
7.	I would collaborate with Max's parent to be able to get useful information from them to help me in the classroom and to inform them of Max's progress.	1	2	3	4	5
8.	I would assist other pupils in the classroom to better understand Max and how to interact with him.	1	2	3	4	5

***THANK YOU FOR YOUR ASSISTANCE IN RESPONDING TO THIS
QUESTIONNAIRE!***

Appendix 2

Dodoso kuhusu uwezo binafsi wa walimu kufundisha, hisia na utayari wao katika kuwajumuisha wanafunzi wenye ulemavu katika darasa la kawaida [Swahili-version questionnaire].

Mpendwa Mwalimu,

Lengo la utafiti huu ni kupata maoni yako kuhusu ujumuishaji wa wanafunzi wenye ulemavu katika madarasa ya kawaida; na pia kujua imani yako wewe juu ya uwezo wako binafsi ulionao katika kuwafundisha wanafunzi wenye ulemavu katika darasa au shule yako. Pia utafiti huu umekusudia kutathimini kwa ujumla utayari wako wewe mwalimu katika kumjumuisha mwanafunzi mwenye ulemavu mkali zaidi (severe disabilities) katika darasa lako.

Utafiti huu unawahusu walimu wa shule za msingi ambao wanafundisha katika shule za kawaida [Sio shule maalumu]. Kwa makadirio dodoso hili unaweza kulikamilisha kwa kutumia dakika 25 hadi 30 lakini pia unaweza tumia muda zaidi kadiri utakavyoona inafaa. Baadhi ya maswali ambayo yameulizwa yanahusu taarifa zako binafsi; mfano: jinsia, umri, uzoefu wa kufundisha, n.k.

Hakuna *hatari yeyote* ile itakayotokana na wewe kutoa taarifa katika dodoso hili. Taarifa au majibu ambayo utayatoa katika dodoso hili itakuwa **SIRI**, na yatatumika kwa madhumuni ya utafiti huu tu na wala sio vinginevyo. **Tafadhali unaombwa usiandike jina lako katika dodoso hili.** Jibu sahihi ni lile ambalo linawasilisha hisia zako kulingana na swali uliloulizwa. Utafiti huu unafanywa na ndugu Mussa Shaffii Ngonyani; namba yake ya simu ni: **+255 762 184 501**; na unaweza wasiliana nae endapo utakuwa na swali lolote. Mwisho natanguliza shukrani zangu za dhati kwako ndugu mwalimu kwa ushirikiano wako mzuri.



Asante sana kwa ushirikiano wako.

SEHEMU A: TAARIFA BINAFSI

1. **Jinsia yako**
1. Me 2. Ke
2. **Umri wako**
1.21-30 2.31-40 3. 40+
3. **Uzoefu wako wa kufundisha**
1.Chini ya mwaka
2.Miaka 1 – 4

3.Miaka 5 – 9
4.Miaka 9-14
5.Miaka 14+
4. **Madarasa unayofundisha**
1. La Kwanza 2. La Pili
3. La Tatu 4. La Nne
5.La Tano 6.La Sita
7.La Saba
5. **Idadi ya wanafunzi darasani**
1.Jumla Kuu
2.Wenye Ulemavu
6. **Aina ya Ulemavu walionao**
[Weka alama ya tiki kwenye 0 = hawapo, 1 = Wapo]
1.Tatizo la kuchelewa kuongea 0 1
2.Matatizo kidogo ya akili 0 1
3.Matatizo ya kusikia 0 1
4.Matatizo ya kuona 0 1
5.Ulemavu wa viungo 0 1
6.Matatizo ya kitabia 0 1
7.Mtindio wa ubongo 0 1
8.Wenye vipaji maalumu 0 1
7. **Tafadhali onyesha utalaamu wako katika eneo la elimu maalumu**
1.Sina utalaamu wowote 0 1
2.Nimejifunza hapa shuleni 0 1
3.Nilihudhuria washa/semina 0 1
4.Nilihudhuria mafunzo chuo 0 1
8. **Aina ya ulemavu ambao unajisikia (upo tayari) kufanya kazi bila tatizo:**
[Weka alama ya tiki kwenye 0 = hawapo, 1 = Wapo]
1.Tatizo la kuchelewa kuongea 0 1
2.Matatizo kidogo ya akili 0 1
3.Matatizo ya kusikia 0 1
4.Matatizo ya kuona 0 1
5.Ulemavu wa viungo 0 1
6.Matatizo ya kitabia 0 1
7.Mtindio wa ubongo 0 1
8.Wenye vipaji maalumu 0 1
9. **Shule yako unayofundisha ipo katika mazingira gani**
1.Kijijini
2.Mji mdogo
3.Jiji

Tafadhali malizia au weka alama ya vema [tick] kwenye chaguo sahihi:-

SEHEMU B: Maoni kuhusu uwezo wako binafsi katika ufundishaji

MAELEKEZO:

Tafadhali unaombwa kutoa maoni yako katika kila jambo uliloulizwa katika sentensi zifuatazo hapa chini. Majibu yako ni **SIRI**.

