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William Nketsia

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Status and Challenges

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I thank them for granting me the permission to use a picture of their inclusive class 6.

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ABSTRACT

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Initial teacher education programs are undergoing reforms to equip pre-service teachers with inclusive skills, knowledge, attitudes, and values that are critical for successful implementation of inclusive education. This dissertation, comprised of four articles and a summary, sought to describe how the colleges of education in Ghana prepare teachers for inclusive education. A descriptive survey research approach was adopted in all four articles.The first article sought to determine the knowledge of pre-service teachers regarding the concept of inclusive education, special education needs (SEN), inclusive pedagogical approaches, and their feelings of self-efficacy in terms of teaching in inclusive settings. The results indicated that the majority of the final-year pre-service teachers have been introduced to the concept of inclusive education, and overall, they demonstrated good knowledge of inclusive education and SEN. However, only the minority indicated that they provided support for the SEN children they encountered and felt highly self-efficient in terms of their preparedness to teach students with SEN. The second article sought to determine the inclusive pedagogical approaches, knowledge, and values that pre-service teachers acquire from a SEN course, their perceptions of the adequacy of the SEN course, and the challenges associated with the delivery of the SEN course. It was found that the medical model view of disability was dominant in the SEN, and only a minority of pre-service teachers acquired the requisite inclusive values, principles, and pedagogical practices from the course. On the whole, the SEN course was found to be adequate in equipping pre-service teachers with the knowledge and skills required to identify the different categories of SEN and disabilities but inadequate in providing pre-service teachers with sufficient inclusive knowledge, skills, and practices.The third article examined the knowledge of teacher educators regarding the concept of inclusive education, SEN, and inclusive pedagogical approaches, as well as their attitudes toward inclusive education, perception of their roles, and preparedness to train teachers for inclusive education. Overall, they demonstrated positive attitudes toward inclusive education and teacher preparation for inclusive education. However, the majority were of the view that Ghana was unready for the implementation of inclusive education because of contextual factors, such as inadequate facilities, inadequate teacher preparation, inadequate resources, societal attitudes, inadequate public education, and lack of political will. Moreover, the majority lacked adequate inclusive teaching experience and felt somewhat prepared for training teachers for an inclusive classroom. The final study adopted a cross-sectional approach to determine pre-service teachers' views and opinions about disability, their level of discomfort, their attitudes toward inclusive education, and the impact of independent variables. Although, the pre-service teachers understood disability in terms of the dynamic interaction of both biological factors and environmental factors, they felt more comfortable interacting with people with disabilities, but their overall attitudes were scantily positive, with some being predisposed to cultural beliefs about disability. The overall study indicates that Ghana needs reforms in initial teacher education to prepare pre-service teachers and teacher educators to promote inclusion. The studies discussed several factors that could be adopted to effectively train teachers on issues of SEN, disabilities, and inclusive pedagogical approaches to improve upon their attitudes and self-efficacy.

Keywords: Initial teacher preparation, Inclusive education, Attitudes, Knowledge, Values, Teacher educators, Pre-service teachers, Colleges of Education, Ghana

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LIST OF EMPIRICAL STUDIES

Sub-study I

Nketsia, W., & Saloviita, T. (2013). Pre-service teachers' views on inclusive education in Ghana, *Journal of Education for Teaching*, 39(4), 429-441, DOI:10.1080/02607476.2013.797291

Sub-study II

Nketsia, W., & Saloviita, T. (Submitted).Teacher Educators and Trainees' Perspective on Teacher Training Special Education Course.

Sub-study III

Nketsia, W., Saloviita, T., & Gyimah, E. K. (2016). Teacher Educators' Views on Inclusive Education and Teacher Preparation in Ghana. *International Journal of Whole Schooling, 12*(2), 1-18.

Sub-study IV

Nketsia, W. (2017). A cross-sectional study of pre-service teachers' views about disability and attitudes towards inclusive education. *International Journal of Research Studies in Education, 6*(3), 53 – 68. DOI: 10.5861/ijrse.2016.1610.

Author's Contribution

The author, William Nketsia, designed the questionnaire and collected and analyzed the data utilized in all the articles. He was also responsible for writing all the articles for publications. His supervisors provided comments at several stages during the writing process and Prof Saloviita and Prof Gyimah participated in the Writing of the Texts.

FIGURES

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CONTENTS

1 THE CONTEXT OF THE STUDY

Ghana is a typically developing Sub-Saharan African country located along the coast of West Africa, neighboring the Gulf of Guinea to the south, Cote d'Ivoire to the east, Togo to the west, and Burkina Faso to the north, and covering a land area of 227,533 sq km. It is a tropical country with hot and humid temperatures. The Republic of Ghana was the first sub-Saharan African country to become independent from the British colony on the 6th of March, 1957. It is a constitutional democracy with 10 administrative regions: Ashanti, Brong-Ahafo, Central, Eastern, Greater Accra, Northern, Upper East, Upper West, Volta, and the Western regions. English is the official language. Ghana has a population of 26,327,649 with a population growth rate of 2.18%. The government spends about 8.1% of the GDP (2011) on education. Ghana has a literacy rate of 76.6% for those over the age of 15 years (Central Intelligence Agency, 2015).

It is a country of about 40 ethnic groups, each with its own culture. Although English is the official language of Ghana, there are more than 50 languages and dialects spoken throughout the country. English is not used by many of the poorest and most illiterate groups (Odoom & van Weelen, 2011). Major spoken languages include Akan, Ewe, and Ga. Ghanaian language is used as the medium of instruction during the first three years of primary school, while English is taught as a subject. English becomes the medium of instruction and the local languages become a subject from the upper primary to the university.

1.1 Basic Education in Ghana

The basic education system in Ghana is comprised of two years of kindergarten, six years of primary, and three years of junior high school (Ministry of Education, 2015). The national education system in Ghana was described as marginally developing as of 2008, and all the educational indicators have been above the average value for sub-Saharan countries, but below the world average, and

much below the average value for North American and Western European countries (Ametepee & Anastasiou, 2015). Ghana operates a centralized subject-based curriculum, which is prescribed for all schools by a centralized body, the Curriculum Research and Development Division (CRDD), under the auspices of the Ministry of Education. Several limitations have been found with such centralized curriculum; it is quite unresponsive to the needs of minority groups, presents significant challenges for teachers trying to implement an inclusive education approach, and encourages teachers to adopt teacher-centered instruction (see, e.g., Loreman, 2007; Price, 2015). It is, therefore, up to teachers to struggle with the official curriculum and the needs of students with disabilities. It also means that teachers need adequate confidence and professional responsibilities to demonstrate knowledge and skills in inclusive pedagogical approaches to make the curriculum accessible to students with disabilities.

Even though there is evidence of growing interest in teacher effectiveness in Ghana, however, reports have indicated that there is still a limited policy guidance and practice (Coffey International Development Report, 2012) and that reform in teacher education curriculum has been slow in comparison to reforms in school curriculum (Akyeampong, Lussier, Pryor, & Westbrook, 2012). Consequently, The National Education Assessment (NEA), which nationally measures student competencies in mathematics and English in primary grades 3 and 6 on a biannual basis, has consistently shown a low proportion of pupils achieving proficiency in mathematics and English (Ministry of Education, 2014, 2012a, 2012b). The 2013 NEA results indicated that only 22.1% and 28.4% of primary three pupils achieved proficiency in mathematics and English, respectively, and only 10.9% and 39.0% of primary six pupils achieved proficiency in mathematics and English, respectively. These poor performances have been ascribed to the inability of the majority of teachers to teach effectively, multi-grade classrooms, a higher percentage of orphans in schools, inadequate textbooks, large class sizes resulting in higher repetitions and dropout rates (Ministry of Education, 2014). Some have argue that discussions regarding the problems of poor quality provision in schools have lacked critical analysis of how pre-service teacher education prepares teachers to teach in an inclusive setting (see, e.g., Akyeampong et al., 2012).

1.2 Initial Teacher Education for Basic Education in Ghana

The vision of teacher education in Ghana is to:

> Prepare the grounds for quality teaching and learning outcomes through competency-based training of teachers (UNESCO, 2003, p. 6).

The mission is to:

> Provide a comprehensive Teacher Education Programme through pre-service and in-service training that would produce competent, committed and dedicated teachers to

> improve the quality of teaching and learning in Ghanaian classrooms (UNESCO, 2003, p. 6).

The initial teacher education for basic education in Ghana has witnessed some introduction of varied teacher certification programs in the past. A three-year Certificate "A" Post-Secondary Teacher Education Program that was introduced in 1978, with the main purpose of improving the professional competence of trained teachers, was designated as a three-year Diploma in Basic Education Program (DBE) in 2004. Currently, the 38 public and four private Colleges of Education (CoE) in Ghana offer a three-year DBE. The CoE program structure follows an "in-in-out" scheme. With this scheme, pre-service teachers spend the first two years of the three-year program in the colleges carrying out course work, school attachment, and on-campus teaching practices. The on-campus teaching practices largely equip trainees with skills to plan lessons, teach, and provide improvisations for teaching materials. This involves four periods of peer-group teaching, each lasting 45 minutes (Akyeampong & Furlong, 2000).

The third year provides an opportunity for pre-service teachers to spend time in real classroom situations to study and learn to teach. It is the actual practice for the development of teaching competencies among pre-service teachers. Each student is expected to receive at least two supervisions a week for the duration of the teaching practice. The pre-service teachers receive specific guidance from experienced in-service teachers in the placement schools and consistent supervision from teacher educators to address the problems they encounter during their teaching practices. However, the use of the last year of the pre-service teacher education program for teaching practice has been been criticized for being too late to make good use of their experience to understand course work. Therefore, some have recommended rescheduling the practicum for an earlier training year (see, e.g., Adu-Yeboah, 2011; Akyeampong et al., 2012).

Recently, the CoE and the University of Cape Coast (UCC) signed a Memorandum of Understanding and Affiliation agreement to affirm their upgrade to tertiary status in accordance with the CoE Act of 2012, Act 847 (UCC, June 2016). This comes after pressures from professional bodies, such as the Colleges of Education Teachers Association of Ghana (CETAG), amid strike actions. As it stands now, the content and organization of the undergraduate initial teacher education courses in the CoE had been under the control of UCC, Institute of Education. The Institute is responsible for the national CoE curriculum, examination, and issuing of certificates. With the signing of the Memorandum of Understanding and Affiliation Agreement document, the UCC would continue to monitor the CoE to carry out their mandate of training competent teachers for basic education.

The pre-service teachers trained for early childhood, kindergarten, and primary schools undertake a generalist training approach, and those trained for junior high school undertake a subject-training approach. The current requirement for colleges of education is the Senior High School Certificate

Examination (SHSCE). The applicants to the CoE are selected for interview and entrance examinations at their selected CoE by the Teacher Education Division (TED) of the Ghana Education Service (GES). The entry examinations, which are devised and administered by each college, are mainly examination oriented to test applicant capabilities in English and Mathematics (Akyeampong & Furlong, 2000). Even though age is not a requirement, the majority of pre-service teachers have been found to be between the ages of 23–33, with a mean age of 24 (see, e.g., sub-studies I, II, III, and IV).

In addition to the three-year DBE program at the CoE, other pathways for teacher preparation and professional development exist. Basic education teachers who have already attained DBE have an opportunity to acquire degrees by enrolling in a two-year post-DBE in the public and private universities. There is also a two-year DBE sandwich program organized by the CoE and examined by UCC for teachers who have already obtained the three-year post-secondary certificate "A." In response to the demand for trained teachers for basic education in rural areas, the CoE, in collaboration with TED of the Ghana Education Service, also offers a four-year distance education in Untrained Teacher's Diploma in Basic Education (UTDBE) for untrained teachers teaching in schools. Applicants who fail to meet the requirement for the UTDBE certificate are provided the opportunity to undertake a three-year distance certificate "A" program. The University of Cape Coast and the University of Education, Winneba, also offer full-time on-campus bachelor's and master's degrees for prospective teachers. There are also other private teacher training providers in Ghana (Asare & Nti, 2014; UNESCO, 2003).

In connection with the new education system in Ghana, in September 1987, special education was introduced into the curricula of regular education pre-service training colleges to provide them with skills to identify children with disabilities and SEN and support their integration in the regular education system. Another aim of the introduction of the special education curriculum into pre-service teacher training colleges was to combat the negative attitude of teachers in the area of integration (UNESCO, 1988). Currently, all teacher trainees undertaking DBE programs at the CoE in Ghana are taking mandatory two-credits course in special needs education at the end of their second year (see, e.g., sub-studies I–IV).

Unlike most other countries, Ghana does not have separate teacher education programs that prepare two sets of teachers (special and regular education) for basic education. Specialist training in SEN is carried out at the university level. This lack of separateness is positive in the sense that it reinforces the view that students with disabilities and special needs are not different and do not require isolated and distinct pedagogical approaches. This is a necessary condition for effective initial teacher preparation for the implementation of inclusive education. It can also be said that GES is gradually moving toward a one-track approach of special provisions because a separate special provision is not well-established at the basic education level, and recent educational policies have advocated for the inclusion of almost all pupils in

regular education, including those with severe disabilities (see, e.g., Ministry of Education, 2015, 2013, 2012c, 2003a). The single-track approach emphasizes the preparation of all teachers for teaching children with SEN in regular education settings (Nash & Norwich, 2010).

Studies have indicated that the teacher educators in CoE feel that their university training did not well prepare them to teach in the CoE, especially teaching of pedagogical content knowledge (Adu-Yeboah, 2011). Moreover, the methods of assessing pre-service teachers have been found to be mainly examination oriented with the focus on subject content knowledge and little on teaching methods and practice (Adu-Yeboah, 2011; Akyeampong et al., 2012). The colleges of education have also been found to lack relevant teaching and learning materials and resources (UNESCO, 2003). The current qualification requirement for teacher educators in the CoE is a master's degree. However, at the time of data collection for the various sub-studies II and III some of the teacher educators had their master's degrees, whereas some still held bachelor's degrees.

This chapter has described the context of the study, the country, Ghana, the basic education system, as well as the initial teacher preparation for basic education. These helped put the study into contextual perspective. The following chapter directs attention to the theoretical concepts adopted in the four sub-studies.

2 THEORETICAL FRAMEWORK OF THE STUDY

2.1 Introduction

This chapter reviews the various theoretical concepts that informed the construction of the questioannaires, analyses, data interpretation, and discussion of the findings. They include disability, special educational needs, inclusive education, attitudes, self-efficacy, and inclusive pedagogical approaches. Sub-study I dealt with pre-service teachers' knowledge of inclusive education, special educational needs, inclusive pedagogical approaches, and feelings of self-efficacy in terms of preparedness for inclusive education. Sub-study II determined the inclusive values, special educational needs, and inclusive pedagogical approaches that pre-service teachers acquired from the special educational needs course.

Furthermore, Sub-study III addressed teacher educators' knowledge of inclusive education, special educational needs, inclusive pedagogical approaches, and attitudes toward inclusive education. Sub-study IV determined pre-service teachers' conceptualization of disability, their views and opinions about cultural beliefs on disability, their attitudes toward inclusive education as well as toward educating different categories of special educational needs in regular education classrooms.

2.2 Disability and Special Educational Needs

Several models have been developed to facilitate the understanding of disabilities. In this dissertation, the historical or traditional psycho-medical model view (individual model), the social model view, and the interactive model view are described. The psycho-medical model, the biological reductionist, or child-deficit model explanation of disability considers disability as being caused entirely or principally by bodily impairment (Anthony, 2011; Oliver, 1990; Thom-

as, 2008). It constructs disability as a personal tragedy, sickness or problem whereby a person with an impairment is considered as having a health problem that must be medically prevented, treated, or cured (Oliver & Barnes, 2012) through procedures tried and tested as medical remedies; it thus adopts a psycho-medical response to learning difficulties (Clough & Corbett, 2000). As a result, the medical view of disability locates the problem, the deficiency, the deficits, and the challenge within individuals with disabilities (Booth & Dyssegaard, 2008; Oliver, 1990; Croft, 2010).

The possible tragic outcomes of the deficit view of difference have been variously described. First, rather than focusing on difficulties within the various school curricula, cultures, educational policies, and approaches to teaching and learning, this view suggests that individual deficits and disabilities must be addressed (Booth & Dyssegaard, 2008; Purdue et al., 2009). Second, it reinforces the idea that the identified children are different from others, justifying their segregation into special education or learning support in anticipation of receiving "different" or "additional" pedagogical approaches (Angelides, Stylianou, & Gibbs, 2006; Avoke, 2001; Florian & Rouse, 2009; Thomas, 2008). The individual model of disabilities has also been criticized for its lack of connection with the experiences of people with disabilities (Oliver, 1990) and the role played by the social, attitudinal, and environmental barriers in the lives of persons with disabilities (Thomas, 2008). Some have also argued that focusing on impairment and difference will not lead to the development of approaches that will improve the lifestyles of persons with disabilities (Oliver, 2013; Oliver & Barnes, 2012).

These foregoing drawbacks of the medical model view of disability have influenced a shift toward the social model of disability. This sociological response broadly represents a powerful and provocative challenge to the dominant psycho-medical legacy (Clough & Corbett, 2000). The social model of disability, therefore, breaks the causal link between impairment and disability (Oliver & Barnes, 2012). Advocated by People with Disability, the sociological perspectives, is of the view that "disability" is not caused by impairment but by social organizational barriers (structural and attitudinal) that people with impairment (physical, intellectual, and sensory) face in society (Oliver, 1990; Thomas, 2008). It shifts the focus from persons with disabilities to all the factors that limit them, such as deep-rooted cultural beliefs, attitudes, prejudices, institutional discrimination, inaccessible public buildings and transport systems, and barriers that have been created by economic and political structures (Croft, 2010; Oliver, 2013). This view is that disability is caused by the failure of society to respond or accept individual differences and welcome people with different abilities by providing services and modifying aspects of society to enable full participation of persons with disabilities in all areas of social life (Oliver, 1990; Oliver & Barnes, 2012; World Health Organization [WHO], 2001).

However, some have argued that the social model of disability also fails to recognize that impairment plays a critical role in the lives of most people with disabilities, that disability would persist even if all social barriers were removed, and that the effects of impairment would continue to inhibit people's activity

(Thomas, 2008). However, Mike Oliver, one of the key advocates of the social model, argues that the social model does not suggest that the individual model of disability should be abandoned and does not claim that the social model of disability is an exhaustive framework within which everything that happens to people with disabilities could be understood or explained (Oliver, 2013). It does not deny the reality of impairment, but it argues that impairment is not the cause of the economic and social disadvantages of people with disabilities (Oliver & Barnes, 2012). From a teaching perspective, some have also criticized the sociological critique on the basis that the ideas it generated related only to an analysis of schools and society and offered no practical advice to teachers in the classroom (Clough & Corbett, 2000).

However, according to Clough and Corbett (2000), curricula approaches to learning difficulties – which developed alongside the sociological critiques of special education – have offered partial practical advice to teachers in the classroom. These curricula approaches owe their development to a more social movement than to psychological constructs. These approaches emphasize the role of the curriculum in both meeting and effectively creating learning difficulties. They brought fresh insights into the nature and process of learning, threw into question notions of innate and static ability, alluded to the vital role of learners themselves in the construction of knowledge, and suggested changes to pedagogic organization, which had traditionally grouped learners by ability. They further described the psycho-medical model, the sociological response, and curricula approaches as key stages or trends characterizing the growth of inclusive education.

Because of the inadequacies of both the medical and social models in describing disability, they are gradually being replaced by a more interactive approach to disability. The WHO's International Classification of Functioning, Disability and Health (ICF) or the bio-psycho-social model approach to disability recognizes disability as an outcome of an interaction between individuals with health conditions or impairments and environmental or contextual factors, such as social support, culturally influenced perceptions of disability, and access to nutrition and education (WHO, 2002). Defining disability in this way means that disability is not an attribute of the person and recognizes the interaction between student, learning environment, and curriculum (McGhie-Richmond & Sung, 2013). The adoption of this interactive approach to disability by international organizations, such as the Convention on the Rights of Persons with Disabilities (United Nations, 2006), WHO, and World Bank (WHO & World Bank, 2011), is a confirmation of the global shift in understanding disability.

In addition, several international organizations and documents have highlighted disability as a human rights issue—for example, the Standard Rules on the Equalization of Opportunities for People with Disabilities (United Nations, 1993), the United Nations Educational, Scientific and Cultural Organization (UNESCO, 1994, 2009), the United Nations Children's Emergency Fund (UNICEF, 2012), the WHO and World Bank (WHO & World Bank, 2011), and

the Convention on the Rights of Persons with Disabilities (United Nations, 2006). The Convention on the Rights of Persons with Disabilities outlines the civil, cultural, political, social, and economic rights of persons with disabilities.

Along with the predominant understanding of disability in terms of the medical model, several studies from different contexts have identified that traditional, cultural, religious, and magical beliefs also facilitate the understanding of disability, especially in sub-Saharan African countries (Avoke, 2002; Botts & Owusu, 2013; Dart, 2006; Kassah, Kassah, & Agbota, 2012; Naami, Hayashi, & Liese, 2012), Asia, and the Middle East (Dhungana, 2006; Gaad, 2004). These studies have shown that children born with disabilities are not thought of as human beings. Therefore, at birth, rituals are performed by medicine men with yams, red oil, and boiled eggs, and the children are taken to the edge of a forest or riverside and shot. Those who are not killed are locked up and hidden. Some also believe that the impairments of the disabled are caused by evil spirits and that they have supernatural powers (Kassah, Kassah, & Agbota, 2012; UNESCO, 1988). Botts and Owusu's (2013) gathering of baseline information on the cultural and religious beliefs about people with intellectual disabilities and their families also showed that some Ghanaians believe that spiritual influences cause disability and that there are spiritual cures for disability. Other studies have also shown that Ghanaians view disability as an act of God or the devil; a curse of witchcraft, juju, gods, evil spirits, ghosts; or the powers of sorcery as a result of sins or offences committed by family members (Avoke, 2002; Botts & Owusu, 2013; Naami, Hayashi, & Liese, 2012).

The psycho-medical discourse has influenced the use of clinic-based assessments involving school doctors, psychiatrists, educational psychologists, and psychometric tests to identify students based on their conditons, categorizing students with disabilities as "maladjusted kids", "educationally sub-normal" etc. (Clough & Corbett, 2000; Dixon & Verenikina, 2007). However, a report by Warnock (DES, 1978) admonished that it was better to identify children by means of their educational difficulties rather than their handicap. Consequently, the term "special educational needs" was originally coined by Warnock to describe all children with developmental difficulties that affect their learning, behavior, emotional and social development, communication, and ability to take care of themselves and live life independently (DES, 1978). In the Salamanca Framework for Action on Special Needs Education Statement (UNESCO, 1994), the term "special educational needs" was used to refer to all children and youth whose needs arise from disabilities or learning difficulties. However, these definitions failed to account for social deprivation as a contributory factor to educational needs (Clough & Corbett, 2000).

The concept of "special educational needs" continues to be dominant in different inclusive education policy documents from different contexts, and the categories of special educational needs vary from country to country. However, the use of special educational needs labels and the processes, practices, and language associated with it, in the attempt to implement inclusive practice, has been variously criticized. Special educational needs labels act as a barrier to the

development of a broader view of inclusion (Ainscow, Booth, & Dyson, 2006), thereby perpetuating and justifying the culture of separate special education (Ballard, 1995). Special educational needs categories and labels have also been found to strengthen the view of otherness, resulting in stigmatization, peer rejection, lower self-esteem, lower expectations, and limited opportunities (Booth, 2005; European Agency for Development in Special Needs Education [EADSNE], 2012; Thomas, 1997; WHO & World Bank, 2011). Corbett (1996) maintained that SEN is the language of sentimentality and prejudice, which is unacceptable and must be challenged.

Thomas (1997) argued that it is inconsistent to define special educational needs purely in terms of the traditional constructs of learning difficulty and disability because children's difficulties at school may arise from a multiplicity of factors relating to language, family income, gender, and cultural and ethnic backgrounds. Moreover, the pathological probing of disablement most often ignores the role of curriculum, pedagogy, assessment, and school organization (Slee, 2001). Consequently, Sebba, and Sachdev (1997) recommended that educationally relevant labels such as "reading difficulty" are more beneficial than categorical labels, such as "Down syndrome" or "moderate learning difficulties." Naukkarinen (2010) also argued that instead of categorizations, teachers must view learners as having multiple intelligences and learning styles along many dimensions as this perspective enhances the development of a continuum of support services for pupils and teachers. Above all, Thomas (1997) argued that children should be viewed as learners characterized by flexibility and plasticity and not by immutable characteristics.

2.2.1 Summary

Many authors from both the Global North and South have reiterated that the social model understanding of disabilities and SEN is central to the call for inclusive education (Armstrong, Armstrong, & Spandagou, 2010; Avoke, 2001; Croft, 2010; Mariga, McConkey, & Myezwa, 2014; Oliver, 2013). The underlying philosophy of the social model is to advance the common individual interests of persons with disabilities, their social and political equality, and their full civil rights by identifying and removing the barriers created by society, schools, and classrooms. Eliminating social barriers, addressing people's attitudes, and developing social policies and practices will facilitate social inclusion and citizenship, thereby resulting in improvements in the lives of individuals with disabilities.

Hence, teachers' conceptualization of disability and special educational needs in terms of the WHO's bio-psycho-social model and the social model of disability enables teachers to locate the source of learning difficulties outside of learners, adjust the educational and pedagogical approaches to individuals with disabilities rather than requiring them to do the adjusting, and eventually improving their support for inclusive education. Hence, the main purpose of Substudy IV was to determine pre-service teachers' conceptualization of disability and views and opinions about cultural beliefs regarding disability. Moreover,

pre-service teachers' and teacher educators' knowledge and ability to identify and meet pupils' special educational needs were addressed in sub-studies I, II, and III.

2.3 The Concept of Inclusive Education

Generally, inclusion has meant different things to different people, and the way inclusion is conceptualized and practiced has differred in different national educational contexts because of local social, cultural, and historical differences (Armstrong, Armstrong, & Spandagou, 2010; Lindsay, 2007; Mitchell, 2005; Swart, Engelbrecht, Eloff, & Pettipher, 2004). Other difficulties involving the conceptualization of inclusion have arisen from semantic, ideological and political discourses (Barton, 1997). Dyson (1999) has established that the concept of inclusion is constructed from four separate discourses, namely, the rights and ethics, efficacy, political, and pragmatic discourses.

The rights and ethics discourse, partly rooted in the notion of social justice, justifies inclusion by reference to the right of all children to an equitable quality education and recommends that inclusion be at the heart of any society that cherishes a liberal political system and pluralistic culture – one that celebrates diversity and promotes fraternity and equality of opportunity (Thomas, 1997). Second, the efficacy discourse offers a critical analysis of the effectiveness of education in special schools as being against inclusive education for students with disabilities. The major arguments in favor of the rights and ethics and the efficacy discourses will be presented later in this chapter. Third, the political discourse, which is about the realization of inclusive education, describes power struggles among professionals with vested interests, such as special education professionals and parents who either assist or resist the transition from a segregated system to an inclusive system.

Fourth is the pragmatic discourse that debates what inclusive education should look like in practice and how it should be realized. This discourse assumes that inclusive schools have determinate characteristics that are distinctively different from those of non-inclusive schools such as systems, structures, practices, ethos, theories of learning and instruction, and strategies that teachers can follow. Some authors have tried to list the characteristics of inclusive schools on the basis of empirical research, some of which will be discussed later in the various definitions of inclusive education. The entire study dealt with how teachers could be trained to assist in the realization of inclusive education, thus locating it within the pragmatic discourse.

These four different discourses construct inclusion in four different ways. Consequently, some are of the view that it makes sense to talk not of *inclusion*, but of *inclusions*, and to not seek a single form of inclusive school (Dyson, 1999; Purdue et al., 2009). A recent critical analysis of studies on inclusive education by Göransson and Nilholm (2014) found four different ways in which inclusion is undertood: a) placement definitions that describe inclusion as the placement

of pupils with disabilities or pupils in need of special support in regular classrooms; b) specified individualized definitions that explain inclusion as meeting the social and academic needs of pupils with disabilities or those of pupils in need of special support; c) general individualized definitions that view inclusion as meeting the academic and social needs of all pupils; and d) community-based definitions that describe inclusion as the creation of communities with specific characteristics.

Some of these definitions of inclusive education have been described as narrow (in reference to promoting the inclusion of specific groups of students in regular education) and broad (when inclusion does not focus on specific groups of students but rather on how schools should respond to the diversity of all students (Ainscow, Booth, & Dyson, 2006). However, both narrow and broad definitions of inclusive education can be fragmented (Armstrong, Armstrong, & Spandagou, 2011).

Notwithstanding these conceptual and ideological complexities, the Salamanca Statement that brought the concept into the international scene originally defined inclusive education as regular education with child-centred pedagogy capable of meeting the SEN of all pupils (UNESCO, 1994). The Statement promoted a wider, principled and idealistic perspective of inclusive education (Evans & Lunt, 2002). The underlying presumption is that all children should be educated in regular education classes wherever possible, regardless of their physical, intellectual, social, emotional, linguistic, or other conditions, including being from the street, being working children, being remote, nomadic, from ethnic or cultural minorities, having other disadvantages, or having SEN that arise from disabilities or learning difficulties. Placement in separate classes or settings is to be considered when regular education classroom placements do not meet individual students' needs. Some have argued that the central focus of the Salamanca Statement is on the education of children and youth with disabilities (Kiuppis, 2014; Peters, 2007). However, according to Kiuppis (2014), the meaning of the words "inclusive education" and "inclusion" since Salamanca has changed within the time frame 1994–2000, and UNESCO's focus on disability has been weakened considerably.

Inclusive education is often framed within the Education for All (EFA) movement, stimulated by the 1990 Jomtien Declaration. It is a key approach that is fundamental to achieving the vision and purpose of EFA, which means that all children access to basic, quality education, requires that the school environment are inclusive of all children, effective with children, friendly and welcoming to children, protective of children, and gender sensitive (Booth & Dyssegaard, 2008; UNESCO 2005, 2009; UNICEF, 2012). An inclusive approach to EFA would address barriers to learning and participation in a country and locality, and it would mobilize local resources through participative processes. It assures all students the needed support systems—supplementary aids and support services (Lipsky & Gartner, 1996) and adequate teaching support systems, such as flexible curriculum, adequately prepared teachers, and a welcoming school culture that accepts and tolerates all (Gartner & Lipsky, 1987;

Peters, 2007). Furthermore, the focus of inclusion has now gone beyond the inclusion of students with disabilities into regular education to a broader focus on access, quality, equity, social justice, democratic values, participation, achievement, balance between community, and diversity (Ainscow, Booth, & Dyson, 2006; Barton, 1997; Forlin & Sin, 2010; Salend, 2010; Thomas, 1997). Inclusion is about inclusive society; it is about collective belonging and equality in a civilized society (Thomas, 1997).

Additionally, inclusive education has an organizational approach to schooling, which views schools as organizations that have the potential to undergo restructuring to become more inclusive (Armstrong, Armstrong, & Spandagou, 2010). Here, it is seen as a process of increasing participation for all children in the curricula, cultures, and communities of their local schools and reducing exclusions on the basis of gender, class, disability, sexual orientation, ethnicity, faith, and family background. Exclusion involves all the discriminatory, devaluing as well as the self-protective process that permeates all aspects of school cultures and society. Exclusion is about rejecting some children from gaining access and also about eliminating those who have already gained access (Ainscow, Booth, & Dyson, 2006; Barton, 1997; UNESCO, 2009). It is extremely important that all children and young people have access to education. However, it is equally important that they are able to take an active part in school and achieve desired outcomes from their educational experiences.

To ensure that the questionnaires appear valid to the respondents and measure the defined content, the current study adopted the narrow conceptualizations of special educational needs and inclusive education, as described in the special education curriculum (see sub-section 4.2).

2.3.1 Justification of Inclusive Education

It is well-established that inclusive education has been advocated on two strong foundations: the rights of children to be included in regular education and the precept that inclusive education is more effective than special education. However, the ethical, right, and philosophical commitment to the inclusive education movement has been firm and has dominated other discourses more than the empirical foundation (Carlberg & Kavale, 1980; Dyson, 1999; Evans & Lunt, 2002; Lindsay, 2007; Manset, Semmel, & Barbara, 1997). The human rights approach to inclusive education has been supported by several international orgnaizations (UNESCO, 1994; UNICEF, 2012). Article 24 of the UN convention on the Rights of Persons with Disabilities indicated that children with disabilities have the right to be included in regular education systems and to receive the necessary support to succeed in school (United Nations, 2006). The convention stated that countries must recognize the right to education of persons with disabilities and implement an inclusive education system at all levels, along with lifelong learning to promote full human potential, a sense of dignity, and a sense of self-worth. Right-based education is not only academically effective but it is also inclusive, healthy, protective of all children,

gender-responsive, and encourages full participation of learners, families, and their communities. Above all, it helps children to recognize their rights (UNESCO, 2009).

Proponents of the principled perspective of inclusion have argued that children's rights are compromised by special education and that it segregates children with disabilities from their typically developing peers and from the regular education curriculum and educational practices (Lindsay, 2007), thereby maintaining and rationalizing the marginalization of those it claims to serve. It legitimates the treatment of children with disabilities as deviant, removes the imperative for any social restructuring in response to their characteristics, and contributes to their oppression (Abberley, 1987, cited in Dyson, 1999).

However, some have opposed the absolutist language of rights and moral imperatives that undergird the concept of inclusive education, such as "every child has a right to education," "education systems should be designed to take into account children's characteristics," and "those with special needs must have access to regular education"(Dyson, 1999; Farrell, 2000; Fuchs & Fuchs, 1994; Kauffman, 1993). They have argued that the most important right of children is to have appropriate education, even if this requires special educational provisions (Evans & Lunt, 2002; Farrell, 2000) and that the provision of inclusive education on the basis of the right discourse could also provide inferior educational experiences for some children (Fuchs & Fuchs, 1994) who might require special schools with special pedagogy and organizations that will meet their individual needs (Baker & Zigmund, 1995). They have argued that special education was created to help schools to better serve all children—to help teachers deal with student diversity—and that if student diversity is to be celebrated, then the diversity of services, programs, and environments providing appropriate education and habilitation should also be celebrated (Kauffman, 1993). Kauffman further expressed concern that the problems that brought special education into being continue to characterize regular education and that merging special education into regular education will not alter those realities. Indeed, some studies have shown that some education professionals believe there may be some pupils for whom inclusive schools are inappropriate, that there are considerable obstacles in the way of full inclusion, and that schools, as currently organized, have difficulty meeting the wide range of individual students' needs (Evans & Lunt, 2002).

Consequently, the opponents to the ethical discourse have argued that ethical justification of inclusive education is concerned only with place but not with whether children with disabilities will receive appropriate services or a stimulating education. There is less concern about the presence of particular pedagogical practices and organizational form and more concern about the absence of injustices, discrimination, exclusionary barriers, and so on (Dyson, 1999). Furthermore, some have argued that children's rights might be in conflict. A parent might think that a child has the right to be educated in a regular education classroom, whereas the child might be better off in a special school.

Other children have the right to better education as well, and placing a child with SEN in a regular education class might have a negative effect on the other pupils (Farrell, 2000). Farrell (2000) understands inclusion in terms of a continuum of provision for which there may remain acceptance of placements in special schools, special units, and special classes on the basis of balancing different rights (Armstrong, Armstrong, & Spandagou, 2010). In addition, there are some opponents to the inclusive education movement who have criticized it from an efficacy-oriented perspective, who feel that decisions regarding inclusive education should be be based on empirical justifications rather than human rights ideals (Carlberg & Kavale, 1980; Dyson, Farrell, Polat, Hutcheson, & Gallannaugh, 2004; Manset, Semmel, & Barbara, 1997; Oh-Young & Filler, 2015; Ruijs & Peetsma, 2009).

Overall, the concerns of opponents to the inclusive education movement have to do with whether students with special needs and disabilities would receive the required instruction and support in general education classrooms. However, the efficacy discourse believes that inclusive education is more effective educationally and more cost-effective, and could bring greater social benefits. Although empirical studies have been criticized on the basis of methodological problems, several meta-analyses and reviews of these empirical studies comparing special versus regular education class placements of exceptional children have consistently found special classes to be significantly inferior to regular education class placements. The review by Ruijs, Ineke Van der Veen, and Peetsma (2010) indicates that efforts to transform regular education into an effective environment for students with disabilities also have positive impacts on normally achieving students and offers a counterargument against the widespread concern that inclusive education assumes an adverse effect on typically developing students. The study found hardly any differences between typical students in inclusive and non-inclusive primary school classes, strengthening the scientific evidence in support of inclusive education.

In addition, some comparative studies have found more-conclusive evidence that organizational and pedagogical changes have a positive impact on the achievement of students without disabilities (Manset, Semmel, & Barbara, 1997; Ruijs, Ineke Van der Veen & Peetsma, 2010). Other studies have also found some evidence that inclusion can have positive effects on the wider achievements of all pupils, such as social, personal, and academic skills, and understanding, in particular, of pupils with SEN (Dyson, Farrell, Polat, Hutcheson, & Gallannaugh, 2004). In addition, recent meta-analyses of the findings of 24 studies published in peer-reviewed journals from 1980 through 2013 have established that a majority of students with disabilities in more inclusive settings outperformed those in less inclusive settings on both academic and social outcomes measures. Combining their findings with two prior meta-analyses, they provided over 80 years of evidence, suggesting that more inclusive settings are more beneficial than separate settings (Oh-Young & Filler, 2015).

However, other reviews have also revealed evidence that does not provide a clear endorsement for the positive effects of inclusion (Lindsay, 2007). Lindsay further argued that the important task now is to research more thoroughly the mediators and moderators that support optimal education for children with SEN and disabilities and, as a consequence, develop an evidence-based approach to these children's education. According to Lindsay, many advocates who are only interested in the rights position have rejected scientific arguments showing the negative effects of inclusion and that poor outcomes should encourage us to discover how to effectively implement the policy on inclusive education. Lindsay acknowledged that the rights, values, and ideologies provide the second pillar along with empirical evidence that might support policies about the education of children and young people with disabilities and SEN (Lindsay, 2007).

2.3.2 Summary

Research has demonstrated that teachers subscribe to multiple interpretations of the concept of inclusive education and that teacher support for inclusive education is influenced by their conceptualization of it (Lalvani, 2013). However, Swart, Engelbrecht, Eloff, and Pettipher (2004) posited that the principles of social justice, human rights, equitable education systems, and the responsiveness of schools toward diversity are clear commonalities across the varieties of inclusion that exist. Teachers who view inclusive education as a key strategy to achieving human rights, democratic societies, equitable education, and social justice demonstrated a strong willingness to implement inclusion (Lalvani, 2013).

It is therefore important that these vital intentions and values of inclusive education, which are themselves fundamental components that are expected of an inclusive society, become part of the initial teacher education curriculum. On this premise, pre-service teachers' knowledge of inclusive education was addressed in Sub-study I. Sub-studies II and III determined whether issues relating to the right of children to education (human rights) and social justice were dealt with in the special education curriculum and the entire teacher education curriculum.

2.4 Attitude and Self-Efficacy

The construct "attitude" has long been central to the field of social psychology and has played a key role in the scientific study of human thought and behavior (Baron & Branscombe, 2012; Kraus, 1990). It continues to be the key focus of theory and research in social and behavioral sciences. The definition of the concept "attitude" has changed over the years from a more complex and multidimensional definition encompassing the cognitive, affective, motivational, and behavioral (Ajzen & Fishbein, 2005; Swart, Engelbrecht, Eloff, & Pettipher, 2004)

to a much more narrow reference to people's evaluation of any aspect of the world (Schwarz & Bohner, 2001). This study adopted the general framework that attitude represents favorable or unfavorable evaluative perceptions of issues, ideas, objects, actions, persons, or entire social groups (e.g., Ajzen, 2001; Baron & Branscombe, 2012; Cacioppo, Petty, & Crites, 1994).

The construct of self-efficacy has also been the subject of interest in theories of human behavior with different theoretical perspectives (Bandura, 1977). Beliefs concerning the presence or absence of factors that make performance of a behavior easier or more difficult have been described as control beliefs (Ajzen & Fishbein, 2005). These control beliefs lead to what has been variously referred to as self-efficacy. Self-efficacy is the perception that one has or does not have the capacity to carry out the behavior (Bandura, 1977). In this study, self-efficacy refers to the strength of teachers' convictions in their own preparedness to teach students with disabilities in inclusive classrooms, which is likely to affect whether they will even try to cope with a given situation.

However, a strong sense of efficacy is also influenced by the belief that they have the other resources needed to perform the behavior or to overcome barriers. In other words, people who are socially persuaded that they possess the skills and resources needed to perform a behavior or overcome barriers are more likely to develop a strong sense of self-efficacy than those who depend on only resources. This means that self-efficacy is influenced by a wide variety of cultural, personal, and situational factors; exposure to information; and physical and social environment (Ajzen & Fishbein, 2005; Bandura, 1977).

Studies have established that teachers' attitudes could predict their self-efficacy (Emam & Mohamed, 2011), and others have also shown that teachers who demonstrate high self-efficacy in inclusive classrooms demonstrate more positive attitudes toward inclusion (Subban & Sharma, 2006). Studies from both the Global North and South have identified teachers' attitudes (Arbeiter & Hartley, 2002; Avramidis & Norwich, 2002; Angelides, 2008; Chhabra, Srivastava, & Srivastava, 2010; De Boer, Pijl, & Minnaert, 2011; Scruggs & Mastropieri, 1996) and self-efficacies (Avramidis, Bayliss & Burden, 2000; Avramidis & Norwich, 2002; Davis & Florian, 2004; Emam & Mohamed, 2011) as key factors for successful adoption and implementation of inclusive education programs.

Some reviews of large bodies of research have found evidence of positive teachers' attitudes toward inclusive education (Avramidis & Norwich, 2002; Scruggs & Masteropieri, 1996), whereas others have found unfavorable attitudes toward inclusive education (Chhabra, Srivastava, & Srivastava, 2010; De Boer, Pjil, & Minnaert, 2011; Gilmore, Campbell, & Cuskelly, 2003; Hudson, Graham, & Warner, 1979). Negative attitudes of teachers, other adults, and peers are major barriers to the implementation of inclusive education. It is therefore important that the attitudes and self-efficacies of all teachers involved in the inclusion of students with disabilities in regular education be modified. Sub-studies III and IV sought to identify teacher educators' and pre-service teachers' attitudes toward inclusive education, respectively.

2.5 Pedagogical Practices and Theories Underlying Them

There is a widespread cognizance of the complex nature of the concept of pedagogy: it changes with time, languages, and cultures, and teachers and policy makers are likely to understand pedagogy in different ways (Alexander, 2001; Watkins, & Mortimer, 1999). However, references are made to few definitions for the purpose of this dissertation. Alexander (2004) defined the concept of pedagogy as the act of teaching and its attendant discourse (p. 8). He distinguished pedagogy as a discourse from teaching as an act, but he made them inseparable. Pedagogy as a discourse covers the ideas, theories, and debates that inform and explain the act of teaching, such as the nature of childhood and learning, the structure of knowledge, the character of culture and society, the purposes of education, etc.

Therefore, pedagogy and teaching are interdependent because there can be no teaching without pedagogy and no pedagogy without teaching (Alexander, 2001). Taking into account both the teacher's and learner's roles and activities, Watkins and Mortimer (1999) simply defined pedagogy as "any conscious activity by one person designed to enhance learning in another" (p. 3). Loreman (2007) opined that curriculum is what is to be taught and pedagogy refers to how the curriculum is to be learned; hence, pedagogy is critical for learning in an inclusive environment. Banking education (authoritarian) and child-centered pedagogical styles have been identified as two distinct and oppositional pedagogical paradigms (Tabulawa, 1997). Both paradigms have different views about what constitutes legitimate knowledge, how knowledge should be transmitted, and how it is subsequently evaluated. The banking education pedagogical paradigm is rooted in an objectivist epistemology, which views knowledge as a commodity whose existence is independent of the learner. Here, the learner is treated as an empty vessel, a passive receiver who is expected to be cognitively docile and deferential toward the knowledgeable teacher. Students are containers and receptacles waiting to be filled by the teacher. Conversely, the child-centered pedagogical paradigm is based on Lev Vygotsky's epistemological assumption that views classroom knowledge as socially constructed.

Vygotsky believes that learners construct their knowledge through interaction within their social and cultural contexts rather than within isolated individuals. The key tenet of socio-cultural theory is the co-construction of knowledge between individual and social processes. Other Vygotsian trademarks include dynamic assessment and the concept of the zone of proximal development. Dynamic assessment encourages the identification of students' strengths, not weaknesses. The concept of the zone of proximal development stresses the need to identify overall independence and a need for support rather than a measure of what the child cannot do. Vygotsky's socio-cultural and social constructivist theories serve as key theoretical frameworks in addressing

the needs of teachers and students and enhance the development of inclusive pedagogical practices (Dixon & Verenikina, 2007).

Constructivism is also another key theory underlying pedagogical practices that are deemed effective in supporting the implementation of inclusive education. Constructivism refers to the assumption that learners construct knowledge through Piagetian ideas of assimilation and accommodation of life experiences (Von Glaserfeld, 1989). Assimilation and accommodation describe the ability of learners to transfer experiences from one situation to another through the mental schemes and categories they have constructed. Assimilation occurs when learners try to connect new experiences or information to already existing mental schemes that they have constructed. Accommodation occurs through learners' expansion of their already existing mental schemes by adding new categories based on their new experiences. On this premise, learners' cognitive development and learning take place when there is an active interaction between these learners and their environment. Here, teachers act as facilitators instead of knowledge depositors (Von Glaserfeld, 1989).

The presence of learners with disabilities and special educational needs in regular education presents enormous pedagogical challenges for education systems around the world. It has been variously stated that inclusive education systems develop schools based on a child-centered pedagogy capable of successfully educating all children (Loreman, 2007; UNESCO, 1994). Several authors from Ghana and other developing countries have also reiterated that the successful implementation of inclusive education in the Global South requires pedagogies that are child-centered and inclusive (Agbenyega & Deku, 2011; Alhassan & Abosi, 2014; Croft, 2010; Forlin & Sin, 2010; O'Sullivan, 2004; Pinnock & Nicholls, 2012).

A key assumption underlying learner-centered approaches is the constructivist view of knowledge in which children are seen as active participants in the process of seeking out knowledge, making sense of their experiences, gaining intrinsic satisfaction with themselves, and solving problems (Davis & Florian, 2004). They seek to develop children's critical thinking skills and encourage them to question adults, to analyze, and to explore (O'Sullivan, 2004). They are based on children's interests, children's participation in decisions related to their learning needs, learning styles, and the development of individual potential (Chung & Walsh, 2000; Humphreys, 2009; UNESCO, 2005). Thus, pupils are placed at the center of learning where their differences relating to understanding and feelings, their own individual previous unique knowledge bases, their level of engagement and motivation in an activity, and their social and perceptual skills are appreciated.

These inclusive approaches are effective in dealing with differences between learners in the classroom in ways that avoid the marginalization that can result from the differentiated treatment of some students (Croft, 2010; Florian & Black-Hawkins, 2010; Florian & Spratt, 2013; Forlin & Sin, 2010; Mintz & Wyse, 2015). They provide rich learning opportunities for all learners to enable them to participate in the classroom teaching community (Florian & Black-Hawkins,

2010). Inclusive pedagogical approaches fundamentally reject the ability labelling and categorization of students as different types of learners, remove limited expectations of both teachers and pupils, and have an open-ended view of each child's potential to learn. These approaches encourage teachers to offer a wide range of choices for all learners in the classroom rather than a set of differentiated options for some learners. They view human diversity as a strength rather than a problem and encourage children to work together, learn from their interactions with each other, and share ideas (Florian & Spratt, 2013).

In this dissertation, all effective pedagogical practices for the successful implementation of inclusive education, which are underpinned by constructivism and socio-constructivism theories and philosophies on children's learning process, are referred to as inclusive pedagogical approaches.

2.5.1 Inclusive Pedagogical Approaches

Peterson and Hittie (2003) have long established that pedagogical approaches adopting multilevel teaching, multiple intelligences and learning styles, and effective scaffolding can create classes that engage every student regardless of their ability levels and needs. They identified these as concepts, practical strategies, and building blocks that provide a foundation for inclusive pedagogical practices. They are the basis for best pedagogical approaches in diverse classrooms that engage academic, social-emotional, and sensory-physical components of student learning. They believe that multilevel teaching provides opportunities and engages students to learn at their own levels. This enables them to be included as effective members in the classroom. It ensures that each individual is treated as a unique person. Scaffolding (providing individual support) involves teachers, other adults, or more competent students helping students to perform tasks. Such individual support and assistance enables students to perform learning tasks beyond their actual level of ability, activities they could not perform without assistance (Peterson & Hittie, 2003).

The eight different ways that human beings learn best, as identified by Howard Gardner in 1993, involve multiple intelligences, such as spatial, kinaesthetic, linguistic, logical-mathematical, musical, interpersonal, intrapersonal, and naturalistic (Peterson & Hittie, 2003). Students manifest their intelligence, learning abilities, and skills in these different ways. It takes an inclusive view of students' needs and abilities, which are critical for curriculum-adaptation strategies or planning. It enables students of diverse learning abilities to learn at their own levels and creates an atmosphere of support devoid of competitiveness, fear, anger, and hostility. Using learning activities that build on the different ways in which human beings learn is very important for an inclusive setting. In addition to the multiple intelligences, the three main approaches of learning styles identified in literature, including visual, auditory, and kinaesthetic learning styles (Davis & Florian, 2004; Peterson & Hittie, 2003), also create the conditions that are most conducive for the diverse learning of students. They enable teachers to accommodate the different learning styles of students through learning activities that build on students' strengths, respond to their individual

needs, and eliminate undue pressure, especially on students with special needs. According to Peterson and Hittie (2003), teachers formulating activities that are relevant to students' learning styles and multiple intelligences personalize learning approaches for all pupils and support them to develop autonomy in their learning. Review by Davis and Florian (2004) found that these strategies have the capacity to meet the individual differences in learning and allow children to obtain individualized support as required.

Furthermore, teachers' understanding of students' diverse backgrounds, learning styles, learning abilities, and multiple intelligences enables them to know who their students are as people and how best they can address their learning needs and interests through differentiated instruction. For instance, allowing slower students more class time to finish an assignment, giving choices of which book to read, and mixing up the different types of assignments to reflect students' abilities and learning styles provide students with the appropriate building blocks to move on (Levy, 2008). Studies have established that differentiation of curriculum content and learning processes are effective inclusive teaching approaches (Ashman, 2010; Davis & Florian, 2004; EADSNE, 2012; Pinnock & Nicholls, 2012), and that is the main idea of inclusive education and inclusive practice (Florian & Black-Hawkins, 2011).

Although some analyses of the existing literature have offered support for individualizing and differentiated instruction in increasingly heterogeneous classrooms, they remained critical of the effectiveness of these learning styles in achieving appropriate individualized and differentiated instruction (Landrum & McDuffie, 2010). They further recommended that differentiated instructions must be based on individual students' present achievement, strengths, needs, and skills, and that the most important and instructionally relevant variables do not include learning styles.

Moreover, Florian, and Black-Hawkins (2011) warned that when the differentiation of instruction is determined by teachers, it can result in the stigmatization of students and can limit student learning and teacher expectations. Also, differentiating instruction by ability level has negative effects on teacher expectation, student self-perception, and curriculum development, and it leads to a massive curtailment of individual potential (Hart, 1998). Consequently, Florian and Black-Hawkins (2011) argued that teachers must provide a range of differentiated approaches to tasks and must provide freedom of choice for students to limit deterministic thinking. In this case, individual differences among learners are accommodated through the provision of choice of tasks and activities that are available to all without the stigmatizing effects of marking some students as different or pre-determining the learning that is possible. Learners' needs are therefore met without marginalizing some individual students within the classroom.

Another outstanding regular education practice that has been found to produce positive effects on the academic and social outcomes of pupils with SEN in regular education are cooperative learning approaches and heterogeneous groupings among learners (Davis & Florian, 2004; EADSNE, 2012). These

pedagogical approaches for which students work in heterogeneous learning teams to assist one another in learning academic material have been described as a key principle for building an inclusive community of learners in schools and classrooms (EADSNE, 2012; Florian & Black-Hawkins, 2011; Peterson & Hittie 2003; Sapon-Shevin, Ayres & Duncan, 2002). One study showed that co-operative learning strategies work better to improve students' performances in teaching and learning of communication, grammar, and mechanics (spelling and punctuation) than individualized strategies (Adeyemi, 2008). Such collaborative learning strategies have been found to promote participation and enjoyment among students (Davis & Florian, 2004). Peterson and Hittie (2003) noted that pairing students with higher and lower abilities to work on tasks allows students with lower abilities to gain assistance and the more able students to strengthen their skills.

Similar to this collaborative learning strategy are peer-assisted learning strategies, such as peer tutoring, mentorship, peer-assisted learning, cross-age tutoring, and peer helpers, for which students team up together or are put in pairs to engage in learning activities, and support each other for a common purpose (McMaster, Fuchs & Fuchs, 2002; Mc Neil & Hood, 2005). They have been identified by several extensive reviews as effective inclusive practices for all pupils (Davis & Florian, 2004; Sebba & Sachdev, 1997). Peer partnership strategies have been found to enhance academic achievement, social skills, and personal and emotional development, and to prepare and empower students to transition into productive membership within their communities (Mc Neil & Hood, 2005; Peterson & Hittie, 2003). They have been empirically validated as effective in improving students' achievements in reading (McMaster, Fuchs & Fuchs, 2002) and in instruction for minorities, disadvantaged children, and children with learning disabilities. They have also been found to actively engage children in school curriculum (Delquadri, Greenwood, Whorton, Carta, & Hall, 1986).

Universal Design for Learning (UDL) has also been identified as a key element that promotes inclusive practices (Ashman, 2010; Hartmann, 2015; McGhie-Richmond & Sung, 2013). UDL originated from the concept of universal design within the field of architecture. The idea was about designing public structures in ways that were accessible to all from the beginning. Adopted in education, UDL aims to reform educational curricula, goals, pedagogical approaches, educational environment, materials, and assessment in ways that will create a greater and more inclusive learning environment and access to the curriculum for all students (Hartmann, 2015; McGhie-Richmond & Sung, 2013). A study by McGhie-Richmond and Sung (2013) showed that the introduction of principles and guidelines of UDL in an initial teacher preparation program enabled pre-service teachers and practice teachers to make significant changes in their lesson plans to optimally include all students. It also helped them to understand inclusion and their pedagogical roles and responsibilities and to achieve successful adaptations-based inclusion where traditional the categorization of students with disabilities was irrelevant. The UDL enables teachers to

appreciate the variability of learning needs in classrooms and how they can modify the curriculum to meet those needs (Hartmann, 2015). It emphasizes best practices through pedagogical adaptation and supports teachers to provide inclusive learning opportunities for all; it strengthens the capacity of teachers to meet the needs of a wider range of students in the regular education classroom and has been found to be the best pedagogical approaches for sensory-physical needs and learning (Peterson & Hittie, 2003).

Moreover, co-teaching or cooperative teaching approaches have emerged as one of the exemplary models of effective inclusive practices. Extensive reviews have found these approaches as effective in developing inclusive classroom arrangements by assisting teachers to serve all students fairly and equitably in regular education classrooms (Beamish, Bryer, & Davis, 2006; Cramer, Liston, Nevin, & Thousand, 2010; Davis & Florian, 2004; Sebba & Sachdev, 1997). Therefore, several reports and authors have recommended that the key elements of successful co-planning and co-teaching techniques should be incorporated and emphasized in all initial teacher education programs to equip student teachers with co-teaching skills (EADSNE, 2012; Florian, 2008; Sebba & Sachdev, 1997; Wang & Fitch, 2010). Bauwens, Hourcade, and Friend (1989) identified this as a model for regular and special education integration.

Co-teaching is an approach whereby two or more people share responsibility for teaching some or all of the students assigned to a classroom (Villa, Thousand, & Nevin, 2008). It involves the multidisciplinary team in both planning and implementation; for instance, regular and special teachers could work in coactive and coordinated fashion to provide a direct educational program to meet the needs of all students (Bauwens, Hourcade, & Friend, 1989). Several different co-teaching arrangements have been reported in literature. The most commonly used co-teaching model is the collaboration between two teachers, usually involving one regular education teacher and one special education teacher or a therapist or aide (Cramer, Liston, Nevin, & Thousand, 2010; Wang & Fitch, 2010). Both teachers are present in the classroom setting and have joint responsibilities; their duties depend on performance-based assessments of their skills and strengths. The skills and strengths of regular education teachers include knowledge about curriculum and its sequencing, about large-group management skills, and that of special teachers include their ability adapt teaching materials, strategies, and Individual Education Plans (IEPs). In addition, Bauwens and colleagues identified three possible arrangements within cooperative teaching as complementary instructions, team teaching, and supportive learning activities. However, all can be used at the same time.

Under complementary instructions, regular education educators teach curriculum content and the special educators help students master academic survival skills, such as taking notes, identifying main ideas in reading, summarizing, and developing study skills. With team teaching, both regular and special teachers plan and teach academic subject content to all students with each assuming a role for a specific type of curriculum. For instance, a regular educator presents curriculum content, and a special educator monitors students' un-

derstanding. Both teachers share equal amounts of planning time, teaching, and managerial responsibilities among themselves (Wang & Fitch, 2010). With supportive learning activities, both teachers develop and deliver teaching content by identifying the skills or the concepts to be taught and supportive learning activities for reinforcement. A regular education teacher is responsible for curriculum content delivery, and a special educator implements supplementary and supportive learning activities (e.g., group discussions, cooperative learning, or investigative projects (Bauwens, Hourcade, & Friend, 1989).

Wang and Fitch (2010) also identified other main variations of co-teaching as parallel teaching, alternative teaching, and one teaching and one assisting. In parallel teaching, each teacher instructs a subgroup of students in the same or different curriculum content in the same classroom. Alternative teaching allows one educator to teach a small group of students with a specialized instruction, while the other teacher instructs the rest of the class in a different class. The one-teaching and one-assisting co-teaching model involves the regular education teacher providing instruction in curriculum content and the special educator providing support to the students who need it. All these variations can be used in combination with one another.

The presence of two teachers in the classroom promotes the participation, acceptance, and academic success of all students in inclusive settings (Wang & Fitch, 2010). Co-teaching utilizes the principles of differentiated instruction, thus adjusting the presentation of curricular content to enhance student learning. It benefits teachers by promoting shared responsibility and expertise of the educational program for all and enhancing professional interaction through decision making, increased job satisfaction, reduced stress, reduced burnout, and accountability for outcomes (Bauwens, Hourcade, & Friend, 1989; Beamish, Bryer, & Davis, 2006). Co-taught classes avoid the stigmatization that can occur when students with disabilities must leave their classmates in a regular education classroom to attend sessions in a special education classroom, thereby improving inclusion of students with special problems in regular education (Cramer, Liston, Nevin, & Thousand, 2010). Co-teaching is also of great benefit to students with and without disabilities because they all receive more attention through more individualized instruction from special education teachers, which provides more social benefits for all students (Wang & Fitch, 2010).

However, studies from both the Global North and South have shown that pre-service teachers either do not get sufficient training in collaboration (Cramer, Liston, Nevin, & Thousand, 2010; Sebba & Sachdev, 1997; Swart, Engelbrecht, Eloff, & Pettipher 2004), or only a few pre-service teachers receive specific training or experience in this inclusive pedagogical approach (Nash & Norwich, 2010; Wang & Fitch, 2010). Studies have also shown that practicing co-teaching is time-consuming because more time and commitment are needed for planning and collaboration between co-teachers from different academic backgrounds. Other challenges identified include lack of planning time, scheduling conflicts, lack of administrative support, incompatibility of style in terms

of cooperation, and increased workloads (Bauwens, Hourcade, & Friend, 1989; Wang & Fitch, 2010).

Moreover, the effective involvement of parents and families in collaborative partnership has been found as an effective teaching strategy and approach in the education of children with SEN in inclusive settings (Davis & Florian, 2004; EADSNE, 2012; Loreman, 2007; Witte & Hornby, 2010). Studies have found parent and family involvement to be an effective approach for pupils with speech, language, communication, and interaction needs (Manolsen, 1992), and that it also promotes children's academic achievement and reduced maladaptive internalizing and externalizing behaviors in both the short and long term (Bronstein et al., 1998). Parents can serve as resources to the school to ensure the inclusion of their children with SEN (e.g., by going to school to listen to their children read, providing help in the classroom, preparing teaching materials, helping on class trips and school camps, helping with sports coaching, assisting with road crossing patrols, helping in the school library, helping in the school canteen, and acting as guest speakers) (Witte & Hornby, 2010). Parents can also play the role of making decisions on behalf of their children, provide and share background information and insights about their children, and act as advocates who want the best for their children. This will make their teachers well in-tune to the learning needs and preferences of their children (Loreman, 2007; Witte & Hornby, 2010).

However, Witte and Hornby (2010) have recommended that schools and teachers must educate parents about possible ways of helping through school newsletters, the school prospectus, and the parent handbook through daily contact when parents drop pupils off at school; through notes sent home by teachers during parent-teacher meetings and conferences; and at enrolments and home visits. They further stated that it is important for teacher education courses to prepare teachers to involve parents in various activities.

Moreover, the development and the implementation of IEPs and other individualized learning programs have been identified as an effective inclusive teaching approach (EADSNE, 2012). The meaning and the description of IEPs and their focus and use vary over time and across different contexts (Blackwell & Rossetti, 2014; Ministry of Education, 2011). It is a primary mechanism used to individualize services for SEN students receiving special education services in either general education or special education settings (Kurth & Mastergeorge, 2010; Pretti-Frontczak & Bricker, 2000). Several literatures have established that an IEP is not just about producing a piece of paper: it is both the process and the blueprint for the services to be developed, implemented, and reviewed based on the individual assessment of the student with SEN or disabilities (Huefner, 2000; Ministry of Education, 2011). The IEP is necessary only when an accurate and up-to-date assessment indicates that optimal teaching and learning for students with SEN or disabilities require differentiations (Ministry of Education, 2011); thus, only when barriers to learning requiring adaptations to regular education teaching strategies or school or classroom environment have been identified.

The IEP process is the ongoing collaborative process between people who are concerned about students' SEN to set and clarify measurable annual goals and strategies to effectively assist students with special needs within classroom programs (Ministry of Education, 2011; Nugent, 2005). The IEP is developed and revised annually by a group of key stakeholders (i.e., the IEP team) who are concerned with the child's education. The team must include parents of students, the regular education teacher, the special education teacher, the student, the school administrator, the psychologist, etc. (Huefner, 2000; Nugent, 2005; Pretti-Frontczak & Bricker, 2000). The IEP creates increased opportunities for collaboration and knowledge-sharing about the students' learning needs, aspirations, personality, and cultural background (Huefner, 2000; Ministry of Education, 2011) and makes parents aware of their children's gifts, strengths, hopes, and plans and what will be done to help them. It gives students with SEN motivation when they become aware of what is expected of them. It documents the success of students with SEN and facilitates review of the progress made (Nugent, 2005).

Some key characteristics of an IEP include: going beyond what is normally available to describe a particular special provision a student will receive; measurable annual goals and objectives that are tailor-made based on an in-depth knowledge of a particular child's strengths, needs, and aspirations, which will enable the child to be involved and progress in the regular education curriculum (e.g., social targets, self-help skills, attendance goals, academic learning, cognitive development, etc.); specified teaching methods and strategies that would be used to support the learning of the specified target goals and objectives; regular monitoring and review to determine the reasonable progress made on the goals within the timeframe; parents taking an active part; and the student with SEN understanding and being committed (Kurth & Mastergeorge, 2010; Nugent, 2005).

IEPs have also been found to be useful in making good use of assessment information of students with SEN to plan effectively for the child's education (Nugent, 2005). It is also about relationship building between family and school; it maps the services and interventions for students with SEN and provides the required level of support to students with disabilities in the least restrictive environment (Blackwell & Rossetti, 2014). It is also an establishment of a legal presumption that special education services will be delivered in regular education settings (Huefner, 2000). However, Humphreys (2009) argued that while the use of IEPs may give teachers an individualized focus, they can also restrict the scope of pupil curiosity. Some have also observed that academic goals are often fewer or absent from some children's IEPs, which might result in more restrictive placement with less access to the regular education curriculum and might diminish contact with typical peers and experiences (Kurth & Mastergeorge, 2010). There have also been complaints by teachers and school personnel that the goals and objectives of the IEP tend to be poorly written. There have also been questions regarding the individualized nature of the IEP. Other criticisms are that the IEP has little utility, unnecessary paperwork, and little empirical

evidence to support a positive relationship between IEPs and child outcomes (Pretti-Frontczak & Bricker, 2000). Pretti-Frontczak and Briker argued that better strategies are needed to assist in the development of quality IEP goals and objectives. Their study showed that training can improve the quality of written IEP goals and objectives and that higher quality IEP goals and objectives developed from a comprehensive assessment process, and directly linked to intervention and evaluation, are likely contributors to the individualization of services and improved outcome for young children.

Finally, studies have established that much can be achieved for children with disabilities and SEN with adaptive or assistive technology (AT) (Chambers, 2011; Davis & Florian, 2004; EADSNE, 2012). The International Classification of Functioning, Disability, and Health (ICF) defines assistive products and technology as any product, instrument, equipment, or technology adapted or specially designed for improving the functioning of a person with a disability (WHO. ICF Browser). AT is an umbrella term for both assistive products and related services that improve the functioning of people with disabilities in various areas of life. These include assisting individuals with disabilities to sustain their lives by feeding, bathing, sleeping, and dressing, other tasks such as oral and written communication, positioning, and movement of students with physical disabilities, self-care, household tasks, family relationships, education, and engagement in play – such as swimming, basketball, biking, and other recreational activities (Simpson, McBride, Spencer, Lodermilk, & Lynch, 2009; WHO & UNICEF, 2015).

Assistive technologies have also been found to be useful in supporting students with SEN and disabilities to be educated in inclusive or UDL classrooms by assisting them in having greater access to school and classroom layout and to participate in and complete tasks they would not otherwise be able to (Davis & Florian, 2004; EADSNE, 2012; Simpson, McBride, Spencer, Lodermilk, & Lynch, 2009). They are effective at providing measurable gains in reading fluency, comprehension, and engagement for students with disabilities and have demonstrated the benefit of teacher-researcher collaboration (Davis & Florian, 2004; White & Robertson, 2015). Moreover, they are useful in imparting information and technological knowledge and skills to visually impaired students to ensure full access, participation, and equality for all people (Mahajan & Nagendra, 2014). Bryant and Bryant (1998) argued that assistive technology devices can be considered instructional adaptations when they are used by individuals with learning disabilities to improve their functional capabilities in inclusive settings, to foster accessibility to the curriculum, and to promote academic skills and independence. Their study revealed that, through the use of assistive technology, students with SEN and disability have the potential to access pedagogical approaches, such as cooperative learning, to the same degree as their peers.

However, they stated that teachers must select technology adaptations appropriately, and they must monitor and evaluate the use of these adaptations in classroom activities to determine the educational benefit for students with

disabilities (Bryant & Bryant, 1998). Other factors that must be considered when choosing appropriate AT are the ease of use (user-friendly format), the amount of training needed, the technological features, the functional assistance to the student, individual performance, portability, expense, the promotion of student independence, and the student's knowledge of the device (Simpson, McBride, Spencer, Lodermilk, & Lynch, 2009; White & Robertson, 2015). Once the type of AT has been determined, the student, and student's teachers and parents will need training on how to use the device (Chambers, 2011; Simpson, McBride, Spencer, Lodermilk, & Lynch, 2009). Other inclusive pedagogical approaches have been found to include proper use of chalkboards, expository method, field trips, role playing, simulations, sigh language, Braille, and management of the physical and social environment of the classroom to change the location of students in class, which are all curriculum adaptation strategies for presentation of information and learning activities (EADSNE, 2012; Peterson & Hittie, 2003).

In this thesis, Sub-study I sought to determine pre-service teachers' knowledge of inclusive pedagogical approaches. Sub-study II determined the inclusive pedagogical approaches pre-service teachers acquired from the SEN course. Furthermore, Sub-study III addressed teacher educators' knowledge of inclusive pedagogical approaches and the inclusive pedagogical approaches pre-service teachers acquired from the entire teacher education curriculum.

2.5.2 Inclusive values

Implementation of an inclusive education system requires inclusive values and beliefs to be integrated into the entire initial teacher education programs to prepare inclusive teachers (EADSNE, 2012). Values underlie the actions of others (Booth 2005), and the values and principles that come with inclusion have clear practical implications (Ainscow, Booth, & Dyson, 2006). Booth and Dyssegaard (2008) stated that inclusive education is about putting inclusive values into action in education and society. They further argued that carefully formulated inclusive values are the fundamental ingredients for increasing the learning and participation of all individuals, ending all forms of exclusions and reforming education settings and systems so that they respond to differences in ways that value everyone equally. Although, values are both historically and culturally located, and that different people at different times and in different places, articulate different values (Ainscow, Booth, & Dyson, 2006).

However, several authors across different contexts have identified certain key inclusive values that underpin an inclusive education approach. They include values such as equity, participation, rights, community, supporting all learners, compassion, fairness, respect, and empathy toward the diverse learning needs of pupils (Booth, 2005; EADSNE, 2012). Spalding et al. (2010) argued that love and caring for one another could combat inequity in schools and enable teachers to teach for social justice. In addition, key qualities that enable a teacher to teach students with disabilities include patience, understanding, kindness, and empathy (Lalvani, 2013). These inclusive values are rooted in the social model view of disability (Anthony, 2011) and must be made explicit in

teachers' actions and practices (Booth & Dyssegaard, 2008). According to Bondy et al. (2007), pre-service teachers view these values as key attributes of a good teacher. A recent study in Ghana reported that teachers made the school and classroom environment welcoming and interesting for street children by showing friendship, understanding, interest, concern, sympathy, empathy, care, and love (Kuyini & Abosi, 2011).

Many have endorsed the contributions that inclusion can make to the development of EFA. However, Booth and Dyssegaard (2008) are of the view that the problem with the EFA movement is that it relied so much on the quantitative measures of progress rather than the importance of quality. They argue that the connection of inclusive values and rights with EFA movements brings the definition of quality into the EFA approach. One of the key goals of Sub-study II was to determine the inclusive values that pre-service teachers acquired from the SEN course.

3 INITIAL TEACHER EDUCATION FOR INCLUSIVE EDUCATION

3.1 Introduction

The regular education teacher has the utmost responsibility for students and their day-to-day learning. Therefore, studies from both the Global North and South have acknowledged that teachers are key players in the successful implementation of inclusive education policy (Avramidis & Norwich, 2002; Gyimah, Sugden, & Pearson, 2009; Swart, Engelbrecht, Eloff, & Pettipher, 2004; UNESCO, 2005; Winter, 2006). The challenge for initial teacher education is to equip teachers with the right attitudes, knowledge, skills, and competencies for the successful implementation of inclusive education policy. Several studies have established that pre-service teacher education has a positive impact in improving pre-service teachers' knowledge of disabilities, attitudes toward disabilities, and skills and strategies for teaching in inclusive settings (Campbell, Gilmore, & Cuskelly, 2003; Dart, 2006; Forlin, 2010a; Rouse, 2008; Sharma, Forlin, & Loreman, 2008). This important role has been emphasized in several international documents, such as the UNESCO's Policy Guidelines on Inclusion in Education (UNESCO, 2009), World Report on Disability (WHO, 2011), and United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities (United Nations, 1993). Collectively, these documents agreed that pre-service and in-service teacher education programs should adopt inclusive education approaches and materials to equip teachers with appropriate skills, knowledge, attitudes, and pedagogical capacities to teach and meet the diverse learning needs of different categories of learners.

Writing from a Global South perspective, Croft (2010), in her research on 'Including Disabled Children in Learning: Challenges in Developing Countries', identified teacher education as one of the significant locations of developing inclusive pedagogy in the Global South, where education systems are typically centralized and pedagogical decisions are embedded in curriculum documents, such as teachers' guides and textbooks. Similarly, comprehensive study in some

African countries, including Ghana, has established that initial teacher education is a place where teachers gain their best understanding of teaching (Akyeampong et al., 2012). Meanwhile, several studies from both the Global North and South have found that initial teacher education programs did not adequately prepare teachers to teach in inclusive settings. Teachers also felt unequipped with the knowledge and skills to address the needs of children with special needs and disabilities; they felt unprepared to teach in inclusive settings (Chhabra, Srivastava, & Srivastava, 2010; Hay, Smit, & Paulsen, 2001; Mangope & Mukhopadhyay, 2015; Scruggs & Masteropieri, 1996; Singal, 2008; Swart, Engelbrecht, Eloff, & Pettipher 2004; Winter, 2006).

The special education courses in the initial teacher education program have been described as too theoretical and providing limited basic knowledge and skills in SEN with no provision for practical experience (Hastings, Hewes, Lock, & Witting, 1996; Sawhney, 2015; Sharma, Forlin, & Loreman, 2008; Tungaraza, 2014; Winter, 2006). They have shown that information-based initial teacher special education courses on SEN and inclusive education alone are inadequate in promoting and equipping teachers with knowledge, skills and positive attitudes required for inclusive education. As such, initial teacher education programs around the world are employing innovative pedagogies and approaches to equip teachers with the relevant knowledge and skills to effectively support the implementation of inclusive education (see, e.g., Arbeiter & Hartley, 2002; Carroll, Forlin, & Jobling, 2003; Dart, 2006; Hastings, Hewes, Lock, & Witting, 1996; Salend, 2010; Sharma, Forlin, & Loreman, 2008).

Teachers' knowledge about the concepts discussed in the previous chapter, such as disability, special educational needs, inclusive education, inclusive pedagogical approaches and their positive attitudes, and self-efficacy are crucial for the successful implementation of inclusive education. This chapter presents the theoretical and empirical literature on different innovative models and pedagogies that initial teacher preparation and teacher educators can adopt to equip pre-service teachers with the knowledge of disability, inclusion, and child-centered and inclusive pedagogies to adequately improve their attitudes and self-efficacy.

In the sub-studies, some of the research objectives sought to determine the adequacy of the content of the special education course in equipping pre-service teachers with the knowledge and skills to identify and meet the different special needs and disabilities among students (Sub-study II). Furthermore, Sub-study III sought to explore teacher educators' awareness of their role and that of teacher preparation in the implementation of inclusive education. It also determined how much attention is being provided in preparing teachers to teach children with special needs and disabilities in regular schools, the kind of innovative programs being implemented in the colleges of education to ensure that teachers are best prepared for inclusive settings, and the inclusive pedagogical approaches that teacher educators adopt in their teaching.

3.2 Innovative Models for Initial Teacher Preparation for Inclusive Education

Different models of inclusive teacher preparation identified in the literature indicate that many initial teacher education programs have incorporated a number of innovative practices to help improve teachers' attitudes toward people with disabilities and equip them with appropriate knowledge and skills to be effective inclusive teachers. Studies from different contexts have shown that teachers are often in a state of ignorance, fear, prejudice, or lack of confidence during their initial experience with pupils with disabilities. However, with time, there is a personal change toward the development of relationships, confidence, skills, and coping strategies (see, e.g., Arbeiter & Hartley, 2002; Dart, 2006; Giangreco et al., 1993). These studies have established that experience can transform teachers' attitudes and encourage them to learn from their own experiences.

Consequently, one key trend in teacher education programs that prepares teachers to teach in inclusive settings has been the restructuring of student teachers' field experiences through work with special populations or the provision of extensive field-based experiences in inclusive settings (Strawderman & Lindsey, 1995; Wolfberg, LePage, & Cook, 2009). Some pre-service teacher education programs have combined these structured fieldwork experiences, such as interactions with people with disabilities, with information-based instruction to effectively improve pre-service teachers' knowledge of disability and attitudes toward disability and inclusion (Campbell, Gilmore, & Cuskelly, 2003; Hastings, Hewes, Lock, & Witting, 1996). In addition, these interactions have been found to result in significantly lower levels of discomfort when interacting with people with disabilities (Arbeiter & Hartley 2002; Carroll, Forlin, & Jobling, 2003; Dart, 2006; Forlin & Chambers, 2011; Sharma, Forlin, & Loreman, 2008) and improved higher self-efficacy (Specht et al., 2015). The attitudinal change in these studies was attributed to not just any contact, but carefully planned and supported personal exposure to and experience with children with disabilities, or spending considerable time in the community and having direct and systematic contact with persons with disabilities.

In addition, studies have shown that pre-service teachers regard school placement as the most important aspect of their initial teacher education program to improve their knowledge and understanding about SEN and inclusive education (Dart, 2006; EADSNE, 2012; Lawson, Norwich, & Nash, 2013; Nash & Norwich, 2008) and to enable them to apply learned concepts (Bondy et al., 2007). Therefore, providing school placement opportunities in inclusive settings for pre-service teachers to see theory in practice is a key factor that can promote teacher preparation for inclusion. Some of these field-based approaches have required strong educational partnerships with placement schools to allow for practical training of pre-service teachers in an inclusive setting (Florian & Rouse, 2009; Lawson, Norwich, & Nash, 2013; McIntyre, 2009; Nash & Norwich, 2010).

Lawson, Norwich, and Nash (2013) identified the three kinds of school-based approaches as one that involves a practical teaching task with SEN focus, one that involves a pupil-focused task (but not practical teaching), and one that involves only a class teaching practice without any specific pupil-focused SENs.

The planned tasks are designed to enable pre-service teachers to engage in a direct teaching experience of an individual learner with some identified SEN under the supervision of a SEN coordinator in their placement schools (Nash & Norwich, 2010). They found that teaching practices with such task designs have positive influences on pre-service teachers learning about pupils with SEN and disabilities as well as the teaching approaches relevant to them. The tasks assist pre-service teachers to develop awareness of individual pupils' learning needs and pedagogic knowledge related to personal learning needs. The planned pupil-focused tasks also have the capabilities to ensure reflective practice on teaching pupils with SEN and disabilities among the pre-service teachers (Lawson, Norwich, & Nash, 2013). Based on their findings, they argue that implementation of planned pupil-focused SEN and disability tasks in favorable conditions can make valuable contributions in preparing teachers to teach pupils with SEN and disabilities.

Aside from the planned tasks, the introduction of portfolios, learning journals, school-based formative tasks, study guides (such as case studies), and different assessment strategies (such as self-assessment, joint assessment between student teachers and their peers, mentors, and tutors to assess student teachers' demonstration of inclusive attitudes, knowledge, and skills) have been found to promote critical reflection among pre-service teachers about their classroom teaching experiences (Dart, 2006; EADSNE, 2012; Nash & Norwich, 2010). Reflective practices in teacher education programs, such as self-evaluation of their own lesson plans, is very productive (Clarke, Lodge & Shevlin, 2012) and is a key area of competence to ensure teachers' continuous personal professional development (EADSNE, 2012). The essays that could be provided regarding the teaching and learning of pupils with disabilities include critical reflection on their experiences with pupils with SEN and disabilities and supervised experience of practical teaching of pupils with SEN during teaching practice. Such opportunities will not only promote critical reflection among pre-service teachers, but they will also encourage them do more research about how to effectively teach pupils with SEN and the effective strategies that could promote the implementation of inclusive education.

The content of the professional portfolio is comprised of tutor-directed activities, school-based enquiry tasks, self-study, reflective accounts, critical incidents, and other materials, such as inspiring quotes, photographs, extracts from pupil work, selected lesson plans, evaluations, and assessment extracts (Florian & Rouse, 2009). Portfolios may also require situational analysis, such as the gathering of information about school needs, policy, provisions, student observation and teaching, pupils' case studies, pupils' diagnostic assessments, gathering of assessment information in schools, and review of policy documents gathered by student groups (Kearns & Shevlin, 2006). These might include writ-

ing a page-long critical reflection on a number of lesson plans considering the success of their plans, the changes and equal opportunities that they would want to make in the future. This will help teacher educators understand the inclusive practices of their students and how to promote those practices. It can be the basis for further learning conversation among student teachers, supervisors, and peers and may serve as a source of reference for student teachers when writing final personal statements (Florian & Rouse, 2009). These strategies were reported as effective in linking the academic and practical elements of SEN courses (Kearns & Shevlin, 2006).

Another innovative trend in teacher education programs that prepare teachers to teach in inclusive settings has been identified as infusion or permeation of SEN and inclusive knowledge and practice into all content areas and subjects of the initial teacher-education curriculum (EADSNE, 2012; Nash & Norwich, 2010; Strawderman & Lindsey, 1995; Winter, 2006). Studies have shown that teacher educators and teachers from both the Global North and South preferred stand-alone courses on SEN combined with permeation across subject areas in the teacher-training curricula (Kearns & Shevlin, 2006; Pinnock & Nicholls, 2012; Winter, 2006). It is argued that construction of SEN knowledge within a specialist SEN course may only unintentionally reinforce medical or remedial approaches to SEN, focus exclusively on learning difficulty or deficit, conflict with pedagogies dominant elsewhere in the training program, and remain foreign to fellow teachers from regular education (Kearns & Shevlin, 2006).

The stand-alone course combined with permeation across other subject areas would overcome any difficulties that might arise from varying levels of teacher educators' expertise (Winter, 2006). It is also recommended that the permeated SEN provisions be audited so that there is clarity among teacher educators regarding what is present outside of specialist SEN course units. A deliberate audited permeated SEN provision across initial teacher education courses found permeated, inclusive, and SEN elements, such as: diversity of abilities and needs, managing emotional and behavioral difficulties, collaboration with parents, identification of SEN, curriculum adaptation, assessment and differentiation, motivation and learning, developmental difficulties, learning styles and multiple intelligences, learning strategies, problem solving, developing community relationships, inclusive schools, etc. (Kearns & Shevlin, 2006).

However, some studies on the effectiveness of the infusion program in producing teachers who are positively inclined to implement inclusive practice in their classroom suggest that single-subject was more effective than infusion programs in producing more change in attitude scores (Sharma, Forlin & Loreman, 2008). In addition, some pre-service teachers completing a pre-service teacher education program based on the curriculum infusion model felt that the content coverage of their regular education curriculum and their own confidence in teaching children with special educational needs were less adequate (Akasmit & Alcorn, 1988; Cook, 2002). The pre-service teachers reported that their teacher preparation experiences and pedagogical skills related to inclusion were inadequate and that their overall attitudes and relevant strengths and

weakness regarding inclusion failed to improve with respect to their years of teacher preparation (Cook, 2002). For these reasons, some have urged that initial teacher education should be cautious in adopting infusion programs (Sharma, Forlin, & Loreman, 2008). Under these circumstances, auditing permeated SEN and inclusive provisions across initial teacher education courses will bring some clarity about what is present outside of specialist course units and will assist in addressing the inadequate coverage of some content areas.

Typically, regular and special education teachers are prepared in two separate tracks, isolated from one another, and the regular education pre-service teachers receive little or no exposure to theory and practice in meeting the needs of students with disabilities. Some teacher-preparation programs have required regular education pre-service teachers to complete one or two separate courses in special education. However, studies have indicated that such separate courses in special education are inadequate to equip teachers with integrated knowledge for their expected roles, functions, and responsibilities in meeting the diverse learning needs of children in inclusive classroom (Jelas, 2010; Stayton & McCollum, 2002; Welch & Sheridan, 1993; Wolfberg, LePage, & Cook, 2009).

Inclusive education requires that regular education teachers be prepared to receive adequate knowledge and exposure to theory and practice on meeting the needs of students with SEN and disabilities. With the separate teacher education programs, it is up to the teacher candidates to integrate the disparate information from regular and special education courses, and this model excludes students with disabilities. Consequently, more collaboration between regular and special education students in coursework and field experiences through the unification of regular and special education curriculum has been recommended. This approach has also been described as the integrated curriculum approach, and it is perhaps the most radical approach to preparing pre-service teachers for inclusive settings (Strawderman & Lindsey, 1995; Stayton & McCollum, 2002; Wolfberg, LePage, & Cook, 2009).

The unified or integrated curriculum approach to teacher training is one in which regular and special education course contents are effectively integrated and presented as a cohesive whole. Such integrated courses challenged university personnel to work together in a collaborative fashion, thereby modelling and encouraging collaboration. With this in mind, the integrated courses are collaboratively taught by regular and special education faculties and jointly attended by students from the two faculties. The students are provided the opportunity to work in multiple inclusive settings during their student teaching experiences. The integrated programs reduce the possibility of duplication of course contents and encourage the candidates' application of proposed strategies and techniques across a range of students. Teachers who have attended such joint programs demonstrate more sense of responsibility in identifying strategies to teach all students and are effective in inclusive schools.

Furthermore, reform in teacher education, such as Collaborative Teacher Education (CTE) programs (which provide pre-service teachers with dual certi-

fication in regular and special education), have been initiated to better prepare teachers for inclusive education (Wang & Fitch, 2010). Similarly, incorporating the key elements of co-teaching in the teacher preparation program and encouraging collaboration among pre-service teachers for successful inclusive education has been found as one of the innovative reforms in initial teacher preparation for inclusive education. It is believed that team teaching between special education and regular education faculties can be modelled in the teacher education program for pre-service to learn co-planning and co-teaching techniques. Other key elements of successful co-teaching that can be incorporated and emphasized in any teacher education program to equip pre-service teachers with co-teaching skills include how to select a co-teaching partner, having a common planning time, training in collaboration and conflict resolution, finding opportunities to actively involve co-teachers in lessons, and teacher input in collaborative partnerships. Pre-service teachers trained through collaborative programs have been found to be more successful in co-teaching and inclusive practices than those who are trained through the traditional single program. They possess additional pedagogical approaches to meet the needs of diverse learners. Therefore, there is the need for teacher education programs to adopt more collaboration elements into their courses and fieldwork (Wang & Fitch, 2010).

Other innovative strategies for initial teacher preparation for inclusive education have been found to include trainees providing classroom support to one large school seeking to develop an innovative approach to teaching; video conferencing in which classroom-based action and reflection are monitored from university during a seminar, whereby student teachers are monitored online, and the discussions are achieved for use by other students; groups of international students visiting ranges of special schools; support services and inclusive settings in other countries; student teachers on placement returning regularly to college workshops to share structured experiences and plans with other students; student teachers visiting referral units for children with severe emotional and behavioral difficulties; and returns to college to make shared presentations to the entire student cohort (Kearns & Shevlin, 2006). They argued that these examples of SEN academic and experiential learning required resources in universities to make them standard practice for all students.

Finally, Rouse (2008) has argued that to reduce the big gap between what teachers know and what they do in classrooms, professional learning and institutional development must involve action-research types of initiatives built around school- or classroom-based development projects. An action-research approach of this nature in which pre-service teachers take part is viewed as preferable to one in which students merely tour special placements. These initiatives to develop inclusion have been found to produce positive outcomes and have resulted in changes to practice. A case study by O'Sullivan (2004), which adopted action research to explore the effectiveness of various learner-centered approaches to learning in the Global South, found it to be an effective method of determining and developing pedagogical approaches to learning appropriate

to particular context. It added rigor to the process of "trial and error" and "adaptation" and led to the development of effective learning-centered skills.