KWA KIASI GANI HUWA UNAFANYA?

	Siwezi	Kidogo Sana	Kiasi tu	Wastani	Naweza				
1. Kwa kiasi gani unaweza kudhibiti tabia za usumbufu darasani?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2. Kwa kiasi gani unamudu kuwatia moyo wanafunzi ambao hawana ari ya kupenda shule?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
3. Kwa kiasi gani unaweza kuwaaminisha wanafunzi wako kuwa wana uwezo wa kumudu vema kazi za shule/kusoma?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
4. Kwa kiasi gani unawasaidia wanafunzi kuthamini/kupenda kusoma?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5. Kwa kiwango gani una uwezo wa kutunga maswali mazuri kwa ajili ya wanafunzi wako?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
6. Kwa kiasi gani unafanya ili wanafunzi wako wafuate taratibu za darasani?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7. Kwa kiasi gani unaweza kutuliza kelele za wanafunzi?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8. Kwa kiwango gani unaweza ukaanzisha mfumo wa utawala darasani kwa kuwa na vikundi vya wanafunzi?	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

9. Kwa kiasi gani unatumia njia mbali mbali za kufanya tathimini? (1) (2) (3) (4) (5) (6) (7) (8) (9)
10. Kwa kiasi gani unaweza kutoa maelekezo mbadala au mfano ikiwa wanafunzi wamechanganyikiwa na ulichokuwa unawafundisha (1) (2) (3) (4) (5) (6) (7) (8) (9)
11. Kwa kiasi gani unasaidia familia katika kuhakikisha kuwa watoto wao wanafanya vizuri darasani? (1) (2) (3) (4) (5) (6) (7) (8) (9)
12. Kwa kiwango gani unatumia mbinu mbadala katika darasa lako? (1) (2) (3) (4) (5) (6) (7) (8) (9)

SEHEMU C: Maoni yako kuhusu kuwajumuisha wanafunzi wenye ulemavu kusoma katika madarasa ya kawaida

Tafadhali unaombwa kuzungushia alama ya duara katika namba mojawapo katika mpangilio uliopo hapa chini katika kila sentensi. Hakuna jibu sahihi, jibu sahihi ni lile ambalo wewe utaona linafaa na pia litawasilisha hisia zako kadiri ya wewe unavyofahamu ukweli.

Tafadhali zungushia duara katika kila sentensi

UFUNGUO

-3: Sikubali Kabisa

-2: Sikubali

-1: Sikubali Kidogo

+1: Nakubali Kidogo

+2: Nakubali

+3: Nakubali Sana

-3 -2 -1 +1 +2 +3

1. Wanafunzi wenye ulemavu wanaweka bidii katika kujaribu kumaliza kazi wanazopewa.

-3 -2 -1 +1 +2 +3

2. Ujumuishaji wa wanafunzi wenye ulemavu utalazimu mafunzo kwa walimu wa madarasa ya kawaida.

-3 -2 -1 +1 +2 +3

3. Elimu jumuiishi inaleta mchanganyiko mzuri wa makundi na unasaidia kuongeza uelewa na kukubali tofauti zao.

-3 -2 -1 +1 +2 +3

4. Kuna uwezekano kuwa mwanafunzi mwenye ulemavu akaonyesha tabia mbaya katika darasa la kawaida.

-3 -2 -1 +1 +2 +3

5. Wanafunzi wenye ulemavu ni vema wakafundishwa katika madarasa ya kawaida.

-3 -2 -1 +1 +2 +3

6. Muda mwingi utakaotumiwa na mwalimu kwa mwanafunzi mwenye ulemavu itakuwa hasara kwa wanafunzi wengine.

- | | | | | | | |
|----|----|----|----|----|----|--|
| -3 | -2 | -1 | +1 | +2 | +3 | 7. Changamoto ya kusoma katika darasa la kawaida itasaidia kuinua taaluma ya mwanafunzi mwenye ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 8. Ujumuishaji wa wanafunzi wenye ulemavu utahitaji mabadiliko ya kanuni zitumikazo katika madarasa ya kawaida. |
| -3 | -2 | -1 | +1 | +2 | +3 | 9. Uhuru uliopo katika darasa la kawaida utaleta mkanganyiko kwa mwanafunzi mwenye ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 10. Mwalimu wa kawaida anao uwezo wa kumfundisha mwanafunzi mwenye ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 11. Uwepo wa wanafunzi wenye ulemavu hautasaidia kuondoa tofauti baina ya wanafunzi wenye ulemavu na wasio na ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 12. Tabia ya wanafunzi wenye ulemavu itaweka mfano mbaya kwa wanafunzi wasio na ulemavu.. |
| -3 | -2 | -1 | +1 | +2 | +3 | 13. Wanafunzi wenye ulemavu wanaweza imarika vizuri kitaaluma haraka iwapo watajumuishwa katika darasa la kawaida kuliko kutengwa katika darasa maalumu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 14. Ujumuishwaji wa mwanafunzi mwenye ulemavu utamfanya akose uhuru katika darasa la kawaida. |
| -3 | -2 | -1 | +1 | +2 | +3 | 15. Ni rahisi kudhibiti nidhamu katika darasa la kawaida ambalo lina wanafunzi wenye ulemavu kuliko darasa ambalo halina wanafunzi wenye ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 16. Katika darasa la kawaida, wanafunzi wenye ulemavu hawatatumia muda mwingi wa mwalimu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 17. Ujumuishaji wa wanafunzi wenye ulemavu unaweza leta faida kwa wanafunzi wasio na ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 18. Kuna uwezekano mkubwa wa wanafunzi wenye ulemavu kuleta mkanganyiko katika darasa la kawaida. |
| -3 | -2 | -1 | +1 | +2 | +3 | 19. Walimu wa kawaida wana mafunzo ya kutosha ya kufundisha wanafunzi wenye ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 20. Ujumuishaji katika darasa la kawaida wa mwanafunzi mwenye ulemavu unaweza kuathiri maendeleo ya kihisia. |
| -3 | -2 | -1 | +1 | +2 | +3 | 21. Wanafunzi wenye ulemavu wapewe nafasi ya kujifunza kadiri inavyowezekana katika darasa la kawaida. |
| -3 | -2 | -1 | +1 | +2 | +3 | 22. Tabia ya mwanafunzi mwenye ulemavu katika darasa la kawaida haihitaji sana subira ya mwalimu ukilinganisha na tabia ya mwanafunzi asiye na ulemavu. |
| -3 | -2 | -1 | +1 | +2 | +3 | 23. Ufundishwaji wa wanafunzi wenye ulemavu ni vema ukafanyika na walimu maalumu kuliko kufanywa na walimu wa kawaida. |
| -3 | -2 | -1 | +1 | +2 | +3 | 24. Kumtenga mwanafunzi mwenye ulemavu katika darasa maalumu kuna faida zaidi kimakuzi-kijamii na kihisia. |
| -3 | -2 | -1 | +1 | +2 | +3 | 25. Mwanafunzi mwenye ulemavu hatotengwa kijamii na wanafunzi wenzake katika darasa la kawaida. |

SEHEMU D: Maoni kuhusu utayari wako wa kumjumuisha mwanafunzi mwenye ulemavu wa kiwango kikubwa katika kusoma ndani ya darasa la kawaida

Tafadhali soma kifungu cha habari haapo chini, kisha jibu maswali yanayofuata kwa kuzungushia duara katika namba ambayo itakuonyesha kuwa unakubali au unakataa katika kila sentensi. Hakuna jibu sahihi, jibu sahihi ni lile litakalowasilisha hisia zako halisi.

HABARI : 1.

John ni mwanafunzi mwenye ulemavu wa viungo na anatarajia kujiunga katika darasa lako. Hana uwezo wa kutembea, hivyo anatumia kiti maalumu chenye magurudumu (wheelchair); na ana uwezo wa kuzungusha kichwa kwa kiasi kidogo kwa kila upande; ana uwezo wa kutumia mkono wa kulia tu. Kwa bahati nzuri darasa lako lipo ghorofa ya kwanza na lina nafasi ya kutosha ambayo itamfanya John aweze kutembea kwa kutumia hicho kiti chake chenye magurudumu. John ijapokuwa haongei, lakini anaonekana ana akili na anawasiliana kwa kuonyesha picha tu. Anaonekana kuwa ni mcheshi, na anacheka pale watu wanapofanya utani au kama kuna jambo limemfurahisha.

Mwenendo wa John ni mzuri na hata watoto wengine hupenda kutumia muda wao kuwa pamoja na John. Wakati mwingine John huwa anakuwa kama mjinga vile; na kwa kufanya hivyo huwa inawapotezea utulivu wanafunzi wengine na kuwafanya kuacha kufanya kazi zao na kuanza kumshangaa John.