3.3 Teacher Education Pedagogies for Initial Teacher Preparation for Inclusive Education

Unquestionably, many have stated that teacher educators have a critical role to play in supporting the implementation of inclusive education by ensuring that teachers are well prepared for it (see, e.g., Forlin, 2010a; Forlin, Sharma, & Loreman, 2014; Pinnock & Nicholls, 2012; West, 2010). They have argued that it is important for teacher educators to identify their student teachers' attitudes and find out the extent to which these attitudes are influenced by demographic variables (Forlin, Sharma, & Loreman, 2014). Teacher educators must also be able to modify the deep-rooted philosophy of student teachers that might be inconsistent with the principles of inclusion (Forlin, 2010; Pinnock & Nicholls, 2012). To improve student teachers' attitudes toward inclusive education and accept inclusive teaching ideologies, it is recommended that the attitudes of teacher educators themselves are positive and supportive and that they must demonstrate inclusive knowledge, skills, and values (EADSNE, 2012; Forlin, 2010). It is therefore strongly recommended that teacher training reforms for inclusive education focus more on equipping teacher educators with appropriate practical training and exposure to inclusive teaching approaches. The professional development opportunities in the form of induction and mentoring of teacher educators will enable them to become inclusive teacher educators who model the core values of inclusive education.

A report by Pinnock and Nicholls (2012) indicates that globally, teacher educators have positive attitudes and a strong understanding of inclusive education principles. However, the inability of initial teacher education programs to translate inclusive principles articulated in policy and teacher training curricula into useful practical guidance for trainees is partly due to teacher educators' lack of relevant experience using inclusive strategies and practices in inclusive settings (Mamah, Deku, Darling & Avoke, 2011; Pinnock & Nicholls, 2012). This lack of teacher educator expertise has also been found to inhibit the training of pre-service teachers in SEN (Nash & Norwich, 2010). Other factors inhibiting the training of pre-service teachers in SEN and inclusive principles globally have also been found to include competing priorities between SEN and other aspects of teaching, lack of allocated time and space within teacher training for inclusive approaches, and lack of educational infrastructure and resources for practice-focused training. These have prevented teacher educators from having a meaningful focus on inclusion in practice (Nash & Norwich, 2010; Pinnock & Nicholls, 2012).

Studies have shown that it is not only the content of the initial teacher education curriculum that is critical for teacher preparation for inclusive educa-

tion but also the pedagogical approaches adopted by teacher educators for the inclusive education and special education courses. The pedagogical approaches adopted by the teacher educators do influence changes in the attitudes of the student teachers (Jorgensen, Bates, Frechette, Sonnenmeier, & Curtin, 2011; Sharma, Forlin, & Loreman, 2008). It has been observed that initial teacher preparation courses co-taught by the university faculty and individuals with disabilities, thus exemplifying the "Nothing About Us Without Us" maxim, have been found to improve student teachers' respect for teaching partners who have disabilities. The study revealed that the student teachers had first-hand experience regarding the life experiences of persons with disabilities from an authoritative position. Also, the co-teacher educators benefited by sharing pedagogical approaches and responsibilities with partners; receiving the emotional support that occurs naturally when colleagues develop a friendship; receiving reading material relating to the person's disability; obtaining personal experiences that shaped the person's life philosophy; and obtaining instruction in the use of augmentative communication devices or other assistive technologies (Jorgensen, Bates, Frechette, Sonnenmeier, & Curtin, 2011). This approach is likely to promote inclusivity of teacher training for people with disabilities by ameliorating the dropout rate of some teacher trainees with disabilities in initial teacher training (Pinnock & Nicholls, 2012). Similarly, incursion activities (children with disabilities visiting the university) have been found to promote positive attitudes among student teachers (Chong, Forlin, & Au, 2007).

Another pedagogical approach for teacher educators for inclusive education proposes changes in curriculum materials, the format of discussions, and the tutorial environment. They developed what they called "circle pedagogy" (Hamilton & Kecskemeti, 2015). They adopted visible materials, such as pictures and videos that trigger student teachers' thinking about the process of inclusion and exclusion. They also made changes to the environment by providing comfortable chairs with enough space. Students were told to sit in a circle facing each other. Teachers acted more like hosts by providing coffee, tea, and biscuits. A circle conversation format was used to promote discussion about the tutorial materials and to invite equal contribution from students and teachers. The lessons were started by encouraging student teachers to locate problems in the material. It was found that the triggered materials encouraged the students to discuss their own experiences; the student teachers became open about the issue of difference and transformed their views about it.

Additionally, Ashman (2010) has stressed that initial teacher education programs adopting the principles and practices of Universal Design for Learning (UDL) have been found to be effective in preparing teacher trainees to adopt inclusive education principles. UDL implores teacher educators to teach by example. It includes teacher educators combining content and resources to provide multi-sensory teaching; utilizing multiple intelligences, differentiated instructions, and performance-based assessment; and employing the use of a wide range of information and communication technologies. Some have argued that pre-service teachers viewing themselves, as passive receptors or active con-

structors of knowledge will determine their future approaches to learning and teaching. Teacher educators using such varied active pedagogy (as opposed to lectures) do not only hold themselves accountable for pre-service teachers' learning but also model the very kinds of strategies they expect them to use in the classroom (Bondy et al., 2007). O'Sullivan (2004) found that adopting learner-centered approaches in the development of teachers' pedagogical skills was effective and developed their capabilities to use the approaches in their classrooms.

Consequently, Clarke, Lodge, and Shevlin (2012) recognized that the pedagogical strategies employed by teacher educators are critical in promoting responsibility among student teachers. They observed that large group lecturing of student teachers does not promote attitudinal change but instead weakens their responsibility for attitudinal formation and elaboration. Korthagen, Loughran, and Lunenberg (2005) have also argued that the modelling of certain pedagogical approaches by teacher educators could be more effective in molding student teachers' behavior than the curriculum content. However, they found that some teacher educators lack competence in carrying out effective explicit modelling and long-term teaching experience does not make them better models.

As summarized in Figure 1 below, initial teacher education programs should, through the special education curriculum and teacher educators' pedagogical practices, equip pre-service teachers with the right knowledge about disability, special educational needs, inclusive education, inclusive values, pedagogical approaches to promote positive attitudes, and self-efficacy for the successful implementation of inclusive education.

Having presented the key theoretical concepts that informed the study, the following chapter turns attention to how these theoretical concepts are conceptualized in Ghanaian policies, the special education curriculum, and the manner in which they are implemented in practice. It critically reviews the inclusive education policy and implementation in Ghana, the pedagogical practices in schools, and challenges to the implementation of inclusive education in Ghana.

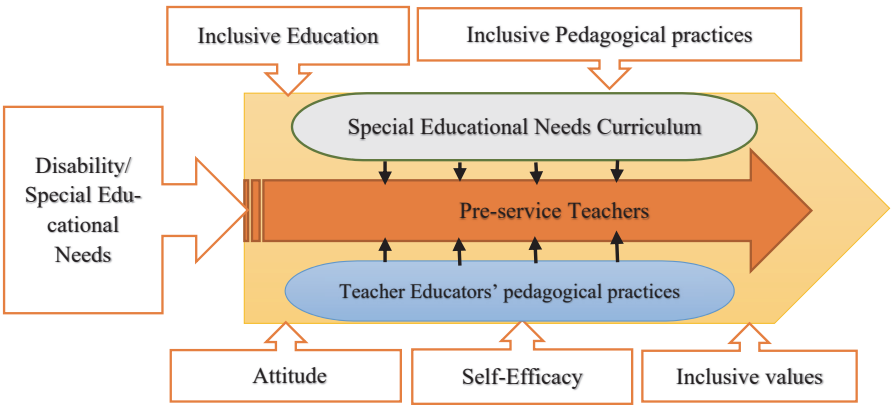

FIGURE 1 The relationship among the theoretical concepts

4 POLICY ON INCLUSION: A GHANAIAN PERSPECTIVE

4.1 Introduction

Ghana has in the past carried out vital educational reforms that have given recognition to education as a fundamental human right for all Ghanaians before some of the international legal frameworks and principles that support the education of all learners were enacted. These included the 1961 Education Act, which is the supreme legislation regarding the right to education for all children in Ghana and preserved in the Legal Framework of Education. It asserts that:

> Every child who has reached the school going age as determined by the Minister shall attend a course of instruction in school as laid down by the Minister for the purpose recognised by the Minister (Ghana Education Service [GES], 2004, p.2).

According to UNESCO (1988), the Education Act of 1961 was the first legislation concerning children with special educational needs. It made the Government of Ghana responsible for the free education of children with disabilities up to the university level. However, it did not cover all the needs of all children and young people with disabilities. The 1961 Education Act also provided for the establishment of special schools for children with disabilities. Admission into special education was based on a screening process involving multi-disciplinary assessment and evaluation. Special schools were to follow the regular education school curricula with some modification, except for special cases such as children with severe disabilities.

Articles 38(1) and (2) of the 1992 Constitution of the Fourth Republic provided reinforcement of the need to understand education as a fundamental human right for all children in Ghana. They declared that:

1. The State shall provide educational facilities at all levels and in all the Regions of Ghana, and shall, to the greatest extent feasible, make those facilities available to all citizens.

2. The Government shall within two years after parliament first meets after coming into force of this constitution draw up a program for the implementation within the following ten years for the provision of a free, compulsory universal basic education. (Government of Ghana (GOV), 1992, p. 35)

Article 38(1) intended to make available the necessary school infrastructures, and Article 38(2) constitutionally provided for costless basic education through a 10-year Free Compulsory Universal Basic Education policy (FCUBE) scheme in 1996 with the objectives of increasing access, capacity to retain, participation, and improving the quality of teaching for all school-going Ghanaian children, although few levies were allowed. According to Avoke (2001), the FCUBE compounded an already-existing problem of over-crowding in many special and regular education classrooms in Ghana.

In addition, Ghana, through the annunciation of the Persons with Disability Act, 2006 Act 715 (20), also enjoined the head of educational institutions and those in charge of admission of students to admit persons with disabilities unless the person with a disability has been assessed by the appropriate authorities to be a person who needs to be placed in a special school. It also made it mandatory for parents or guardians of children with disabilities to send them to school. Failure to do so would cause them to be found guilty of a criminal offence. Act 715 (18) specifically states that the government shall provide free education for a person with a disability and establish special schools for persons with disabilities whom, by reason of their disabilities, cannot be enrolled in formal regular education (Republic of Ghana, 2006).

Other constitutional revisions that propagated the right to Education for All agenda included the Children's Act of 1998. The Children's Act stated that every child has the right to life, dignity, respect, leisure, liberty, health, education, and shelter from his parents, and no person shall deprive a child access to education, immunization, adequate diet, clothing, shelter, medical attention, or anything else required for that child'sdevelopment. A child with a disability has a right to special care, education, and training wherever possible to develop that child's maximum potential and ability to be self-reliant (Republic of Ghana, 1998).

The Education Act of 1961 is often hailed as that which promoted the concept of inclusive education in Ghana. However, the focus was the integrated educational system. Recently, Ghana has demonstrated increased interest in inclusive education with the endorsement and support for the Education for All initiative, the Salamanca Statement and Framework for Action, the ratification of the United Nations Convention on the Rights of Persons with Disabilities, among others.

However, the term "integrated education system" superseded the term "inclusive education" in the education policies enshrined in the Education

Strategic Plans of 2003–2015. Many have also described it as adopting inclusive education as the main policy. In line with Rule 6 of the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities, the Education Strategic Plans 2003–2015 was to "Integrate all children with non-severe special needs in regular education by 2015" (Ministry of Education, 2003b, p. 21). The subsequent constitutional revisions, the Education Act (778) of 2007, shifted the educational agenda of integrated systems toward the international notion of inclusive education by conceptualizing inclusive education as a value system that ensures that all persons have equal access to learning, achievement, and the pursuit of excellence in all aspects of their education, thus promoting participation, friendship, and interaction (Education Act, p. 5).

Consequently, the international demand for inclusive education became pronounced in the subsequent Education Strategic Plans of 2010–2020. In line with the tenets of the 1992 constitution of Ghana and in compliance with the 1994 Salamanca Statement and the 2006 UN Convention on the Rights of Persons with Disabilities, the Education Strategic Plans of 2010–2020 identified three key principles to guide the provision of education to young people with disabilities and SEN in Ghana. They included the right to education, the right to equality of educational opportunity, and the right and obligation to be included in and participate fully in the affairs of society (p. 17). The main objective of the plan was the inclusion of all children with non-severe physical and/or disability, slow/fast learners, orphans, young mothers, street children, those from deprived areas, slum children, and, whenever possible, those from regular formal education systems or from special units or schools only when considered necessary (Ministry of Education, 2012b).

The recent inclusive education policy has brought Ghana in strong alignment with the international commitments to the implementation of inclusive education. The policy has adopted inclusive education as a wider reform to create a more effective educational system and society (Ministry of Education, 2013, 2015). Inclusive education is established in the current Inclusive Education Policy based on the concepts of the rights of all children to access basic education, the belief that all children can learn regardless of differences in age, gender, ethnicity, language, disability etc., and the belief that the educational system should adapt structures, systems, and methodologies to meet the needs of all children. This is a drastic and positive switch from the earlier, more narrow view of the concept of inclusive education in the strategic plans 2003–2015 and 2010–2020, which referred only to the inclusion of all children with non-severe disabilities and other disadvantaged children into regular education.

Some key components of the 2015 Inclusive Education Policy are:

- The policy seeks inclusive education for all persons with mild and severe SEN at all levels of education from kindergarten up to tertiary and adult education.

- The policy is expected to deliver quality equitable education for all upon the structures of UDL and Child Friendly Schools (CFS) models.
- The focus of the policy is to improve equitable access to quality education for all children of diverse educational needs, provide necessary teaching and learning materials, and improve the capacity of teachers and other managers in education.
- The policy adopts inclusive education as a strategy to tackle discriminatory attitudes, such as the exclusion of slow learners from the teaching and learning process in the classroom and the inclusion of those who are out of school due to the requirements of SEN (Ministry of Education, 2013, 2015).

The inclusive education policy broadly defines children with special educational needs to include various categories of persons with varied educational needs, such as those with hearing impairment, visual impairment, intellectual disability, physical disability, deaf-blindness, multiple disabilities, speech and communication disorders, attention deficit hyperactivity disorder, gifted and talented persons, persons with specific learning disabilities, persons with autism, persons with emotional and behavior disorders, and persons with other health impairments (e.g., asthma).

Also included are children displaced by natural catastrophes and social conflicts, nomadic children (shepherd boys, fisher-folks' children, and domestic child workers), children living in extreme social and economic deprivation, children exploited for financial purposes, orphans and children who are not living with their biological parents, children living with HIV/AIDS, street children, and children with poor literacy skills and disadvantages, such as in relation to poverty, gender, and inequity (Ministry of Education, 2015). The discussion section offers a critical analysis of the conceptualization of the concepts of "special educational needs," "disability," and "inclusive education" in the current policy on inclusive education in Ghana.

4.2 Overview of the Curriculum on the SEN Course in the Colleges of Education in Ghana

The colleges of education in Ghana offer a two-credit special education course to regular education pre-service teachers undertaking a diploma in the three-year Basic Education Teacher Certification Program. The terminology for children with disabilities and/or special educational needs differ across countries. In Ghana, the term "special educational needs" was adopted in the inclusive education policy and the special education curriculum (SEN Curriculum, n.d). The special educational needs categories cited in the SEN curriculum are quite narrow and differ from those listed in the recent inclusive education policy. They include gifted and talented children, mental retardation, visual impairment, hearing impairment, physical and health disorders, behavioral disorders, learning disabilities, and speech, language, and communication disorders.

In addition, the curriculum describes the meaning of these categories, their various types, the criteria for identification, and the characteristics, causes, and various management strategies for each category. The challenges and reasons

for the categorization and assessment of individuals with special needs are also well justified in the curriculum. In addition, the curriculum describes the various professionals, equipment, and materials used in special education. The management strategies outlined in the curriculum for gifted and talented students include enrichment, acceleration, mentorship, independent study, brainstorming, and pull out for resource rooms. Some of the management strategies for students with intellectual disabilities include accommodation strategies such as habilitation, task analysis, modelling, and teaching functional skills.

Moreover, the curriculum describes the elimination of objects for free safe movement, mobility practices, repetition of information, bold writing on chalk boards, calling pupils by name, the use of braille, tape recording, and reading buddies as approaches for visually impaired students. The teaching approaches for hearing impaired pupils include the repetition of information, noise level reduction, ensuring good lighting conditions, speaking clearly, using gestures and sign language, and the use of visual materials like pictures and graphics. For the learning of students with disabilities, the recommended strategies include the diagnostic-prescriptive model, modelling, reinforcement, peer tutoring, cooperative learning, the use of learning centers, and multi-sensory approaches.

Pre-service teachers are also expected to arrange classrooms to facilitate mobility and to accommodate mobility and accessibility equipment such as braces, wheel chairs, crutches, ramps, and cooperative learning strategies for those with physical disabilities. The key management strategies identified for managing children with communication and behavioral disorders include correcting tardiness, controlling verbal outbursts through a fair and firm application of rules and the use of reinforcement, controlling disruptive class movement, and encouraging appropriate behavior reinforcement. However, the three different concepts of "mainstreaming," "inclusion," and "integration" are explained in the curriculum as main methods in inclusive education and briefly define the concept of inclusive education as an "idea of including the special needs child in the regular education system which is provided for the normal child" (SEN Curriculum, n.d., p. 35).

As critiqued earlier (sub-section 2.2), the use of these special educational labels in an effort to implement inclusive education has been criticized for lack of accuracy, strengthening the view of otherness and attracting stigmatization, peer rejection, lower self-esteem, lower expectation, and limited opportunities. The discussion section offers a critical examination of the conceptualization of the concepts of "special educational needs," "disability," and "inclusive education" in the special education curriculum in teacher training colleges.

4.3 Educational Provision for Pupils with Disabilities and SEN in Ghana

Despite the substantial progress made over the years by the Government of Ghana in signing and ratifying the international laws, treaties, and conventions, and ultimately the development of an inclusive education policy, disability is officially understood in Ghana through the medical model. This officially contributes to the adoption of educational policies and approaches in the provision of services to students with disabilities and special needs. The dual system of education at the basic education level is, therefore, firmly rooted; those with disabilities attend segregated residential schools while others attend regular education schools. The separate segregated special boarding education, located mainly in urban centers, continues to exist for students with disabilities alongside regular schools for children without disabilities (Agbenyega, 2003; Anthony, 2011; Avoke, 2001). The following are the various educational provisions for children and youth with disabilities by the Special Education Division of the Ghana Education Service (GES).

- 13 segregated special boarding basic education schools for the deaf
- 2 segregated special boarding basic education schools for the blind
- 3 units for the blind
- 12 segregated special boarding schools for the intellectually challenged
- 23 units for the intellectually challenged
- 3 segregated special boarding secondary/technical/vocational schools for the deaf
- 4 integrated senior secondary schools for the blind
- 3 integrated teacher training colleges for students with disabilities (Republic of Ghana, 2008).

However, the facilities in these special schools have not expanded over the years to match the increasing population of children with SEN and disabilities (Ministry of Education, 2013, 2015). According to reports cited by Casely-Hayford and Lynch (2003), due to the high cost of the provision of special education, special institutions could provide only for less than two percent of people with disabilities, and the majority of them are those residing in urban areas. In reality, recent studies have shown that young people with disabilities do not choose which school to attend; various push and pull factors within regular schools and the availability of special schools influence the type of school they attend (Singal et al., 2015). Consequently, a large percentage of children with SEN and disabilities attend public regular basic education across the country (Agbenyega, 2003; Alhassan, 2014; Ministry of Education, 2012b, 2013, 2015). This is consistent with the findings of Sub-study 1.

Historically, the separate special school system in Ghana has been criticized for being more expensive in relation to the resources of the country, and for alienating the children with disabilities from their community, thus perpetuating traditional prejudices against persons with disabilities. This criticism led to the adoption of an integrated system of education to supplement the special school arrangements (UNESCO, 1988). In 1968, initial attempts were made to integrate visually impaired students in regular education at the secondary and tertiary levels, and the 1990s saw a continuous growth in the integration of these students and the piloting of community-based rehabilitation (CBR) programs for persons with disabilities; this was done through the mobilization of resources at the community level and with the assistance of NGOs (Hooker, 2007).

4.4 Implementation of Inclusive Education in Ghana

Currently, Ghana is piloting inclusive education across the country. The piloting began with 35 schools from 10 district education directorates of three regions – Greater Accra, Central, and Eastern – at the beginning of the 2003/2004 academic year (Republic of Ghana, 2008). This was expanded to 46 districts in all ten regions (Ministry of Education, 2013, 2015). The implementation of the pilot-inclusive schools has involved the appointment of resource teachers, sensitization and orientation on inclusive education, production of screening manuals, selection of screening teams, screening of children, clinical assessment of pupils in target schools, educational assessment for the management of special needs (Republic of Ghana, 2008), and the training of district staff, head teachers, and teachers working with children with SEN in the use of appropriate pedagogy (Ministry of Education 2013, 2015).

In addition, Ghana has implemented social intervention programs, such as capitation grants, the school feeding program, and free school uniforms, to promote the achievement of the policy objectives of Ghana's Free Compulsory Universal Basic Education Policy (FCUBE) and the international Millennium Development and EFA goals (Education Act, 2008; Ministry of Education, 2003a; Republic of Ghana, 2008). Under the Capitation Grant Scheme, every basic-school child in the public system receives an amount of three Ghana cedis per annum toward the cost of schooling (Ministry of Education, 2003a, 2013). Under the school feeding program, children in basic education are provided with a snack and one hot meal made from locally grown foodstuffs every school day (Republic of Ghana, 2008). These programs have contributed to a tremendous rise in access and enrollment of boys and girls and moved Ghana toward the MDG targets of gender parity and universal primary completion of basic education (Ministry of Education, 2015).

Despite this substantial progress in terms of inclusive legislation, policies, and an increase in access to education, the nation continues to face serious contextual issues relating to the socio-cultural, physical, material, attitudinal, and

financial barriers that exclude many children, including those with disabilities and special educational needs, from meaningful participation in school. Recent studies have established that a large number of children with disabilities still do not attend school, and many of those who attend schools are without meaningful support. The current status of the inclusive education system in Ghana is currently limited within a marginally developing national education system (Ametepee & Anastasiou, 2015; Ministry of Education, 2015). The Ministry of Education (2015) estimated those out of school children aged between 6-14 who have at least a form of known disability to be 25 percent and established that the majority of excluded children have SEN.

4.4.1 Challenges to the implementation of inclusive education in Ghana

The previous chapters and sections have already highlighted some of the challenges to the implementation of inclusive education, such as the effect of the psycho-medical and the religious and cultural conceptualizations of disability on access to education for students with disabilities and SEN. These dominant views in Ghana emphasize impairments at the individual level and locate learning difficulties within individuals with disabilities. Religious and cultural beliefs about disability, in particular, result in derogatory labels, discrimination, stigmatization, negative preconceptions, stereotypes, and social, capital, physical, and emotional abuse; they also justify the manner in which people with disabilities are treated (Alhassan, 2014; Avoke, 2002; Botts & Owusu, 2013; Dako-Gyeke & Asumang, 2013; Kassah, Kassah, & Agbota, 2012; Naami, 2014; Singal et al., 2015). Pupils with intellectual and mental disorders suffer greater discrimination than those with other disabilities (Botts & Owusu, 2013).

These negative attitudes and prejudices remain critical barriers to free universal education for those with disabilities because they limit their participation in most aspects of educational and social inclusion (Agbenyega, 2007; Kassah, Kassah, & Agbota, 2012; Ghana Education Service, 2004; Naami, 2014). A study by Naami and Hayashi (2012) found that a substantive minority of university students in Ghana hold strong prejudices against persons with disabilities. Hence, some have argued that it is important for any definition of disability in Ghanaian policy documents to respond to negative cultural beliefs and attitudes to promote the fundamental rights of persons with disabilities in the country.

In addition to these deep-rooted negative attitudes, other barriers are of an institutional, architectural, transportational, informational, and environmental nature, such as inaccessible buildings, lack of sidewalks, ramps, elevators, and curb cuts, and ignorance about available resources, opportunities, and potentials (Ghana Education Service, 2004; Naami, 2014). However, Naami (2014) stated that the attitude of individual persons with disabilities themselves also contributes to their exclusion; for example, they have low levels of self-confidence and negative reactions to societal attitudes.

Furthermore, recent studies have concluded that regular education teachers are unable to cater for students with disabilities; the special needs of regular

education pupils are not met (Agbenyega & Deku, 2011; Alhassan, 2014; Kuyini & Desai, 2008; Kuyini & Mangope, 2011; Singal et al., 2015) because regular teachers have limited to moderate pedagogical competence in adapting instruction (Ametepee & Anastasiou, 2015, Alhassan & Abosi, 2014; Kuyini & Desai, 2009). Consequently, the majority of Ghanaian teachers adopt teacher-centered pedagogy or fewer pedagogical adaptations to meet the needs of students with special needs in regular education classrooms, thus resulting in lack of student engagement (Agbenyega, 2008; Kuyini & Desai, 2009). Students sit idly in classrooms and are unable to understand the lessons taught (Singal et al., 2015).

Other teacher practices have been identified to include undemocratic student-teacher relationships and classroom control enforced through caning (corporal punishment) (Alhassan, 2014; Alhassan & Adzahlie-Mensah 2010). Tafa (2003) argued that the authoritarian teaching methods are rooted in the dominant positivist view of curriculum knowledge as irrefutable knowledge ready to be transferred to passive students. Another contributory factor to the widening gap between inclusive policies and their implementation has been due to the lack of funds (i.e., economic hardships and lack of political will) (Ametepee & Anastasiou, 2015).

4.5 Pedagogical Practices in the Global South and Contextual Issues

There is increased awareness of the need to take into account the context in which pedagogy occurs (Watkins & Mortimer, 1999). The local context influences the way in which teaching strategies are interpreted, adapted, and implemented (Davis & Florian, 2004). For instance, school structures – such as the policies of subject departments, the school policy setting, the classroom environment, and the availability of resources (e.g., ICT and teaching assistant), and teachers' own knowledge of pedagogical approaches, theories, and beliefs – can have a significant influence on the adoption of a particular pedagogy and can constrain what teachers can do (Alexander, 2000 cited in Croft, 2010; Florian & Rouse, 2001).

Many authors on the Global South have described inclusive pedagogical practices as critical to the implementation of inclusive education. However, they are of the view that inclusive pedagogical approaches are based on the educational theories of the Global North and that due to the socio-cultural context of Sub-Saharan African countries, these theories might not be feasible (Croft, 2010; Le Fanu, 2013; Tabulawa, 1997). Historically, learner-centered or inclusive approaches have been promoted in the teaching policy and curricula of middle- and low-income countries for many years as a countermeasure to the prevalence of teacher-centered approaches (Coffey International Development report, 2012; Le Fanu, 2010; O'Sullivan, 2004; Pinnock & Nicholls, 2012). In Ghana, for instance, the changes in the curricula of basic education under the 1987 educa-

tional reforms promoted the adoption of hands-on activities and student-centered approaches among teachers (Akyeampong & Furlong, 2000).

However, these efforts have failed, and pedagogical and assessment practices in classrooms in Ghana and other sub-Saharan African countries are still being described as rigid, chalk-and-talk, teacher-centered, lecture-driven pedagogy, with memorization and rote learning, whereby pupils assume inactive, passive roles (Association for the Development of Education in Africa [ADEA], 2003; Casely-Hayford et al., 2013; O'Sullivan, 2004; Todd & Mason 2005). The lack of progress in implementing child-centered or inclusive pedagogies in the Global South have been ascribed to the current context of formal schooling. Most schools in the Global South have limited resources, teaching, and learning materials, large class sizes, unavailability of curriculum support, and the absence of trained teachers and examination-driven curricula. Other conditions concern cultural and attitudinal factors, teachers' lack of understanding of learners' background, space problems, teachers' professional capacity, and teaching through foreign language (Agbenyega 2007, 2008; Alhassan, 2014; Arbeiter & Hartley, 2002; Casely-Hayford et al., 2013; Charema, 2010; Jordan et al., 2014; Kuyini & Desai, 2009; Le Fanu, 2010, 2013; O'Sullivan, 2004; Tabulawa, 1997; Singal et al., 2015; Tafa, 2004). Others have also suggested that inclusive pedagogical approaches are inadequate within both pre-service and in-service teacher training programs (Akyeampong et al., 2012; Casely-Hayford et al., 2013; Coffey International Development Report, 2012; Le Fanu, 2010; Pinnock & Nicholls, 2012).

Consequently, studies have identified and observed that only a few teachers adopt some of the evidence-based inclusive strategies to include pupils with disabilities and SEN in regular education classrooms. Some studies have also found that teachers from different African contexts stay behind after class to provide extra classes for children who lag behind in their academic achievement (Johnstone & Chapman, 2009; Arbeiter & Hartley, 2002). Croft (2010) argued that this teaching strategy is dominant in cultures in which a whole-class teaching approach is mostly adopted to keep the entire class working together at the same level of academic achievement in formal lesson; it is also practically challenging in contexts where class sizes are most often large.

Studies have also shown that teachers code-switch into local languages to enable children to understand lessons (Akyeampong et al., 2012; Ampiah, 2008; ADEA, 2003; Croft, 2010). Others adopt physical classroom arrangements, such as seating, for students with hearing and visual impairments (Alhassan, 2014; Arbeiter, & Hartley, 2002; Croft, 2010). Croft (2010) has observed that teachers, rather than pupils, mostly determine seating arrangements and that those pupils must be allowed to select the seating position they found most helpful. This has been found to be more effective in improving the academic performance of hearing-impaired pupils.

Furthermore, a study by Singal (2008) found that teachers were confident about using a predominant chalk-and-talk pedagogical approach to effectively teach and include pupils with hearing or visual impairments. They argued that

hearing- and speech-impaired students benefit from more written work (i.e., the teacher writing on chalkboard) and that blind students benefit from more oral work (i.e., the teacher talking). Some studies have also revealed that teachers provide social-emotional support to children with disabilities and SEN by adopting inclusive values: such as offering encouragement to work hard; building self-confidence and self-esteem; providing special attention, help, friendship, and understanding; and showing interest, concern, sympathy, empathy, care, and love (Arbeiter & Hartley, 2002; Dart, 2006; Kuyini & Abosi, 2011). Other inclusive values include adaptation (content and methods), communication skills (sign language, gestures, and simple language), activity-based learning, the problem-solving approach, questioning skills, child-to-child activities, and group work (Arbeiter & Hartley, 2002; Dart, 2006).

Moreover, Charema (2010) has recommended teaching strategies that provide opportunities or put children in mixed-ability groups so that children who are more able can assist less able children. This could be effective in large classes and could support teachers in the Global South. Recent studies have reinforced that few students with disabilities in regular schools in Ghana depend on their schoolmates for support through peer-assisted and cooperative learning approaches (Alhassan, 2014; Kuyini & Abosi, 2011; Kuyini & Desai, 2009; Singal et al., 2015). In addition, Kuyini and Abosi (2011) found that some teachers employ explicit instructions, differentiated learning strategies, direct instruction, behavior-management techniques, collaboration with special educators, asking students to play leadership roles, paying teachers an extra allowance, parents and school collaboration, and social skills instructions to enhance the inclusion of street children in regular schools in Accra, Ghana. However, the aforementioned studies found that few of these inclusive or child-centered approaches could be observed in the classroom and that teachers used them marginally and inconsistently.

5 AIMS AND METHODS

5.1 Introduction

The previous chapters dealt with the theoretical concepts informing the study and how the concepts are adopted in the educational context of Ghana. The current chapter discusses the broad aim and research method of the entire study. It presents the research questions, participants, data collection, instruments, and analytical method adopted in the sub-studies.

5.2 Main Aims

Initial teacher preparation plays a pivotal role in the implementation of inclusive education. However, there has been little detailed investigation of the status of teacher preparation for inclusive education in Ghana. The entire dissertation is within this broader context of the current internationally acknowledged concern with regard to teacher preparation for inclusive education. The main goal was to describe in greater depth the current state of preparedness of pre-service teachers for inclusive education, and it discussed factors that can promote teacher education for inclusion. Figure 2 presents the summary of the research questions in the sub-studies. The participants, instruments, and analytical techniques are presented in Table 1.

The first aim was to determine pre-service teachers' and teacher educators' knowledge of the concept of inclusive education, SEN, and inclusive pedagogy, as well as their relationship with demographic variables (sub-studies I, II and III).

The second aim was to investigate pre-service teachers' and teacher educators' attitudes toward inclusive education and the impact of demographic variables on their attitudes (sub-studies III and IV).

The third aim was to investigate pre-service teachers' and teacher educators' perceptions of the adequacy of the SEN course and the entire initial teacher education program to prepare teachers for inclusive education and the challenges pre-service teacher's encounter during the SEN course (sub-studies II and III).

The fourth aim was to examine pre-service teachers' feelings of preparedness for inclusive education and teacher educators' perceptions of their roles and preparedness for the implementation of inclusive education (sub-studies III and I).

The fifth aim was to determine pre-service teachers' views and opinions about cultural beliefs, conceptualization of disability, and level of discomfort, as well as the impact of demographic variables on their attitudes (Sub-study IV).

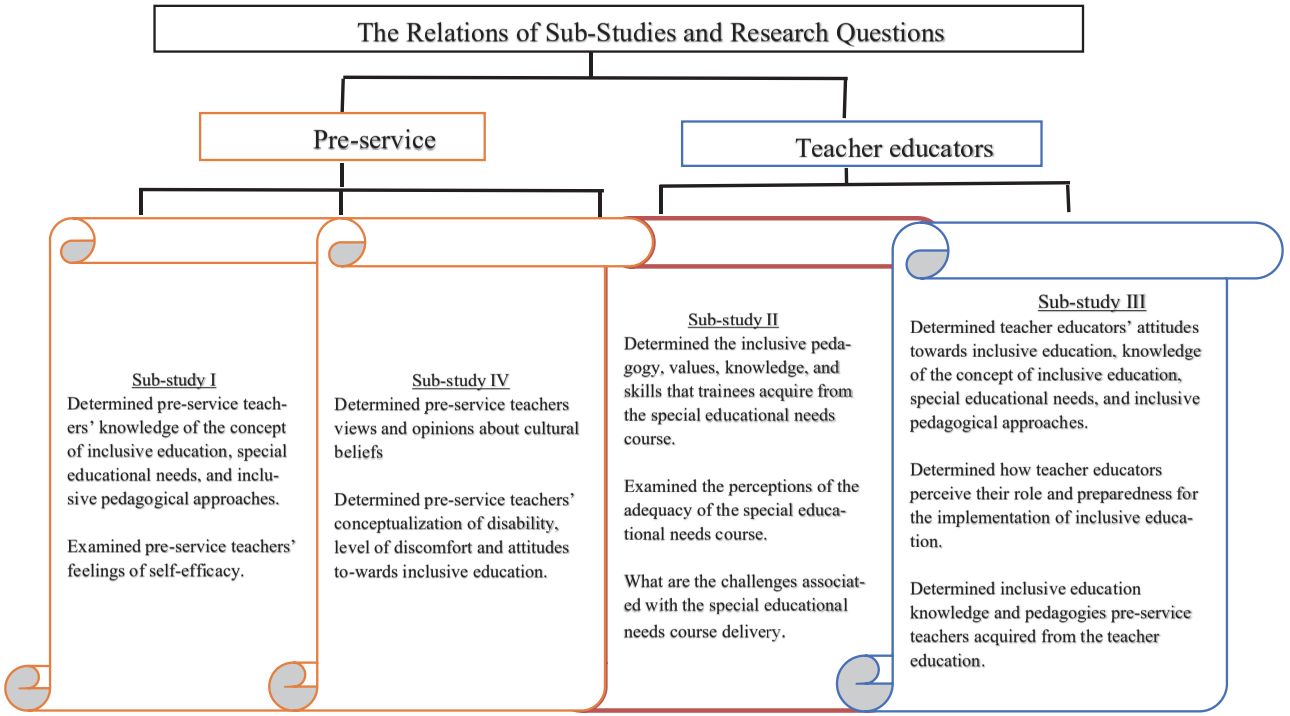

FIGURE 2 The Relations of Sub-Studies and Research Questions

5.3 Methodological Approach

> Unless researchers first generate an accurate description of an educational phenomenon as it exists, they lack a firm basis for explaining or changing it. (Gall, Gall, & Borg, 2003, p. 290)

The main purpose of the current study was to generate a description of the current state of teacher preparation for inclusive education in Ghana. The purpose of the research determines the methodology and design of the research (Cohen, Manion, & Morrison, 2000), hence the selection of descriptive and causal-comparative research designs in the quantitative research tradition for the study.

A descriptive design was selected to provide detailed descriptions of pre-service teachers' and teacher educators' attitudes toward inclusive education; their knowledge, skills, values, and experiences regarding inclusive education and SEN; and their views on teacher preparation (sub-studies II, III, IV, and I). In addition, the sub-studies adopted a causal-comparative design to describe cause-and-effect relationships between dependent and independent variables (see, e.g., Cohen, Manion, & Morrison, 2000; Best, 1970; Gall, Gall, & Borg, 2003).

Descriptive survey studies involve the administration of questionnaires in the form of survey research and gather data at a particular point in time with the intention of describing the nature of existing conditions. It adopts data gathering techniques such as structured or semi-structured interviews, attitude scales, questionnaires, test scores, etc., all of which allow comparisons between groups and provide valuable knowledge and statistical information about opinions, attitudes, and practices. The survey research method involves administering questionnaires to a sample that is representative of the population to which the data analysis can be generalized. It relies on large-scale data, and the researcher is very clearly an outsider.

Descriptive survey research designs are subsumed within an objectivist (or positivist) approach to the social world, which views knowledge as hard, objective, and tangible, with the researcher assuming an observer role (Cohen, Manion, & Morrison, 2000; Gall, Gall, & Borg, 2003). Gall, Gall, and Borg (2003) defined positivism as the epistemological doctrine that physical and social realities are independent of those who observe them and that observation of this reality is unbiased and constitutes scientific knowledge (p. 14).

TABLE 1 The summary of the participants, instruments, and analysis for the sub-studies

	Sub-study I	Sub-study II	Sub-study III	Sub-study IV
Participants	200 final-year pre-service teachers	167 final-year pre-service teachers, 13 teacher educators	125 teacher educators	501 pre-service teachers from first, second, and third year
Instruments	24-item scale measuring knowledge and understanding of IE Open-ended questions on SEN and challenges to the implementation of IE Closed-ended question on self-efficacy and 22 IE instructional strategies	Open-ended questions on: IE knowledge, values, instructional strategies, challenges, purpose of SEN course Closed-ended question on adequacy of SEN course and 21 inclusive pedagogy Background variables	6-items closed-ended-type Likert scale on teacher educators' knowledge, attitudes, and views about teacher preparation for IE, awareness of their role, IE instructional strategies Extent of permeation of 21 instructional strategies Background variables	3-items closed-ended-type Likert scale on cultural beliefs 4-item scale on level of discomfort 6-item scale on conceptualization of disability 33-item scale on attitudes toward IE Background variables
Analytical techniques	Thematic analysis Frequencies Percentages Means Standard deviations T-tests Analyses of variance	Thematic analysis Frequencies Percentages Means Standard deviations Chi-square analysis T-tests Analyses of variance	Thematic analysis Frequencies Percentages Means Standard deviations	Frequencies Percentages Correlation Means Standard deviations T-tests Analyses of variance Reliability Exploratory factor analysis Principal component analysis

5.4 Participants and Sampling Techniques

The hypothetical sets of people to which the researcher wished to generalize the findings of the study were pre-service teachers (sub-studies II, IV, and I) and teacher educators (sub-studies II and III) in the public colleges of education in Ghana. Throughout the entire study, purposeful sampling was used to select the respondents for each study because they had the desired information. The aim of purposeful sampling is to choose respondents who have some breadth of experience, with common traits, who would likely provide relevant information that would address the purposes of the study (Gall, Gall, & Borg, 2003; Patton, 2002).

Accordingly, in Sub-study I, the survey data were drawn from 200 final-year pre-service teachers because they were the ones who were expected to have completed both the theoretical and practical aspects of their training and, therefore, they were the group that could provide a clear picture on their knowledge of the concept of inclusive education, SEN, inclusive pedagogy, and their overall feelings of self-efficacy in terms of their preparedness of inclusive education.

In sub-studies II, the main focus was pre-service teachers' and teacher educators' perspectives on special education courses. Therefore, 167 final-year

pre-service teachers who have completed the special education course and 13 teacher educators of the course were involved in providing relevant responses in the survey.

The sub-studies III sought to determine teacher educators' knowledge of the concept of inclusive education, SEN, and inclusive pedagogy, and their attitudes toward inclusive education, as well as their perception of their roles and preparedness to train teachers for inclusive education. As a result, 125 teacher educators took part in the survey.

In the final Sub-study IV, the objectives were to undertake a cross-sectional study to determine pre-service teachers' views and opinions about cultural beliefs, views of disability, levels of discomfort, and attitudes toward inclusive education. The aim was also to determine the impact of independent variables, such as gender, colleges of education, year levels, subject specializations, completion of SEN courses, previous teaching experiences, and friends or classmates with or without disabilities. Accordingly, 501 pre-service teachers from first years (204), second years (169), and final years (128) from three colleges of education were surveyed in the study.

With regard to the colleges of education, convenience sampling was used to select the nearest colleges of education in all the sub-studies because of such factors as expenses, time, accessibility, and familiarity with the regions (sub-studies II, III, IV, and I).

5.5 Research Instruments

Studies intended to provide valuable information on views, opinions, perceptions, attitudes, knowledge, skills, and practices of participants are best executed through a quantitative approach, such as a descriptive survey research (Cohen, Manion, & Morrison, 2000; Gall, Gall, & Borg, 2003). It is one of the preferred designs for studies that seeks to explore core beliefs about curriculum courses, competencies, inclusive pedagogical practices, and learning activities of inclusive initial teacher education programs (Salend, 2010). The data for the entire dissertation (sub-studies 1, II, III, and IV) were gathered using surveys and questionnaires. Questionnaires are documents that ask the same questions of all individuals in a sample. Respondents control the data collection process: they can fill out the questionnaire at their own convenience, answer the question in any order, take more than one sitting to complete it, and make marginal comments or skip questions (Cohen, Manion, & Morrison, 2000; Gall, Gall, & Borg, 2003).

The questionnaire for data collection in Sub-study I included a self-developed 24-item scale measuring pre-service teachers' knowledge and understanding of inclusive education, semi-structured open-ended questions on SEN, challenges to the implementation of inclusive education, and closed-ended types of items on background variables, self-efficacy, and 22 inclusive pedagogical approaches originally developed by Gyimah (2010).

The questionnaire for Sub-study II included both semi-structured open-ended questions on inclusive education knowledge, values, pedagogical approaches, challenges, and purposes of special education courses and closed-ended types of items on the adequacy of special education courses. A few questionnaire items also required respondents to choose 21 predetermined inclusive knowledge and pedagogy options and closed-ended types of items on background variables. Opportunities were also provided for them to specify other alternatives that were not predetermined by the authors.

The questionnaire for Sub-study III included semi-structured open-ended questions regarding the role that teacher education plays in the implementation of inclusive education, the teacher educators' experience in teaching students with disabilities, and how their experiences influenced their tutoring. The closed-ended types of items on the Likert scale were used to determine teacher educators' knowledge about inclusive education and SEN, attitudes toward inclusive education, teacher preparation for inclusive education and their awareness of their role in the implementation of inclusive education. Others on the Likert scale included; knowledge of inclusive teaching methods for effective teaching in inclusive classrooms, the extent of permeation of these strategies across the various subjects, their views on the current preparedness of trainees for inclusive classrooms, and the educators' own preparedness in training teachers to teach pupils with SEN and disabilities in inclusive classrooms and background variables.

Finally, the questionnaire in Sub-study V included a three-item, closed-ended-type Likert scale measuring pre-service views and opinions on cultural beliefs, a four-item scale measuring pre-service teachers' level of discomfort interacting with people with disabilities, a six-item scale measuring pre-service teachers' conceptualization of disability, and a 33-item scale measuring pre-service teachers' attitudes toward inclusive education. The 33-item scale was designed by EL-Ashry (2009), and the rest of the scales were self-developed.

The semi-structured, open-ended type of items in all the sub-studies required respondents to provide their own responses. This method of written responses was preferred because it allows for the involvement of a large sample, and it is more reliable, anonymous and more economical.

5.6 Data Collection and Ethical Considerations Relating to the Study

Data collection from human participants must adopt strategies that conform to ethical standards and legal regulations to protect the participants from possible harm. Although one or two teacher educators or principals in the selected colleges of education knew the researcher, certain procedures were followed to obtain permission for the study and to gain cooperation from the participants (see, e.g., Gall, Gall, & Borg, 2003).

In Sub-study I, the researcher collected the data at the time of his internship in the Regional Directorate of Ghana Education Service in Ashanti Region. Therefore, a letter of introduction to the selected colleges of education was obtained from the Regional Director of Education. In sub-studies II, III, and IV, the researcher sent letters of introduction with clear and written descriptions of the research and the instruments to be administered to all the principals in the selected colleges of education for approval. In some of the colleges, some principals gave their approval by endorsing the introductory letters with the college stamps, and others provided the researcher letters of introduction to be shown to the teacher educators, pre-service teachers, and head teachers of the basic education in which the final-year pre-service teachers were carrying out their off-campus teaching practice.

In addition, a number of strategies were adapted to obtain informed consent from the participants. For instance, a cover letter was attached to each survey form explaining to each participant in simple language that the research was purely for academic purposes; therefore, their confidentiality and anonymity were assured in all phases of the study. This was to disclose to the participants the intended use of the research data (Gall, Gall, & Borg, 2003). In addition, it is recommended that confidentiality be further protected by not using the names or locations of individuals in publications resulting from the research, unless agreed to by all parties. Accordingly, to protect the participants' privacy and to ensure their complete anonymity, the researcher did not make any request for personal data, and they were instructed not to write any identifying marks, such as their names or the names and addresses of the colleges of education and the basic education that could identify the participant providing them.

Moreover, the names of the colleges of education were not published in any of the publications to protect their privacy and anonymity. The study was, therefore, carried out in accordance with the ethical guidelines of the National Advisory Board on Research Ethics in Finland (2009) and colleges of education in Ghana.

Using the convenience sampling technique, the survey forms in all the studies were delivered in paper form to the nearest and most easily accessible participants personally by the researcher. They were given enough time to think through and complete the questionnaire. This avoided any undue pressure on the participants. Also, one respondent in each of the colleges volunteered for the collection of the completed questionnaire and made them available to the researcher at a later time (see, e.g., Cohen, Manion, & Morrison, 2000). The data for all the sub-studies were collected at the end of the 2012/2013 academic year.

5.7 Data Analysis

5.7.1 The Quantitative Data Analysis Used in the Study

The quantitative statistical data analyses in all sub-studies were conducted using IBM SPSS software statistics 18–22. In all data in the sub-studies, descriptive statistics such as frequencies, percentages, means, and standard deviations were used to describe the sample in the method sections. Some of these descriptive statistics were also used in the analysis of categorical and continuous variables. Furthermore, in sub-studies I, II, and IV, the independent-sample t-test and the one-way analysis of variance were used to compare the mean scores on some continuous variables of two groups and more than two groups respectively, and the internal consistency of the instruments on the scales were estimated by using Cronbach's coefficient alpha.

In Sub-study I, the independent-sample t-test was used to compare the mean scores on Knowledge of Inclusive Education (KIE) of those who were familiar with the concept of inclusion and those who were not, those who encountered a child with SEN and those who did not, and those who supported a child with SEN and those who did not. One-way analysis of variance was used to compare the mean scores on self-efficacy of pre-service teachers between the three colleges of education involved in the study.

In Sub-study II, one-way between-group analysis of variance was employed to compare the mean score on the adequacy of the content of the curriculum on SEN to prepare pre-service teachers to identify SEN and to make pedagogical accommodation to meet those needs across colleges. In addition, Chi-square contingency table analysis was employed to determine the relationship between those who have and do not have previous teaching experience and perception of inclusive values, knowledge, and skills. The same analysis was also used to determine those who have or have had classmates and friends with disabilities and their perceptions of inclusive values, knowledge, and skills.

In Sub-study IV, an independent-sample t-test was used to compare the mean scores between gender, those who had or had not completed the SEN course, those with or without previous teaching experience, and those who had or did not have friends/classmates with disabilities on continuous variables, such as agreement with cultural beliefs about the causes of disability, conceptualizations of disability, attitudes toward inclusive education (as well as the three components—benefits of inclusion, inclusive classroom management, and perspectives toward teaching students with specific types of disabilities), and the level of discomfort when interacting with people with disabilities. A one-way between-group analysis of variance was employed to compare the mean scores on these dependent variables among colleges of education, year levels, and subject specializations.

Moreover, other analysis methods employed in Sub-study IV included exploratory factor analysis, and principal component analysis. The exploratory

factor analysis was used to identify the structure and the unidimensionality of the pre-service teachers' conceptualization of disability. The principal component analysis was used to identify (extract) the number of underlying components within pre-service teachers' attitudes toward the inclusive education scale.

5.7.2 The Qualitative Data Analysis Used in the Study

Braun and Clarke (2006) stated that the question of epistemology is not only determined when the research project is conceptualized but may raise its head again during analysis. The descriptive research designs adopted in the current study are located in the positivist essentialist/realist epistemology, which believes in bias-free observation of the natural and social world. However, as indicated earlier, semi-structured open-ended types of items were included in sub-studies II, III, and I. These permitted the respondents to describe what is meaningful and salient without being pigeonholed into standardized categories (Patton, 2002). Some of the responses to the semi-structured open-ended type of items yielded qualitative data, which required the use of the qualitative analytic method. Accordingly, thematic analysis, the most common analytic method in qualitative research, was employed to analyze the responses to the open-ended type of items.

Thematic analysis is a flexible approach to analyzing qualitative data that involves identifying, analyzing, and reporting themes within the data. The themes are recurring coded phrases, terms, and expressions across datasets that are important to the description of a phenomenon and are associated with a specific research question. The themes then become the categories for analysis (Braun & Clarke, 2006; Given, 2008).

The thematic analysis of the qualitative data was performed through the process of coding in six phases described by Braun and Clarke (2006) and Attride-Stirling (2001). First, the researcher read the data repeatedly to familiarize himself with the depth and breadth of the data. This involved marking ideas and patterns for coding. The second phase involved generating initial codes by attaching names to pieces of texts that were related to specific research questions and the theoretical framework of the study. In the third phase, the codes were analyzed and sorted into potential themes. The potential themes were reviewed and refined in the fourth phase. In this phase, some of the themes were collapsed into each other and others were also discarded because there were not enough data to support them. The fifth phase involved defining and naming themes by identifying the aspect of the data that each theme captured and how each theme related to the research question or questions. In the sixth phase, the fully worked-out themes identified were coded and entered into IBM SPSS software statistics to demonstrate the prevalence of the themes. Also, some vivid extracts of the data were cited to support the themes in the write-ups (Attride-Stirling, 2001; Braun & Clarke, 2006; Given, 2008).

Given (2008) argued that thematic analysis remains descriptive and is not designed to uncover an essential structure or developed grounded theory. However, in the current analysis, certain precautions were also taken to avoid

the inductive method of thematic analysis, which is used purely for qualitative analyses. The researcher adopted a theoretical, deductive, or top-down thematic analysis. Thus, the coding was done on the basis of the theoretical interests guiding the research questions (Attride-Stirling, 2001; Braun & Clarke, 2006). These resulted in a number of themes around the research questions and theoretical framework of the study. Also, the researcher was not looking for anything beyond what the participant had said or written. The themes were identified within explicit or surface meanings of the data. Last, the current analysis also adopted essentialist/realist thematic analysis (i.e., data were understood in a straightforward manner).

5.8 Validity and Reliability of the Research Instruments

There are many different types of validity and reliability, and how they are addressed in both quantitative and qualitative research varies (Cohen, Manion & Morrison, 2000; Gall, Gall, & Borg, 2003). Gall, Gall, and Borg (2003) stressed that it is relevant for the questionnaire design to satisfy the same requirements of validity and reliability applicable to other data-collection measures in educational research. It is impossible for research to be 100 percent valid, and it is recommended that researchers strive to minimize invalidity and maximize validity (Cohen, Manion, & Morrison, 2000). Accordingly, in all sub-studies, efforts were made to maximize the validity of the research instruments.

According to Gall, Gall, & Borg (2003), the research instruments themselves do not have validity; it is the researcher's interpretations that can be valid or invalid. In all the sub-studies, the researcher asked some colleagues and experts in the field, such as my supervisors, teacher educators, and researchers in Ghana, to review and judge the suitability of the research instruments. This review and judgement by the panel of experts ensured the instruments comprehensively cover the items they purport to cover (i.e., content and face validity of the research instruments) (Cohen, Manion, & Morrison, 2000; Given, 2008). In addition, the validity of the data was improved through careful, purposive sampling and the use of appropriate instrumentation (Cohen, Manion, & Morrison, 2000). Also, the validity of individual themes produced in the thematic analysis of the qualitative data was checked in relation to the dataset. In this instance, the entire dataset was re-read to find out whether the themes "work" in relation to the dataset and to code any additional data within themes that have been missed in earlier coding stages (see, e.g., Braun & Clarke, 2006).

Furthermore, in all the sub-studies, the main constructs of the study, such as the concepts of inclusive education, SEN and the SEN categories were clarified in the cover letters of all the questionnaires. The definition of these concepts and the SEN categories, as provided in the special education curriculum and the Education Strategic Plan 2003–2012, was adopted for this clarification. In both the documents, inclusive education was defined narrowly as the process of including students with special educational needs and disabilities within

regular schools. This approach ensured the construct validity of the research instrument and that the participants' understanding of these concepts was in line with the generally accepted understanding in the teacher education and Ghanaian contexts.

Reliability of research instrument is the consistency of their measurement. It refers to the degree to which the items that make up the scale are all measuring the same underlying attribute (Gall, Gall, & Borg, 2003). For the purpose of this study, the researcher estimated internal consistency of the instruments by using Cronbach's coefficient alpha. Gall, Gall, and Borg (2003) recommend that lower-level item reliability is acceptable when the data are to be analyzed and reported at the group level rather than at the individual respondents' level. In Sub-study I, the Cronbach alpha for the Knowledge on Inclusive Education scale was $\alpha = .76$. In Sub-study IV, the reliability of the level of discomfort in interacting with people with disabilities scale was satisfactory with $\alpha = .73$; the reliability of the pre-service teachers' conceptualization of disability scale was satisfactory with $\alpha = .68$; the pre-service teachers' attitude toward inclusive education scale yielded a reliability of $\alpha = .70$; and the reliability of the three components of the attitude scale (benefits of inclusion [component I], inclusive classroom management [component II], and perspectives toward teaching students with specific types of disabilities [component III]) was $\alpha = .78$, $\alpha = .65$, and $\alpha = .72$, respectively.

5.8.1 External Validity or Generalizability of the Findings

Some of the key strengths of quantitative survey research lie in its ability to make statements that are supported by large data as well as the ability to generalize data and findings to larger populations. However, the generalizability of data and findings to wider contexts is undermined in the absence of critical attention to rigorous sampling. The generalizability of the data collected from surveys is underpinned by probability sampling rather than non-probability samples. As a quantitative researcher, I was concerned about the external validity (generalizability) of the research findings (i.e., the likelihood that a study's findings will apply to the larger population represented by the study sample).

In all the sub-studies, all the colleges of education were selected on the basis of convenience. Therefore, each college of education and each respondent did not have an equal chance of being selected. In these types of samplings, the parameters of generalizability are negligible because of the selective and biased nature of the selection of the population. To obtain good population validity, and, therefore, to be able to make accurate and statistical inferences about the target population (such as all pre-service teachers, final-year pre-service teachers, and teacher educators), the researcher must have selected the sample randomly from the defined population to which he/she wishes to generalize his/her results (see, e.g., Cohen, Manion & Morrison, 2000; Gall, Gall, & Borg, 2003).

However, the research data and findings obtained could not be generalized to the larger population on the basis of the convenience and purposive

sampling approaches adopted. Nevertheless, all pre-service teachers were senior high school leavers and had completed the same centralized curriculum and external examination. In addition, all public and private colleges of education in Ghana adopt the same centralized curriculum and qualifications. It is therefore the view of the researcher that some qualitative researchers' notion of transferability rather than the generalizability of the findings could be applied here. The transferability notion of the qualitative researcher assumes that when similar things are done in an apparently similar context, a finding is likely to be transferable to other situations. It further argues that only the consumers of research can determine whether a finding is likely to be transferable to their situations (Given, 2008). In this instance, it is up to the users of these research findings to determine the generalizability of the findings to other colleges of education in Ghana.

This chapter has dealt with the aims of the entire study, a description of the research questions and the instruments of the sub-studies, and the methodological approaches adopted in the data collection and analysis. The next chapter will undertake an overview of the results and the main findings of the sub-studies.

6 OVERVIEW OF SUB-STUDIES

6.1 Sub-Study I: Pre-Service Teachers' Views on Inclusive Education in Ghana

The first Sub-study investigated the extent of pre-service teachers' preparedness to create inclusive classrooms; their knowledge of the concept of the inclusive education (KIE) scale, SEN, and pedagogical approaches; and their feelings of self-efficacy in terms of preparedness for inclusive teaching.

The results of the study indicate that the majority of participants (90% of 200 final-year participants from three of the 38 public colleges of education) indicated that they have been introduced to the concept of inclusive education. Overall, the participants demonstrated good knowledge of inclusive education, with a maximum score of 55 on the KIE scale (M = 41.1, SD = 7.3). Those who indicated that they have been introduced to the inclusive education concept (n = 148) demonstrated higher scores on the KIE scale (M = 42.3, SD = 6.6) than those (n = 17) who indicated they have not been introduced to the concept (M = 33.0, SD = 9.1), t (16.7) = 4.0, p = .001. There were clear differences between the colleges in terms of their familiarity with the concept of inclusive education.

The characteristic of inclusive education that were more familiar to the final-year pre-service teachers included the fact that "in inclusive classroom or school, everyone is made to feel welcome, regardless of their disability"; "inclusion requires that there is cooperation among teachers and other professionals"; "inclusive teachers understand the different ways in which students respond to the same tasks"; "in inclusive classroom good students are encouraged to help students with SEN"; and "inclusion requires that teachers and parents work together." They were least familiar with the view that inclusion is not only about students with disabilities.

Furthermore, final-year pre-service teachers were asked to mention some SEN they knew and those that they encountered during teaching practice. The SEN categories that were most known to the respondents included visual impairments (57%), hearing impairments (53%), intellectual disabilities (34%), and

learning disabilities (32%). The least mentioned were behavioral and emotional problems (1%). With regard to the SEN categories encountered by the respondents, the majority of respondents (71%) indicated that they encountered a child with SEN with a learning disability (28%) and visual impairment (23%).

However, only the minority (47%) indicated that they provided support for the SEN children they encountered. The main supports provided were arrangement of the classroom in appropriate ways (36%), the provision of individual attention (18%), the provision of suitable learning tasks for all students (11%), and asking for advice from other persons (8%). The encounter of children with SEN during the teaching practice did not significantly explain ($p < 0.05$) their score on the KIE scale. However, provisions of support for children with SEN significantly ($p < 0.05$) improved the score on the KIE scale. Again, the provision of support for SEN children also differed among the colleges of education.

Correspondingly, only a minority (22%) could indicate that they are highly self-efficient in terms of their preparedness to teach students with SEN. Thirty-eight percent felt somewhat prepared and 25 percent felt unprepared. Twenty-eight percent of those who had encountered SEN children during teacher practice ($n = 14$) reported that they felt highly prepared to teach students with SEN. The strong association between self-efficacy and field experience was strengthened by the findings that the majority (83%) of the pre-service teachers who had provided support for a child with SEN in their teaching practices ($n = 94$) reported feeling either highly or somewhat prepared to teach children with SEN. Conversely, only 43% of those who did not provide support for children with SEN ($n = 53$) indicated that they were either highly or somewhat prepared to teach children with SEN. Similarly, the final-year pre-service teachers' self-efficacy differed among the colleges of education, with the majority of those who did not feel prepared coming from one college.

Moreover, participants were asked to rank 22 items on pedagogical approaches originally developed by Gyimah (2010) in order of their preferences. All 22 items were ranked by 68% of the participants in line with the order requested. The most preferred pedagogical approaches of the respondents included "to ensure that the classroom environment is comfortable for all children," "to select learning tasks that children with SEN can do," "to select teaching materials that make it possible for all children to learn," "to give individual attention to children who need help," and "to set teaching objectives to cover all children, including those with SEN."

Lastly, when the final-year pre-service teachers were asked to list what challenged them most in terms of the inclusion of students with SEN within the regular education classroom, their responses included lack of quality teacher preparation, inadequate teaching resources and materials, the stigmatization and discrimination of students with disabilities and SEN, low self-esteem of students with SEN, lack of appropriate facilities and environments, and lack of cooperation with parents, consultants, and other professionals.

6.2 Sub-study II: Teacher Educators' and Trainees' Perspective on Teacher Training Special Education Course

The main objectives of Sub-study II were to determine the inclusive pedagogical practices, values, knowledge, and skills that pre-service teachers acquired from the SEN course, their perceptions of the adequacy of the SEN course for preparing teachers to create inclusive classrooms, and the challenges associated with the course delivery.

With regard to the inclusive values, the most-often mentioned values by both pre-service teachers and teacher educators were patience, tolerance, and empathy. The inclusive knowledge acquired from the course that most pre-service teachers and teacher educators deemed relevant for the effective teaching of pupils with disabilities and SEN in regular classrooms was "nature of special needs," "causes of special needs," and "inclusive pedagogical practices." Most pre-service teachers stressed the need for knowledge about the "identification of special needs," while only a few teacher educators emphasized the need for knowledge on "special education policies."

There was a relationship between previous teaching experience and perception of inclusive values and knowledge. The respondents who had previous teaching experience stressed the inclusive values of "empathy" and "equal treatment and fairness" as relevant inclusive values more often than those who had no previous teaching experience. However, those who had no previous teaching experience stressed "tolerance" and "love" more often than those who had teaching practice experience. Similarly, those who have had previous teaching practice stressed the relevance of inclusive knowledge, such as "nature of disabilities," "identification of special needs," and "causes of disabilities."

Furthermore, the analysis of results also showed that respondents who had or had had friends or classmates with disabilities (n = 34) more often stressed "respect" and "acceptance" than the other group of respondents who had no friends with disabilities (n = 133). However, those who had no friends or classmates with disabilities more often stressed the inclusive value of "empathy" and the inclusive knowledge of "causes of disability" and "nature of disabilities."

In relation to the perception of inclusive pedagogical approaches, the most mentioned inclusive pedagogical approaches acquired from the course by pre-service teachers were speaking louder, writing boldly, and demonstration. The most mentioned inclusive pedagogical approaches by teacher educators were discussion, discovery, and acceleration. A minority of pre-service teachers and teacher educators mentioned activity method and brainstorming. Only a few trainees mentioned inclusive practices, such as sitting arrangements, field trips, role-play, cooperative learning, peer learning, telescoping, and grade skipping. In addition, only a few teacher educators mentioned task analysis.

Moreover, when issues and topics deemed critical to the implementation of inclusive education were presented to both pre-service teachers and teacher

educators, they indicated that those comprehensively covered in the course to prepare pre-service to teach pupils with disabilities and SEN included "learning difficulties and disabilities" and "emotional and behavioral problems." Only a minority (31%) of teacher educators and only a few (8%) pre-service teachers indicated that the "right of children to education (human right)" issue was covered in the course. In addition, only a few pre-service teachers (6%) and teacher educators (5%) indicated that issues such as "social justice (equity in education)" and "communicating and working with parents," respectively, were covered in the SEN course.

Overall, the majority of pre-service teachers (68%) and teacher educators (69%) considered the SEN course as adequate in equipping pre-service teachers with the knowledge and skills required to identify the different categories of SEN and disabilities. Conversely, the majority of pre-service teachers (66%) and teacher educators (85%) perceived the course to be inadequate in providing pre-service teachers with sufficient inclusive knowledge, skills, and practices. Consequently, a majority of teacher educators (62%) stated that the main purpose of the SEN course was to equip pre-service teachers with knowledge of SEN and disabilities. The other main purposes of the course mentioned by a minority of teacher educators were to equip pre-service teachers with knowledge about inclusive pedagogy (23%) and to prepare pre-service teachers to appreciate the uniqueness of every learner (15%).

However, both teacher educators and pre-service teachers identified some problems with the SEN course and its delivery. The minority of pre-service teachers (32%) viewed the course to be too theoretical. The majority of teacher educators (62%) validated that pre-service teachers complained about the theoretical nature of the course. Another problem with the course, most mentioned by both teacher educators and pre-service teachers, was inadequate teaching and learning materials. In addition, the majority of teacher educators (77%) considered a lack of teaching experience in an inclusive setting and inflexible curriculum in the colleges of education as a major barrier. Some of the teacher educators indicated that they have to strictly follow the centralized curriculum for the purpose of external examination, and that the rigid nature of the curriculum prevents them from including other contents.

Finally, both pre-service teachers and teacher educators made recommendations as to what needs to be included in the course to effectively prepare teachers to teach in an inclusive education settings. Practical training in an inclusive setting was mentioned by a minority of pre-service teachers (13%) and a majority of teacher educators (77%), and incorporation of an inclusive education course was mentioned by a majority of teacher educators (69%) and a minority of pre-service teachers (44%). Another recommendation made by a few pre-service teachers (3%) was involvement of resource personnel with practical experience to teach pupils with SEN. Another recommendation mentioned by a majority of teacher educators (77%) was the inclusion of more knowledge of inclusive pedagogical approaches.

6.3 Sub-Study III: Teacher Educators' Views on Inclusive Education and Teacher Preparation in Ghana

The third Sub-study sought to determine the attitudes of teacher educators regarding support for the implementation of inclusive education in Ghana, how they perceive their role, preparedness regarding the implementation of inclusive education, the forms of inclusive education knowledge, and pedagogical approaches acquired by pre-service teachers from the initial teacher education program.

The majority of teacher educator participants appeared to have enough knowledge about SEN (88%), inclusive education (85%), and the overall purpose of inclusive education (80%). However, only a minority demonstrated adequate understanding of the purpose of inclusive education, which included the following: to ensure the integration of SEN students in regular education (36%), to achieve equal access to quality education (28%), acceptance (22%), social inclusion (18%), to reduce stigmatization of SEN students (14%), and to prevent discrimination (14%).

Overall, the teacher educators demonstrated positive attitudes toward inclusive education and positive views about teacher preparation for inclusive education. They were most in favour of inclusive education (M = 4.07), were of the view that inclusive education will be beneficial for pupils with SEN/disabilities (M = 3.81), and were most positive that all pre-service teachers must have teaching experience in inclusive settings (M = 4.21). However, the majority of respondents (62%) indicated that Ghana is very little ready for the implementation of inclusive education; 30% indicated that Ghana is ready to some extent; and only 2% indicated that Ghana is not at all ready. Their major reasons included; inadequate facilities (42%), inadequate teacher preparation (28%), inadequate resources (26%), societal attitudes (9%), inadequate public education (9%), and lack of political will (4%). Almost the same reasons were mentioned as their main concerns in relation to the implementation of inclusive education in Ghana: inadequate teacher preparation (38%), lack of teaching materials (25%), less attention to teacher preparation for inclusive education (20%), workload for classroom teachers, and lack of public education (10%), whereas 21% indicated that the current focus in the colleges of education was the preparation of teachers for children without special needs.

Predominantly, teacher educators were very much aware of the role that teacher education plays in the implementation of inclusive education (M = 4.01), their own roles in the preparation of teachers (M = 3.60), and their roles in the implementation of inclusive education in Ghana (M = 3.28). The main categories of the roles identified were to prepare teachers to teach pupils with SEN (74%), to equip teachers with knowledge about SEN (26%), to equip teachers with knowledge about inclusive pedagogical practices (12%), to organize workshops for in-service teachers on SEN (19%), to organize workshops for in-service teachers on inclusive education (9%), to prepare teachers to collaborate during

teaching (7%), to train teachers to use assistive technology for pupils with SEN (6%), to recruit and train teachers with disabilities (6%), to promote positive attitudes among pre-service teachers (5%), to provide public education (3%), and to advocate for teacher support systems (3%).

However, the majority (60%) indicated that they were only somewhat prepared for training teachers to teach pupils with SEN/disabilities in an inclusive classroom; 24% indicated they were very well-prepared; eight percent indicated they were not prepared at all, and 8% indicated that this was not part of the courses they taught. Meanwhile, the majority (56%) had little experience-teaching pupils with SEN/disabilities, 33% indicated they have no such experience, and 18% indicated they had a lot of experience. Nineteen percent of those who had experience teaching pupils with SEN indicated that it influenced them to treat student teachers individually; 17% indicated that they offered practical examples of how to meet the learning needs of SEN during teaching; 12% indicated that they tried to meet the learning needs of pre-service teachers; and three percent indicated that they provided more attention to pre-service teachers.

A minority (7%) indicated that the current pre-service teachers were very well prepared; 68% indicated that they were somewhat prepared; 15% indicated that they were not at all prepared; and 10% indicated that they do not know. Only 9% of the respondents indicated that more attention was being provided to prepare teachers to teach children with SEN/disabilities in regular schools; a minority (40%) indicated that less attention was being provided; 31% were of the view that some attention was being provided; and 11% believed no attention was being provided and that more needs to be done. With regard to the innovative programs being implemented to ensure that teachers are best prepared to work in inclusive settings, 17% mentioned a SEN course, 13% indicated educational visits to special schools, 2% indicated inclusive education workshops for teacher educators, and 1% indicated more reading materials on SEN.

Furthermore, analysis of the data indicated that the majority of teacher educators (56%) had little knowledge of inclusive teaching methods or pedagogical approaches for effective teaching in inclusive classrooms; 24% indicated they have no knowledge; and only 20% indicated they have a lot of knowledge. The inclusive teaching methods/pedagogical strategies identified by the teacher educators who have knowledge were mainly activity-based learning (10%), breaking down tasks and demonstration (7%). Those that received only one or two mentions were role-play, cooperative teaching and class-wide peer tutoring. The teaching methods or instructional strategies teacher educators most often used in class included the lecture method (49%), the discussion method (38%), demonstration (28%), and the activity method (27%). Only a minority (less than 10%) mentioned group work, discovery, brainstorming, role-play, question and answer, case study, experiment, and project work.

Also, the majority of teacher educators (74%) indicated that their courses dealt "very little" with SEN/disabilities; 21% indicated that their courses dealt "a lot" with how to teach pupils with SEN/disabilities; and only five percent

indicated they did not know. The teacher educators indicated that learning difficulties and disabilities (46%) were most comprehensively covered in their courses, followed by emotional and behavioral problems (44%), learning styles (20%), the right of children to education (human rights) (17%), communication and working with parents (10%), multiple intelligences (10%), and social justice/equity in education (6%). The inclusive pedagogical practices covered were: co-operative learning (36%), heterogeneous grouping (34%), providing individual assistance (22%), peer-assisted learning strategies (22%), strategies for managing behaviour problems (21%), class-wide peer tutoring (18%), collaborative problem solving (17%), co-operative teaching/co-teaching (17%), curriculum adaptation (14%), communication techniques and technologies (12%), modifying students' tasks (7%), differentiated instruction (6%), writing individual educational programs (5%), and universal instructional design (1%).

6.4 Sub-Study IV: A Cross-Sectional Study of Pre-Service Teachers' Conceptualization of Disability and Attitudes toward Inclusive Education

In Sub-study IV, a cross-sectional study approach was adopted to survey pre-service teachers' views and opinions about the perceived cultural and religious causes of disability; their conceptualization of disability; their level of discomfort with interacting with people with disabilities; their attitudes toward inclusive education; and the effects of the independent variables on cultural beliefs, understanding of disability, level of discomfort with interacting with people with disabilities, and attitudes toward inclusion.

The results indicate that most pre-service teachers' cultures endorsed some of the Ghanaian traditional, cultural beliefs about causes of disabilities to some extent (41%) or to very little extent (30%). The majority (49%) did not agree with those cultural beliefs, but 25% did agree, and 26% were uncertain. The overall mean score on Agreement with Cultural Beliefs about the causes of disability (ACB) scale was 2.57 (SD = 1.20). College C (M = 2.84) was significantly higher than Colleges A (M = 2.54) and B (M = 2.33) F (2, 493) = 6.57, p = .00.

The total analysis of all 501 respondents on all items of the pre-service teachers' conceptualization of disability (CD) scale indicated an overall mean of 4.13 (SD = .62). The male pre-service teachers achieved higher mean scores (M = 4.20) on CD scale than their female counterparts [M = 3.99, SD = 0.71; t (264.74) =3.28, p = 0.00]. The first years had the highest score (M = 4.18, SD = 0.61), followed by second years (M = 4.17, SD = 0.57), whereas third years (M = 3.99, SD = 0.67) F (2, 496) = 4.23, p = 0.02, scored significantly lower than first years and second years. Also, the total analysis of all 501 respondents indicated an overall mean of 1.97 (SD = .82) on all items of the Pre-Service Teachers' Level of Discomfort of Interacting with People with Disabilities (LD).

The overall mean of the total analysis of all 501 respondents on all items on the pre-service teachers' attitudes toward inclusive education (PTAIE) scale was 3.35. This indicated that the overall attitudes of the pre-service teachers toward inclusive education fell between "neutral" and "agree," leaning more toward "neutral." College C had the highest score (M = 3.45, SD = 0.45), followed by College B (M =3.34, SD =0.47), while College A (M = 3.29, SD = 0.45) F (2, 496) = 5.03, p = 0.01 scored significantly lower than College C. The pre-service teachers demonstrated more positive attitudes toward educating students with physical disabilities (M = 3.84) and behavioral problems (M = 3.56), and the least positive attitudes were toward those with hearing (M = 2.49) and visual (M = 2.61) impairments in regular education classrooms.

The principal component analysis of the short version of the attitude scale with varimax rotation yielded three components, namely benefits of inclusion (Component I), inclusive classroom management (Component II), and perspectives toward teaching students with specific types of disabilities (Component III). Reliability of the three components was α = 0.78, α = 0.65, and α = 0.72, respectively, and the total mean scores for the components were M = 3.95, M = 2.76, and M = 3.17. The male pre-service teachers demonstrated more positive attitudes about the benefits of inclusion (M = 4.00, SD = 0.68) than females [M = 3.86, SD = 0.66; t (482) = 2.22, p = 0.03]. The pre-service teachers who have had friends and classmates with disabilities were more positive about the benefits of inclusion (M = 4.02) than those who have not (M = 3.89), t (487) = -2.18, p = .03. College C had the highest score (M =4.08, SD =0.58), followed by College B (M =3.92, SD =0.69), while College A (M = 3.89, SD = 0.70) F (2, 492) = 3.86, p = 0.02 scored lower than College C.

The pre-service teachers who have not yet completed SEN courses achieved higher mean scores (M = 2.85, SD = 0.81) on inclusive classroom management than those who have completed a SEN course [M = 2.70, SD = 0.73; t (391.24) =-2.12, p = 0.03]. College B (M = 2.88, SD = 0.84) had the highest score, followed by College A (M =2.76, SD =0.76), while College C (M =2.65, SD =0.68) F (2, 492) = 3.09, p = 0.05; differed significantly from College B. The highest score came from first years (M = 2.84, SD = 0.81), followed by second years (M =2.76, SD =0.75), while third years (M =2.63, SD =0.69) F (2, 492) = 3.00, p = 0.05, scored significantly lower than first years.

Further, the mean score on perspectives toward teaching students with specific types of disabilities differed among College F (2, 486) = 8.01, p = 0.00, with the highest score from College C (M = 3.38, SD = 0.77, while College A (M =3.07, SD =0.77) and College B (M =3.09, SD =0.71) scored significantly lower than College C. The results also indicate that those who had friends and classmates with disabilities showed more positive perspectives toward teaching students with specific types of disabilities (M = 3.24, SD = 0.75) than those who did not have friends and classmates with disabilities [M = 3.10, SD = 0.78; t (481) = -.2.00, p = 0.05]. The second years (M =3.30, SD =0.77) scored the highest, followed by third years (M =3.24, SD =0.69) F (2, 486) = 7.50, p = 0.00. The mean score for the first years (M = 3.01, SD = 0.78) was statistically different from the

second years and the third years. Finally, the pre-service teachers who had completed a SEN course (M = 3.27) showed more positive perspectives regarding teaching students with specific types of disabilities than those who had not (M = 3.00), t (478) =3.79, p = .00.

Having presented the mains findings of the sub-studies in this chapter, the next chapter turns attention to the discussion of the main findings of the sub-studies. The final sections of the next chapter deal with the recommendation/implications of the study, the limitations and strengths of the study, and future directions.

7 DISCUSSION OF MAIN FINDINGS

Several studies and reports from both the Global North and South have consistently established that teachers are key players in support for inclusion (Gyimah, Sugden, & Pearson, 2006; Rouse, 2008; Winter, 2006) and that pre-service teacher education has a positive impact on improving teachers' knowledge of disabilities, knowledge of inclusive pedagogical approaches, attitudes toward disabilities, and self-efficacy for creating inclusive settings (Arbeiter & Hartley, 2002; Campbell, Gilmore, & Cuskelly, 2003; O'Sullivan, 2004; Rouse & Florian, 2012; Sharma, Forlin, & Loreman, 2008; UNESCO, 2005, 2009; West, 2010). The entire dissertation agrees with the argument that the move toward more-inclusive practices in classrooms requires that initial teacher education program responses to inclusive education are investigated in greater depth. The studies reported in this dissertation focused on initial teacher preparation for basic education in Ghana and the extent to which they prepare teachers for inclusive education.

Several studies from both the Global North and South have shown that teachers' (Arbeiter & Hartley, 2002; Avramidis & Norwich, 2002; Campbell, Gilmore & Cuskelly, 2003; Dart, 2006; De Boer, Pijl, & Minnaert, 2011; Swart, Engelbrecht, Eloff, & Pettipher, 2004) and teacher educators' (Forlin, 2010; Pinnock & Nicholls, 2012) attitudes are extremely critical in the process of inclusive education. Largely, the findings of Sub-study III indicated that the teacher educators had a positive view of inclusive education. The majority of teacher educators was in favour of inclusive education and believed that inclusive education is the best educational practice to benefit pupils with and without SEN and disabilities. These findings were in line with previous studies (Pinnock & Nicholls, 2012; Tungaraza, 2013). However, consistent with a previous study from Ghana (Kuyini & Mangope, 2011), the overall attitude of a cross-section of pre-service teachers in Sub-study IV was found to be barely positive.

Although disability was understood among the pre-service teachers as an interaction between individuals (with health conditions) and their contextual factors (environmental and personal factors) (see, e.g., WHO, 2001, p. 213), and demonstrated a lower level of discomfort in interacting with people with disabilities. However, some of them were either inclined to or uncertain about cul-

tural beliefs that disabilities are caused by sorcery, witchcraft, or the devil, or as a result of an offence against God, gods, or ancestral spirits. Training in a SEN course was found to be ineffectual in recanting the cultural beliefs and less effective in promoting positive attitudes among pre-service teachers. These beliefs that still facilitate the understanding of disability of some of the pre-service teachers in Ghana might result in derogatory labels, discrimination, stigmatization, and segregation of students with SEN and disability in the inclusive classrooms.

Also, the pre-service teachers' training in special education was found to be dominated by the medical model view of disability (sub-studies II, III and IV). The special education course was found to be adequate in equipping pre-service teachers to identify different disabling conditions among students. Knowledge regarding identification of SEN, the nature of special needs, and causes of special needs was found to be dominant in the SEN course (Sub-study II). Likewise, topics on learning difficulties, disabilities, and emotional and behavioural problems were found to be comprehensively covered in the SEN course (Sub-study II) and permeated across other courses in the colleges of education (Sub-study III). Consequently, most pre-service teachers had higher knowledge levels about the biological factors causing disabilities (sub-studies IV) and were confident to identify SEN among students during teaching practice (Sub-study II).

Studies have shown that pre-service teachers' knowledge about SEN and disability characteristics improved their attitudes and confidence in their ability to teach students with SEN and made them less concerned about inclusive education (Carroll et al., 2003; Forlin & Chambers, 2011). However, the medical perspective of disability locates the learning problem, the deficiency, the deficits, the lacking areas, and the challenge within the individual persons with disabilities (Booth & Dyssegaard, 2008; Oliver, 1990; Croft 2010). Therefore, many have established that an overemphasis on disability categories reinforces the idea of human difference or otherness that predicts learning difficulties. This justifies the segregation children with special needs into special education or learning support in anticipation that they will receive "different" or "additional" instructional provisions (Florian & Rouse, 2009; Lalvani, 2013). Such emphasis could also influence negative teacher attitudes toward mainstreaming/inclusion due to the inherent responsibilities that might be imposed on them (Scruggs & Mastropieri, 1996).

Consistent with the content of the special education curriculum (see section 4.2), it is clear from the current findings that the conceptualization of special educational needs in the curriculum is based purely on the traditional medical constructs of disability and learning difficulties. It ignores other factors that can result in educational needs such as economic backgrounds, second-language backgrounds, and the role of curriculum, pedagogy, assessment, school organization, etc. Consequently, some have described the introduction of such compulsory units in special education to prepare pre-service teachers for inclusive education as antithetical to the implementation of inclusive education

for some reasons (Slee, 2001). The special education curriculum in the colleges of education only seeks to make pre-service teachers familiar with the range of disorders and their identification, characteristics, causes, and various management techniques as well as various special education professionals, equipment, and materials. This transmission of traditional special education knowledge in teacher education narrows the focus of inclusive education to the traditional constituency of special education and is likely to guarantee a continuation of educational disablement.

Furthermore, the special education curriculum adopts a narrow and placement definition of inclusion that promotes the inclusion of a specific group of students with special educational needs in regular education. It also considers some children as "special" and others as "normal." Teacher education needs to explore new forms of knowledge about difference and adopt inclusive schooling as a broad strategy to address the diversity of educational experiences and outcomes for all children (see, e.g., Slee, 2001). It is my view that the use of special needs categories for students influences teachers to focus more on students and assume that the problem lies with students. Conceptualizations of inclusive education that refer to all students will thus enable us to shift the focus from the individual to the social context.

Similarly, the previous inclusive education policies: strategic plans 2003–2015 and 2010–2020 narrowly adopted the concepts of "special education needs" and "inclusive education" by referring to the inclusion of children with non-severe disabilities into regular education. However, the recent inclusive education policy has some positive developments (Ministry of Education, 2015). The current policy is guided by principles such as the right of all children to access basic education, the belief that all children can learn irrespective of differences, and that the educational system should adapt structures, systems, and methodologies to meet the needs of all children. It adopts inclusive education broadly as a strategy to address the diverse learning needs of all students within the Universal Design for Learning and Child Friendly Schools, addresses discrimination issues in the classroom, provides equitable access to quality education for all children, restructures the entire educational system, promotes an inclusive society and values such as participation, friendship, and interaction.

In addition, the current policy has revised the definition of disability away from the medical view to the World Health Organization's (2001) bio-psycho-social model. It acknowledges that other factors beyond psycho-medical terms such as natural disasters, social conflicts, health, social, and economic disadvantages could bring about special educational needs (Ministry of Education, 2015). However, some have argued that the fragmentation of "all children" into "numerous groups" subsequently renders inclusion as a process of "managing" individuals and groups that are perceived as "problems" (Armstrong, Armstrong, & Spandagou, 2011). Notwithstanding, this positive development will ensure the achievement of Education for All goals. This understanding of the concepts of "disability" and "special educational needs" has to be inculcated into the special educational needs curriculum in the colleges of education.

Moreover, inclusive education is also concerned with issues of human rights and social justice. It is a key strategy to ensure that the rights of all children to quality education are realized. These have been some of the main arguments propelling the inclusive education agenda (Lindsay, 2007; UNESCO, 1994, 2005, 2009). However, a closer examination of the content of the curriculum (see section 4.2) and study findings indicated that issues that are extremely critical to the implementation of inclusive education were not highlighted in the curriculum and were least covered in SEN courses (Sub-study II) and other courses (Sub-study III) in the colleges of education. A discussion of issues of disability from other discourses, such as the right to an equitable education for all as well as social factors that affect children's learning, must be addressed in inclusive teacher education courses to enhance pre-service teachers' understanding that every child has the right to quality education. Such a conceptualization of inclusive education has been found to influence teacher support for inclusive education (see, e.g., Lalvani, 2013; Florian & Rouse, 2009; Purdue et al., 2009).

It is widely established that successful implementation of inclusive education will require teachers to have the knowledge and skills to modify curriculum, assessments, and pedagogical approaches, such as child-centered and inclusive pedagogies to meet the diverse needs of all students (Alhassan & Abosi, 2014; Croft, 2010; Florian & Black-Hawkins, 2010; Francis & Muthukrishna, 2004; Loreman, 2007; UNESCO 1994, 2005). The initial teacher education programs have the responsibility to adopt these pedagogies to enable them to prepare teachers to teach in inclusive classrooms. One way to find out is by assessing the inclusive practices that they have acquired through their training (see, e.g., Art, 2006; O'Sullivan, 2004; Pinnock & Nicholls, 2012; Specht et al., 2015; Mintz & Wyse, 2015). The current study found that the majority of pre-service teachers who identified students with SEN during their teaching practices failed to provide any meaningful support for them and indicated that they felt ill prepared to teach students with SEN (Sub-study I). These findings are consistent with those found in other studies from different contexts (ADEA, 2003; Agbenyega, 2007; Croft, 2010; Kuyini & Mangope, 2011). Several possible factors for the inability of pre-service teachers to provide support for students identified with SEN were found in sub-studies II and III. Figure 3 presents a summary and the relationships among these factors.

First, the SEN course in the colleges of education provided minimal knowledge and skills about inclusive pedagogical practices. Inclusive pedagogical practices were one of the least mentioned types of knowledge acquired from the SEN course (Sub-study II). In Sub-study III, teacher educators of other courses in the colleges of education indicated that their individual courses placed little emphasis on the elements of inclusive knowledge, values, and competencies. Subsequently, the study found that the few evidence-based inclusive pedagogical approaches pre-determined by the author were the least disseminated across the various taught courses in the colleges of education, indicating some limitation in the content of the initial education curriculum. Some

effective inclusive practices, such as differentiated instruction and provision of IEP and UDL were found to be the least integrated in the curriculum (Sub-study III). These findings substantiate arguments from earlier studies that colleges of education place less emphasis on pedagogical approaches, citing them as cogent reasons for the total neglect of participatory and interactive teaching methods in basic education (see, e.g., Adu-Yeboah, 2011; Akyeampong et al., 2012; Agbenyega, 2007; Coffey International Development Report, 2012; Kuyini & Mangope, 2011; Ministry of Education, 2010; Pinnock & Nicholls, 2012).