UFUNGUO

SK = Sikubali Kabisa; S = Sikubali; H = Hujui; N = Nakubali; NK = Nakubali Sana

	SENTENSI	S K	S	H	N	NK
1.	Mimi nitaafiki wazo la kumjumuisha John katika darasa langu.	1	2	3	4	5
2.	Mimi nitaamua kushiriki katika mafunzo kazini ili yanisaidie kupata mbinu za kumfundisha John.	1	2	3	4	5
3.	Mimi nitatumia ujuzi niliojifunza kwenye washa/semina ili kumsaidia John, na watoto wengine kama John ambao watajumuishwa katika darasa langu.	1	2	3	4	5
4.	Mimi nitatumia ujuzi wangu wa kudhibiti tabia ili kukabiliana na tabia ambazo si za kawaida kama ambazo John ataonyesha.	1	2	3	4	5

5.	Mimi ningejitathimini mwenyewe na ufundishaji wangu, halafu ningeamua kujifunza mbinu mpya ambazo zinahitajika kumsaidia John kusoma katika darasa langu.	1	2	3	4	5
6.	Mimi ningempokea John, pia ningetumia mbinu ninazowafundishia watoto wengine kumfundisha John ili aweze kushiriki vema .	1	2	3	4	5
7.	Mimi nitashirikiana na wazazi wa John ili nipate taarifa zake vizuri kutoka kwao ili zinisaidie darasani na pia kuwapa taarifa kuhusu maendeleo ya John.	1	2	3	4	5
8.	Mimi nitawasaidia watoto wengine darasani ili wamuelewe John na hatimaye wajue namna ya kushirikiana nae.	1	2	3	4	5

HABARI: 2

Julia ni mwanafunzi mwenye ulemavu mkali wa akili; na anategemea kujiunga katika darasa lako. Uwezo wake wa kutamka maneno, kusoma na kuandika unalingana na mwanafunzi mwenye umri mdogo zaidi kwa miaka miwili kuliko yeye Julia. Pamoja kuwa Julia ana uwezo wa kutambua herufi zote, na namba, lakini hana uwezo wa kuandika hizo herufi na namba vizuri. Julia pia anashindwa hata kukariri baadhi ya maneno au herufi.

Uwezo wake wa kuhesabu ni mdogo ambao unalingana sawa na mwanafunzi mwenye umri mdogo zaidi kwa miaka mitatu kuliko yeye Julia. Kwa kuwa hana uwezo wa kukariri inamuwia vigumu sana kukumbuka jambo. Inachukua muda mrefu sana kwa Julia kujifunza kitu ukilinganisha na wanafunzi wengine darasani;na anaweza akamaliza kufanya kazi kwa kuchelewa sana kuliko wenzake au anaweza asimalize kabisa kufanya hiyo kazi aliyopewa.

Julia ni msikivu sana, na anafuata maelekezo na kufuatisha wanayofanya watoto wengine. Julia haonekani kama ni msumbufu darasani. Julia ni mpole, na hasa pale wanafunzi wenzake wanapomfuata. Kwa ujumla watoto wengine wanampenda sana Julia, lakini wanamchukulia Julia kama mtoto ambae anahitaji msaada na sio kama mtu wa rika lao. Julia anapenda utulivu anapofanya jambo, na pia anaonekana kukwazika moyoni mwake pale watoto wengine wanapoonyesha hali ya kutomjali.

UFUNGUO

SK = Sikubali Kabisa; S = Sikubali; H = Hujui; N = Nakubali; NK = Nakubali Sana

	SENTENSI	S	S	H	N	N
1.	Mimi nitaafiki wazo la kumjumuisha Julia katika darasa langu.	1	2	3	4	5

2.	Mimi nitaamua kushiriki katika mafunzo kazini ili yanisaidie kupata mbinu za kumfundisha Julia.	1	2	3	4	5
3.	Mimi nitatumia ujuzi niliojifunza kwenye washa/semina ili kumsaidia Julia, na watoto wengine kama Julia ambao watajumuishwa katika darasa langu.	1	2	3	4	5
4.	Mimi nitatumia ujuzi wangu wa kudhibiti tabia ili kukabiliana na tabia ambazo si za kawaida kama ambazo Julia ataonyesha.	1	2	3	4	5
5.	Mimi ningejitathimini mwenyewe na ufundishaji wangu, halafu ningeamua kujifunza mbinu mpya ambazo zinahitajika kumsaidia Julia kusoma katika darasa langu.	1	2	3	4	5
6.	Mimi ningempokea Julia, pia ningetumia mbinu ninazowafundishia watoto wengine kumfundisha Julia ili aweze kushiriki vema .	1	2	3	4	5
7.	Mimi nitashirikiana na wazazi wa Julia ili nipate taarifa zake vizuri kutoka kwao ili zinisaidie darasani na pia kuwapa taarifa kuhusu maendeleo ya Julia.	1	2	3	4	5
8.	Mimi nitawasaidia watoto wengine darasani ili wamuelewe Julia na hatimaye wajue namna ya kushirikiana nae.	1	2	3	4	5

HABARI : 3

Max ni mwanafunzi mwenye matatizo ya tabia kwa kiwango cha juu sana, na amabae anatarajia kujiunga katika darasa lako. Maendeleo yake ya shule yapo chini ya wastani. Kuna kipindi anajihusisha kufanya kazi za shule na anafanya kama wanafunzi wenzake darasani. Hata hivyo kuna kipindi (kama mara moja kwa siku), Max anakuwa hana utulivu na wala hasikii. Katika hali kama hiyo, huwa anasahau taratibu zote za darasani/shule na huwa hafuati maelekezo ya mwalimu.

Max anakuwa msumbufu kwa wenzake kwa kupiga kelele kwa sauti, kuchukua vitu vya wanafunzi wenzake, na hata kuvitupa, hali ambayo husababisha mkanganyiko darasani.

Anapokuwa katika hali hiyo, Max hukataa kufanya kazi za darasani, na anakuwa msumbufu kweli. Iwe darasani au nje ya darasa, Max anakuwa na hasira na yupo tayari kupigana na wenzake endapo hatapata anachokitaka/au ambacho anataka kufanya. Endapo watoto wengine wanacheza na anataka kuungana nao huchukua midoli yao na hudiriki hata kuwasukuma. Watoto wenzake wanajitahidi sana kumkwepa Max na hasa ambao tayari waligombana nae.

UFUNGUO

SK = Sikubali Kabisa; S = Sikubali; H = Hujui; N = Nakubali; NK = Nakubali Sana

	SENTENSI	S	S	H	N	N
1.	Mimi nitaafiki wazo la kumjumuisha Max katika darasa langu.	1	2	3	4	5
2.	Mimi nitaamua kushiriki katika mafunzo kazini ili yanisaidie kupata mbinu za kumfundisha Max.	1	2	3	4	5
3.	Mimi nitatumia ujuzi niliojifunza kwenye washa/semina ili kumsaidia Max, na watoto wengine kama Max ambao watajumuishwa katika darasa langu.	1	2	3	4	5
4.	Mimi nitatumia ujuzi wangu wa kudhibiti tabia ili kukabiliana na tabia ambazo si za kawaida kama ambazo Max ataonyesha.	1	2	3	4	5
5.	Mimi ningejitathimini mwenyewe na ufundishaji wangu, halafu ningeamua kujifunza mbinu mpya ambazo zinahitajika kumsaidia Max kusoma katika darasa langu.	1	2	3	4	5
6.	Mimi ningempokea Max, pia ningetumia mbinu ninazowafundishia watoto wengine kumfundisha Max ili aweze kushiriki vema .	1	2	3	4	5
7.	Mimi nitashirikiana na wazazi wa Max ili nipate taarifa zake vizuri kutoka kwao ili zinisaidie darasani na pia kuwapa taarifa kuhusu maendeleo ya Max.	1	2	3	4	5
8.	Mimi nitawasaidia watoto wengine darasani ili wamuelewe Max na hatimaye wajue namna ya kushirikiana nae.	1	2	3	4	5

ASANTE SANA KWA USHIRIKIANO WAKO!

Appendix 3

Teachers demographic information (N = 1264)

Demographic variable	Category	Frequency	Percentage
Gender	Female	866	68.5
	Male	398	31.5
Age	21 - 30	320	25.3
	31 - 40	433	34.3
	> 40	511	40.4
Teaching experience	< 1 year	74	5.9
	1 - 4 years	163	12.9
	5 - 9 years	240	19
	10 - 14 years	246	19.5
	> 14 years	541	42.8
Teachers' grade level taught	I	120	9.5
	II	97	7.7
	III	241	19.1
	IV	225	17.8
	V	217	17.2
	VI	206	16.3
	VII	158	12.5
Class size	<45	321	25.4
	46 - 85	625	49.4
	>85	318	25.2
Total number of pupils with disabilities per classroom	0	441	34.9
	1 - 3	535	42.3
	> 4	288	22.8
Location of schools	Rural areas/village	504	39.9
	Small towns/districts towns	531	42
	Urban areas/city	229	18.1

Appendix 4

One way ANOVA for teachers' age, teaching experience, teachers' grade level taught, class size, and total number of pupils with disabilities per classroom.