The lack of emphasis on inclusive pedagogical approaches in the SEN course and other courses in the colleges of education was further considerably supported by the insufficient knowledge of inclusive pedagogical approaches demonstrated by both final-year pre-service teachers and teacher educators (sub-studies II and III). In spite of the perceived adequate knowledge possessed by final-year pre-service teachers and teacher educators about SEN and inclusive education, the final-year pre-service teachers in Sub-study II demonstrated less knowledge about the few inclusive pedagogical approaches outlined in the special education curriculum (see section 4.2). In Sub-study III, the majority of teacher educators reported having little knowledge about inclusive pedagogical approaches. The teacher educators' demonstration of less knowledge on inclusive pedagogical approaches is consistent with the findings reported in other studies (see, e.g., Mamah et al., 2011; Pinnock & Nicholls, 2012; Rouse & Florian, 2012).

The main inclusive pedagogical approaches acquired from the SEN course (Sub-study II) and mentioned by teacher educators (Sub-study III) were largely traditional, whole class, teacher-directed, instructional practices that exalt shallow thinking and students' passivity, and are inappropriate for inclusive classrooms (see sub-studies II and III). Consequently, studies have found that many trained teachers in Ghana possess limited knowledge of the pedagogical approaches required to teach students with disabilities and special needs (Agbenyega, 2008; Alhassan & Abosi, 2014; Akyeampong et al., 2012; Kuyini & Desai, 2009). These pedagogical approaches are likely to exclude many learners who might have trouble in learning. Inclusive and child-centered pedagogical practices are those that include all learners, regardless of their needs and abilities, to respond to individual differences between learners in ways that avoid marginalization. They offer choices for learners and take collaborative actions for effective teaching of all learners (Croft, 2010; Florian & Rouse, 2009; Florian & Linklater, 2010). These approaches are in agreement with the child's real interests, needs, learning styles and encourage children's participation in decisions and the development of their individual potential (Chung & Walsh, 2000; Humphreys, 2009).

Second, the unpreparedness of the final-year pre-service teachers to teach students with SEN and disabilities, and the lack of emphasis of inclusive pedagogical approaches in teaching, could also be explained by the lack of modelling of inclusive pedagogical approaches by teacher educators (Sub-study III). Globally, studies have shown that teacher educators are not only reforming the

inclusive education and special education courses they teach, but they are also employing innovative pedagogical approaches to teaching to improve their efficacy of changing the attitudes of pre-service teachers and to equip them with pedagogical approaches. Such innovative pedagogical approaches have included changing the format of discussion by using pictures and videos to promote discussion (Hamilton & Kecskemeti, 2015), teacher educators co-teaching with individuals' with disabilities (Jorgensen, Bates, Frechette, Sonnenmeier, & Curtin, 2011), and teacher educators adopting the principles and practices of UDL (Ashman, 2010) and child-centered pedagogy (O'Sullivan, 2004). The findings of the studies indicate that the pedagogical approaches employed by teacher educators in teaching the various courses in the colleges of education (Substudy II and III) were largely teacher-centered approaches, such as lecture, discussion, and demonstration methods. Although the professional backgrounds of the teacher educators were mainly basic and secondary school teaching, their lack of adoption of learner-centered and inclusive pedagogical approaches confirm Smith, Basmadjian, Kirell, and Koziol's (2003) argument that previous teaching experience does not naturally make one an effective teacher educator. The pedagogical approaches adopted by teacher educators are critical in promoting attitudinal formation (Clarke, Lodge, & Shevlin, 2012) and development of pre-service teachers' inclusive pedagogical skills and principles (Ashman, 2010; O'Sullivan, 2004).

Third, nearly all the teacher educators in Sub-study II commented that the prescribed syllabus and external examination of the SEN course confined them to emphasize the contents imposed by the centralized curriculum during teaching. The inflexible curriculum and rigid systems of assessment and examination at the colleges of education could therefore be blamed for the lack of reforms of the content of the SEN course and the teaching methodologies in the colleges of education. This could thwart the efforts of teacher educators in adopting and modelling evidence-based innovative inclusive pedagogical approaches for preparing teachers for inclusive education. Such prescriptive centralized curriculum is unresponsive to the needs of minority groups and often results in teacher-centered instruction (Loreman, 2007; Price, 2015). This might be a reason for the underdevelopment of suitable inclusive competencies among pre-service teachers. Sense of freedom and choice in the teacher educators' role are vital for a successful inclusive practice because it encourages creative teaching skills, modelling, and different approaches to discussion and teaching. Specified curriculum has been found to be ineffective because it is restrictive and arrests teachers' and students' freedom and choice in their deliberations on issues and topics (Purdue et al., 2009). Large classroom sizes and lack of resources in the colleges of education have also been cited as major influencing factors in teacher educators' adoption of teacher-centered approaches (Adu-Yeboah, 2011; Akyeampong & Furlong, 2000).

Other relevant factors that might have contributed to the lack of emphasis of inclusive pedagogical approaches in the colleges of education and consequently hindered the development of inclusive practices among pre-service

teachers were found to include; the teacher educators' insufficient hands-on previous teaching experience in inclusive settings, resulting in a lack of knowledge and modelling (Sub-study III). Another contributory factor is the lack of direct teaching experience in inclusive settings for pre-service teachers (Sub-study II). Experience has been found to be very effective in transforming teachers' attitudes from that of ignorance, fear, prejudice, and lack of confidence toward the development of relationships, confidence, skills, and coping strategies (see e.g., Arbeiter & Hartley, 2002; Dart, 2006; Giangreco et al., 1993). Restructuring teachers' school-based experience to enable them to have direct and systematic interaction with people with disabilities and teaching in an inclusive setting have been found to promote positive attitudes and self-efficacy toward inclusive education (Sharma, Forlin & Loreman, 2008; Specht et al. 2015).

The inevitable consequence of all these major interrelated factors to the lack of emphasis on inclusive pedagogical approaches in the colleges of education is the insufficient levels of inclusive knowledge, skills, and practices (Sub-study II) and the strong feeling of unpreparedness among final-year pre-service teachers to teach students with SEN in the regular education classroom (sub-studies I and II).

In addition, studies have shown that the local school contexts and structures, such as school policy and the availability of teaching and learning materials and resources, influence the way teachers interpret, adapt, and implement instructional approaches (see, e.g., Davis & Florian, 2004). Along with the pre-service teachers' limited knowledge and adoption of the inclusive and child-centered approaches, other school contextual or environment-related factors might have hindered the adoption of inclusive pedagogical approaches by final-year pre-service teachers. The challenges reported in Sub-study I were lack of teaching and learning materials and resources, large class sizes, lack of parental cooperation, inadequate facilities desks, and lack of special professionals, stigmatization, discrimination, and low self-esteem of students with SEN. Many of these factors were cited by teacher educators in Sub-study III as the main concerns regarding Ghana's unreadiness to the implementation of inclusive education. Studies have established that these factors interact with children's impairments to either assist or hinder access to meaningful learning and make the application of learner-centered and inclusive pedagogical approaches difficult in practice in the Global South (Akyeampong et al., 2012; Croft, 2010). Agbenyega (2008) found the teacher-centered pedagogy adopted by many Ghanaian teachers is in part a result of large class sizes and that the demands of the large class sizes influence teachers to adopt aversive powers, such as caning, to tame and control students.

The successful implementation of inclusive education requires initial teacher education programs to equip teachers with certain inclusive values that are critical for increasing the learning and participation of all learners. Some of the inclusive values and principles that underpin the inclusive education approach have been identified to include equity, participation, rights, community, support of all learners, compassion, fairness, respect, love, caring, patience, un-

derstanding, kindness, and empathy toward the diverse learning needs of pupils (Booth, 2005; EADSNE, 2012; Lalvani, 2013; Spalding et al., 2010). In the current study, only minority pre-service teachers and teacher educators indicated that the SEN course was effective in equipping pre-service teachers with inclusive values. The most often perceived inclusive values acquired from the SEN course mentioned by both teacher educators and final-year pre-service teachers were patience, empathy, and tolerance. Some have stated that carefully formulated inclusive values of this nature are extremely vital in ensuring the equitable right to quality education (Booth & Dyssegaard, 2008) and are capable of making the school and classroom environment welcoming and interesting for all children (Kuyini & Abosi, 2011).

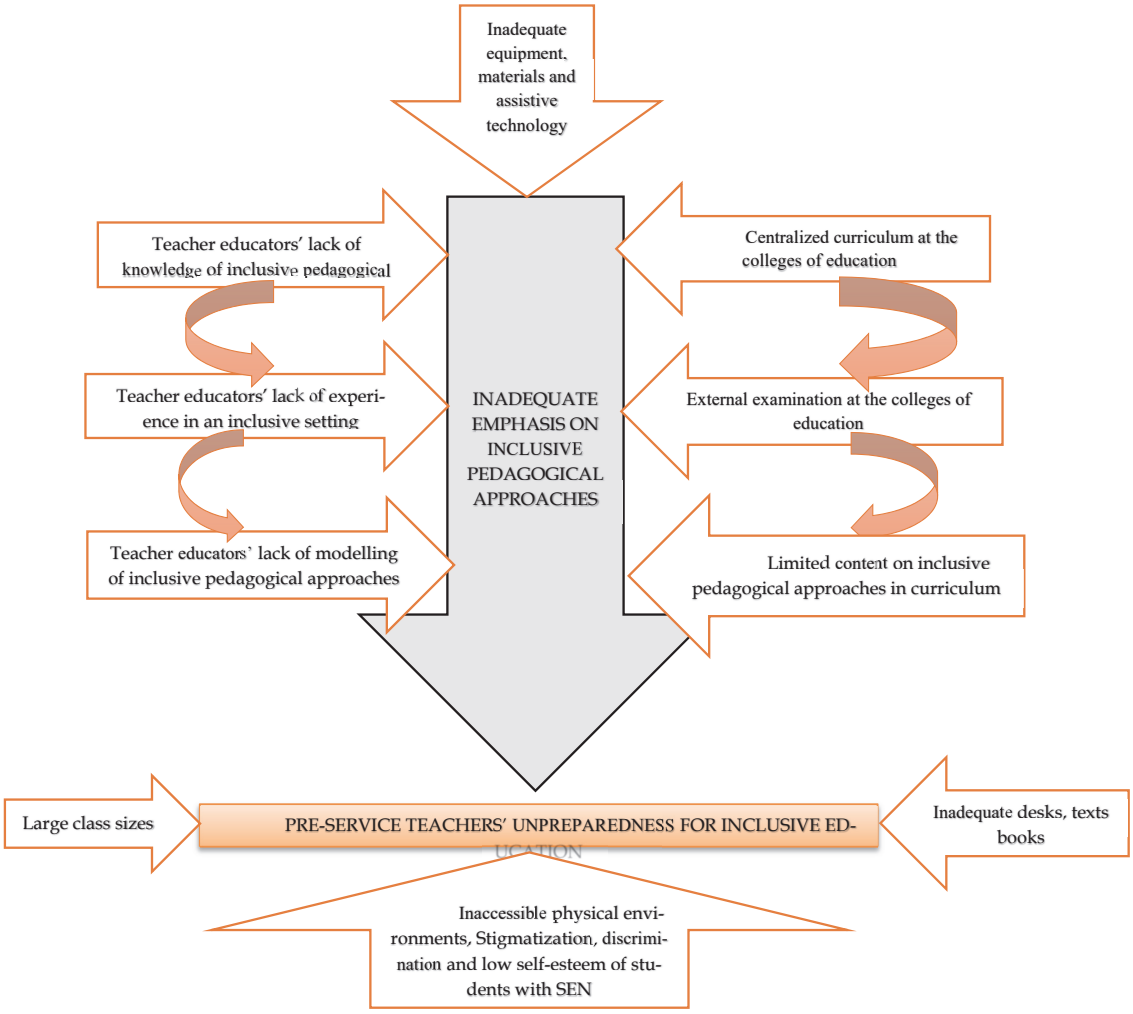

FIGURE 3 Summary of some of the key findings

7.1 Recommendation/Implication of the Study

The findings of the study provide support for reforms in the initial teacher education program in the colleges of education. The barely positive attitudes and the misconception about disability demonstrated by the pre-service teachers (Sub-study IV) and the lacked meaningful experiences in inclusive settings by teacher educators (sub-studies II and III), indicate that adoption of innovative practices is required to improve pre-service and teacher educators' experiences and attitudes toward people with disabilities and SEN.

The colleges of education could provide pre-service teachers with carefully structured and supported field experience, such as interaction with people with disabilities (see, e.g., Arbeiter & Hartley 2002; Carroll et al., 2003; Dart, 2006; Forlin & Chambers, 2011; Campbell, Gilmore, & Cuskelly, 2003) and direct teaching experience with children identified with SEN or disabilities in an inclusive setting (see, e.g., Lawson, Norwich & Nash, 2013; Nash & Norwich, 2010). These innovative strategies have been found to promote positive attitudes and meaningful experiences in inclusive settings among teachers. Moreover, the special schools and special educational needs units in the districts could collaborate with the colleges of education to enable these strategies to be implemented.

These innovative practices could be combined with assessment opportunities such as pre-service teachers' self-evaluation of their own lesson plans, writing a portfolio and other assessment methods, and peer- and self-review methods, essays, and reports about teaching individuals and/or groups of pupils with SEN and disabilities (see, e.g., Angelides et al., 2006; Clarke, Lodge, & Shevlin, 2012; Dart, 2006; Nash & Norwich, 2010; Lawson et al., 2013). These opportunities have also been effective in encouraging pre-service to critically reflect on learning and teaching pupils with SEN and disabilities during their feedback sessions after teaching practice. This requires a strong planned partnership between the colleges of education and the regular education system to ensure that some aspects of the teacher training are carried out in inclusive settings to promote the development of appropriate inclusive attitudes, values, skills, and knowledge among both pre-service teachers and teacher educators.

The results of the sub-studies suggest that, in general, there is limited emphasis of inclusive and child-centred teaching approaches in the colleges of education. This lack of emphasis might have been supported by several factors, such as teacher educators' insufficient knowledge of inclusive pedagogical approaches, a lack of modelling of inclusive pedagogical approaches, a prescribed syllabus, the teacher educators' insufficient hands-on teaching experience in inclusive settings, and the lack of direct teaching experience in inclusive settings for pre-service teachers. These call for a reform of the initial teacher-education curriculum in the colleges of education that will put more emphasis on inclusive pedagogical approaches. Reforms that incorporate assignments requiring students to reflect on their own practices have been found to contribute signifi-

cantly in reducing pre-service teachers concerned about implementing inclusive education in classrooms among pre-service teachers (Sharma, Forlin, & Loreman, 2008).

In addition, making pre-service teachers do valuable course work assignments, such as classroom management, assessment, and behavioral support plans is critical for developing their skills as pre-service teachers (Wang & Fitch, 2010). Lawson, Norwich, and Nash's (2013) study found that pre-service teachers who performed pupil-focused tasks on meeting pupils' personal learning needs learned pedagogical approaches, such as task analysis, learning modes, behavior management, pupil grouping, teacher-pupil learning interactions, and motivational approaches. Thus, by spending time and focusing on a pupil, pre-service teachers better understood the interactive nature of the teacher-learner relationship and the relevance of planning appropriate teaching and learning tasks. Such practically oriented training has been found to influence teachers' self-efficacy (Lancaster & Bain, 2010).

Additionally, emphasis on the modelling of inclusive and child-centered pedagogies in the colleges of education requires further development of the profession of teacher educators in the colleges of education in the area of inclusive education, its principles, and pedagogical approaches. This could be carried out in short in-service training courses for teacher educators. The teacher educators can then model the inclusive and child-centered pedagogies by adopting them as their teaching methods to effectively address pre-service teachers' beliefs and attitudes and prepare them to adopt such pedagogical approaches.

Also, the teacher educators in the colleges of education could adopt action-research type initiatives built around the school or classroom. For instance, a case study that adopted action research to explore the effectiveness of various learner-centered approaches to learning in the Global South context found that action research is an effective method of determining and developing pedagogical approaches in a particular context. In the case-study context, it led to the development of effective learning-centered skills (O'Sullivan, 2004). This approach could also equip teacher educators with appropriate practical training and exposure to inclusive teaching approaches.

The findings of the study also support a substantial transformation in the special education course from deficit models toward an understanding of inclusive education in the context of human rights, democratic societies, and social justice. The social model of disability, which has influenced significant discussion on inclusive education, has established that it is not a person's impairment but the society that causes disability and disadvantages and excludes people with impairments. Therefore, the special education course must focus pre-service teachers' attention on removing the socio-cultural, environmental, and attitudinal barriers within the society and the school that debilitate persons with impairments. Society must adjust to persons with disabilities rather than requiring them to do all the adjusting (Gartner & Lipsky, 1987; UNESCO, 2005). Similarly, the special education course needs reevaluation to include evidence-

based inclusive practices that were found to be limited in the initial teacher education curriculum, such as provision of IEPs and UDLs.

It is important to note that some elements of inclusive teaching strategies exist in the initial teacher education curriculum (see section 4.2), and effort must be made to highlight and model them to pre-service teachers. The research has also shown that greater provision of classroom level tools, equipment, resources, and teaching and learning materials is required to strengthen the resource base of schools and to provide teachers with adequate resources to provide effective learning experiences for students with disabilities. It is important to note that, without sufficient support for teachers in terms of resources and materials, teachers will be unable and unwilling to adopt child-centered and inclusive pedagogical approaches to promote inclusive education in the Global South.

7.2 Limitations and Strengths of the Study

There are 38 public colleges of education in Ghana, and they are scattered across the 10 regions of the country. Overall, the study was limited to eight of the 38 public colleges of education from four of the ten regions of Ghana. In Sub-study I, three colleges of education were selected from two regions; two from the Central region and one from the Ashanti region. In Sub-study II, three colleges of education were selected from three regions: Central, Ashanti, and Eastern. In Sub-study III, four colleges of education were selected from four regions: Central, Ashanti, Eastern, and Western.

In sub-studies IV, three colleges of education were selected from three regions: Central, Ashanti, and Western. Hence, the generalizability of these results is subject to these limitations. In addition, sophisticated statistical analyses (e.g., multilevel modelling or structural equation modelling) were not used in the analysis of the data for the studies. They could have deepened the analysis and findings. Also, many constructs in the studies were measured by a single question or a few questions, whereas the use of scales consisting of several items might have provided more valid and reliable results. Notwithstanding these limitations, the current studies adopted a purely quantitative approach, and the current sub-studies are based on a large percentage of respondents.

7.3 Future Directions

Researchers and several scholars on research methodology have established that studies on views, attitudes, knowledge, skills, etc. are best executed through the quantitative method (see, e.g., Cohen, Manion, & Morrison, 2000; Gall, Gall, & Borg, 2003; Salend, 2010). Some studies have also indicated it is difficult to observe from outside teachers' responses to individual differences. Sometimes observers lack knowledge about the detailed context of teachers'

thinking, underpinning their actions on planning, prior knowledge, and experiences (Florian & Black-Hawkins, 2011). Similarly, the presence of an observer could sometimes skew teachers' behavior to attempt to demonstrate inclusive practice (Arbeiter & Hartley, 2002).

However, purely qualitative approaches employing research methods, such as open-ended interview questions, observation, and ethnography to deeply explore the experiences of teachers, pupils with disabilities, and their classmates could provide a thick description of beliefs, attitudes, and views on inclusive education and teacher preparation for inclusive education. This will also encourage pre-service teachers to critically reflect on their beliefs, attitudes, views, knowledge, and concepts about children with disabilities and their inclusion in regular education. Few studies on the same topics have been carried out through qualitative procedures (see, e.g., Hodgkinson, 2009; Lalvani, 2013). Further studies could also adopt experimental/quasi-experimental and longitudinal methods to provide a detailed picture of the impact of teacher education on teachers' attitudes, beliefs, and self-efficacy.

It is important for teacher educators in colleges of education to carry out more studies to blueprint the kinds of knowledge, skills, and attitudes that are useful for teachers in developing inclusive education in a Ghanaian context. They must scrutinize the growing literature on special and inclusive education and identify through action or experimental research which knowledge, skills, and values can be effective and assist in developing an inclusive education system in the social, historical, philosophical, political, cultural, and economic context of Ghana. This knowledge and these skills and values can then determine the content of the inclusive or special education curriculum.

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APPENDIX 1: QUESTIONNAIRE FOR THE FIRST ARTICL

UNIVERSITY OF JYVÄSKYLÄ
DEPARTMENT OF EDUCATIONAL SCIENCES
FINLAND

QUESTIONNAIRE FOR PRE-SERVICE TEACHERS

Dear Sir/Madam,
I am a Masters student of University of Jyväskylä, Finland researching into the topic 'Pre- service teacher's preparedness for creating an inclusive classroom,' to find out; a) the extent to which final year pre-service teachers are knowledgeable of inclusive teaching strategies. b) The extent to which final year pre-service teachers in College Of Education are knowledgeable about the concept of Inclusive Education. The results of the study will be published by the University and an article of the main results made available to the Ghana Education Service. The research is purely for academic purposes; therefore, the confidentiality and anonymity of the respondents are assured in all phases of the study. Please, respond to the statements and questions on the basis of your personal opinions. There is no "right" or "wrong" responses.
.....
WILLIAM NKETSIA

PART A: PERSONAL DATA

Provide short responses to the following statements or mark (x) where applicable.

1. Gender: Male [ ] Female [ ]
2. Date of Birth:_____

PART B: TEACHERS' KNOWLEDGE ABOUT THE CONCEPT OF INCLUSIVE EDUCATION

3. Have you been introduced to inclusive education?
Yes [ ] No [ ]

The statements below relate to your understanding of Inclusive Education. After each statement, **tick [√]** in the appropriate box of scores numbered 1-5 which represent your personal opinion.

1 = I Strongly Disagree, 2 = I Disagree, 3 = Undecided,
4 = I Agree, 5= I Strongly Agree

STATEMENT	1	2	3	4	5
1. Inclusion is only about including students with disabilities.					
2. In inclusive classroom or school, everyone is made to feel welcome, regardless of their disability.					
3. Inclusion seeks to remove all forms of barriers to learning and participation for all students.					
4. Inclusion requires that differences among students are viewed as problems that must be overcome.					
5. Inclusion encourages students to learn collaboratively.					
6. Inclusive teaching means that all students should be given the same task during teaching.					
7. Inclusive teachers understand the different ways in which students respond to the same tasks.					
8. Inclusive teaching uses one-size-fits all curriculum.					
9. Inclusive teaching encourages the participation of only intelligent students.					

10. Effective teaching for students with special educational needs is **NOT** good for all students.					
11. Inclusion requires that teaching activities are planned with all students in mind.					
12. In inclusive classroom high value is placed on students who have made progress in their performance.					
13. In inclusive classroom, expectations are high for the academically brilliant students.					
14. In inclusive classroom good students are encouraged to help students with disability and Special Education Needs.					
15. Inclusive classroom makes it difficult for children who are gifted to learn with children who have severe mental retardation.					
16. Inclusive classroom is where difference is celebrated, embraced, and valued.					
17. Inclusive schools build on the differences among students in ways that value everyone equally.					
18. In inclusive schools, the intelligent students are made to feel good about themselves.					
19. To create an inclusive classroom, teachers have to consult students in order to make classroom rules.					
20. In inclusive classroom, differences between students are viewed as resources to support learning.					
21. Students with unequal abilities helping each other in a classroom amount to cheating.					
22. Class grouping consisting of intelligent and unintelligent students will encourage copying.					
23. Inclusion requires that teachers and parents work together.					
24. Inclusion requires that there is co-operation among teachers and other professionals.					

PART C: **PRE-SERVICE TEACHERS' KNOWLEDGE ABOUT SPECIAL EDUCATIONAL NEEDS AND PUPILS WITH DISABILITIES**

3. What do you understand by the term 'Special Educational Needs'?

   _____

4. Mention some of the special educational needs that can be found in mainstream classroom.

_____ _____

5. During your last teaching practice, did you encounter any child with special educational needs?
   Yes [ ] No [ ]
6. What special educational needs did you identify in your last teaching practice?

_____

7. Did you have an opportunity to support any of them? Yes [ ]
   No [ ]
8. If your answer to question 7 is yes, how did you support them?

   _____

9. How well prepared are you to teach students with special educational needs?
   Highly prepared [ ] Somehow prepared [ ] Not prepared [ ] yet to think about it [ ]

PART D: INSTRUCTIONAL OR PEDAGOGICAL STRATEGIES TEACHERS PREFER TO USE TO CREATE AN INCLUSIVE CLASSROOM.

In teaching in inclusive setting, there are various teaching strategies which teachers can use. Below are 22 of the strategies. Please using the figures 1, 2, 3, 4… 22 rank them in order of preference. The one rated 1 is the most preferred, while 22, is the least preferred.

Instructional strategy	Rank
To move to a new section or unit when all children have understood and can perform what they have learned.	
To select learning tasks that children with special education needs and disabilities can do.	
To allow children with Special Education Needs to engage in certain activities elsewhere in the classroom.	
To constantly monitor all my children while they do class work.	
To design individualized education plan (IEP) for children with Special Education Needs and disabilities.	
To ask children to help each other	
To give individual attention to children who need help.	
To mix up the children when they are performing assignment.	
To try to arrange my classroom to encourage participation.	
To allow children who have difficulties writing the chance to answer questions by saying it orally or verbally	
To ensure that questions are fair and evenly distributed to allow children to contribute to lessons.	
To let children with Special Education Needs and disabilities work at different activities when assignment is given.	
To approach consultants for advice when I do not know how to make all children learn	
To give sufficient time to all children to practice what they learn.	
To set instructional objective (s) to cover all children including those with Special Education Needs and disabilities.	
To present tasks in bits to allow children to learn efficiently.	
To ensure that the classroom is spacious to allow for free movement.	
To vary the pace to help the children to learn.	
To keep daily records of the progress children make in class.	
To give sufficient time to all children to complete tests and assignments.	
To select instructional materials that makes it possible for all children to learn.	
To ensure that the classroom environment is comfortable for all children.	

PART E: CHALLENGES ASSOCIATED WITH THE INCLUSION OF STUDENTS WITH SPECIAL EDUCATION NEEDS/DISABILITIES IN REGULAR SCHOOLS.

What do you think are the biggest challenges in relation to the inclusion of students with special education needs in the regular classroom?

_____

_____Thank you

APPENDIX 2: QUESTIONNAIRE FOR THE THIRD ARTICLE – PRE-SERVICE TEACHERS

UNIVERSITY OF JYVÄSKYLÄ
DEPARTMENT OF TEACHER EDUCATION
FINLAND

EVALUATION OF INCLUSIVE INITIAL TEACHER EDUCATION COURSE IN THE COLLEGES OF EDUCATION IN GHANA

Dear Sir/Madam,

The research is purely for academic purposes; therefore the confidentiality and anonymity of the respondents are assured in all phases of the study. Please, circle the number of the right answer and respond to the open questions on the basis of your personal opinions. There is no "right" or "wrong" responses, however, it is very important for the study that your answers are **HONEST**.

WILLIAM NKETSIA

THE MEANING OF INCLUSIVE EDUCATION AND SPECIAL EDUCATION NEEDS

One of the strategic goals in Education Strategic Plan 2003-2012 is **Inclusive Education** i.e. provision of education for **excluded/special education needs/disable** children by including them wherever possible, within the mainstream formal system or only when considered necessary, within special units or schools. **Special education needs pupils** include those who are; **visually impaired, hearing impaired, intellectually disabled, learning disabled/Autism, physically disabled, gifted and talented, behavioural problems, speech and language problems and serious medical concern e.g. HIV, sickle cell** etc. It means that the teachers you are preparing are already teaching or will be teaching in these inclusive classes.

The above statement describes the Ghanaian conception of Inclusive education. With this understanding in mind, please respond to the following questions.

EXAMPLE 1: Here write your response on the line provided.
Which year were you born? *19___* ***75***

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

SECTION A: BACKROUND INFORMATION

Provide short responses to the following statements or ***circle*** where applicable.

10. Gender:
    1. Male
    2. Female
11. Year of Birth: 19_____
12. Have you taken a course on special education needs/ inclusive education yet?
    1. Yes
    2. Not yet
13. How much previous teaching experience did you get before enrolling into the teacher education program?
    1. None
    2. A little
    3. Some
    4. Quite a lot

5. A lot

14. Throughout your schooling, have you ever had a class mate(s) with special education needs/disabilities?
    1. Yes
    2. No
15. Do you have a friend with special needs/disabilities?
    1. Yes
    2. No

SECTION A: <u>QUESTIONS FOR PRE-SERVICE TEACHERS</u>

16. How many credits do student teachers get on special education/inclusive education course? _____
17. What values do you think are needed for effective teaching of students with disabilities and special needs in regular school that you have acquired from this course?

_____ _____

18. What knowledge do you think are needed for effective teaching of students with disabilities and special needs in regular school that you have acquired from this course?

_____ _____

19. How will you rate the **ADEQUACY** of the content of the course to equip you with the knowledge and skills to identify the different special needs/disabilities among students?
    1. Very adequate
    2. Adequate
    3. Inadequate
    4. Very inadequate
    5. Extremely inadequate
    6. More needs to be done

11. How will you rate the **ADEQUACY** of the content of the course to equip with inclusive knowledge, skills and practices to be able to meet the needs of students with disabilities and special needs?
    1. Very adequate
    2. Adequate
    3. Inadequate
    4. Very inadequate
    5. Extremely inadequate
    6. More needs to be done

12. Please mention some of the inclusive instructional strategies that you learn from this course that will enable them make effective accommodation for the above special needs

_____

13. What needs to be included in the course to better prepared teachers to work effectively in inclusive education settings

_____

14. What types of problems did you have with the course in special education?

_____
_____

15. Please, which of the following topics/issues are well dealt with in the course to enable you teach students with disabilities and special needs?
    1. Learning difficulties and disabilities
    2. Emotional and behavioural problems
    3. Learning styles
    4. Multiple intelligence
    5. Communicating and working with parents
    6. The right of children to education (human rights)

7. Social justice/equity in education
8. Other (please specify) _____

16. Please, which of the following inclusive pedagogical practices/teaching methods are well dealt with in the course to enable you teach students with disabilities and special needs?

1. Differentiated instruction
2. Classwide Peer Tutoring
3. Heterogeneous grouping
4. Collaborative problem solving
5. Universal Instructional design (UID)
6. Peer-Assisted Learning Strategies
7. Co-operative learning
8. Writing Individual educational programs
9. Dialogic pedagogy
10. Modifying students' tasks
11. Curriculum adaptation
12. Strategies for managing behaviour problems
13. Providing individual assistance
14. Communication techniques and technologies
15. Co-operative teaching/co-teaching

1. Others (Please specify) _____

ANY FURTHER COMMENTS

_____

THANK YOU VERY MUCH FOR YOUR HONEST

APPENDIX 3: QUESTIONNAIRE FOR THE SECOND ARTICLE

UNIVERSITY OF JYVÄSKYLÄ
DEPARTMENT OF TEACHER EDUCATION
FINLAND

Dear Sir/Madam,

This research is purely for academic purposes; therefore the confidentiality and anonymity of the respondents are assured in all phases of the study. Please, circle the number of the right answer and respond to the open questions on the basis of your **PERSONAL OPINIONS**. There are no "**RIGHT**" or "**WRONG**" responses, however, it is very important for the study that your answers are **HONEST**.

WILLIAM NKETSIA
williamsnketsia@yahoo.co.uk

THE MEANING OF INCLUSIVE EDUCATION AND SPECIAL EDUCATION NEEDS

SPECIAL EDUCATIONAL NEEDS/SPECIAL NEEDS CHILDREN describes children who have disabilities or learning difficulties that make it more difficult for them to learn or access education like most children of the same age. They include those who are: visually impaired, hearing impaired, intellectually disabled, learning disabilities physically disabled, gifted and talented, behavioural problems, speech and language problems and serious medical concern e.g. HIV, sickle cell etc.

INCLUSIVE EDUCATION is a process of including students with **special educational needs/special needs children** and those who have serious disadvantages and disabilities within regular/mainstream schools. Within inclusive schools, children with special educational needs receive whatever extra support they may require.

With this understanding in mind, please respond to the following questions:

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

EXAMPLE 2: Here ***CIRCLE*** the number which most closely matches your opinion about the following claims.

Students who cannot move without the help should be in regular classes.

1. Strongly Agree
2. (2) Agree
3. Somewhat Agree
4. Somewhat Disagree
5. Disagree
6. Strongly Disagree

Students who cannot move without the help should be in regular classes.	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
	6	(5)	4	3	2	1

SECTION A: BACKROUND INFORMATION

Provide short responses to the following statements or ***circle*** where applicable.

20. I am:
    3. Male
    4. Female
21. My Year of Birth: 19_____
22. I have the following qualifications: ***Circle*** as many as you have.
    1. Post middle
    2. Certificate A
    3. Diploma
    4. Degree
    5. MA/M.Phil.
    6. PhD
23. I have taught the following levels of education before:
    1. Basic School
    2. Secondary School
    3. Special School

4. Inclusive pilot school

24. I have had training in: Please circle one or both, if you have had
    1. Special education
    2. Inclusive education
25. Please mention the institution you got the training(s) you have circled above.

_____

26. Which Subject have you been teaching in the College?

_____

27. Number of years of tutoring: _____

SECTION B: TEACHER EDUCATORS' KNOWLEDGE ABOUT INCLUSIVE EDUCATION AND SPECIAL EDUCATION NEEDS

Questions	Very much	Quite much	Can't say	Quite little	Not at all
9. How much KNOWLEDGE do you have about inclusive education?	5	4	3	2	1
10. How much KNOWLEDGE do you have about special needs children	5	4	3	2	1
11. How much do you know about the overall PURPOSE of inclusive education?	5	4	3	2	1

12. In your view, please what are the main purposes of inclusive education, what does it seek to achieve?_____ _____

TEACHER EDUCATORS' VIEWS ABOUT INCLUSIVE EDUCATION

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
13. I am in favour of inclusive education	5	4	3	2	1
14. Inclusive education will benefit pupils WITHOUT special needs/disabilities	5	4	3	2	1
16. Inclusive education will be beneficial to pupils WITH special needs/disabilities	5	4	3	2	1

17. Inclusive education is the best educational practice to educate pupils with disabilities and special needs	5	4	3	2	1
35. All Pre-service teachers must have teaching experience in an inclusive settings	5	4	3	2	1
36. ALL teachers should be trained and prepared to teach all pupils with different special educational needs/disabilities in an inclusive setting	5	4	3	2	1

18. To what extent do you think Ghana is ready for inclusive education?
    1. Very little
    2. To some extent
    3. Don't know
    4. Not at all
19. Please briefly explain why

SECTION C: TEACHER EDUCATORS' VIEWS ABOUT TEACHER PREPARATION

Questions	Very much	Quite much	Can't say	Quite little	Not at all
37. How much important role does teacher preparation play in the implementation of inclusive education	5	4	3	2	1
38. To what extent do you see your role in the preparation of teachers to create an inclusive classroom	5	4	3	2	1
39. To what extent do you see your role in the implementation of inclusive education in Ghana	5	4	3	2	1

40. To what extent does the course/subject you teach *deal* with special needs/disabilities?
    1. Very little
    2. To some extent
    3. Don't know
    4. Quite a lot
    5. A lot
41. To what extent does the course/subject you teach deal with inclusive knowledge, values and competences?
    1. Very little
    2. To some extent
    3. Don't know
    4. Quite a lot
    5. A lot
42. In your view, what role does teacher education has to play for the implementation of inclusive education?

SECTION D: TEACHER EDUCATORS' VIEWS ABOUT THE EFFECTIVENESS OF THE TEACHER EDUCATION PROGRAM

43. What do you think about the current preparedness of student teachers for inclusive education?
    1. Very well prepared
    2. Somehow prepared
    3. Don't know

4. Not prepared at all

44. How well prepared do you feel for training pre-service teachers **to teach pupils with special educational needs/disabilities in an inclusive classroom**?

1. I am very well prepared
2. I am somehow prepared
3. I am not prepared at all
4. Is not part of my subject/course

45. How much experience do you have in teaching students with disabilities?

1. None
2. A little
3. Some
4. Quite a lot
5. A lot

46. Please, how does your experience influence your tutoring?

_____

47. Please in your own opinion; how much attention is being given in preparing teachers to teach children with special needs/disabilities in regular schools?

1. More attention
2. Some Attention
3. Less attention
4. No attention
5. More needs to be done

48. Please if more, some or less attention is being paid to it, what innovative programs are being implemented in your college to ensure that teachers are best prepared for inclusive settings?

_____

SECTION E: TEACHER EDUCATORS KNOWLEDGE ABOUT INCLUSIVE INSTRUCTIONAL STRATEGIES AND WHAT THEIR COURSES OFFER

49. Please how much are you aware of inclusive teaching methods/ instructional strategies for effective teaching in diverse classroom or inclusive classroom?

1. None
2. A little
3. Some
4. Quite a lot
5. A lot

50. If little, some or a lot, please briefly mention few

_____ _____

SECTION F: THE INSTRUCTIONAL STRATEGIES USED BY TEACHER EDUCATORS AND WHICH ARE WELL-MODELED

51. Which teaching methods/ instructional strategies do you use most often in class?

_____ _____

52. Please which of the following topics/issues are well dealt with in the course/subject you teach?

9. Learning difficulties and disabilities
10. Emotional and behavioural problems
11. Learning styles
12. Multiple intelligence
13. Communication and working with parents
14. The right of children to education (human rights)
15. Social justice/equity in education

53. Please which of the following inclusive pedagogical practices are well dealt with in the course/subject you teach?

16. Differentiated instruction
17. Classwide Peer Tutoring

18. Heterogeneous grouping
19. Universal Instructional Design (UID)
20. Collaborative problem solving
21. Peer-Assisted Learning Strategies
22. Co-operative learning
23. Writing Individual educational programs
24. Modifying students' tasks
25. Curriculum adaptation
26. Strategies for managing behaviour problems
27. Providing individual assistance
28. Communication techniques and technologies
29. Co-operative teaching/co-teaching
30. Other (Please specify) _____

SECTION D: TEACHERS EDUCATORS' CONCERNS

54. What concerns do you have as far as implementation of inclusive education in Ghana is concerned?

_____ _____

55. Any further comments, Please feel free share anything you want to contribute to this research that I failed to asked

_____

THANK YOU VERY MUCH FOR YOUR HONEST RESPONSES

APPENDIX 4: QUESTIONNAIRE FOR THE THIRD ARTICLE – TEACHER EDUCATORS

UNIVERSITY OF JYVÄSKYLÄ
DEPARTMENT OF TEACHER EDUCATION
FINLAND

EVALUATION OF INCLUSIVE INITIAL TEACHER EDUCATION COURSE IN THE COLLEGES OF EDUCATION IN GHANA

Dear Sir/Madam,

The research is purely for academic purposes; therefore the confidentiality and anonymity of the respondents are assured in all phases of the study. Please, circle the number of the right answer and respond to the open questions on the basis of your personal opinions. There is no "right" or "wrong" responses, however, it is very important for the study that your answers are **HONEST**.

WILLIAM NKETSIA

THE MEANING OF INCLUSIVE EDUCATION AND SPECIAL EDUCATION NEEDS

One of the strategic goals in Education Strategic Plan 2003-2012 is **Inclusive Education** i.e. provision of education for **excluded/special education needs/disable** children by including them wherever possible, within the mainstream formal system or only when considered necessary, within special units or schools. **Special education needs pupils** include those who are; **visually impaired, hearing impaired, intellectually disabled, learning disabled/Autism, physically disabled, gifted and talented, behavioural problems, speech and language problems and serious medical concern e.g. HIV, sickle cell** etc. It means that the teachers you are preparing are already teaching or will be teaching in these inclusive classes.

The above statement describes the Ghanaian conception of Inclusive education. With this understanding in mind, please respond to the following questions.

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

EXAMPLE 1: Here write your response on the line provided.
Which year were you born? *19___* ***75***____

EXAMPLE 2: Here ***CIRCLE*** the number which most closely matches your opinion about the following claims.
Students who cannot move without the help should be in regular classes.

7. (2) Strongly Agree
8. Agree
9. Somewhat Agree
10. Somewhat Disagree
11. Disagree
12. Strongly Disagree

SECTION A: BACKROUND INFORMATION

Provide short responses to the following statements or ***circle*** where applicable.

28. Gender:
    5. Male
    6. Female
29. Year of Birth: 19_____
30. Please which of the following Qualifications do you have? ***Circle*** as many as you have.
    7. Post middle
    8. Certificate A
    9. Diploma
    10. Degree
    11. MA/M.Phil.
    12. PhD
31. Which of the following levels of education have you taught before?
    4. Basic School
    5. Secondary School
    6. Special School

4. Inclusive school

32. Please indicate which of the following have you had training in?
    3. Special education needs
    4. Inclusive education
33. Please where and when did you get the training you have ticked above?

_____

34. Which Subject have you been teaching in the College?

_____

35. Number of years of tutoring: _____

QUESTIONS FOR EDUCATION TUTORS

1. How many credits do student teachers get on special education/inclusive education course? _____
2. What are the main purposes of this course on special education/inclusive education?

_____

3. What values do you think are needed by student teachers to effectively teach students with special educational needs/disabilities in regular classrooms that this course provides?

_____ _____

4. What knowledge do you think is needed by student teachers to effectively teach special needs/disable children that this course provides?

_____ _____

5. How will you rate the **ADEQUACY** of the content of the course to provide student teachers the knowledge and skills to identify the different special needs/disabilities among students?
    7. Very adequate
    8. Adequate
    9. Inadequate
    10. Very inadequate
    11. Extremely inadequate
    12. More needs to be done
6. How will you rate the **ADEQUACY** of the content of the course to provide student teachers with enough inclusive knowledge, skills and practices to be able to meet the needs of students with disabilities and special needs?
    7. Very adequate
    8. Adequate
    9. Inadequate
    10. Very inadequate
    11. Extremely inadequate
    12. More needs to be done
7. Please mention some of the inclusive instructional strategies that pre-service teachers learn from this course that will enable them make effective accommodation for the above special needs

_____

8. What needs to be included in the course to better prepare teachers to effectively meet the learning needs of the pupils with special needs/disabilities in regular schools? _____
9. What types of problems do student teachers have with the course in special education? _____

10. Please which of the following topics/issues are well dealt with in the course to prepare student teachers to teach students with disabilities and special needs?
    16. Learning difficulties and disabilities
    17. Emotional and behavioural problems
    18. Learning styles
    19. Multiple intelligence

20. Communication and working with parents
21. The right of children to education (human rights)
22. Social justice/equity in education
23. Others (Please specify) _____

11. Please which of the following inclusive pedagogical practices are well dealt with in the course to prepare student teachers to teach students with disabilities and special needs in regular schools?

31. Differentiated instruction
32. Classwide Peer Tutoring
33. Heterogeneous grouping
34. Collaborative problem solving
35. Universal Instructional design (UID)
36. Peer-Assisted Learning Strategies
37. Co-operative learning
38. Writing Individual educational programs
39. Dialogic pedagogy
40. Modifying students' tasks
41. Curriculum adaptation
42. Strategies for managing behaviour problems
43. Providing individual assistance
44. Communication techniques and technologies
45. Co-operative teaching/co-teaching
46. Others (Please specify) _____

ANY FURTHER COMMENTS

_____

THANK YOU VERY MUCH FOR YOUR HONEST RESPONSES

APPENDIX 5: QUESTIONNAIRE FOR THE FOURTH ARTICLE

UNIVERSITY OF JYVÄSKYLÄ
DEPARTMENT OF TEACHER EDUCATION
FINLAND

Dear Sir/Madam,

This research is purely for academic purposes; therefore the confidentiality and anonymity of the respondents are assured in all phases of the study. Please, circle the number of the right answer and respond to the open questions on the basis of your **PERSONAL OPINIONS**. There are no "**RIGHT**" or "**WRONG**" responses, however, it is very important for the study that your answers are **HONEST**.