Variable	Scale	ANOVA					
			Sum of square	df	Mean square	F	Sig.
Teachers' age	Self-efficacy	Between	2.616	2	1.308	1.234	.291
		Within groups	1336.023	1261	1.059		
		Total	1338.639	1263			
	Attitudes	Between	6.582	2	3.291	2.069	.127
		Within groups	2005.534	1261	1.590		
Total		2012.116	1263				
Willingness-physical	Between	.946	2	.473	.765	.465	
	Within groups	779.308	1261	.618			
	Total	780.254	1263				
Willingness-cognitive	Between groups	1084.827	2	2.300	2.674	.069	
	Within groups	1261	.860				
	Total	1089.428	1263				
Willingness-behaviour	Between groups	1.857	2	.928	1.203	.301	
	Within groups	973.214	1261	.777			
	Total	975.071	1263				
Teachers' teaching experience	Self-efficacy	Between	3.541	4	.885	.835	.503
		Within groups	1335.098	1259	1.060		
		Total	1338.639	1263			
	Attitudes	Between	10.839	4	2.710	1.705	.147
		Within groups	2001.277	1259	1.590		
Total		2012.116	1263				
Willingness-physical	Between	2.306	4	.577	.933	.444	
	Within groups	777.947	1259	.618			
	Total	780.254	1263				
Willingness-cognitive	Between groups	5.703	4	1.426	1.656	.158	
	Within groups	1083.725	1259	.861			
	Total	1089.428	1263				
Willingness-behaviour	Between groups	1.960	4	.490	.634	.638	
	Within groups	973.111	1259	.773			
	Total	975.071	1263				

Teachers' grade level taught	Self-efficacy	Between groups	8.635	6	1.439	1.360	.227
		Within groups	1330.004	1257	1.058		
		Total	1338.639	1263			
	Attitudes	Between groups	9.599	6	1.600	1.004	.421
		Within groups	2002.517	1257	1.593		
	Total	2012.116	1263				
Class size	Willingness-physical	Between groups	4.703	6	.784	1.270	.268
		Within groups	775.551	1257	.617		
		Total	780.254	1263			
	Willingness-cognitive	Between groups	3.839	6	.640	.741	.617
		Within groups	1085.589	1257	.864		
	Total	1089.428	1263				
Total number of	Willingness-behaviour	Between groups	4.067	6	.678	.878	.511
		Within groups	971.003	1257	.772		
		Total	975.071	1263			
	Self-efficacy	Between groups	1.192	2	.596	.562	.570
		Within groups	1337.447	1261	1.061		
	Total	1338.639	1263				
Total number of	Attitudes	Between groups	2.991	2	1.496	.939	.391
		Within groups	2009.125	1261	1.593		
		Total	2012.116	1263			
	Willingness-physical	Between groups	2.362	2	1.181	1.914	.148
		Within groups	777.892	1261	.617		
	Total	780.254	1263				
Total number of	Willingness-cognitive	Between groups	4.031	2	2.016	2.342	.097
		Within groups	1085.397	1261	.861		
		Total	1089.428	1263			
	Willingness-behaviour	Between groups	2.208	2	1.104	1.431	.239
		Within groups	972.862	1261	.772		
	Total	975.071	1263				
Total number of	Self-efficacy	Between groups	23.699	2	11.849	11.36	<.001
		Within groups	1314.940	1261	1.043		
	Total	1338.639	1263				
Total number of	Attitudes	Between groups	43.830	2	21.915	14.04	<.001
		Within groups	1968.287	1261	1.561		

pupils with disabilities per classroom		Total	2012.116	1263			
	Willingness-physical	Between	3.219	2	1.610	2.612	.074
		Within groups	777.034	1261	.616		
		Total	780.254	1263			
	Willingness-cognitive	Between groups	4.209	2	2.105	2.446	.087
		Within groups	1085.218	1261	.861		
		Total	1089.428	1263			
	Willingness-behaviour	Between groups	.455	2	.227	.294	.747
		Within groups	974.616	1261	.773		
		Total	975.071	1263			

Appendix 5

Multiple comparisons of different groups of the total number of pupils with disabilities per classroom for the teachers' perceived self-efficacy, attitudes and willingness scales

Scale	Teacher's age (I)	Teacher's age (J)	Mean difference (I - J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Self-efficacy	0	1 - 3	-.172	.065	.024	-.32	-.01
		> 4	-.367	.077	.000	-.54	-.18
	1 - 3	0	.172	.065	.024	.01	.32
		> 4	-.194	.074	.025	-.36	-.01
	> 4	0	.364	.077	.000	.18	.54
		1 - 3	.194	.074	.025	.01	.36
Attitudes	0	1 - 3	-.382	.080	.000	-.57	-.19
		> 4	-.404	.094	.000	-.62	-.18
	1 - 3	0	.382	.080	.000	.19	.57
		> 4	-.021	.091	.969	-.23	.19
	> 4	0	.404	.094	.000	.18	.62
		1 - 3	.021	.091	.969	-.19	.23
Willingness – physical disability	0	1 - 3	-.079	.050	.257	-.19	.03
		> 4	-.130	.059	.072	-.27	.00
	1 - 3	0	.079	.050	.257	-.03	.19
		> 4	-.051	.057	.644	-.18	.08
	> 4	0	.130	.059	.072	-.00	.27
		1 - 3	.051	.059	.644	-.08	.18
Willingness- cognitive disability	0	1 - 3	-.114	.059	.135	-.25	.02
		> 4	-.131	.070	.147	-.29	.03
	1 - 3	0	.114	.059	.135	-.02	.25
		> 4	-.017	.067	.965	-.17	.14
	> 4	0	.131	.070	.147	-.03	.29
		1 - 3	.017	.067	.965	-.14	.17
Willingness- behaviour problems	0	1 - 3	-.040	.056	.750	-.17	.09
		> 4	-.007	.066	.994	-.16	.14
	1 - 3	0	.040	.056	.750	-.09	.17
		> 4	.033	.064	.860	-.11	.18
	> 4	0	.007	.066	.994	-.14	.16
		1 - 3	-.033	.064	.860	-.18	.11