WILLIAM NKETSIA (Doctoral Student)
williamsnketsia@yahoo.co.uk

THE MEANING OF INCLUSIVE EDUCATION AND SPECIAL EDUCATION NEEDS

SPECIAL EDUCATION NEEDS/SPECIAL NEEDS CHILDREN describes children who have disabilities or learning difficulties that make it more difficult for them to learn or access education like most children of the same age. They include those who are: visually impaired, hearing impaired, intellectually disabled, learning disabled, Autism, physically disabled, gifted and talented, behavioural problems, speech and language problems and serious medical concern e.g. HIV, sickle cell etc.

INCLUSIVE EDUCATION is process of including students with **special educational needs/special needs children** and those who have serious disadvantages and disabilities within regular/mainstream schools. Within inclusive schools, children with special educational needs receive whatever extra support they may require.

With this understanding in mind, please respond to the following questions:

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

EXAMPLE 1: Here write your response on the line provided.
Which year were you born? *19___* ***75***____

EXAMPLE 2: Here ***CIRCLE*** the number which most closely matches your opinion about the following claims.

Item	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
Students who cannot move without the help should be in regular classes.	6	**5**	4	3	2	1

Students who cannot move without the help should be in regular classes.

13. Strongly Agree
14. Agree
15. Somewhat Agree
16. Somewhat Disagree
17. Disagree
18. Strongly Disagree

2

SECTION A: BACKROUND INFORMATION

Provide short responses to the following statements or ***circle*** where applicable.

36. I am:
    7. Male
    8. Female
37. My Year of Birth is: 19_____
38. I are in:

13. 1st year
14. 2nd year
15. 3rd year

39. My Subject Specialization is: _____
40. Have you taken a course on special education needs/ inclusive education yet?
    3. Yes
    4. Not yet
41. How much previous teaching experience did you get before enrolling into the teacher education program?
    6. None
    7. A little
    8. Some
    9. Quite a lot
    10. A lot
42. Throughout your schooling, have you ever had a class mate(s) with special education needs/disabilities?
    3. Yes
    4. No
43. Do you have a friend with special needs/disabilities?
    3. Yes
    4. No

SECTION B: PRE-SERVICE TEACHERS' BELIEFS ABOUT DISABILITIES

To what extent do you agree or disagree with the following statements.

Please select an option by CIRCLING the number which most closely matches your opinion about the statement

QUESTIONS	**Very large extent**	**Large extent**	**Don't know**	**To some extent**	**Only very little**
13. My **CULTURE** believes that disabilities are caused by sorcery, witchcraft or the devil?	5	4	3	2	1
14. My **CULTURE** believes that children are born with disabilities because their parents committed offence against God, gods or ancestral spirits?	5	4	3	2	1
Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
16. How much do you agree with the **CULTURAL** Beliefs?	5	4	3	2	1

SECTION C: PRE-SERVICE TEACHERS' VIEWS ABOUT DISABILITY

20. To what extent do you agree that disabilities are caused by maternal exposure to drugs, x-rays and radiation?	5	4	3	2	1
21. To what extent do you agree that disabilities are caused by maternal malnutrition?	5	4	3	2	1
22. To what extent do you agree that	5	4	3	2	1

disabilities can be caused by maternal diseases?					
23. To what extent do you agree that disabilities can be caused during child birth?	5	4	3	2	1
24. To what extent do you agree the home and school environment can make a child disable?	5	4	3	2	1
25. To what extent do you agree that disabilities are caused by chromosomal or genetic abnormalities?	5	4	3	2	1

SECTION D: LEVEL OF DISCOMFORT INTERACTING WITH PEOPLE WITH DISABILITIES

28. I do not feel comfortable around people with disabilities.	5	4	3	2	1
29. I am afraid to look at a person with a disability straight in the face.	5	4	3	2	1
31. I find it difficult to relate with students with disabilities and special needs	5	4	3	2	1
32. Disabilities can be transmitted by bodily contact	5	4	3	2	1

SECTION E: PRE-SERVICE TEACHERS ATTITUDES TOWARD1

SECTION E: PRE-SERVICE TEACHERS ATTITUDES TOWARD INCLUSIVE EDUCATION

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
37. Students with disabilities/special needs should be given every opportunity to function in the general classroom where possible.	5	4	3	2	1
38. The inclusion of students with disabilities/special needs can be beneficial for students without disabilities.	5	4	3	2	1
39. Inclusion promotes social independence among students with disabilities/special needs.	5	4	3	2	1
40. The nature of the study in general classrooms will promote the academic growth of the students with special needs/disabilities.	5	4	3	2	1
41. The study skills of students with special needs/disabilities are inadequate for success in the general education classroom.	5	4	3	2	1
42. Inclusion promotes understanding and acceptance of individual differences between students without	5	4	3	2	1

disabilities/special needs and students with disabilities/special needs.					
43. Students without disabilities/special needs will likely avoid interacting with students with disabilities/special needs in the inclusive classrooms.	5	4	3	2	1
44. Inclusion promotes self-esteem among children with disabilities/special needs.	5	4	3	2	1
45. Students with disabilities/special needs lose the stigma of being "different" or "failures" when placed in the general education classrooms.	5	4	3	2	1
46. Isolation in a special classroom has beneficial effect on the social and emotional development of the students with disabilities/special needs.	5	4	3	2	1
47. General-classroom teachers have sufficient training to teach students with disabilities/special needs.	5	4	3	2	1
48. Students with disabilities/special needs are likely to create confusion in the general education classroom.	5	4	3	2	1
49. Teaching students with disabilities/special needs is better done by special rather than general classroom teachers.	5	4	3	2	1
50. The behaviour of students with disabilities/special needs will set a bad example for other students in the classroom.	5	4	3	2	1
51. Students with disabilities/special needs will not waste the general-classroom teacher's time.	5	4	3	2	1
52. It is likely that the students with special needs will exhibit behaviour problems in a general education classroom.	5	4	3	2	1
53. Increased freedom in the general classroom will create too much confusion for the student with a disabilities/special need.	5	4	3	2	1
54. Students with disabilities/special needs will make an adequate attempt to complete their assignments in general education classrooms.	5	4	3	2	1
55. The extra attention students with disabilities/special needs require will be to the detriment of the other students in the classroom.	5	4	3	2	1
56. General-classroom teachers have the primary responsibility to teach	5	4	3	2	1

students with disabilities/special needs in their classrooms.					
57. Inclusion will likely have a negative effect on the emotional development of the students with disabilities/special needs.	5	4	3	2	1
58. General-classroom teachers have the appropriate capability to work with students with disabilities/special needs.	5	4	3	2	1
59. Inclusion of students with disabilities/special needs will necessitate extensive retraining of general classroom teachers.	5	4	3	2	1
60. Students with special needs can be best served in general education classrooms.	5	4	3	2	1
61. It is difficult to maintain order in classrooms that contain a mix of students with and without disabilities/special needs.	5	4	3	2	1
62. Inclusion of students with disabilities/special needs will require significant changes in general education classroom procedures.	5	4	3	2	1
63. The behaviour of the students with disabilities/special needs will not require more attention from the teacher than the behaviour of students without special needs.	5	4	3	2	1
64. The student with a disabilities/special need will probably develop academic skills more rapidly in a general education classroom than in a special education classroom.	5	4	3	2	1

In my view, most students with the following special needs can be educated in general education classroom

Statement	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
65. Visually impaired	5	4	3	2	1
66. Hearing impaired	5	4	3	2	1
67. Intellectually disabled	5	4	3	2	1
68. Learning disabilities	5	4	3	2	1
69. Physically disabled	5	4	3	2	1
70. Behavioural problems	5	4	3	2	1
71. Speech and language problems	5	4	3	2	1

THANK YOU VERY MUCH FOR YOUR HONEST RESPONSES

ORIGINAL PAPERS

I

PRE-SERVICE TEACHERS' VIEWS ON INCLUSIVE EDUCATION IN GHANA

by

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Pre-service teachers' views on inclusive education in Ghana

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Pre-service teacher training has been identified as one of the key factors in the promotion of inclusive education. In this study, 200 final-year pre-service teachers from three colleges of education in Ghana were surveyed about their views and knowledge on inclusive education and special educational needs (SEN). The results showed that almost all of the participants had been introduced to the concept of inclusion during their studies. However, only one-third felt highly, or somewhat, prepared to teach children with SEN. The level of knowledge and feelings of self-efficacy were highest among those pre-service teachers who had personal experience of supporting children with SEN during their practicum. The participants tended to prefer those inclusive instructional strategies that were easiest to apply in general education classrooms. Significant differences in the outcomes were found between the three colleges studied indicating strong effects of the teacher education model applied in each college.

Keywords: inclusive education; teacher training; self-efficacy; Africa; Ghana

Introduction

Education of children with disabilities in mainstream classrooms became an internationally accepted goal along with the declarations of the United Nations in 1993 (United Nations 1994) and at the World Conference on Special Needs Education in Salamanca (UNESCO 1994). The concept of inclusive education presented in the Salamanca Statement contained the principle of equal access for all students in mainstream classrooms, and the demand for necessary accommodations and support for meeting the diverse needs of all children (UNESCO 1994). Subsequently, inclusive education has been promoted by worldwide organisations, such as UNESCO (2009), OECD (2003), WHO (2011) and the World Bank (Peters 2004), both in developed and developing countries.

Although the concept is inextricably linked to the broader campaign for social justice and human rights agendas around the world, it has accommodated diverse meanings in different contexts and the concrete outcomes of the inclusion movement have varied across countries. In spite of the definitional problems, different modes of realisation and outcomes, its popularity in educational policy and practice is considerable (Armstrong, Armstrong and Spandagou 2010; Florian 2008; Lindsay 2003).

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Teachers often resist more inclusive schooling because they feel ill-prepared for such situations. Many teachers report that they lack the knowledge and skills to teach students with disabilities in a mainstream setting as shown by the meta-analysis of Scruggs and Mastropieri (1996). Comparison of studies between the years 1958 and 1995 further indicated that no improvement or change was observed in the teachers' perceptions of their preparedness for inclusion during these years. Additionally, some studies demonstrated that only a minority of the teachers felt that participation in additional in-service training was useful for increasing their skills for inclusive education (Scruggs and Mastropieri 1996). Teachers' attitudes, self-efficacy and knowledge about inclusive practices are therefore vital for the successful implementation of inclusion (Avramidis and Norwich 2002). These three teacher components have been found to be influenced by teacher education programmes (Forlin et al. 2010; Lambe 2007; Lambe and Bones 2007; Sosu, Mtika and Colucci-Gray 2010; Subban and Sharma 2006). Accordingly, teacher education has been identified as an important factor in the promotion of inclusive education (EADSNE 2009, 2010; WHO 2011, 226). This observation has led to some large-scale efforts of development and study, such as the 'Teacher Education for Inclusion' project of the European Agency for Development in Special Needs Education (EADSNE 2012).

It is well known that teacher attitudes towards inclusive education are ambiguous and very often negative (Avramidis and Norwich 2002; Scruggs and Mastropieri 1996). The same ambiguity holds true for pre-service teachers. A Spanish study of 114 final-year pre-service teachers indicated that the great majority of respondents agreed with the philosophy of inclusive education, but at the same time did not feel confident enough to teach in an inclusive classroom (Cardona 2009). They considered special education teachers more competent for this task, and stressed the perceived differences concerning the teaching methods between special education and regular education (Cardona 2009). Similar results were found in Northern Ireland (Lambe and Bones 2006).

These attitudes do not breed in a vacuum. An international comparison of attitudes has indicated that both the in-service teachers' and the pre-service teachers' beliefs on inclusion seem to be influenced by prevailing policies in each country (Cornoldi et al. 1998; Sharma, Ee, and Desai 2003). Besides, teacher training has also been associated with more positive sentiments towards inclusive education among teachers (Lambe and Bones 2007).

Although a teacher training programme alone does not produce positive changes in pre-service teachers' attitudes towards disability (Tait and Purdie 2000), its effects depend on the commitment of a specific programme to the goals of inclusion. For example, a four-year university-based teacher education programme that strongly emphasised the commitment to inclusion and social justice as educational outcomes, indeed produced significant changes in student teachers' attitudes (Sosu, Mtika, and Colucci-Gray 2010).

Another factor possibly affecting attitudes towards inclusion is the way special educational knowledge is incorporated into teacher education programmes. A comparative study indicated that the integrated model, in which special educational contents were infused in most or all units in initial teacher education, produced greater positive changes in teachers' attitudes compared with a self-contained model consisting of separate special education modules (Kim 2011). Other studies have equally indicated that more training in special education promotes more positive

attitudes among teachers (Avramidis, Bayliss, and Burden 2000; Subban and Sharma 2006).

Some studies have indicated that having experiences of people with disabilities, and especially participating in an inclusive teaching practice, have had positive effects on pre-service teachers' attitudes (Lambe and Bones 2007; Swain, Nordness, and Leader-Janssen 2012). Pre-service teachers with at least weekly contact with people with disabilities perceived less discomfort with such interactions than those who had less contact (Forlin et al. 1999). Specifically, the participation of pre-service teachers in inclusive field experience led to more positive attitudes towards students with special educational needs (SEN) and higher feelings of self-efficacy compared with teachers without this experience (Forlin et al. 2009, 2010; Hopper and Stogre 2004; Sharma et al. 2006). Student teachers' improved feelings of self-efficacy, obtained through field practice, might be an influencing factor in creating more positive attitudes towards inclusive education. It has been shown that teaching practice is a good way to develop better self-efficacy feelings among pre-service teachers (O'Neill and Stephenson 2012). Qualitative studies have equally given support to these conclusions (Boling 2007; Brownlee and Carrington 2000).

Development of inclusive education in Ghana

The present study investigated inclusive teacher education in Ghana, a West African country with a population of about 25 million. Ghana occupies the position 135/187 on the UN Human Development Index with a medium human development status (United Nations 2011) and a literacy rate of 67% (World Bank 2013).

Since independence, several educational policies and initiatives have been introduced to improve educational access in Ghana. The Education Act of 1961 was the principal legislation concerning the right to education for children (Agbenyega 2007). In order to achieve UNESCO's mandate of free universal education for all the Free Compulsory Universal Basic Education policy (FCUBE) was launched in 1996. The policy was based on the 1992 Constitution. FCUBE focused, among other things, on increasing educational access of all school-aged children (Adera and Asimeng-Boahene 2011). However, these two major reforms fell short of making a distinct mention of children with disabilities and special needs (Avoke and Avoke 2004; Oppong 2003).

However, in line with the 2007 Educational Reform, inclusive education has become one of the central areas of the revised Education Strategic Plan for 2010-2020. The plan describes inclusive education as the enrolment of children with non-severe SEN and disabilities as well as disadvantaged children in mainstream schools and this is to be achieved by 2015.

In Ghana, mainstream basic school teachers are trained in colleges of education. A diploma is awarded after a three-year programme, in which the final year is dedicated to off-campus teaching practice. The student teachers complete the programme for general teaching in primary schools and for subject teaching in a junior high school. In the teacher education programme several steps have been undertaken to promote the capacity of Ghanaian teachers to meet the needs of children with SEN. Incorporation of an SEN curriculum into the teacher education curriculum has been one of the strategic activities to increase student teachers' knowledge and promote the implementation of the inclusive education policy. In 1989 the government introduced special education content into the curriculum of initial teacher

education programmes (Government of Ghana 2012, 44; Kuyini and Mangope 2011). The addition of inclusive education content into the initial teacher education curriculum was enhanced by the Ministry of Education in 1995 through a Pilot Action Research Project (Kuyini and Desai 2008). Currently, all Colleges of Education in Ghana offer a two-credit special education/inclusive education course for pre-service teachers in the second year to equip them with inclusive knowledge and skills.

Despite these progressive steps, recent studies have found problems in teacher attitudes concerning the acceptance of inclusive education (Kuyini and Mangope 2011; Obeng 2007). These negative attitudes have been attributed to inadequate resources such as large class size, but also to superstitious religious beliefs concerning disability (Agbenyega 2007; Gyimah 2010). Additionally, inadequate teacher training affecting the implementation of inclusive education has been identified as one of the major factors (Agbenyega 2003; Agbenyega and Klibthong 2011; Kuyini and Mangope 2011; Ocloo and Subbey 2008). Kuyini and Mangope's (2011) study, for instance, has shown that student teachers in Ghana received less training in SEN/inclusive education than their counterparts in other African countries. However, most studies have failed to describe the extent to which the pre-service teachers are knowledgeable of the concepts of inclusive education, SEN and disabilities. This topic was covered by a recent study (Deku and Ackah 2012), indicating that two thirds of the teachers surveyed had a good conceptualisation of inclusive education.

The aim of the current study was to discover the extent of pre-service teachers' readiness to create inclusive classrooms by looking at factors such as their knowledge of the concepts of inclusive education, SEN, instructional strategies and their feelings of self-efficacy in terms of preparedness for inclusive teaching. The attitudinal factors will be examined in the context of some features of the teacher education curriculum.

Methods

Participants and data collection

The data were collected from 200 final-year pre-service teachers in three of the 38 colleges of education in Ghana. Due to familiarity, easy access, time and resources, the participating colleges were selected from two different regions. College A in the Central region was selected to represent women's colleges. In all, there are seven women-only colleges in Ghana. The other two selected colleges were co-educational. College B was equally situated in the Central region. College C was in the Ashanti region, and was known as one of the top performing colleges.

Permission for the study was obtained from the Regional Directorates of Ghana Education Service and the basic school head teachers and mentors of the schools in which the participants were having practical training. The primary/junior high schools were selected by using convenient sampling technique and all the final year pre-service teachers in the selected schools formed part of the sample. A four-page survey form was personally delivered to 300 final year pre-service teachers of the participating colleges and schools. The participation was anonymous and voluntary. Consent to participate was indicated by answering the questionnaire. In all, 200 teachers responded with a total return rate of 67%. The return rate of college A was 88%, college B 64% and college C 64%. Of the participating students, 39% were

Table 1. Results of final-year pre-service teachers ($n = 199$) on KIE-Scale.

Item	Mean	SD	Agree or strongly agree %
1. In inclusive classroom or school, everyone is made to feel welcome, regardless of their disability	4.2	1.1	84
2. Inclusion requires that there is cooperation among teachers and other professionals	4.0	1.3	76
3. In inclusive classroom good students are encouraged to help students with SEN	3.9	1.2	75
4. Inclusion requires that teachers and parents work together	3.9	1.2	75
5. Inclusion seeks to remove all forms of barriers to learning and participation for all students	3.9	1.2	72
6. Inclusive teachers understand the different ways in which students respond to the same tasks	3.8	1.1	78
7. Inclusion requires that teaching activities are planned with all students in mind	3.7	1.3	68
8. Inclusive schools build on the differences among students in ways that value everyone equally	3.6	1.2	66
9. An inclusive classroom is where difference is celebrated, embraced and valued	3.4	1.3	56
10. In an inclusive classroom, differences between students are viewed as resources to support learning	3.4	1.1	56
11. Inclusion is only about including students with disabilities	2.6	1.5	37

female and 61% male. The mean age of the participants was 24 years, with a standard deviation (SD) of 2 years. The age varied from 21 to 33 years.

Variables

The survey form contained both closed and open questions. Participants were first asked to indicate their gender and year of birth. They were then asked whether they had been introduced to inclusive education. They were asked to mention some examples of SEN. Additionally, they were asked whether they had encountered children with special needs during their last teaching practice and whether they had had an opportunity to support these children and, if so, how.

The respondents answered 24 propositions which the authors had selected to measure knowledge and understanding of inclusive education. The participants were asked to use the scale 'strongly disagree' (1), 'disagree' (2), 'undecided' (3), 'agree' (4) or 'strongly agree' (5) in the evaluation of these statements. Of these propositions, 11 statements presented in Table 1 were selected to form the 'Knowledge on Inclusive Education Scale' (KIE). Those items selected for the scale were considered by the authors as best corresponding to the concept of inclusive education. They also demonstrated the best psychometric qualities on the basis of item analysis of the whole scale. The item analysis was based on the correlation coefficients. The values of one item, number 11 in Table 1, were reversed when used on the scale. The Cronbach alpha for the KIE was $\alpha = .76$ which confirmed its reliability. The strong one-dimensionality of the scale was confirmed through the principal compo-

nent analysis, which indicated that the first component explained 32% of the variance of the KIE scale. The second emerging component explained 11% and was associated with the dimension of cooperation in education. The content validity of the scale was confirmed through the observation, reported later, that participants introduced to the concept of inclusion differed from those that were not.

Self-efficacy was measured by asking 'How well prepared are you to teach students with special educational needs?' with alternatives 'highly prepared', 'somewhat prepared', 'do not know' and 'not prepared'. The pre-service teachers were asked about instructional strategies they preferred to use in an inclusive setting. A list of 22 strategies was offered. The respondents were asked to rate them from the most preferred to the least preferred. The list was a modified set of instructional strategies used by Gyimah (2010) in a study of an examination of teachers' use of instructional strategies in primary schools in Ghana. Finally, the participants were asked about their views on the challenges to the implementation of inclusive education in Ghana.

The data were analysed using the PASW Statistics 18 program. The common themes in the qualitative data were identified, coded and entered into the program for each respondent. The results were presented using percentages, means and SDs. *F*- and *t*-tests were used to analyse statistical significance.

Results

Level of knowledge

The participants were asked if they had been introduced to inclusive education during their studies. Of the respondents, 90% answered yes and 10% no. There were clear differences between colleges. In colleges B and C, all except for one student were familiar with the concept, while in college A only 76% had been introduced to it. Table 1 presents the views of the respondents on the characteristics of inclusive education. The most preferred characteristics of inclusive education were the notion of welcoming everyone, regardless of students' disabilities.

The KIE offered a method to estimate the knowledge concerning inclusive education. The maximum score from the KIE scale was 55. The mean of the distribution of the KIE scores was 41.1, the mode 42 and SD 7.3. These results indicated generally good knowledge on inclusive education with the exception of a small minority. On the KIE scale the students familiar with the concept ($n = 148$) achieved higher scores ($M = 42.3$, SD = 6.6) than those ($n = 17$) who reported not being familiar with the concept ($M = 33.0$, SD = 9.1), $t(16,7) = 4.0$, $p = .001$. This confirmed the convergent validity of the scale.

In the latter group, the mean corresponded the response 'undecided' indicating a total lack of knowledge. The mean score for the KIE scale differed between colleges, $F(2196) = 10.9$, $p = .000$, the highest scores coming from college B ($M = 44,5$) while college A ($M = 38,7$) and college C ($M = 41.7$) scored lower than college B as indicated by the Scheffe *post hoc* test.

The respondents were asked to identify some SEN that could be found in mainstream classrooms, and report those needs which they actually had encountered in teaching practice. The most common conditions identified were visual (57%) and hearing (53%) impairments, followed by intellectual disabilities (34%) and learning

disabilities (32%). Behavioural and emotional problems remained almost unnoticed in both scorings (1%).

Experience of disabilities

During their teaching practice, 71% of the respondents reported to have encountered a child with SEN, and 47% reported to have supported these children in some way. Encountering a child with SEN in the teaching practice was not connected with increased KIE as measured by the KIE scale, $t(df = 188) = -1.58$, $p = 0.12$. However, supporting the child with SEN was related with increased knowledge on inclusive education, $t(df = 144) = 2.61$, $p = 0.01$. The practice of supporting children with SEN during the practicum varied between colleges. In College A only 53% of the pre-service teachers with a child with SEN in their classroom reported having provided some support to the child in contrast to 76 and 77% in the other two colleges.

The most often encountered forms of SEN were a learning disability (28%) and visual impairment (23%). Only a minority of the respondents gave more than three types of needs. The most often used supports reported were arranging the classroom in an appropriate way (36%), giving individual attention (18%), giving learning tasks which suited all (11%) and seeking advice from other persons (8%).

Self-efficacy of pre-service teachers

The self-efficacy of the pre-service teachers was measured by asking them how well prepared they felt to teach students with SEN. In all, 22% of participants felt highly prepared, 38% somewhat prepared, 25% not prepared and 15% were yet to think about it. Some differences were observed between the colleges: of the participants who felt not prepared, a majority or 58% came from college A.

Table 2. The first 15 most preferred instructional strategies in the inclusive classroom by final-year pre-service teachers ($n = 194$–197). Means of rank ordering of the items from 1, or the most preferred, to 22, or the least preferred.

	Instructional strategy	Mean
1	To ensure that the classroom environment is comfortable for all children	6.41
2	To select learning tasks that children with SEN can do	6.49
3	To select instructional materials that make it possible for all children to learn	6.57
4	To give individual attention to children who need help	6.67
5	To set instructional objectives to cover all children including those with SEN	6.98
6	To ensure that questions are fair and evenly distributed to allow children to contribute to lessons	7.18
7	To move to a new section or unit when all children have understood and can perform what they have learned	7.48
8	To try to arrange my classroom to encourage participation	7.52
9	To design IEPs for children with SEN	7.62
10	To monitor constantly all my children while they do class work	7.65
11	To approach consultants for advice when I do not know how to make all children learn	8.13
12	To vary the pace to help the children to learn	8.13
13	To present tasks in bits to allow children to learn efficiently	8.15
14	To ensure that the classroom is spacious to allow for free movement	8.18
15	To give sufficient time to all children to practise what they learn	8.14

An encounter with a child with SEN during the teaching practice was associated with the feeling of preparedness to teach such children. Of the students who had this recent experience ($n = 14$), 28% reported to be highly prepared. Of those students, who lacked this experience ($n = 49$), only 6% reported to feel highly prepared. The association of self-efficacy with field experience became even more prominent when asked if the respondent had supported the child with SEN. Of those respondents who had supported the child with SEN in their teaching practice ($n = 94$), a total of 83% felt themselves highly or somewhat prepared for this activity, in comparison to 43% among those ($n = 53$) who did not have this experience.

Instructional strategies preferred and challenges mentioned

The order of preference of the instructional strategies is presented in Table 2 given as means counted from rank orders. Only 68 participants ranked all the 22 items in the order requested. The others gave # 1 to as many items as they considered worth it and then continued with # 2, and so on. Despite this disparity, Table 2 gives a general picture of the instructional preferences of the respondents. The table contains only the 15 most preferred strategies.

The participants were asked about the biggest challenges of including students with SEN in a mainstream classroom. Responses were analysed thematically. Seven major themes were identified by the first author. The most often mentioned challenge was the lack of quality teacher preparation (33%). This was cited equally by those who felt themselves well prepared as well as those who felt they were not. The second challenge was inadequate resources and teaching materials (12%). Third, stigmatisation and discrimination were mentioned (7.5%). Other challenges were named by less than 5% of the respondents. These included low self-esteem of students with SEN, the lack of proper facilities and environments, and lack of cooperation with parents and consultants as well as other professionals.

Discussion

Two hundred final year pre-service teachers from three colleges in Ghana were asked about their experiences and knowledge on inclusive education. The results showed that almost all participants had been introduced to the concept, and 84% of the respondents were able to define an inclusive classroom as a place in which everybody is made to feel welcome, despite their disability. Encountering a child with SEN during the teaching practice did not increase the knowledge on the prerequisites of inclusive education. However, the teacher's level of knowledge and the feeling of self-efficacy were higher for those teachers who actively supported the child with SEN in the classroom. This result was in line with previous findings on the positive effects of inclusive field experience on the attitudes and skills of pre-service teachers (Forlin et al. 2009, 2010; Hopper and Stogre 2004; Lancaster and Bain 2007; Richards and Clough 2004).

The results of this study revealed some deficiencies of pre-service teacher training related to inclusive education. About one third of the pre-service teachers reported having had children with SEN in their practicum classrooms without providing special support to them. This was particularly common in College A, and was associated with lower levels of reported preparedness among the students in this college. This buttresses previous findings that Ghanaian teacher preparation

does not provide enough training in special/inclusive education to enable it to make instructional accommodations for students with SEN and disabilities (Kuyini and Mangope 2011; Agbenyega and Deku 2011).

When asked to identify some SEN that could be found in mainstream classrooms, and needs which the participants actually encountered in the teaching practice, the conditions most often mentioned were visual and hearing impairments, while behaviour and emotional problems remained almost unnoticed. In general, the answers indicated a low level of knowledge of different disabling conditions. As a comparison, a recent study containing almost 500 teachers from Ghana found that of all the children having SEN, the teachers classified approximately 60% as having visual disabilities, approximately 20% as having behavioural problems and 8% as having hearing disabilities (Obeng 2007).

Some 25% of the pre-service teachers felt themselves fully unprepared for the challenges of an inclusive classroom. Of these teachers, 58% came from the same college (A), which was the lowest achieving college in this respect. On the other hand, college B was noted as the highest achieving, with 63% of the most highly knowledgeable respondents on the KIE scale.

The instructional strategies most preferred by the pre-service teachers were those compatible with the idea of universal design, i.e. strategies which did not require separate work with a child with SEN. The most preferred individualising strategy was 'giving individual attention'. It was used frequently during the teaching practice, as well. This strategy is easily combined into classroom work and is used by most teachers as a daily routine. The individualised education plan (IEP) was not highly favoured, showing the relative unpopularity of strategies that demand extra work from the teacher. Despite this, a written IEP is generally understood as an important and even obligatory element in the education of children with SEN in many countries (EADNSE 2009, 16).

The results of this study indicated that the knowledge level of inclusive education of pre-service teachers in their last year of their programme was, for the most part, at least on a satisfactory level. This is promising when thinking of the future. There is hope that old abusive habits will be discarded with the advent of more educated schoolteachers. A worrying finding was the large differences between the colleges. While one of the three colleges, college B, manifested good results in terms of preparing students for inclusive education, another college (A) clearly lagged behind it. It seems that in Ghana there is already considerable knowledge on how to organise efficient inclusive teacher education. What is needed is the dissemination of these models to all colleges. The great variation between the outcomes of the three colleges indicates that various models of pre-service teacher education really can make a difference.

In all, the results of this study, obtained from a developing country with limited resources, indicated more similarities than differences with the previous research results obtained from developed countries in terms of teacher attitudes towards inclusive education.

As shown by many studies, teachers have consistently reported that they lack the appropriate knowledge and skills to provide inclusive education (Scruggs and Mastropieri 1996). However, it may be too straightforward always to interpret these results as indicating that there are serious problems in teacher education programmes. There are alternative possibilities to understand the feelings of uncertainty by the teachers and pre-service teachers regarding inclusive education. First, it is

useful to make a distinction between knowledge and self-efficacy. According to Bandura's social cognitive theory, self-efficacy refers to 'individuals' judgements about their capabilities to successfully carry out a particular course of action' (Bandura 1997, 391). It has been shown that teachers' self-efficacy influences their teaching behaviours and their students' achievement (Klassen and Chiu 2010), and that teacher training significantly increases teachers' self-efficacy (Woolfolk Hoy and Burke Spero 2005). However, teachers may feel insecure or uncertain in front of previously unknown situations, even if they actually possess all the necessary knowledge and skills to solve the problem. What may be lacking could be previous experience which would have shown the teacher that they are perfectly able to manage the difficult situation. The effect of actual practice on teacher efficacy was demonstrated in this study as well as in many others.

A third possible explanation, thus far insufficiently researched, is the work orientation of the teachers. Some studies have shown that teachers are more willing to accept students whose disabilities do not require additional work on the teacher's part (Center and Ward 1987; Houck and Rogers 1994). In the present study it was observed that the most popular accommodations in teaching were those that did not ask for too much work. Thus, the reluctance to accept students with disabilities could be due to teachers' concerns about their workload (Kuyini and Mangope 2011). In other words, teachers may actually possess all the necessary skills but their orientation to work may make inclusive education less tempting to them. This may explain why only a minority of teachers felt in-service training on inclusive education could be of any help for them (Scruggs and Mastropieri 1996). Despite these reservations, this study was able to relate the different outcomes of the three colleges to different instructional practices in these colleges. In particular, the inclusive teaching practice proved again to be of vital importance in developing confidence and sense of mastery in inclusive education.

The limitations of this study include the use of a small sample of colleges. In addition, it would have been useful to supplement statistical inquiry with interviews of the key persons and participants. Future studies should also take into consideration the distinction between actual knowledge, feelings of self-efficacy and work orientation of teachers. More refined research instruments are therefore needed to study the attitudes and readiness of teachers to apply inclusive education strategies in their classroom.

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II

TEACHER EDUCATORS AND TRAINEES' PERSPECTIVE ON TEACHER TRAINING SPECIAL EDUCATION COURSE

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Abstract

Inclusive education has become a key global policy objective for the education of students with special educational needs (SEN) and disabilities, and initial teacher education programmes around the world are employing innovative pedagogies and approaches to equip teachers with the relevant knowledge and skills for its effective implementation. This study sought to ascertain the views of teacher educators and trainees on the SEN teacher preparation course in Ghana's colleges of education. A survey of 167 final-year pre-service teachers and 13 teacher educators revealed the dominance of the SEN medical model, and only a minority of pre-service teachers acquired the requisite inclusive values, principles and pedagogical practices. The paper discusses key barriers to the development of inclusive pedagogical practices and principles among pre-service teachers as well as factors that can promote these practices and principles.

Keywords: Teacher educators; trainees; special education course; inclusive education; teacher education; Ghana

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Teacher Educators and Trainees' Perspective on Teacher Training Special Education Course

Introduction

Informed by the principle of inclusion, the Salamanca Statement and Framework for Action was adopted by the 1994 World Conference on Special Education (UNESCO, 1994). The statement argues that regular schools with an inclusive orientation are the most effective means of combating discriminatory attitudes, building an inclusive society and achieving education for all. Inclusive education is linked to the broader campaign for social justice and the right to education for all, including children with disabilities (Armstrong, Armstrong, & Spandagou, 2010; UNICEF, 2012). It appeals for the transformation of school structures, systems, cultures, policies and practices to address and respond to the diverse needs of all learners by increasing participation in learning for all children and decreasing exclusion from education (Booth & Dyssegaard, 2008). Thus, inclusive education shifts the focus from children with SEN and disabilities to reforming school structures, systems, cultures, policies and practices.

This is in conformity with the conceptualisation of disability by the United Nations Convention on the Rights of Persons with Disabilities, which is rooted in the social model of disability. The convention defines disability as one that results from interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others (United Nations, 2007). Inclusive education, which is rooted in this social model view of disability, recognizes that the difficulties experienced by pupils with SEN in schools do not result only from their impairments but also from the ways in which schools are organised and from teaching methods (UNESCO, 2005). This contradicts the individual, biological deficit explanation of disability as having been caused entirely by bodily impairments, a view which has been associated with segregation, special schools, and conditional integration.

Following the adoption of the Salamanca Statement, many countries in Sub-Saharan Africa have declared inclusive education as a goal and have adopted strategies to make it a reality. In Ghana, for instance, the concept has gained considerable attention in education policymaking. The recent policy on inclusive education adopted in parliament is expected to provide the platform for addressing the diverse educational needs of all Ghanaian school-going-age children (Ministry of Education [MOE], 2013). Consistent with the core principles of inclusion advocated by international agencies, the guiding principles of the inclusive education policy in Ghana includes: the right of all children to access basic education; the belief that all children can learn irrespective of individual differences and that the educational system should

adapt its structures, systems and methodologies to meet the needs of all children.

Ghana has operated the dual system of education at the basic level; however, there has been no expansion in the number of segregated schools to cater for the ever-increasing population of children with disabilities (Anthony, 2011; MOE, 2013). Hence, the Education Sector Performance Report (MOE, 2012) established that the majority of pupils with unidentified SEN, which can considerably arrest their academic progress and result in failure or drop out, are enrolled in mainstream schools. The MOE (2013) confirmed that over 16,500 pupils with mild disability are enrolled in mainstream basic schools across the country, that more than 25% of out-of-school children aged six to 14 have at least one form of known disability and that the majority of excluded children are persons with SEN. Importantly, the situation in most other developing countries is not significantly different (Arbeiter & Hartley, 2002; Sawhney, 2015).

Studies have found that mainstream schools in developing country contexts are not adequately resourced to include SEN children, and only few examples of inclusive pedagogies for meeting the diversity of pupils' needs exist (Arbeiter & Hartley, 2002; Croft, 2010; Le Fanu, 2013). The predominant methods of instruction in most classrooms in developing countries have been found to be teacher-centred lecture method: the teacher talks, asks questions and writes on the chalkboard while pupils listen, write and shout out answers (Arbeiter & Hartley, 2002; Croft, 2010; Le Fanu, 2013; Sawhney, 2015; Singal, 2008). Studies from Ghana have also established that the special needs of mainstream pupils are not met and that teachers lack knowledge of inclusive pedagogical approaches (Agbenyega & Deku, 2011; Alhassan, 2014; Alhassan & Abosi, 2014). Observations of pedagogical practices in classrooms in the context of the ideals of inclusive education describe current instructional practices as depressive, inhumane and insufficient in meeting the diverse learning needs of students (Agbenyega & Deku, 2011). Inclusive education systems develop schools based upon a child-centred pedagogy and inclusive teaching methods capable of successfully educating all children. Such systems stress the active participation of students in the learning process as well as differentiated and individualised instruction (UNESCO, 1994; UNESCO, 2005; UNICEF, 2012). The adoption of these pedagogies is critical to the implementation of inclusive education in developing countries.

Other studies have also identified high teacher-pupil ratios, the lack of resources and facilities at schools, the lack of teacher training in inclusive education methodologies and the lack of appropriate teaching as contextual factors limiting the implementation of inclusive education and the adoption of an inclusive pedagogy in developing countries (Alhassan, 2014; Arbeiter & Hartley, 2002; Charema, 2010; Croft, 2010; Sawhney, 2015; Singal, 2008; Le Fanu, 2013). Other barriers to the development of inclusive competences among trainees in teacher education programmes have been found to include insufficient SEN aspects, limited training time, overloaded initial teacher

education programmes (Dart, 2006; Rouse, 2008) and lack of resources such as textbooks and teaching and learning materials (Coffey International Development, 2012; Croft, 2010; Dart, 2006; Le Fanu, 2013). Studies from both developed and developing countries have described the special education course in the initial teacher education programme as overly theoretical, with no provision for practical experience (Nash & Norwich, 2010; Rouse, 2008; Sawhney, 2015), hardly covering topics on inclusive knowledge and skills and insufficiently preparing teachers to work in inclusive settings (Alhassan, 2014; Emam & Mohamed, 2011; Sawhney, 2015; Winter, 2006).

Initial Teacher Education for inclusive Education

Teacher education plays a crucial role in the successful implementation of inclusive education by equipping teachers with requisite inclusive knowledge, skills, values and positive attitudes (Dart, 2006; Florian, 2008; Forlin & Chambers, 2011; Sharma, Forlin, Loreman, & Earle, 2006). Requisite knowledge has been found to include inclusive principles such as human rights, social justice and collaboration with teachers, parents and communities (UNESCO, 2005; UNICEF, 2012), knowledge of disabilities, inclusive instructional strategies, behavioural management techniques, legislation and policy (Rouse, 2008; Forlin & Chambers, 2011; Winter, 2006).

However, the dominant medical view of disability in many SEN courses in both developed and developing countries has been described as a key barrier to the development of inclusive practices among trainees (Angelides, Stylianou, & Gibbs, 2006; Croft, 2006). This view prompts teachers to view diversity as a problem to be overcome, rather than seeing issue with school curricula, educational policies and teaching approaches (Booth & Dyssegaard, 2008), and risks absolving teachers of their responsibility for their SEN and disabled pupils (Croft, 2010). It propels teachers to focus less on the impact of socio-cultural and contextual barriers to pupils' learning (Lalvani, 2013). Therefore, reforms in the initial teacher education curriculum have sought to reposition the concept of difference from the deficit view to the view that it is a natural and necessary part of human and social systems (Purdue et al., 2009). Greater awareness and understanding of educational and social factors that affect children's learning are now being promoted (Lalvani, 2013; Rouse, 2008).

In addition, some initial teacher education programmes employ practical training in inclusive settings to equip teachers with relevant inclusive pedagogies (Dart, 2006; Forlin & Chambers, 2011). This practical training provides student teachers with opportunities for greater levels of contact with pupils with disabilities and to learn key inclusive strategies such as the development of the individual education plan (IEP) and teaching aids with local materials for the effective teaching of SEN children during teaching practice (Dart, 2006). Such opportunities have been found to promote positive attitudes and self-efficacy among teachers (Dart, 2006; Forlin & Chambers, 2011; Sharma et al., 2006).

The connections between the inclusive education movement, social justice, human rights and multicultural education around the world have broadened

the movement's focus beyond the issue of disability to encompass other issues, such as race, language, ability, socio-economic status, gender, learning style, ethnicity, cultural and religious background, family structure and sexual orientation (Armstrong, Armstrong, & Spandagou, 2010; UNICEF, 2012). Florian (2008) has admonished that an explicit understanding of these issues requires special attention on reforms in initial teacher education programmes for inclusive education.

Booth and Dyssegaard (2008) argue that carefully formulated inclusive values are the fundamental ingredients for quality education that is compatible with the practical realisation of a universal right to education. Values influence teachers' actions towards pupils with disabilities and special needs, and inclusive values have been found to include rights, participation, community, trust, respect for diversity, fairness, equity, compassion, honesty, courage and joy (Booth & Dyssegaard, 2008; UNESCO, 2005). For instance, teachers' demonstration of inclusive values, such as support, encouragement and respect, meant that disabled pupils in a rural context in South Africa had a positive experience about their inclusion (Francis & Muthukrishna, 2004). A recent study in Ghana reported that teachers make the school and classroom environment welcoming and interesting for street children by showing friendship, understanding, interest, concern, sympathy, empathy, care and love (Kuyini & Abosi, 2011). The special education course in Botswana, which included practical training in inclusive settings, was effective in equipping teacher trainees with inclusive values such as love, empathy, acceptance, friendship and understanding of issues such as the rights of persons with disabilities (Dart, 2006). The implementation of inclusive education will thus require teacher education to equip teachers with inclusive values.

Initial Teacher Preparation in Ghana

The initial teacher education programme for basic school teachers in Ghana is a three-year diploma programme in basic education. The entrants are senior high school graduates who spend two years on classroom work followed by field-based teaching experience in the final year. All the colleges of education in Ghana currently follow the same syllabus prepared by the Teacher Education Directorate of the Ghana Education Service, which is approved by the Institute of Education at the University of Cape Coast. The programme offers a mandatory two-credit SEN course to trainees at the end of their second academic year. An important strategy identified in the current policy on inclusive education to ensure its implementation is the training of pre-service and in-service teachers in inclusive education to prepare them to identify and respond to the needs of each child and to equip them with pedagogical skills. It is argued that the school curriculum should be sufficiently flexible to allow for differentiation and adaptations to meet the needs of children with SEN (MOE, 2013).

In the SEN curriculum, the categories of the SEN outline include: gifted and talented children, mental retardation, visual impairment, hearing

impairment, physical and health disorders, behavioural disorders, learning disabilities and speech, language and communication disorders. It outlines the meaning of these categories, their various types, criteria for identification and the characteristics and causes of SEN. The course also highlights several strategies for managing each SEN category. It briefly defines the concept of inclusive education as an 'idea of including the special needs child in the normal education system which is provided for the normal child' (p. 35).

Consequently, the theoretical foundations unpinning the design of the questionnaire were the requisite inclusive knowledge, values and skills described earlier in the literature. Many have argued that it is important to explore the extent to which teacher training has equipped trainees with these competencies (Dart, 2006; Winter, 2006). So far, however, little is known about the SEN course in the colleges of education, and it is not clear what kinds of inclusive pedagogical practices, knowledge, skills or values trainees and teacher educators think are useful in developing inclusive education and which of these are acquired from the SEN course.

The main focus of the study was to determine the inclusive pedagogical practices, values, knowledge and skills that trainees acquire from the SEN course, perceptions of the adequacy of the course for preparing teachers to create inclusive classrooms and the challenges associated with the delivery of the course.