Appendix 6

Letters for research clearance

UiO  **Faculty of Educational Sciences**
University of Oslo

Date: 16.06.14
Your ref.:
Our ref.:

To whom it will concern

This is to certify that **Mussa Shaffi Ngonyani**, date of birth 08.03.1979, is a full-time doctoral student pursuing a course of study at the Department of Special Needs Education at the University of Oslo, Norway, leading to the degree of Philosophiae Doctor in Special Needs Education (Phd).

Ngonyani will be travelling to his home country, Tanzania, and conduct field work relevant to his thesis. This field work is an essential part of his course of study. The field work will start August 18th 2014 and last until August 14th 2015.

Ngonyani is planning to travel to Tanzania August 10th 2014 and travel back to Oslo, Norway, August 17th 2015.

Sincerely yours


Kristin F. Fredriksen
Head of Office


Camilla Rake
Senior Executive Officer



The Department of Special Needs Education (DSNE)
Postal addr.: PB 1140 Blindern, 0318 Oslo
Visiting addr.: Helga Eng's hus, 4th floor,
Sem Sælands vei 7, 0371 Oslo

Phone: (+47) 22 85 80 59
Telefax: (+47) 22 85 80 21
ekspedisjonen@isp.uio.no
www.isp.uio.no
Org. no.: 971 035 854

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION AND VOCATIONAL TRAINING

Cable: "ELIMU" DAR ES SALAAM
Telex: 41742 Elimu Tz.
Telephone: 2121287, 2110146
Fax: 2127763



7 Magogoni Street
11479 DAR ES SALAAM

In reply please quote:

Ref. ED/EP/ERC/VOLVI/ 75

Date: Tuesday, 15th July, 2014.

The Regional Administrative Secretary – Dar es Salaam, Morogoro, Njombe Ruvuma, Mbeya, Lindi, Mtwara, Singida, Tanga, Kilimanjaro, Mwanza, Tabora, Arusha and Manyara Regions.

ATT: Regional Education Officer – Ruvuma.

RE: RESEARCH CLEARANCE FOR MR. MUSSA SHAFFII NGONYANI

The above-mentioned is a bonafide student at University of Oslo who is conducting a research on the topic titled **"Teacher' Self-efficacy, Willingness and Attitudes towards Inclusion of Pupils with Disabilities"** as part of his course programme for the award of PhD programme.

For the purpose of accomplishing this study, the researcher will therefore need to collect data and necessary information related to the research topic from your office(s).

In line with the above information you are being requested to provide the needed assistance that will enable him to complete the research successfully.

The period by which this permission has been granted is from **July, 2014 to August 2015**

By copy of this letter, **Mussa Shaffii Ngonyani** is required to submit a copy of the report (or part of it) to *the Permanent Secretary, Ministry of Education and Vocational Training* for documentation and reference.

Yours truly,

A handwritten signature in black ink, appearing to read 'Erasmus J. Buretta'.

Mr. Erasmus J. Buretta

For Permanent Secretary

CC: Mr.Mussa Shaffii Ngonyani – University of Oslo - Norway

HALMASHAURI YA MANISPAA SONGEA

[Barua zote ziandikwe kwa Mkurugenzi wa Manispaa]

MKOA WA RUVUMA:

SIMU OFISINI Na.2602970

Fax: 0252602474

E-mail songea.municipal@gmail.com



UKUMBI WA MANISPAA,

S. L. P. 14,

SONGEA.

Unapojibu tafadhali taja:

Kumb. Na. SO/MC/E.10/178/42

01 Agosti, 2014

Walimu Wakuu wote,
S.L.P. 14,
SONGEA.

YAH: KUMTAMBULISHA NDUGU MUSSA SHAFII NGONYANI

Tafadhali rejea mada hapo juu.