Methods

Participants and Data Collection Procedure

The study participants included 167 final-year, basic school trainees and 13 teacher educators drawn from three of the 38 colleges of education in Ghana. To ensure easy access, three colleges of education were selected: College A from the Eastern Region, College B from the Central Region and College C from the Ashanti Region.

The final-year trainees and the teacher educators of the SEN course were selected for the study on the basis of their knowledge and the purpose of the study. All the final-year trainees were expected to have taken the SEN course, and the teacher educators were instructors of the course. Permission was sought from the principals of each college. The first author subsequently hand delivered 270 questionnaires to trainees and 15 questionnaires to teacher educators. The confidentiality and anonymity of the respondents were assured during all phases of the study.

Out of 270 questionnaires administered to trainees, 167 were retrieved for analysis, thus indicating a return rate of 62%. Of the 167 trainees, 34% were male, and 67% were female. The majority of trainees (94%) had completed the SEN course. Sixty-nine per cent indicated that they had some previous teaching experience; 10% reported significant previous teaching experience; and 31% revealed they had no teaching experience. One per cent indicated that they had some kind of disability; 61% revealed that they have or have had a classmate with a disability; and 28% reported that they have or have had a friend with a

disability. The age of the participating trainees ranged from 21 to 31 years with a mean of M = 24 and SD = 2.

Out of the 15 questionnaires delivered to teacher educators, 13 were retrieved, indicating a return rate of 87%. Of the 13 teacher educators who responded, 80% were male, and 24% were female. Sixty-two per cent had bachelor's degrees, and 39% had acquired master's degrees. Their age ranged from 23 to 55 years (M = 43, SD = 10), and the number of years of tutoring ranged from 1 to 20 (M = 7, SD = 5).

Instruments

The questionnaire consisted of two main sections for both teacher educators and trainees. Section A sought information on the respondents' backgrounds, including their gender and year of birth. Section B solicited the teacher educators' and trainees' perceptions of the inclusive knowledge, values and inclusive instructional strategies acquired from the SEN course, the problems trainees encountered during the course and what needed to be included in the course to better prepare trainees to work effectively in inclusive settings.

Both the trainees and teacher educators rated the adequacy of the SEN course with regards to preparing teachers to identify SEN among pupils and making instructional accommodations to meet such needs. The definition of inclusive education and the SEN categories used in the SEN curriculum were used in the questionnaire to ensure reliable data. Some topics and issues crucial to teacher preparation for inclusive education were predetermined by the first author, and both the teacher educators and trainees were asked to indicate which issues were well disseminated in the course.

The data were analysed using the IBM SPSS Statistics Program 20. The open-ended data were categorised and coded as quantitative variables by the first author and entered into an SPSS database.

Results

Perceptions of inclusive Values, Knowledge and Skills

Using open questioning, the trainees were asked: 'In terms of what you have acquired from the course, what values do you think are needed for the effective teaching of pupils with disabilities and SEN in regular schools?' Similarly, the teacher educators were asked about the provision of these values. The results were classified into 13 categories (Table 1). The most often mentioned values in both groups were patience, tolerance and empathy. The trainees additionally stressed equal treatment, while the teacher educators mentioned respect and love.

[Table 1 about here]

The trainees were secondly asked about the kind of knowledge they acquired from the course that they thought was necessary for the effective teaching of pupils with disabilities and SEN in regular classrooms. Similarly, the teacher educators were asked about the provision of this kind of knowledge

from the course. Six major categories were obtained. Both the trainees and the teacher educators stressed the nature and causes of SEN, while the trainees also mentioned the identification of SEN (Table 1). Inclusive instructional practices, the use of assistive technology and the policy issue were mentioned by a minority of participants.

The trainees with previous teaching experience (N = 115) differed somewhat from those who had no teaching experience (N = 52). Those with previous experience stressed more often than the latter group 'empathy' and 'equal treatment and fairness' as relevant inclusive values. Those without teaching experience stressed 'tolerance' and 'love' more often than the first group. Those with teaching experience also stressed more often than the other group the need for knowledge on disabilities (Table 1).

Trainees with disabled friends or classmates (N = 34) differed from those who had no disabled friends (N = 133) in that respondents with disabled friends or classmates stressed more often 'respect' and 'acceptance' as inclusive values whilst those who had no disabled friends or classmates stressed more often 'empathy', knowledge on the nature of disabilities and knowledge on the causes of disability.

Perceptions of inclusive Pedagogical Approaches

The trainees were asked to state the instructional strategies and teaching methods that they learned from the SEN course that would enable them to effectively accommodate SEN pupils. Similarly, the teacher educators were asked about the provision of these strategies and methods from the course. The content of the SEN curriculum was also closely examined to identify possible inclusive pedagogical approaches. The results presented in Table 2 show that 'speaking louder' and 'writing boldly' were most often mentioned by trainees. Instead, the teacher educators mentioned most often the collaborative exchange of ideas through 'discussion' and guiding learners' own 'discovery' of knowledge. Other inclusive instructional strategies mentioned by a minority of both trainees and teacher educators were the activity method and brainstorming. Only a few trainees mentioned inclusive practices such as sitting arrangements, field trips, role play, cooperative learning, peer learning, telescoping etc.

[Table 2 about here]

Both the trainees and teacher educators were asked to indicate which pre-determined topics/issues were comprehensively covered in the course to enable trainees to teach pupils with disabilities and SEN. A majority of the trainees and teacher educators agreed that 'learning difficulties and disabilities' was such a thing (Table 3). Only a few mentioned the issues of 'the right of children to education', 'social justice' or 'communicating and working with parents'.

[Table 3 about here]

Perceptions of the Adequacy of the Special education Course

The majority of the trainees (68%) and teacher educators (69%) perceived the SEN course adequate in providing student teachers with the knowledge and skills to identify the different SEN and disabilities. However, the majority of the trainees (66%) and teacher educators (85%) considered the course to be inadequate in providing student teachers with sufficient levels of inclusive knowledge, skills and practices.

According to teacher educators the main purpose of the SEN course was to deliver knowledge to identify SEN and disabilities (62%), to provide knowledge about inclusive pedagogy (31%), to prepare teachers to treat every student equally (23%), and to prepare teachers to understand the uniqueness of every student (15%). College A attained higher scores than the other two colleges in teacher educators' perceptions on the delivery of knowledge on disabilities and on inclusive skills.

Problems with the Course and how to improve It

Both the teacher educators and trainees were asked to disclose the kinds of challenges encountered during the SEN course and to discuss possible improvements to the course to better prepare teachers for inclusive education. The course was considered too theoretical by 32% of the trainees, while 23% considered inadequate teaching and learning materials to be a major challenge. The majority of the teacher educators (62%) indicated that trainees complained about the course being overly theoretical while 77% considered the lack of teaching experience in inclusive settings as a major challenge. More than half (54%) indicated that inadequate equipment, materials and assistive technology were major challenges, and 69% commented that the inflexible curriculum in the college was a major hindrance. One of the teacher educators explained: "I have to prepare pre-service teachers for external examinations and must follow the syllabus in a strict manner". Another teacher educator noted: "The syllabus does not allow us to include other contents that are not prescribed therein."

Consequently, when the teacher educators and trainees were asked about what needs to be included in the course to better prepare teachers to work effectively in inclusive education settings, 44% of the trainees mentioned the incorporation of an inclusive education course; 13% mentioned practical training in inclusive settings; and three per cent mentioned the involvement of resource personnel with practical knowledge to teach pupils with special needs. The teacher educators mentioned most often the need to enhance knowledge of inclusive pedagogical approaches (85%), followed by the importance of practical training in inclusive settings (77%) and the need to increase the course credits through more inclusive educational content (69%).

Discussion

The current study found that the medical model perspective of SEN trumped inclusive pedagogical approaches and principles in the colleges studied. Knowledge about the causes, nature and characteristics of SEN and disabilities were perceived to be the main purpose of the course and were most often mentioned by both teacher educators and trainees. Therefore, the majority of both respondent groups were convinced that the SEN course was adequate in equipping trainees with the knowledge and skills to identify SEN among pupils. This finding is in agreement with those of Dart (2010), which showed that trainees who attended the SEN awareness course in Botswana acquired greater levels of skills in identifying SEN among pupils than inclusive teaching strategies. A similar study by Croft (2006) also found that the Malawian student teacher handbook focused more on deficit-based categories and other terms, such as 'difficulty' and 'impairments', with less emphasis on inclusive pedagogy.

Even if knowledge of disabilities is required, a too strong focus on it may negatively influence teachers' attitudes towards inclusion (Scruggs & Mastropieri, 1996). It has a tendency to propel teachers to focus more on the need for pupils to overcome their limitations and less on socio-cultural, political and environmental factors that influence learning outcomes (Booth & Dyssegaard, 2008; Lalvani, 2013). Thus, it may absolve teachers of their responsibility to their SEN pupils (Croft, 2010).

Issues of the right of children to education and social justice were the least discussed topics in the SEN course. This confirmed Lalvani's (2013) argument that many initial teacher education programmes do not address these issues. The finding supports the call for substantial transformation in the SEN course to address the core ideas of inclusion, such as human rights and social justice. Such a conceptualisation has been found to influence teachers' support for inclusive education in both developed (Lalvani, 2013; Purdue et al., 2009) and developing (Dart, 2006) countries.

In congruence with the results obtained by Sawhney (2015) and Nash and Norwich (2010), both the teacher educators and trainees identified the theoretical nature of the course as one of the challenges associated with its delivery. The teacher educators also viewed the lack of direct teaching experience in inclusive settings as the most compelling challenge in the delivery of the SEN course. They therefore called for practical training in inclusive settings as an essential component of the course. Studies from different contexts have shown that practical experiences in inclusive settings do not only bring about attitudinal change among teachers but also the development of confidence, skills and inclusive strategies (Arbeiter & Hartley, 2002; Dart, 2006; Forlin & Chambers, 2011). As Rouse (2008, p. 15) states, 'if teachers acquire new knowledge and they are supported in implementing new practice, then attitudes and beliefs will change over time'.

In this study, both the teacher educators and trainees called for more content knowledge on issues of SEN and inclusive education. A few of the trainees also called for the involvement of resource personnel with practical knowledge in teaching pupils with SEN in their training. These results are consistent with other studies in both developed (Nash & Norwich, 2010) and developing countries (Arbeiter & Hartley, 2002; Dart, 2006) which noted that trainees receive limited opportunities for training in issues of SEN and inclusive practices. The involvement of school practitioners, such as SEN coordinators, in campus sessions is quite common in certain initial teacher programmes (Nash & Norwich, 2010).

In the current study, inclusive instructional strategies were mentioned by a minority of both teacher educators and trainees. Additionally, the trainees demonstrated minimal knowledge of the few inclusive pedagogical approaches outlined in the SEN curriculum. The most frequently mentioned strategies were speaking louder, writing boldly, discussion, demonstration and the activity method or the use of task-based activities to guide learners to make their own discoveries. Some of the above strategies may actually be of little value with respect to inclusive education (UNESCO, 1994; UNESCO, 2005; UNICEF, 2012). A few of the practices mentioned by the minority of trainees included cooperative learning, enrichment, telescoping, grade skipping, mentorship, the provision of challenging tasks and peer learning. Consequently, only a minority of the participants considered the course as adequate in equipping trainees with inclusive approaches necessary to meet the learning needs of SEN pupils. These results are in accord with recent studies indicating that regular school teachers in Ghana have limited to moderate pedagogical competence in adapting instruction and are unlikely to make any effective instructional adaptation to address the needs of pupils with learning difficulties in regular classrooms (Agbenyega & Deku, 2011; Alhassan & Abosi, 2014).

Almost all teacher educators commented that the prescribed syllabus and external examination of the SEN course restricted them in terms of what they could emphasise during teaching. This finding appears consistent with research findings confirming that teacher educators lack incentives to reform their content and methodology because of external examinations (Coffey International Development, 2012). Inflexible curricula and rigid systems of assessment and examination at the colleges of education could therefore be blamed for the lack of development of inclusive principles and pedagogical approaches among teacher trainees.

A minority of teacher educators and trainees mentioned some inclusive values as necessary for effective teaching in inclusive settings. Patience, empathy and tolerance were most often perceived as important by both teacher educators and trainees. A few participants also identified fairness, respect, acceptance, love, caring, understanding, affection and encouragement as fundamental values. The respondents with prior teaching experience demonstrated more inclusive knowledge and values than those without prior teaching experience.

The trainees with disabled classmates or friends emphasised respect and acceptance more often than other trainees, who instead mentioned more often empathy and knowledge of causes of disabilities. These dissimilarities show that when people have closer relations with people with disabilities, their perceptions change; their values lean more towards respect and acceptance and less towards causes of disabilities or empathy—which may be seen as aspects of a patronising attitude—thereby rejecting the medical model view of disability. This is consistent with findings across disparate contexts that direct experiences of working with people with disabilities promote teachers' positive attitudes and self-efficacy (Arbeiter & Hartley, 2002; Dart, 2006; Forlin & Chambers, 2011; Sharma et al., 2006).

Conclusions

Although recent education-related acts and policies point towards Ghana's commitment to ensuring equity in education for children with disabilities, the findings of this study suggest that preparing teachers to achieve this commitment might not be one of the major goals in the initial teacher education programmes for basic education. The findings support calls for reforms in the SEN curriculum for inclusive education. The categorical deficit-based thinking, which engenders discrimination and oppressive practices in education, must be transformed to include principles of inclusion such as human rights, social justice, democratic societies, sociocultural perspectives of children's learning and the development of inclusive pedagogy to improve teachers' confidence and their ability to cope in inclusive settings.

Further, the much centralised curriculum in the colleges of education is in need of reform. Some curriculum flexibility in colleges of education would provide possibilities for teacher educators to adopt and model evidence-based inclusive strategies and contents as well as assessment procedures that will promote the development of inclusive principles and pedagogical practices among trainees.

Lastly, considering the positive effects of practical training in inclusive settings on teachers' attitudes and self-efficacy, future course reforms should provide more opportunities for practical training in inclusive settings. For instance, for assignments that involve supervised direct experiences in observing, identifying, assessing, planning and teaching SEN pupils, the involvement of district and regional SEN coordinators and excursions to special schools and rehabilitation centres could be included in teaching practice to promote teacher training in the areas of SEN and inclusive pedagogy. These can only be feasible with curriculum flexibility and less emphasis on external examination.

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Table 1

Inclusive values and knowledge needed by pre-service teachers and acquired from the special education course

	Pre-service teachers (N = 167) %	Teacher educators (N = 13) %
Inclusive values mentioned		
Patience	52	39
Empathy	37	31
Equal treatment, fairness	34	8
Tolerance	27	46
Respect	17	31
Acceptance	17	8
Love	13	31
Understanding	10	-
Caring	10	-
Affection	4	8
Encouragement	4	-
Self Confidence	2	-
Trust	-	8
Inclusive knowledge mentioned		
Identification of special needs	47	-
Nature of special needs	46	85
Causes of special needs	45	85
Inclusive pedagogical practices	17	39
Use of assistive technology	8	15
Special education policies	-	15

Table 2

Inclusive instructional strategies needed by pre-service teachers from the special education course

Inclusive Instructional Strategies	Pre-service teachers (N = 167) %	Teacher Educators (N = 13) %
Speaking louder	43	-
Writing boldly	41	8
Demonstration	35	-
Discussion	29	46
Activity method	10	15
Brainstorming	9	8
Sitting arrangements	8	-
Field trip, role play, cooperative learning	5	-
Enrichment program	2	-
Telescoping, peer learning, more challenging task, mentorship, grade skipping	1	-
Discovery	-	46
Acceleration	-	31
Task analysis	-	15
Multi-sensory approach	-	8

Table 3

Comprehensively covered issues in the SEN course

Issues covered	Pre-service teachers (N = 167) %	Teacher educators (N = 13) %
Learning difficulties and disabilities	74	77
Emotional and behavioral problems	44	69
The right of children to education (human rights)	8	31
Social justice (equity in education)	6	0
Communicating and working with parents	5	0

III

TEACHER EDUCATORS' VIEWS ON INCLUSIVE EDUCATIONAND TEACHER PREPARATION IN GHANA

by

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Teacher Educators' Views on Inclusive Education and Teacher Preparation in Ghana

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Abstract

The crucial role of initial teacher education programmes and teacher educators in preparing effective inclusive practitioners has been universally acknowledged. This study explored the attitudes of 125 teacher educators from four colleges of education towards inclusive education, their views and concerns about teacher preparation and the implementation of inclusive education in Ghana. The study found positive attitudes and considerable support for inclusive education. However, the majority of teacher educators were of the view that Ghana was inadequately prepared for the implementation of inclusive education. Their reasons and concerns were generally found to include: inadequate teacher preparation, unpreparedness of teacher educators, inadequate emphasis on inclusive instructional strategies and lack of teaching and learning materials. The implications of these findings for future reforms of inclusive teacher education were discussed.

Keywords: teacher educators, initial teacher preparation, inclusive education, Ghana

Introduction

The 1994 World Conference on Special Needs Education in Salamanca, Spain, declared that although children, the youth and adults have differing characteristics, interests, abilities and learning needs, they must all have access to regular education, through child-centred pedagogy, that is capable of meeting their special educational needs (SEN). The Salamanca Statement – reaffirming the right to education of every individual, as enshrined in the 1948 Universal Declaration of Human Rights, and committing to the 1990 World Conference on Education for All (EFA) – called upon countries to adopt inclusive education as a matter of law or policy (UNESCO, 1994). The Salamanca Statement has been a considerable source of influence in the formulation of local educational policies and has rekindled Ghana's commitment to improve the access, quality and provision of equal educational opportunities for all children, including those with disabilities. In particular, the Education Strategic Plans (ESP) of 2005 to 2015 and 2010 to 2020 have decreed inclusive education as the most appropriate educational provision for students with disabilities, with the goal of achieving an inclusive education system by 2015 (Government of Ghana, 2012, 2003). The recently drafted inclusive education policy of Ghana is founded on the premise that every child has the right to education. This policy therefore seeks inclusive education for all persons with mild as well as severe SEN at all levels of education (Ministry of Education [MOE] 2013).

A recent review of the status of the inclusive education system in Ghana (Ametepee & Anastasiou, 2015), however, found that ESP (2003–2015) targets have not been met, that only three percent of children with disabilities in Ghana receive any form of education, that the remainder fails to attend and that those who attend are without support. The establishment of an inclusive education system across Ghana has lagged because of barriers facing students with disabilities, such as schooling costs, lack of adequate transportation, unavailability of curriculum support and the absence of trained teachers (Singal et al., 2015). Others explanations include lack of effective teacher training and an inadequacy of clear inclusive policies embracing specific inclusive and child-centred strategies such as co-teaching, consultative services and peer-assisted strategies (Ametepee & Anastasiou, 2015).

Notwithstanding, the curricula at the primary and junior high school levels in Ghana encourage the adoption of child-centred approaches (Ampiah, 2008). However, recent studies have shown that the experiences of students with disabilities in mainstream settings are unfavourable; they sit idly and do not understand taught lessons (Singal et al., 2015), and their SEN are inadequately met due to teachers' limited competence in adaptive teaching practices (Agbenyega & Deku, 2011; Alhassan & Abosi, 2014; Kuyini & Desai, 2009; Kuyini & Mangope, 2011). Similar studies across other developing countries have shown that participatory, child-centred teaching pedagogies, activity-based learning, problem-solving approaches, child-to-child activities and group work are non-existent in mainstream classrooms (Arbeiter & Hartley, 2002; Johnstone & Chapman, 2009).

The prevailing practice of teachers' adoption of teacher-centred strategies that keep disabled children away from school in developing countries has been attributed to high student-teacher ratios, a lack of resources and support services for pupils with impairments, inadequate pre-service and in-service training for teachers (Le Fanu, 2013; Singal et al., 2015) and little emphasis on inclusive instructional strategies in initial teacher education programmes (Johnstone & Chapman, 2009). The lack of adoption of inclusive and child-centred strategies might also reflect a lack of knowledge on the part of teachers.

The didactic approach of disseminating knowledge from teacher to students fails to take into account the SEN of students and contradicts the pedagogies required for providing equitable and accessible education for all (Forlin & Sin, 2010). Inclusive education requires a child-centred pedagogy that acknowledges that human differences are normal and that learning must be adapted to the needs of the child rather than the child adapting to the pace and nature of the learning process (Rouse & Florian, 2012; UNESCO, 1994). It requires teachers to modify curricula and adopt more child-centred modes of instruction and small-group learning (Loreman, 2007). As an important aspect of inclusion, child-centred learning recognises that individual students each have their own starting point for learning, their own individual previous unique knowledge base, that the teacher recognises the importance of the student level of engagement and motivation in an activity, that students are in control of their environment and that the teacher facilitates students' ability to control their day (Humphreys, 2009).

Similarly, an inclusive pedagogy constitutes a shift from approaches that work for most learners – those that exist alongside 'additional' or 'different' approaches – and moves towards approaches that provide rich learning opportunities for everyone (Rouse & Florian, 2012). Both pedagogical categories shift the focus from learners with SEN to learning for all. They provide learning opportunities that benefit everyone so that all learners are able to participate. Child-centred pedagogies are therefore conducive to inclusive pedagogies. O'Sullivan (2004) argues that Western conceptualisations of child-centred approaches could improve teachers' capacities in developing countries to implement inclusive education. However, few of these pedagogical strategies have been observed in mainstream classrooms due to the aforementioned contextual factors in Sub-Saharan African countries (Arbeiter & Hartley, 2002; Dart, 2006; Le Fanu, 2013).

The recent policy on inclusive education in Ghana is expected to provide the platform for addressing the diverse educational needs of all Ghanaian school-age children within the structures of the Universal Design for Learning and Child Friendly Schools to ensure that the teaching and learning environment is friendly to all pupils. It is expected to equip teachers with pedagogical skills to identify and respond to the needs of each child (Ministry of Education, 2013), which will have crucial implications for teacher educators and initial teacher education in Ghana.

Teacher educators' attitudes towards inclusive education

A number of studies from both developed and developing countries suggest that teachers' attitudes are critical to ensuring successful inclusive education (Agbenyega, 2007; Arbeiter & Hartley, 2002; Forlin, Earle, Loreman & Sharma, 2011; Kuyini & Mangope, 2011). Teacher preparation courses focusing on attitudinal change towards inclusive education, including the required knowledge and skills, have produced teachers who are more positive towards the inclusion of SEN students (Dart, 2006; Forlin & Chambers, 2011; Forlin et al., 2011; Rouse & Florian, 2012). Teacher educators' knowledge, beliefs, attitudes and skills about inclusion have been identified as crucial to identifying and addressing student teachers' attitudes within teacher education programmes towards accepting inclusive teaching ideologies (EADSNE, 2012; Forlin, 2010; Rouse & Florian, 2012). Moreover, studies from both developed and developing countries have established that teacher educators have supportive attitudes towards inclusive education (Pinnock & Nicholls, 2012; Tungaraza, 2013).

A recent study showed that Ghanaian public university teachers had a favourable perception of the inclusion of visually-impaired students and agreed that all children with

disabilities can benefit from inclusion. However, they lacked the capabilities to teach such students (Mamah, Deku, Darling & Avoke, 2011). Other studies have also observed that some teacher educators lack knowledge of the underlying values and practices of inclusive education (EADSNE, 2012). Moreover, some have little experience with SEN pupils and lack experience of inclusive practices and relevant experiences in inclusive settings (Pinnock & Nicholls, 2012; Rouse & Florian, 2012).

It is highly recommended that teacher educators model effective inclusive practices to their student teachers (Coffey International Development, 2012; EADSNE, 2012). However, studies have shown that that they are unable to translate inclusive principles in training into useful practical guidance for trainees (Pinnock & Nicholls, 2012) and are uncertain about demonstrating inclusive practices (Rouse & Florian, 2012). Many have, therefore, argued for opportunities for the professional development of teacher educators to improve their practical experiences, knowledge of inclusive teaching approaches, concepts, skills and values (EADSNE, 2012; Mamah et al., 2011; Pinnock & Nicholls, 2012; Rouse & Florian, 2012).

Initial teacher preparation for inclusion

Teachers' knowledge of SEN, inclusive pedagogical strategies, students' diverse learning styles and motivational techniques in teaching has been identified as essential for the implementation of inclusive education (Forlin & Sin, 2010). Studies from teacher education programmes indicate that when pre-service teachers are trained in inclusive pedagogical strategies, such as Universal Design for Learning (UDL), they can more easily develop lesson plans that are accessible to a diversity of learners (McGhie-Richmond & Sung, 2013). UDL enables teachers to appreciate the variability of learning needs in classrooms and to modify the curriculum to meet those needs (Hartmann, 2015).

Further, collaboration, co-teaching and differentiated instruction have been identified as effective inclusive strategies in providing equitable core curricula access to diverse student bodies, including those with SEN (Thousand & Santamaria, 2004). Co-teaching is an approach whereby two or more teachers share responsibility for teaching some or all of the students assigned to a classroom. It has been found to assist teachers to serve all students fairly and equitably in general education classrooms (Cramer, Liston, Nevin & Thousand, 2010). Effective parental involvement in the education of SEN children has been regarded as a critical factor in the success of inclusive education; therefore, teachers must be trained to work with parents (Witte & Hornby, 2010). Peer partnership strategies such as peer tutoring, mentorship, peer-assisted learning, cross-age tutoring and peer help in which students team up to support each other for a common purpose have been found to enhance academic, social and personal development and to prepare and empower students to transition as productive members within their community (Mc Neil & Hood, 2005).

Other inclusive pedagogical strategies include cooperative learning approaches and heterogeneous groupings among learners, the development and implementation of Individual Education Plans (IEP) as a tool to support individual SEN pupils in the classroom (Davis & Florian, 2004; EADSNE, 2012) and the formulation of learning activities for all students to develop their autonomy in learning through the adoption of students' learning styles and multiple intelligences (Peterson & Hittie, 2003). The use of information and communication technologies (ICT) and adaptive and assistive technologies also support flexible approaches to learning, promote greater access to learning opportunities and promote collaborative problem-solving

(EADSNE, 2012). The development of teachers understanding of how to use assistive technology will enable them to provide effective assistance to students with SEN (Chambers, 2011).

Initial teacher education courses incorporating the above contents have significantly improved teachers' attitudes and self-efficacy perceptions towards including students with a range of learning needs, resulting in fewer concerns about inclusion (Forlin & Sin, 2010). Studies have shown that teachers who adopt pedagogies of inclusion promote principles of whole schooling such as: empowering citizens for democracy, including all, providing authentic, multi-level instruction, community building, supporting learning and partnering with parents and communities (Thousand & Santamaria, 2004).

It is highly recommended that these effective inclusive knowledge and strategies permeate all content areas and subjects of the initial teacher education curriculum (EADSNE, 2012; Nash & Norwich, 2010). Studies from both developed and developing countries have demonstrated that both teacher educators and teachers prefer this permeation across subject areas alongside the stand-alone compulsory SEN and inclusion module. They strongly agree that this combination would improve the inclusion of people with disabilities in education (Kearns & Shevlin, 2006; Pinnock & Nicholls, 2012) and overcome difficulties that might arise from varying levels of teacher educator expertise (Winter, 2006). However, few studies have confirmed the permeation of these areas across other subject areas in the initial teacher education curriculum (Kearns & Shevlin, 2006; Winter, 2006).

Teacher education for basic education in the Ghana

The basic education system in Ghana consists of two years of kindergarten, six years of primary and three years of junior high school. As a result of the cancellation of school fees and the introduction of capitation grants in 2005 and compulsory pre-school education in 2007, Ghana has made significant improvement in the access and participation of children in basic education, achieving significant progress in gender parity at the kindergarten level (1.01), primary level (0.99) and junior high school (0.95) (Ministry of Education, 2015). However, the literacy levels among Ghanaian children completing Primary 6 remained poor (UNESCO, 2014). The Ministry of Education has recommended that class size not exceed 30 for lower primary and 35 for upper primary and junior high schools; however, several studies have described class sizes as large, with limited teaching and learning materials and teacher support (Agbenyega, 2007; Kuyini & Abosi, 2011; Kuyini & Desai, 2009), thus resulting in limited student engagement and interaction (Agbenyega, 2008).

Ghana operates a centralised curriculum system prescribed by the Curriculum Research and Development Division under the Ministry of Education. This centralised national curriculum has been described as unresponsive to the needs of minority groups. It presents significant challenges for teachers seeking to implement an inclusive education approach, resulting in teacher-centred instruction. This requires teachers to demonstrate confidence and professional responsibilities to adopt pedagogical approaches that broaden curriculum accessibility and increase expectations and learning progression of students with disabilities (Loreman, 2007; Price, 2015).

Since Ghana's independence in 1957, many reforms and teacher certification programmes have been introduced to prepare teachers for basic education. The thirty-eight public and four private colleges of education in Ghana have been upgraded to offer a three-year diploma

in basic education to promote quality education in basic schools. General knowledge in special education has been introduced into the teacher education curriculum, and therefore, a separate mandatory two-credit course on SEN is being offered to all general education pre-service teachers undertaking the diploma in basic education in the teacher certification programme. Specialist training in special educational needs is provided only at the university level. In spite of the upgrade, recent studies have described Ghanaian teachers as incompetent in adapting instructions (Kuyini & Abosi, 2011) and have found absolute neglect of participatory and interactive teaching methods in schools and a preference for lecture and rote learning methods (Ministry of Education, 2010), resulting in pupils' poor performance. To improve pedagogical training, the current policy on inclusive education states that teachers should be equipped with pedagogical skills to identify and respond to the needs of each child (Ministry of Education, 2013).

Statement of the problem

Previous studies on Ghana have focused on mainstream teachers' (Agbenyega, 2007), student teachers' (Kuyini & Mangope, 2011) and university teachers' (Mamah et al., 2011) attitudes towards inclusive education. However, little is known about the attitudes of teacher educators in colleges of education and the extent to which initial teacher education programmes equip teachers with inclusive principles and strategies. This study therefore aimed to address the following research questions:

1. What are the attitudes of teacher educators regarding support for the implementation of inclusive education in Ghana?
2. How do teacher educators in Ghana perceive their role and preparedness regarding the implementation of inclusive education?
3. What forms of inclusive education knowledge and instructional strategies are acquired by pre-service teachers from the initial teacher education programme?

Methods

Participants

The study consisted of 125 teacher educator participants from four of the 38 public colleges of education in Ghana. To ensure easy access, the participating colleges were selected from four regions: College A from the Ashanti Region; College B from the Western Region; College C from the Central Region and College D from the Eastern Region. All four colleges are located in the more prosperous south of the country, and all colleges of education in Ghana follow the same centrally designed curriculum. All teacher educators from the selected colleges purposively became part of the sample. The first author personally delivered survey forms to all teacher educators upon the consent of the principals of the colleges. The purpose of the study was explained to the respondents, and their confidentiality and anonymity were assured.

After several reminders, the response rates for the individual colleges were: 24% for College A, 20% for College B and 28% each for colleges C and D. With respect to gender, 73% were male, and 27% were female. The age distribution ranged from 28 to 60 years ($M = 43.9$, $SD = 7.33$), and their teaching experience ranged from one to 34 years ($M = 8.07$, $SD = 5.58$). Thirty-six percent had obtained bachelor's degrees, and 64% had obtained master's degrees.

The professional background of the teacher educators was predominantly teaching: the majority of the participants (77%) had previous teaching experience in basic schools, 63% had teaching experience in senior high schools, 15% had teaching experience in special schools, and only six percent had teaching experience in inclusive pilot schools. Sixty-one percent had received SEN training, 18% had received training in inclusive education, 14% had received training in both SEN and inclusive education, and only seven percent had received no training in SEN or inclusive education. The teacher educator study participants were responsible for teaching a range of subjects and methodology courses in the colleges of education.

Instrumentation

The questionnaire consisted of two main sections: Section A sought information on respondents' background, such as gender, year of birth, etc. Section B mainly consisted of close-ended-type Likert scale items and a few open-ended items. Items using a Likert scale from 1 to 5 with a neutral middle point were used to determine a) teacher educators' knowledge about inclusive education and SEN, b) their attitudes towards inclusive education and teacher preparation for inclusive education, c) their awareness of their role in the implementation of inclusive education and d) their knowledge of inclusive teaching methods and instructional strategies for effective teaching in inclusive classrooms and the extent of permeation of these strategies across the various subjects. The current preparedness of trainees for inclusive classrooms and the educators' own preparedness in training teachers to teach pupils with SEN and disabilities in inclusive classrooms were measured using a scale of 1 = very well prepared; 2 = somewhat prepared; 3 = don't know; 4 = not prepared at all.

The participants were presented with open-ended questions regarding the role that teacher education plays in the implementation of inclusive education, the participants' experience in teaching students with disabilities and how their experience influenced their tutoring. In addition, seven topics or issues considered critical to the implementation of inclusive education and fifteen teaching strategies and approaches identified in the literature review were presented to the teacher educators so that they could indicate by ticking which ones were comprehensively covered in their course(s) (see Table 2). Considering the breadth of the inclusive teaching approaches and strategies, the authors provided the respondents with options to indicate approaches or strategies that were not pre-determined. The open-ended data were categorised, coded and entered into IBM SPSS Statistics Program 20 together with the quantitative data. Simple frequencies, percentages and one-sample t-test analyses were used in the data analysis.

Results

Level of knowledge

A large majority of the participants (80–86%) reported having adequate levels of knowledge about both special needs children and inclusive education as well as about the overall purpose of inclusive education. The main purposes of inclusive education were tackled with the use of an open-ended question, with the teacher educators characterising these mainly in terms of physical presence (integration) (36%), equal access to quality education (28%) and as a means to achieving acceptance (22%). There were also several mentions of social inclusion, reducing

stigmatisation, preventing discrimination and promoting self-esteem. In general, the teacher educators had a positive view of inclusive education and the need to prepare pre-service teachers for inclusion (see Table 1).

Table 1

Teacher educators' attitudes towards inclusive education and their views regarding teacher preparation (n = 125)

	Items	*M*	*SD*	Agree or strongly agree (%)
1.	I am in favour of inclusive education	4.07	.85	85
2.	Inclusive education will be beneficial to pupils with special needs/disabilities	3.81	.95	78
3.	Inclusive education will benefit pupils without special needs/disabilities	3.57	1.19	66
4.	Inclusive education is the best educational practice to educate pupils with disabilities and special needs	3.57	1.16	65
5.	All pre-service teachers must have teaching experience in an inclusive settings	4.21	.84	86
6.	All teachers should be trained and prepared to teach all pupils with different special educational needs/disabilities in an inclusive setting	4.10	.85	82

Views on the implementation of inclusive education

The teacher educators were asked to indicate the extent of Ghana's readiness for the implementation of inclusive education. The majority of them (62%) indicated very little readiness, 30% reported that Ghana was somewhat ready, and only two percent indicated that Ghana was not at all ready.

The teacher educators were asked to explain their choices. The main reasons cited for Ghana's negligible readiness included: inadequate facilities (42%), inadequate teacher preparation (28%), inadequate resources (26%), societal attitudes (9%), inadequate public education (9%) and lack of political will (4%).

Similar reasons were cited as main concerns regarding the implementation of inclusive education. These included: inadequate teacher preparation (38%), lack of instructional materials (25%), an overwhelming focus of colleges of education on the preparation of teachers for regular children (21%), less attention being paid to teacher preparation for inclusive education (20%) and high workloads for classroom teachers and lack of public education (10%).

Teacher education for inclusive education

Overall, the teacher educators were cognisant of the role that teacher education plays in the implementation of inclusive education (M = 4.01), their own role in teacher preparation (M = 3.60) and their role in the implementation of inclusive education in Ghana (M = 3.28). They were further asked to discuss the role that teacher education plays in the implementation of inclusive education in Ghana.

The main role categories identified by the first author from the open-ended question included: to prepare teachers to teach pupils with SEN (74%), to equip teachers with knowledge about SEN (26%), to equip teachers with knowledge about inclusive pedagogical practices (12%) and to organise SEN workshops for in-service teachers (19%). The more infrequently mentioned roles included organising workshops on inclusive education for in-service teachers and preparing teachers to collaborate during teaching, training teachers to use assistive technology for pupils with SEN and recruiting and training disabled teachers and promoting positive attitudes among pre-service teachers.

Adequacy of the teacher education programme

The teacher educators were asked to rate their preparedness for training teachers to teach pupils with SEN/disabilities in an inclusive classroom. The majority (60%) indicated that they were somewhat prepared, 24% reported being very well prepared, eight percent indicated that they were not at all prepared, and eight percent reported that it was not part of the courses they taught. They were also asked to indicate their own experience of teaching pupils with SEN/disabilities. The results indicate that the majority (56%) had little or some experience, 33% reported no experience and 18% quite a lot or a lot of experience. Of the 125 participants, 19% reported that their experience helped them treat student teachers individually, 17% offered practical examples of how to meet the learning needs of SEN pupils during teaching, 12% tried to meet the learning needs of student teachers, and three percent provided greater attention to student teachers.

Regarding their views of the current preparedness of student teachers for inclusive education, only a minority (7%) indicated that the current cohort of student teachers were very well prepared, 68% reported that they were somewhat prepared for inclusive education, 15% indicated that they were not at all prepared, and 10% indicated that they did not know. Regarding the views of teacher educators on how much attention was being given to preparing teachers to teach children with SEN/disabilities in regular schools, a minority (40%) believed that less attention was being provided, 31% believed that some attention was being provided, 11% believed no attention was being provided and that more needed to be done, and only nine percent indicated that more attention was being provided. On their views about the innovative programmes being implemented in their colleges of education to ensure that teachers are best prepared to work in inclusive settings, 17% indicated a SEN course, 13% indicated educational visits to special schools, two percent indicated inclusive education workshops for teacher educators, and one percent indicated additional reading material on SEN.

Knowledge and modelling of inclusive practices

The teacher educators were asked to indicate their level of awareness of inclusive teaching methods or instructional strategies. Most of them (56%) reported having little knowledge, 24% reported having no knowledge, and only 20% reported having significant knowledge. They were then asked to list some of the inclusive teaching methods or instructional strategies they knew. Activity-based learning (10%) was most frequently mentioned, followed by breaking down the task (7%) and demonstration (7%). Several other inclusive methods received only one or two mentions, including role play, cooperative teaching, sensory approaches and class-wide peer tutoring.

The respondents were further asked to state the teaching methods or instructional strategies they most often used in class. The open-ended question was categorised by the first author. The most often mentioned method was lecturing (49%), followed by teacher-led discussion (38). Two other frequently mentioned methods were demonstration (28%) and the activity method (27%) which meant that student teachers were actively participating in the learning process, mentally and physically. Less than 10% mentioned more interactive approaches such as group work, the discovery method, brainstorming, role play, questioning, case study, experimenting and project work.

Permeation of SEN and inclusive education elements

The teacher educators were asked to indicate the extent to which the course(s) or subject(s) they taught dealt with SEN/disabilities and inclusive knowledge, values and competencies. The majority of them (74%) indicated that their course(s) dealt 'very little' with SEN/disabilities; 21% reported that their courses dealt 'a lot' with SEN/disabilities, and only five percent indicated that they did not know. Similarly, the majority of teacher educators (69%) indicated that their courses had 'very little' elements of inclusive knowledge, values and competencies; 16% indicated 'a lot' while only 15% indicated that they did not know. The teacher educators were provided with possible topic areas and inclusive pedagogical practices that could be covered in their courses and were given opportunities to state others that were not pre-determined by the authors. The results are presented in Table 2.

The present study also found widespread adoption of teacher-centred approaches by teacher educators, the most common of which were lectures and demonstration methods. Only a minority of them indicated that they encouraged collaborative exchange of ideas through discussion and activity methods to enhance trainees' understanding and active participation. These results corroborate those of Avoke (2008) that teaching methodologies and assessment practices in the colleges were inadequate in preparing trainees to make instructional accommodations for students with SEN and disabilities.

In spite of their perceived sufficient knowledge about SEN and inclusive education, the present study found that the majority of the teacher educators had little knowledge of inclusive teaching methods/instructional strategies. Only a minority demonstrated knowledge of interactive teaching methods – such as activity-based learning, role playing and class-wide peer tutoring – characterising a child-centred pedagogy. These results accord with those of recent studies indicating that the majority of teacher educators lack knowledge of inclusive teaching

Table 2

The extent to which topic areas and inclusive pedagogical practices are dealt with across subjects/courses, as reported by teacher educators (n = 125).

	%
Topics and issues	
Learning difficulties and disabilities	46
Emotional and behavioural problems	44
Learning styles	20
The right of children to education (human rights)	17
Communication and working with parents	10
Multiple intelligences	10
Social justice/equity in education	6
Inclusive pedagogical practices	
Co-operative learning	36
Heterogeneous grouping	34
Providing individual assistance	22
Peer-assisted learning strategies	22
Strategies for managing behaviour problems	21
Class-wide peer tutoring	18
Collaborative problem-solving	17

approaches (Mamah et al., 2011; Pinnock & Nicholls, 2012; Rouse & Florian, 2012). The teacher educators' inadequate knowledge of inductive approaches or child-centred and inclusive pedagogies perhaps explains the widespread adoption of teacher-centred approaches in colleges of education. These findings therefore provide support for the further development of the profession of teacher education in the area of inclusive education, its principles and instructional practices (EADSNE, 2012; Rouse & Florian, 2012).

The present results also show that the majority of respondents have not had training in inclusive education and have only had little or some inclusive teaching experience. Consequently, most of them perceived themselves as somewhat prepared to train teachers to teach in inclusive settings. These results are in agreement with previous findings showing that teacher educators have little experience with pupils with diverse learning needs and lack experience of inclusive practices or relevant experience in inclusive settings. Therefore, they could not demonstrate inclusive principles and practices (EADSNE, 2012; Pinnock & Nicholls, 2012; Rouse & Florian, 2012). Pinnock and Nicholls (2012) and EADSNE (2012) recommend that teacher training reforms for inclusive education should focus more on equipping teacher educators with inclusive teaching experience and strategies to promote inclusion. This would enable them to effectively model core inclusive values and competences to support trainees in becoming inclusive teachers.

However, another significant finding was that the few respondents who had had previous teaching experience in inclusive settings stated that they valued diversity and modelled some effective teaching strategies for their trainees. Based on their experience of teaching pupils with

SEN/disabilities, they treated trainees individually, offered practical examples of how to meet the learning needs of SEN pupils, tried to meet the learning needs of trainees and provided them with greater levels of attention. This combination of findings provides some support for the conceptual premise that teacher educators' direct experience of work in inclusive education would enable them to effectively communicate to their trainees the 'what', 'how' and 'why' of teaching learners with diverse needs (EADSNE, 2012, p. 22). A study on Ghana confirmed that due to a lack of such effective communication and modelling, countless in-service training programmes had failed to convince teachers of the need to adopt activity-based learning approaches in Ghanaian schools (Coffey International Development, 2012).

The modelling of effective instructional approaches by experienced teacher educators in classrooms with similar characteristics to mainstream classrooms will not only allow trainees to observe these approaches in action but to also witness their feasibility and efficacy. O'Sullivan (2004) hopes that student teachers' experiences as students learning within child-centred approaches would further develop their capabilities to use these approaches in their classrooms. Also, strong coordination between the colleges of education and special and inclusive schools would maintain the relevant previous regular classroom experiences of teacher educators. This would enable them to carry out action research and implement research findings about inclusive pedagogy. Studies have explained that action research on pedagogy and the process of its development is an effective method of determining pedagogical approaches appropriate to particular contexts (O'Sullivan, 2004) and can yield knowledge about the possible forms that inclusive pedagogy can take in the resource-constrained and traditionally collective societies of many developing countries (Croft, 2010).