Mtajwa hapo juu ni mwanachuo Chuo Kikuu cha OSLO – Norway anasoma Shahada ya Uzamivu (PhD). Anahitaji kufanya utafiti katika shule yako juu ya uwezo wa walimu kufundisha, elimu jumuishi na mambo mengine yanayohusiana na ufundishaji.

Ni matumaini yangu utampa ushirikiano wa kutosha.

Nakutakia utekelezaji mwema.

Nathaniel F. Yonas
Kaimu Afisaelimu wa Manispaa
SONGEA

MKUU WA WILAYA HALMASHAURI YA WILAYA YA NAMTUMBO
(Barua zote ziandikwe kwa Mkurugenzi Mtendaji wa Wilaya)

Simu/Fax: 025 – 260 2864

Simu: 025 – 260 2865



IDARA YA ELIMU,
S.L.P. 55,

NAMTUMBO.

15/09/2014

KUMB. NA DED/NMT/E.10/V.1/57/69

WALIMU WAKUU WOTE.
NAMTUMBO,
S.L.P.55,
NAMTUMBO.


YAH: KUMTAMBULISHA KWENU NDUGU, MUSSA SHAFII NGONYANI.

Tafadhali husika na somo la hapo juu.

Mtajwa hapo juu ni mtafiti wa maswala yanayohusu mambo ya Elimu Jumuishi, atapita katika shule zenu kuanzia tarehe 15/09/2014 hadi 01.12.2014.

Tafadhali tunaomba mpeni ushirikiano katika utafiti wake ili aweze kukamilisha kwa wakati.

Nawatakia kazi njema.


Laberto J. Mbilinyi,
AFISA ELIMUS/M (W),
NAMTUMBO.

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION AND VOCATIONAL TRAINING

Cable: "ELIMU" DAR ES SALAAM
Telex: 41742 Elimu Tz.
Telephone: 2121287, 2110146
Fax: 2127763



7 Magogoni Street
11479 DAR ES SALAAM

In reply please quote:

Ref. ED/EP/ERC/VOLVI/ 76

Date: Tuesday, 15th July, 2014.

The Regional Administrative Secretary – Dar es Salaam, Morogoro, Njombe Ruvuma, Mbeya, Lindi, Mtwara, Singida, Tanga, Kilimanjaro, Mwanza, Tabora, Arusha and Manyara Regions.

ATT: Regional Education Officer – Mbeya.

RE: RESEARCH CLEARANCE FOR MR. MUSSA SHAFFII NGONYANI

The above-mentioned is a bonafide student at University of Oslo who is conducting a research on the topic titled **"Teacher' Self-efficacy, Willingness and Attitudes towards Inclusion of Pupils with Disabilities"** as part of his course programme for the award of PhD programme.

For the purpose of accomplishing this study, the researcher will therefore need to collect data and necessary information related to the research topic from your office(s).

In line with the above information you are being requested to provide the needed assistance that will enable him to complete the research successfully.

The period by which this permission has been granted is from **July, 2014 to August 2015**

By copy of this letter, **Mussa Shaffii Ngonyani** is required to submit a copy of the report (or part of it) to *the Permanent Secretary, Ministry of Education and Vocational Training* for documentation and reference.

Yours truly,

A handwritten signature in black ink, appearing to read 'Erasmus J. Bureta'.

Mr. Erasmus J. Bureta

For Permanent Secretary

CC: Mr.Mussa Shaffii Ngonyani – University of Oslo - Norway

**THE UNITED REPUBLIC OF TANZANIA
PRIME MINISTERS' OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT AUTHORITIES**

REGIONAL COMMISSIONER'S OFFICE
P.O. Box 754,
MBEYA.

MBEYA REGION
TELEGRAM: "REGCOM"
Telephone No: 025-2504045
Fax No.025-2504243



08TH OCTOBAR, 2014

In reply please quote:

Ref. No. DA.75/228/01/51

The City Director,
Mbeya City Council,
P.O.Box 149,
MBEYA.

Distict Executive Directos,
Rungwe, Kyela na Mbozi
MBEYA REGION

**RE: PERMISSION TO MR MUSSA SHAFFII NGONYANI FOR CONDUCTING
RESEARCH AT YOUR COUNCIL**

Reference is made for the above caption. The above – mentioned is a bonafide Student at University of Oslo who is conducting a research on “ Teacher” self = efficacy, willingness and Attitudes towards inclusion of pupils with Disabilities.

Iam requesting you to support him conduct a research from Octoba 2014 to August 2015 on above mentioned tittle as a part of programme fullfilment. The concerned research area is on primary education.

Thank you in advance for your cooperation.

A handwritten signature in black ink, appearing to read 'Mwakyusa, N.K.'.

Mwakyusa, N.K

For: **REGIONAL ADMINISTRATIVE SECRETARY.**
MBEYA

Copy: Mussa Shaffii Nkonyani
University of Oslow- Norway