The permeation of knowledge of SEN and inclusive strategies across subject areas in teacher training programmes has been highly recommended (EADSNE, 2012; Nash & Norwich, 2010) and supported by both teacher educators and teachers (Kearns & Shevlin, 2006; Pinnock & Nicholls, 2012; Winter, 2006). In this study, the majority of the teacher educators of courses besides the SEN course indicated that their courses dealt marginally with elements of SEN and inclusive education. Consistent with the findings of Pinnock and Nicholls (2012), a greater degree of SEN elements – as opposed to inclusive knowledge, values and practices – were reportedly covered by the teacher educators. Similarly, most of them identified their main role and that of teacher education as dealing more with equipping trainees with knowledge about SEN than with inclusive pedagogical practices.

Moreover, the teacher educators were presented with issues and inclusive teaching strategies from the literature (see Table 2) so that they could tick which ones were comprehensively covered in their course(s). They were also provided with space to specify others that were not predetermined by the authors. The result indicates that only a minority of them indicated that such issues and effective instructional strategies were covered in their courses. This confirms the assertion of Coffey International Development (2012) that such strategies are not comprehensively mainstreamed in the teacher training programme in Ghana. Consequently, mainstream classroom teachers in Ghana rarely demonstrate these effective adaptive teaching practices (Alhassan & Abosi, 2014; Kuyini & Desai, 2009). The current study therefore calls for the mainstreaming of inclusive strategies into pre-service and in-service teacher training programmes as requirements for the achievement of the desired characteristics and implementation of child-centred and inclusive pedagogies.

Notwithstanding, the teacher educators demonstrated full awareness of their responsibility and the role that teacher education plays in the implementation of inclusive

education. However, the study found evidence of inadequate innovative reforms for inclusive education in the colleges of education. Only a few teacher educators mentioned educational visits to special schools, inclusive education workshops for teacher educators and SEN courses and the provision of reading materials on SEN as innovative programmes to prepare teachers for inclusive education. The lack of adequate innovative reforms for inclusive education within colleges of education could be due to the rigid nature of the centralised curriculum for the colleges of education. The high sense of responsibility should lead to significant reforms aimed at preparing inclusive teachers (see e.g. Dart, 2006; Forlin & Chambers, 2011; Rouse & Florian, 2012). In the case of the Molepolole College of Education in Botswana, for instance, teacher trainees are encouraged to develop IEPs for SEN children during teaching practice, make teaching aids out of local materials for the effective teaching of SEN children and reflect on factors that affect pupils' learning (Dart, 2006).

Lastly, the majority of the respondents were of the view that Ghana was not very well prepared for the implementation of inclusive education. Consistent with the study of Tungaraza (2013) on Tanzania, the reasons behind their concerns included: inadequate teacher preparation, inadequate resources and facilities and a lack of public education and political will. In Ghana and other developing countries, these reasons and concerns constitute formidable barriers to the quality of teaching and learning for all pupils and for the achievement of inclusive education (Agbenyega, 2007; Charema, 2010; Croft, 2010; Le Fanu, 2013; Kuyini & Desai, 2009; Pinnock & Nicholls, 2012; Singal et al., 2015). There is therefore a need for major campaigns aimed at overcoming these barriers to achieve increased participation for all learners in schools' cultures, practices, curricula and assessments in sub-Saharan African countries through the provision of classroom level tools, equipment, resources, guidelines and support.

Implications and Conclusion

The findings of this study suggest that the preparation of teachers for inclusive education is perhaps one of the greatest challenges facing the implementation of inclusive education in Ghana. With inclusive education as a policy goal in Ghana, the findings of this research have several practical implications for inclusion in the future reform of teacher education and teacher educators' preparedness to train teachers.

First, the present study provides additional evidence that there is inadequate emphasis and integration of effective instructional strategies in Ghana's colleges of education. This lack of emphasis and modelling might explain the widespread adoption of teacher-centred approaches by Ghana's mainstream teachers and their inability to adapt the centralised curriculum to the needs of Ghanaian school children. These areas require further policy development to ensure the mainstreaming of inclusive principles and inclusive instructional practices in the curricula of colleges of education to enhance the implementation of inclusive education.

Second, the study provides evidence that the majority of teacher educators lack sufficient understanding of inclusive education and its purposes as well as knowledge about inclusive pedagogical practices and experience in inclusive settings. This provides support for the further development of teacher educators' profession in the area of inclusive education. The master's programmes in teacher education must incorporate courses that promote teacher educators' understanding of inclusive education, diversity, inclusive and child-centred pedagogical practices. Opportunities should also be provided for teacher educators to enable them to access a wide range of practical experiences with SEN pupils in mainstream schools, further enabling

them to model inclusive values and competences for trainees. Taken together, these strategies will provide a tremendous boost to teacher educators' preparedness in training teachers to teach pupils with SEN/disabilities in mainstream classrooms.

Lastly, there is a need for the reform of certain aspects of colleges of education – such as the lack of resources, the deep-rooted examination-oriented culture and the inflexible curriculum – that might prevent teacher educators from adopting and modelling child-centred and inclusive instructional pedagogies.

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IV

A CROSS-SECTIONAL STUDY OF PRE-SERVICE TEACHERS' VIEWS ABOUT DISABILITY AND ATTITUDES TOWARDS INCLUSIVE EDUCATION

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A cross-sectional study of pre-service teachers' views about disability and attitudes towards inclusive education

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Abstract

Teachers' attitudes towards students with disabilities and special educational needs (SEN) and their inclusion in regular education classrooms have been internationally identified as a key factor in the implementation of inclusive education. In this study, 501 participants representing a cross-section of pre-service teachers from three public colleges of education in Ghana were surveyed about their views regarding disability, level of discomfort interacting with people with disabilities and attitudes towards inclusive education. The results indicate that the pre-service teachers understood disability as an interaction between biological and environmental factors and felt comfortable interacting with people with disabilities. However, their attitudes towards inclusive education were imperceptibly positive, with some being predisposed to cultural and religious beliefs about disability. The results are discussed in relation to the impact of background variables and the range of factors that can improve pre-service teachers' attitudes towards inclusive education.

Keywords: pre-service teachers' attitudes; cultural and religious beliefs; conceptualization of disability; level of discomfort; inclusive education; Ghana

A cross-sectional study of pre-service teachers' views about disability and attitudes towards inclusive education

1. Introduction

It is estimated that about 80% of the world's population with some form of disability live in the global south (World Health Organization [WHO] & World Bank, 2011). The WHO estimates on the basis of the World Health Survey that between 2001 and 2004, the disability rate in Ghana was 12.8% (WHO & World Bank, 2011) of the entire population, which is estimated at around 27 million (Central Intelligence Agency, 2015). It is also estimated that 98% of children with disabilities in the global south do not attend school (UNICEF, 2015). According to a new report (UNESCO-UIS, 2015), between 10% and 19.9% (0.5 million) of children of primary school age in Ghana are out of school, making Ghana part of the region with the highest out-of-school rate. About 25% of out-of-school children aged six to 14 have at least one known form of disability, and the majority of them are excluded from school or have the lowest literacy levels (Ametepee & Anastasiou, 2015; Ministry of Education, 2015). The conceptualisation of disability in policy documents has considerable influence on the estimates of disability prevalence (UNICEF, 2013) and the kinds of educational policy provisions and programmes that are available for persons with disabilities (Avoke, 2001, 2002; Lindsay, 2003). This paper begins with a description of some models of disability and inclusive education and the relevant policy in Ghana. It then discusses teachers' attitudes towards disability and inclusion and teacher preparation for basic education in Ghana before delving into the method used as well as the results obtained; a discussion and conclusion.

1.1 Conceptualizing disability in Ghana

Several conceptual models have been developed to define disability. For the purpose of this paper, the individual (or medical) view, the social model view and the WHO's International Classification of Functioning, Disability and Health (ICF) model will be discussed. The individual or medical model views disability as a personal tragedy caused by impairments, health conditions, disease or trauma that must be prevented or treated by professionals (Oliver, 2013; Thomas, 2008). Consequently, this view locates disability, learning problems and deficiency within children with disability rather than in curricula, school cultures and teaching and learning approaches (Booth & Dyssegaard, 2008; Purdue et al., 2009). It leads teachers to believe that children identified with disability or SEN are different or special and must therefore receive special or segregated education (Florian & Rouse, 2009; Thomas, 2008).

Conversely, the social model views disability as a socially-created problem caused entirely by oppressive social barriers (structural and attitudinal) that people with impairments (physical, intellectual and sensory) come up against in society. This breaks the causal link between impairment and disability and has the potential to improve the lives of disabled people by advancing the common individual interests of disabled people, their social and political equality and their full civil rights (Oliver, 2013; Thomas, 2008).

Although these two models are partially valid, they only narrowly describe disability. Social model views fail to recognise the role of impairments in disabled people's lives while the medical model fails to take into account social barriers to functioning and participation (Thomas, 2008; UNICEF, 2013; WHO, 2001). The current ICF/WHO or bio-psycho-social model sought to address the limitations of these two models by conceptualising disability as a dynamic interaction between an individual (with a health condition or impairment) and his/her contextual factors (environmental and personal) (WHO, 2001, 2013). This does not attribute disability entirely to persons with impairments and acknowledges the interaction between students, the learning environment and the curriculum (McGhie-Richmond & Sung, 2013). It has been broadly endorsed by the United Nations and other international organisations (United Nations, 2006; UNICEF, 2013; WHO & World Bank, 2011). Consequently, to address the civil, cultural, political, social and economic rights of persons with

disabilities, disability is increasingly understood as a human rights issue following the adoption of the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006).

Although the current policy on inclusive education in Ghana has adopted the WHO's model (Ministry of Education, 2015), however, the individual or medical model has been found to be the most dominant in many policy documents relating to inclusive education (Anthony, 2011; Lamptey et al., 2015), thus resulting in limited educational opportunities for children with disabilities. In Ghana, residential special schools have been established for students with specific disabilities such as visual and hearing impairments and intellectual and developmental disabilities (Anthony, 2011; Avoke, 2001; Ministry of Education, 2015).

Groce (1999) has argued that different cultures have different interpretations and complex system of beliefs and practices concerning disability. Apace with the dominance of the individual model in Ghana, religious (or magical) (Avoke, 2002) and cultural (or traditionalist) models (Agbenyega, 2003; Anthony, 2011) have been found to influence people to think that disabilities are caused by an evil placed on an individual from the gods, devil, evil spirits, ghosts and powers of sorcery as a result of offences this individual has committed. They believe that disability is caused by witchcraft, evil spirits and ghosts or a curse or punishment from gods, juju or deity for one's wrongs (Agbenyega, 2003; Avoke, 2002; Botts & Owusu, 2013). These beliefs are dominant in sub-Saharan African countries (see example Anthony, 2011; Dart, 2006; Gaad, 2004). Also, studies from countries in Asian and Middle East regions such as Israel (Florian & Katz, 1983), United Arab Emirates (Gaad, 2004), and Nepal (Dhungana, 2006) have indicated that disability is often portrayed as something fearful and usually understood as retribution for sinful deeds, curse for the handicapped child and his family or caused by demons or God's will. They believe disability could be inherited by children and that disability brings bad luck in family and religious ceremonies.

1.2 The concept of inclusive education and the related policy in Ghana

Inclusive education is based on the social model and demands the adaptation of the existing regular education school system to include everyone, celebrate difference, support learning, respond to individual needs and combat discriminatory attitudes (UNESCO, 2009, 1994). Adopted at the World Conference on Special Needs Education in Salamanca, Spain, 7–8 June 1994, inclusive education is described as the education of students with SEN and disabilities, with their unique characteristics, interests, abilities and learning needs, in regular schools capable of meeting their needs within a child-centred pedagogy (UNESCO, 1994).

Recently, Ghana has successfully launched a national policy framework on inclusive education to address the challenges faced by children with SEN (Ministry of Education, 2015). The policy directive seeks inclusive education for all persons with mild and severe SEN at all levels of education. It entreats regular schools to provide education for all children, regardless of their physical, intellectual, social, emotional, linguistic or other disabilities. Ghana has made major progress towards the implementation of inclusive education by expanding the Inclusive Education Pilot Programme from 29 districts in seven regions in 2011 to 46 districts in all of its ten regions today (Ministry of Education, 2015).

However, progress regarding the implementation of inclusive education in Ghana has been very slow due to barriers such as inaccessible curricula, inadequate assessment facilities, architectural barriers, curriculum inflexibility, lack of teaching and learning materials, inadequate supply of exercise books, lack of textbooks/syllabus, a high and growing prevalence of untrained teachers, large class sizes, inadequate teacher-centred methodologies and inadequate teacher training (Agbenyega, 2007; Ametepee & Anastasiou, 2015; Kuyini & Mangope, 2011; Singal, Salifu, Iddrisu, Casely-Hayford, & Lundebye, 2015). Similar challenges are affecting the implementation of inclusive education in India (Pacha, 2012), United Arab Emirates and Jordan (Alghazo, Dodeen, & Algaryyouti, 2003; Nisreen, 2013), Bangladesh (Malak, 2013) and Egypt (El-Ashry, 2009; Nisreen, 2013).

Another barrier facing the Government of Ghana in the development of educational and social inclusion for

those with disabilities are the dominant religious/magical or cultural beliefs about disability that engender negative attitudes and prejudices towards people with disabilities (Agbenyega, 2003, 2007; Anthony, 2011; Avoke, 2002; Ghana Education Service, 2004; Naami & Hayashi, 2012). Consequently, in Ghana children with disabilities are often killed or isolated in rooms, hidden from public view by their families or kept in institutions secluded from mainstream society, such as religious camps and residential special schools. These beliefs have resulted in the derogatory labelling, stigmatisation, discrimination and social exclusion of persons with disabilities in all aspects of life, human rights abuses and the segregation of children with disabilities into residential special schools (Agbenyega, 2003, 2007; Anthony, 2011; Avoke, 2001, 2002; Botts & Owusu, 2013; Dart, 2006; Kassah, Kassah, & Agbota, 2012; UNESCO, 1988). Those in regular schools are mistreated by their teachers and other students; they are labelled as stubborn, lazy, wayward, stupid, idiotic and blockheaded in classrooms characterised by excessive corporal punishment such as caning, knocking, ears pulling and pinching (Agbenyega, 2003).

Similarly, studies from Israel (Florian & Katz, 1983), Bangladesh (Malak, 2013), Nepal (Dhungana, 2006), India (Pacha, 2012), United Arab Emirates and Jordan (Alghazo et al., 2003; Gaad, 2004) and other cross-cultural studies (Groce, 1999) have shown that these cultural and ethnic beliefs about causes of disabilities appear to influence negative attitudes towards the disabled and marginalized minority groups and their educational and social inclusion. The cultural understanding of disability places enormous limitation on the lives of individuals with disability much more than their specific type of impairments (Groce, 1999). Consequently, Ghana has adopted inclusive education as a strategy to tackle these discriminatory attitudes that result in the exclusion of students with disabilities from teaching and learning processes in the classroom and to include those who are out of school due to SEN requirements (Ministry of Education, 2015).

1.3 Teachers' attitudes towards disability and inclusion

It is globally recognised that teachers' attitudes towards students with disability and SEN and their inclusion in regular education classrooms are a key factor in the implementation of inclusive education. Challenging teachers' negative attitudes towards persons with disabilities and their educational and social inclusion is the first step and most important factor towards creating more accessible environments for persons with disabilities (Avramidis & Norwich, 2002; Campbell, Gilmore, & Cuskelly, 2003; Chhabra, Srivastava, & Srivastava, 2010; Parasuram, 2006; WHO & World Bank, 2011). There are mixed results regarding teachers' attitudes towards the inclusion of students with SEN and disabilities into regular classrooms in both developed and developing countries.

For instance, some results have shown that the majority of teachers hold neutral or negative attitudes towards students with SEN and disabilities and their inclusion in regular primary education (Chhabra et al., 2010; De Boer, Pijl, & Minnaert, 2011; Hudson, Graham, & Warner, 1979; Parasuram, 2006) while others have found evidence of positive teacher attitudes (Avramidis & Norwich, 2002; Scruggs & Mastropieri, 1996). Similarly, some studies have found positive attitudes among pre-service teachers towards disability (Forlin & Chambers, 2011; Haimour, 2012) and inclusive education (Lambe & Bones, 2006; Muwana, 2012); others have found negative attitudes towards disability (Alghazo et al., 2003) and inclusive education (EL-Ashry, 2009; Kuyini & Mangope, 2011; Malak, 2013).

Both pre- and in-service teachers have raised several concerns about inclusive education programmes. These concerns, identified as factors impacting teachers' attitudes towards inclusive education, include insufficient time, inadequate teacher preparation, lack of skills, lack of resources, lack of administrative support services, lack of knowledge about disabilities, high workloads, inflexible curricula, large class sizes and the nature of the disability (Avramidis & Norwich, 2002; Chhabra et al., 2010; De Boer et al., 2011; Hudson et al., 1979; Lambe & Bones, 2006; Scruggs & Mastropieri, 1996).

Further to the above educational environment-related variables, child-related variables (such as the nature of

disabilities) and teacher-related variables (such as gender, previous teaching experience, experience of contact with persons with disabilities, training and teachers' beliefs) have also been found to impact significantly on teachers' attitudes (Avramidis & Norwich, 2002). Some studies have shown that pre-service teachers were more positive about including students with mild support needs, such as those who have difficulty expressing their thoughts verbally (Forlin & Chambers, 2011; Kuyini & Mangope, 2011), students with learning disabilities, hearing and health impairments (McCray & McHatton, 2011) and physical disabilities (Muwana, 2012). Studies from Ghana (Kuyini & Mangope, 2011), United Arab Emirates (Gaad, 2004; Nisreen, 2013) and Egypt (El-Ashry, 2009) have affirmed that teachers are more inclined to include students with minor and mild disabilities than students with more severe disabilities.

Regarding teacher-related variables, some studies have shown that female teachers were more positive towards students with disabilities (Haimour, 2012) and inclusion (Parasuram, 2006). Conversely, Forlin, Loreman, Sharma and Earle (2009) found male pre-service teachers to be more positive about inclusion. Others have shown that teachers with prior teaching experience with children who have disabilities (Chhabra et al., 2010; Forlin et al., 2009; Nisreen, 2013) demonstrate more positive attitudes and less discomfort. Furthermore, some educational programme specialisations positively influence pre-service teachers' attitudes towards students with disabilities and inclusion, for example, special education (Haimour, 2012) and education and humanities (Alghazo et al., 2003). Forlin and Chambers (2011) also observed that previous training, the level of experience of educating students with disabilities or achievement of higher qualifications do not influence teachers' overall attitudes or concerns about inclusion. Conversely, increased contact with persons with disabilities has been found to explain positive changes in scores on comfort levels (Carroll, Forlin, & Jobling, 2003; Sharma et al., 2008). Pre-service teachers with a family member or close friend with a disability exhibit more positive attitudes towards students with disabilities (Haimour, 2012) and inclusion (Dart, 2006; Parasuram, 2006) and fewer concerns about the inclusion of students with disabilities into regular classes (Chhabra et al., 2010; Forlin et al., 2009; Malak, 2013).

Above all, pre-service teacher education has been found to significantly promote teachers' knowledge about disabilities, their attitudes towards disability and inclusive education and their confidence and competence in teaching children with diverse educational needs (Forlin & Chambers, 2011; Hudson et al., 1979; McCray & McHatton, 2011). Studies have shown that after taking a course in special education, pre-service teachers became more positive, felt more comfortable interacting with people with disabilities and had fewer concerns about implementing inclusive education in classrooms (Campbell et al., 2003; Carroll et al., 2003; Dart, 2006; Sharma et al., 2008; Forlin et al., 2009). Some of these pre-service special education courses have been effective because of the inclusion of elements such as structured fieldwork experiences and interactions with people with disabilities (Campbell et al., 2003; Carroll et al., 2003; Hudson et al., 1979) as well as an emphasis on inclusive instructional strategies and the incorporation of assignments that require students to reflect on their own practices (Sharma et al., 2008).

1.4 Initial teacher education for basic education in Ghana

Initial teacher education for basic education in Ghana is a three-year diploma programme in basic education offered in all the 38 public and three private colleges of education. Basic education is made up of kindergarten, primary school and junior high school. The current requirement into colleges of education is the Senior High School Certificate Examination. Pre-service teachers spend the first two years in college undertaking coursework, school attachments and on-campus teaching practice. The third year provides an opportunity for them to spend time in real classroom situations to study and learn to teach.

Special education content knowledge and skills have been introduced into the regular pre-service training curriculum since late 1980s to provide regular classroom teachers with skills to identify children with SEN and disabilities and to combat the negative attitudes of teachers regarding integration (UNESCO, 1988). All pre-service teachers currently undertake a two-credit course in special education at the end of their second year.

At the time of the data collection, the second- and third-year pre-service teachers had completed the SEN course.

Most studies on inclusive education in Ghana have focused on in-service regular classroom teachers' and principals' attitudes, knowledge and concerns about inclusive education (Agbenyega, 2007; Ocloo & Subbey, 2008) as well as university students' attitudes towards disability (Naami & Hayashi, 2012). One study on pre-service teachers' attitudes and concerns about inclusive education in Ghana found imperceptibly positive attitudes among pre-service teachers (Kuyini & Mangope, 2011). This study further found that training in special/inclusive education was the only background variable relating to pre-service teachers that significantly improved their attitudes. Moreover, they were most concerned about lack of resources, workload and their own knowledge and skills for the implementation of inclusive education.

Previous studies have noted that prejudiced perceptions and negative attitudes towards persons with special needs and disabilities resulting from religious and cultural beliefs about disability could challenge the educational and social inclusion of people with disabilities (Agbenyega, 2003, 2007; Anthony, 2011; Avoke, 2002; Botts & Owusu, 2013; Ghana Education Service, 2004). However, despite the increased interest in the implementation of inclusive education in Ghana, it is still not known the views and opinions pre-service teachers about these cultural and religious beliefs, their actual understanding of disability, their level of discomfort interacting with people with disabilities and the effectiveness of the special education course in addressing these issues.

2. Research objectives

A survey research approach was adopted to determine pre-service teachers':

- Views and opinions regarding the cultural and religious beliefs about disability,
- Views of disability,
- Level of discomfort interacting with people with disabilities, and
- Attitudes towards inclusive education.

The effects of the independent variables on cultural and religious beliefs, understanding of disability, level of discomfort interacting with people with disabilities and attitudes towards inclusion were also determined.

2.1 Method

Participants **-** The study comprised 501 participants representing a cross-section of pre-service teachers at different educational levels (i.e. first year, second year and third year) from three of the 38 public colleges of education in Ghana. The three colleges were selected on the basis of proximity and ease of access. The mean age of the participants was 23.81 (SD = 2.35). Table 1 presents the demographic characteristics of the participants that might explain the variance of the dependent variables.

Table 1

Demographic characteristics of participants

Characteristics	*n*	%	*M*	*SD*
Gender				
Male	326	67	1.33	.47
Female	164	33		
College of Education				
College A	226	45		
College B	129	26	1.84	.85
College C	146	29		

Table 1 … continued

Characteristics	*n*	%	*M*	*SD*
Year				
First year	204	41		
Second year	169	34	1.85	.80
Third year	128	26		
Subject specialization				
Math/science	143	37		
Science/technical	52	13		
General arts	73	19	2.67	1.57
Social studies	37	10		
Vocational studies	86	22		
Completion of SEN course				
Yes	291	59		
Not yet	201	41	1.41	.49
Previous teaching experience				
None	212	43		
Some	279	57	1.57	.50
Friends/classmates with disabilities				
Yes	229	46		
No	266	54	0.46	.50

Procedure - Ethical approval was obtained from the University of Jyvaskyla and all the principals of the colleges of education involved in the study as a means of gaining genuine consent from respondents. These were in line with the ethical standards of the National Advisory Board on Research Ethics in Finland (2009). The main aim of the research was explained to the participants, and anonymity was assured. The pre-service teachers who voluntarily collected the questionnaires agreed to participate in the study. Each cohort in each college of education comprised nearly 300 pre-service teachers. To ensure a good response rate, 100 questionnaires were distributed to each educational level in each college except one educational level in one of the colleges, which received 150 survey forms due to its higher numbers. Out of the 950 survey questionnaires distributed, 501 were completed and returned for analysis, representing a return rate of 53%.

2.2 Measures

Views on religious/cultural beliefs regarding causes of disability - Using a Likert scale, the participants were asked to indicate the extent to which traditional Ghanaian religious and cultural beliefs about the causes of disability were endorsed within their cultures as well as their agreement with these beliefs (ACB). The contents of the items are presented in Table 2. The item concerning their agreement was measured using a Likert scale from 1 to 5, including a neutral midpoint, with 1 indicating 'strongly disagree' and 5 indicating 'strongly agree'.

Level of discomfort interacting with people with disabilities - In the next part, a 4-item scale was used to measure the level of discomfort interacting with people with disabilities (LD). Two of these statements were originally designed by Gething and Wheeler (1992) 'The Interaction with Disabled Persons Scale', which addressed reactions suggesting discomfort interacting with people with disabilities, and appeared to demonstrate greater internal consistency (see e.g. Iacono et al., 2009; Sharma et al., 2008). These items were: 'I do not feel comfortable around people with disabilities' and 'I am afraid to look at a person with a disability straight in the face'. The other two statements were self-developed based on how people feel getting closer to people with disabilities in Africa (Botts & Owusu, 2013; Dart, 2006; Kassah et al., 2012) and Asian and Middle East countries (Dhungana, 2006; Gaad, 2004). These items were: 'I find it difficult to relate with students with disabilities and special needs' and 'Disabilities can be transmitted by bodily contact'. All items were measured using a Likert scale from 1 to 5, with a neutral midpoint, with 1 indicating 'strongly disagree' and 5 indicating 'strongly agree'. The reliability of the scale was satisfactory with $\alpha = .73$.

Pre-service teachers' views about disability - The next part measured the construct of 'Pre-Service Teachers'

Views about Disability' (VD). Six items were self-developed: 'To what extent do you agree that disabilities are caused by maternal exposure to drugs, x-rays and radiation?' 'To what extent do you agree that disabilities are caused by maternal malnutrition?' 'To what extent do you agree that disabilities can be caused by maternal diseases?' 'To what extent do you agree that disabilities can be caused during child birth?' 'To what extent do you agree that the home and school environment can make a child disabled? and 'To what extent do you agree that disabilities are caused by chromosomal or genetic abnormalities?' The items were measured using a Likert scale from 1 to 5, with a neutral midpoint, with 1 indicating 'strongly disagree' and 5 indicating 'strongly agree'. The reliability of the scale was satisfactory with $\alpha = .68$. An exploratory factor analysis of the six items yielded a unidimensional scale with 41.32% of the total variance explained. The Kaiser-Meyer-Olkin measure of sampling adequacy of .75 and Bartlett's test of sphericity were also highly significant: $x^2(15) = 491.587$, $p = .00$.

Pre-service teachers' attitudes towards inclusive education - The last section measured 'Pre-Service Teachers' Attitude towards Inclusive Education (PTAIES)'. The original scale was designed by EL-Ashry (2009) and consisted of 33 items drawn from previous studies to measure constructs such as benefits of inclusion, inclusive classroom management, ability to teach students with disabilities, special versus inclusive education and placements and perspectives towards teaching students with specific types of disabilities. This attitude scale was adopted in this study because of its cultural relevance to African contexts and its use for pre-service teachers in Egypt (EL-Ashry, 2009) and Zambia (Muwana, 2012). To ensure greater data reliability, the categories of SEN/disabilities, as stated in the special education curriculum of the colleges of education in Ghana, were used instead of those adopted in previous studies. On the basis of reliability and correlation analysis, 24 original items were removed from the scale because their item-total correlations were lower than .25. The scoring of five items on the short version containing 19 items (i.e. 7, 8, 9, 10 and 12) was reversed, yielding a reliability of $\alpha = .70$.

The resulting data was entered into the IBM SPSS Statistics Program 22 and was analysed using simple frequencies, percentages, correlations, independent-samples t-tests and one-way between-groups analyses of variance.

3. Results

3.1 Views on cultural and religious beliefs

The participants' responses presented in Table 2 show that the culture of the majority of pre-service teachers endorsed some of the traditional Ghanaian cultural and religious beliefs about the causes of disability to some or very little extent. With regard to their agreement with cultural and religious beliefs about the causes of disability, the results show that nearly half of the participants (49%) did not agree with the religious/magical and cultural beliefs; 25% agreed; and 26% were undecided. The overall mean score on the scale was 2.57 ($SD = 1.20$). Comparisons among the independent variables indicated that College C had the highest score ($M = 2.84$), followed by College A ($M = 2.54$) and College B ($M = 2.33$). The mean score for College C was significantly higher than that of colleges A and B according to post-hoc comparisons using the Tukey HSD test $F(2, 493) = 6.57$, $p = .00$. However, the results did not indicate any statistically significant difference between the groups in relation to the other background variables.

3.2 Views about disability

The mean score for biological factors in causing disabilities ($M = 4.25$) was significantly higher than that pertaining to environmental factors ($M = 3.55$), $t(498) = 148.52$, $p = .00$. The first-year participants recorded the highest score for biological factors ($M = 4.29$), followed by the second-year participants ($M = 4.28$), with the third-year respondents ($M = 4.12$) scoring significantly lower according to post-hoc comparisons using the Tukey HSD test: $F(2, 496) = 3.55$, $p = .03$.

The total analysis of all 501 respondents on all the items of the VD scale indicated an overall mean of 4.13 (*SD* = .62). The male pre-service teachers recorded higher mean scores (*M* = 4.20) than their female counterparts (*M* = 3.99), *t*(264.74) = 3.28, *p* = .00. The first-year pre-service teachers also reported the highest score (*M* = 4.18), followed by the second-year participants (*M* = 4.17), while the third-year respondents scored (*M* = 3.99) significantly lower than the first- and second-year participants according to post-hoc comparisons using the Tukey HSD test *F* (2, 496) = 4.23, *p* = .02.

With regard to the level of discomfort interacting with people with disabilities, the total analysis of all 501 respondents indicated an overall mean of 1.97 (*SD* = .82). No significant differences were found when all the independent variables were compared.

Table 2

Participants' (N = 501) responses to questions on cultural beliefs

Cultural beliefs	Very large extent	Large extent	Don't know	To some extent	Only very little	Sum %
My CULTURE believes that disabilities are caused by sorcery, witchcraft or the devil?	7	12	10	41	30	100%
My CULTURE believes that children are born with disabilities because their parents committed offences against God, gods or ancestral spirits?	9	13	16	29	33	100%
ACRB scale	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Sum %**
How much do you agree with the CULTURAL beliefs?	5	20	26	25	24	100%

3.3 Attitudes towards inclusive education

The total analysis of all 501 respondents on all the PTAIES items indicated an overall mean of 3.35 (*SD* = .46). College C had the highest score (*M* = 3.45), followed by college B (*M* = 3.34). College A scored (*M* = 3.29) significantly lower than College C according to post-hoc comparisons using the Tukey HSD test *F* (2, 496) = 5.03, *p* = .01. However, the results did not indicate any statistically significant difference between the groups regarding the other background variables. The participants expressed the most positive attitudes towards educating students with physical disabilities (*M* = 3.84) and behavioural problems (*M* = 3.56) in general education classrooms and the least positive attitudes towards those with hearing (*M* = 2.49) and visual (*M* = 2.61) impairments.

Principal component analysis of the short version of the attitude scale - A principal component analysis of the short version of the attitude scale with varimax rotation yielded three components (Table 3): benefits of inclusion (Component I), inclusive classroom management (Component II) and perspectives towards teaching students with specific types of disabilities (Component III). Component I consisted of items: 1, 2, 3, 4, 5, 6 and 11; Component II consisted of items: 7, 8, 9, 10 and 12; and Component III consisted of items: 13, 14, 15, 16, 17, 18 and 19. The items loaded on the first two components were consistent with those of Muwana (2012), who also modified the original scale in her study of Zambian student teachers' attitudes towards inclusive education. The reliability of the three components were: α = .78, α = .65 and α = .72, with total mean scores of *M* = 3.95, *M* = 2.76 and *M* = 3.17, respectively. The components and their values, means and standard deviations are presented in (Table 3).

Table 3

Factor loading for principal component analysis with varimax rotation and Kaiser normalisation for attitudes scale and their mean scores and standard deviations

	Statements	Components			Communalities	*M*	*SD*
		I	II	III			
1	Students with disabilities/special needs should be given every opportunity to function in the general classroom where possible.	.80			.96	4.22	0.96
2	The inclusion of students with disabilities/special needs can be beneficial for students without disabilities.	.60			.47	3.68	1.15
3	Inclusion promotes social independence among students with disabilities/special needs.	.66			.57	3.88	1.06
4	The nature of the study in general classrooms will promote the academic growth of the students with special needs/disabilities.	.54			.39	3.69	1.15
5	Inclusion promotes understanding and acceptance of individual differences between students without disabilities/special needs and students with disabilities/special needs.	.57			.41	4.03	0.95
6	Inclusion promotes self-esteem among children with disabilities/special needs.	.53			.43	3.98	0.96
11	Students with special needs can be best served in general education classrooms.	.80			.96	4.22	0.96
7	Students with disabilities/special needs are likely to create confusion in the general education classroom.		.61		.46	3.07	1.22
8	It is likely that the students with special needs will exhibit behaviour problems in a general education classroom.		.71		.49	2.63	1.10
9	Increased freedom in the general classroom will create too much confusion for the student with disabilities/special needs.		.66		.47	2.73	1.11
10	The extra attention students with disabilities/special needs require will be to the detriment of the other students in the classroom.		.54		.48	2.66	1.11
12	It is difficult to maintain order in classrooms that contain a mix of students with and without disabilities/special needs.		.65		.51	2.66	1.23
13	Visually impaired			.55	.80	2.61	1.41
14	Hearing impaired			.66	.76	2.49	1.22
15	Intellectually disabled			.70	.51	3.03	1.23
16	Learning disabilities			.71	.58	3.38	1.14
17	Physically disabled			.43	.41	3.84	1.07
18	Behavioural problems			.59	.55	3.56	1.14
19	Speech and language problems			.64	.48	3.26	1.30
	Total variance explained for each component	16.69	14.29	11.65			

Note. The total variance explained is 42.62%.

Comparisons between the independent variables of Component I - The results from the comparative analysis indicate that men were more positive about the benefits of inclusion (M = 4.00) than women (M = 3.86), $t(482) = 2.22$, $p = .03$. Those pre-service teachers who have had friends and classmates with disabilities were more positive about the benefits of inclusion (M = 4.02) than those who have not (M = 3.89), $t(487) = -2.18$, p = .03. The mean scores also differed among the colleges: College C had the highest score (M = 4.08), followed by college B (M = 3.92), while College A scored (M = 3.89) lower than College C according to post-hoc comparisons using the Tukey HSD test $F(2, 492) = 3.86$, $p = .02$.

Comparisons between the independent variables of Component II - Pre-service teachers who had not completed the SEN course achieved higher mean scores for inclusive classroom management (M = 2.85) than those who had (M = 2.70) $t(391.24)$ =-2.12, p = .03. The first-year participants achieved the highest mean score (M = 2.84), followed by those in the second year (M = 2.76). Post-hoc comparisons using the Tukey HSD test indicated that the third-year participants scored (M = 2.63) significantly lower than their first-year counterparts F (2, 492) = 3.00, p = .05. Also, College B had the highest score (M = 2.88), followed by College A (M = 2.76), and College C (M = 2.65) differed significantly only from College B, as indicated by post-hoc comparisons using the Tukey HSD F (2, 492) = 3.09, p = .05.

Comparisons between the independent variables of Component III - The results also indicate that those who had completed a SEN course (M = 3.27) showed more positive perspectives regarding teaching students with specific types of disabilities than those who had not (M = 3.00), $t(478)$ =3.79, p = .00. Moreover, those who have had friends and classmates with disabilities (M = 3.24) showed more positive perspectives regarding teaching students with specific types of disabilities than those who have not (M = 3.10), $t(481)$ =-.2.00, p = .05. College C recorded the highest score (M = 3.38) while College A (M = 3.07) and College B (M = 3.09) scored significantly lower than College C according to post-hoc comparisons using the Tukey HSD test F (2, 486) = 8.01, p = .00. The second-year participants also scored the highest (M = 3.30), followed by those in the third year (M = 3.24). Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the first-year participants (M = 3.01) was statistically different from those of the participants in their second and third years F (2, 486) = 7.50, p = .00.

4. Discussion

The present study was designed to determine pre-service teachers' views and opinions regarding the religious/magical and cultural beliefs about disabilities, views about disability, level of discomfort interacting with people with disabilities, attitudes towards inclusive education as well as the effect of the background characteristics on these variables. Overall, the study found that pre-service teachers disagreed with religious/magical and cultural beliefs about disabilities. However, only about half of them disagreed with the beliefs that disability is caused by sorcery, witchcraft or the devil or that it is the result of an offence against God, gods or ancestral spirits. A quarter of them agreed and over a quarter of them was undecided about these beliefs. The results are consistent with other findings indicating that university students in Ghana (Naami & Hayashi, 2012), most pre-service teachers in Botswana (Dart, 2006), teachers in United Arab Emirates (Gaad, 2004) and pre-service teachers in Bangladesh (Malak, 2013) are predisposed to misconceptions and superstitious beliefs about the causes of disability which influence them to worry about students with disabilities.

The study further found that the only background variable of the respondents that significantly impacted on agreement with religious/magical and cultural beliefs was the differences in the colleges of education: College C strongly agreed while College A demonstrated the least agreement. Surprisingly, no differences were found between those who had completed the SEN course and those who had not. This finding was unexpected and suggests that training in the SEN course was not significantly effective in repudiating religious/magical and cultural beliefs. The considerable number of pre-service teachers still predisposed to these beliefs might adopt attitudes and teaching practices that are hostile to the inclusion of students with disabilities and special needs in regular classrooms. Teacher education must adopt effective strategies to adequately address these negative, deep-rooted religious/magical and cultural beliefs, attitudes and prejudices and the barriers they might create.

Consistent with the findings of Kuyini and Mangope (2011), the results of the current study showed that pre-service teachers' attitudes were imperceptibly positive. Pre-service teachers held more positive attitudes about the benefits of the inclusive education component and were strongly positive about the inclusion of students with specific disability components. However, they were quite undecided about their inclusive classroom management skills. They were more positive about educating students with physical disabilities in general education classrooms but expressed the least positive attitudes towards the education of students with

sensory, hearing and visual impairments. Similarly, studies from Zambia (Muwana, 2012), United Arab Emirates (Gaad, 2004; Nisreen, 2013) and Egypt (El-Ashry, 2009) reinforced that teachers support the inclusion of students with mild disabilities. However, inclusion for some and exclusion for others makes the concept of inclusion meaningless (Gaad, 2004).

Contrary to expectations, the pre-service teachers' attitudes towards inclusion differed only among the colleges of education, with College C holding more positive attitudes towards inclusive education. Previous studies from Botswana, Ghana, India, Bangladesh, Egypt, United Arab Emirates and Jordan have shown that other background variables promote positive attitudes towards inclusive education, for example; the completion of the special education course (Campbell et al., 2003; Dart, 2006; Kuyini & Mangope, 2011; Sharma et al., 2008); closer contacts with persons with disabilities (Dart, 2006; Malak, 2013; Parasuram, 2006); educational programme specialisation (Alghazo et al., 2003; Haimour, 2012), advanced levels of education and the gender of pre-service teachers (EL-Ashry, 2009) and previous teaching experiences with children who have disabilities (Nisreen, 2013). These findings suggest that the SEN course needs to be improved in order to promote positive pre-service teacher attitudes towards inclusive education.

However, the three components within the attitudes scale yielded some significant differences between the independent variables. The results indicate that male pre-service teachers and those who have had close contact with people with disabilities were more positive about the benefits of the inclusive education component. The inclusion of students with specific disabilities in regular classrooms was viewed positively by those who had completed the SEN course, by the second- and third-year participants and by those who have had close contact with people with disabilities.

Despite the centralised nature of the curriculum within the colleges of education in Ghana, College C held more positive attitudes about the benefits of inclusive education and the perceptions regarding the inclusion of students with specific disabilities. College B held more positive attitudes regarding inclusive management skills. This finding suggests that, perhaps, some colleges are more effective at improving teachers' attitudes in some aspects than others.

Inclusive education is rooted in the social model view of disability and requires the removal of structural and attitudinal barriers and an adaptation of the existing regular education school system to meet the learning needs of all learners (UNESCO, 2009, 1994). This means that understanding disability from the social model perspective will promote the implementation of inclusive education. Generally, the pre-service teachers understood disability in terms of the WHO's biopsycho-social model of disability adopted in the current policy on inclusive education in Ghana (Ministry of Education, 2015). The conceptualisation of this model was higher among males and first- and second-year participants. However, the pre-service teachers' understanding of disability was significantly higher in terms of biological factors than environmental factors. The third-year pre-service teachers' understanding of disabilities in terms of environmental factors was higher than that of their first- and second-year counterparts. This could be due to their awareness of the school environmental factors in creating disabilities during teaching practice.

Another important finding was that, generally, pre-service teachers felt more comfortable interacting with people with disabilities. These results are inconsistent with those of Naami and Hayashi (2012), who found that university social work students felt uncomfortable interacting with persons with disabilities. Nevertheless, contrarily to findings of previous studies, no significant differences were found when all the independent variables were compared on comfort levels. Other studies have shown that meaningful contact with persons with disabilities (Carroll et al., 2003; Sharma, Forlin, & Loreman, 2008) and taking a special education course (Campbell et al., 2003; Dart, 2006) explained changes in scores on comfort levels in a positive direction.

5. Conclusions

The results of this study have important implications for teacher preparation programs, school administrators,

policy makers, teachers, and students with regards to the successful implementation of inclusive education policy in Ghana (see Ministry of Education, 2015) and other African, Asian and Middle East contexts with similar cultural beliefs about disabilities. The findings indicate that more needs to be done to address pre-service teachers' views and opinions regarding cultural beliefs about the causes of disability and special needs and attitudes towards inclusive education. The SEN course appears to be ineffective at expunging cultural beliefs about disability and barely promotes positive attitudes among pre-service teachers.

Studies must be carried out in these contexts to analyse the effects these cultural beliefs have on teachers' attitudes towards inclusive education. The understanding of the belief structures of teachers is an essential step to cultural and attitudinal change to improve teachers' professional preparation and teaching practice to ensure successful inclusion (Gaad, 2004; Schechtman & Or, 1996). Schechtman and Or (1996) argued that radical methods of intervention is required to effectively deal with teachers' distorted beliefs and convictions about self and others. Their study from Israel showed that training programs could alter teachers' stereotypic thinking and prejudices regarding students with SEN. The initial teacher education programs in African, Asian and Middle East contexts should adopt well-planned intervention programs and practical measures to enable pre-service teachers to critically reflect on their beliefs and attitudes towards persons with disabilities.

The teacher training special education course should incorporate assignments that require pre-service teachers to reflect on their own practices, such as structured field experiences that increase pre-service teachers' contact with people with disabilities. These strategies have been found to be effective at increasing pre-service teachers' knowledge about disability, explaining positive changes in scores on comfort levels and improving their attitudes towards disability and inclusion. Also, more emphasis must be placed on inclusive instructional strategies and the social model understanding of disability in the special education course to prepare teachers to adapt the curricula and school practices to improve learners' access to meaningful learning. The policies on inclusive education must adopt the social model and human rights understanding of disability to improve educational opportunities for children with disabilities and the lives of disabled people. Also, school administrators and teachers should endeavour to model positive attitudes for students without disabilities and encourage learning relationship among students.

The present study successfully determined pre-service teachers' views and opinions on religious/magical and cultural beliefs regarding disabilities, level of discomfort in interacting with people with disabilities, their attitudes towards inclusive education, views on disability and the impact of the special education course on these factors. However, more research on this topic needs to be undertaken to determine the extent to which pre-service teachers conceptualise disability as a political, economic and human rights issue.

6. References

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