UNIVERSITY OF EDUCATION, WINNEBA

ASSESSING TEACHERS' CAPACITY IN TEACHING IN INCLUSIVE CLASSES IN ELEVEN SELECTED SCHOOLS IN AKUAPEM NORTH MUNICIPALITY

GIDEON KOMLA DOYI

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UNIVERSITY OF EDUCATION, WINNEBA

DEPARTMENT OF SPECIAL EDUCATION

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GIDEON KOMLA DOYI

A Dissertation in the DEPARTMENT OF SPECIAL EDUCATION, of the FACULTY OF EDUCATIONAL STUDIES, submitted to the School of Research and Graduate studies, University of Education, Winneba, in partial fulfilment of the requirement for the award of Degree of MASTER OF EDUCATION IN SPECIAL EDUCATION of the UNIVERSITY OF EDUCATION, WINNBA
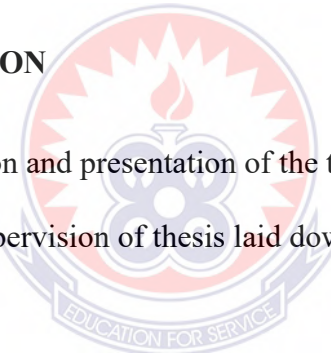
2014

STUDENT'S DECLARATION

I, Gideon Komla Doyi declare that thesis, with the exception of quotations and references contained in published works which have been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part whole, for another degree elsewhere.

Signature: …………………

Date: ……………………..

SUPERVISOR'S DECLARATION

I hereby certify that the preparation and presentation of the thesis were supervised in accordance with guideline and supervision of thesis laid down by the University of Education, Winneba.

Name of Supervisor: ……………………………

Signature: …………………………….......

Date: ………………………………………

ACKNOWLEDGEMENT

DEDICATION

To my dear wife, Grace Donku and children Bright, Fortune and Angela whose support and encouragement I always cherish.

TABLE OF CONTENTS

CONTENT   **PAGES**

LIST OF TABLES

ABSTRACT

This study focused on the assessment of teachers' capacity in teaching in inclusive classes in ten selected schools in Akuapem North Municipality. In an extension, the study seeks to understand the quality of training in the existing inclusive teacher education programmes in Ghana and how regular classroom teachers are prepared in carrying out inclusive task in everyday classroom. Four research questions were raised to direct the study. The research design for the study was descriptive survey. A total of 85 teachers formed the sample size of the study. The data for the study was obtained through the use questionnaire. Data was analyzed quantitatively and statistically using percentages. The result indicated that teachers were exposed to in-service training on inclusive education. However, there was inadequate pre-service preparation to equip teachers with requisite knowledge on inclusive education. Recommendations therefore, were made for the need to provide adequate pre-service preparation and in-service training for successful inclusive education in Ghana. The study concluded that for inclusive education to succeed and meet the diverse needs of all children, quality teacher preparation, adaptation of teaching and learning strategies, supply of adequate special instructional materials and support services for teachers are paramount and cannot be discounted.

CHAPTER ONE

INTRODUCTION

Background to the Study

One major issue that seems to have generated a lot of debate in education circles in Ghana is how to effectively equip classroom teachers with requisite knowledge towards successful inclusive education in Ghana. Inclusive classrooms are those in which students with disabilities are educated alongside their non-disabled peers. In recent times however, the concept of inclusion has been expanded to include those who are at risk of marginalization or exclusion for whatever reason. UNESCO (2009) cited in Hayford (2013) states that inclusive education aims at eliminating exclusion that is a consequence of negative attitudes and a lack of response to diversity in race, social status, social class, ethnicity, language, religion, gender, sexual orientation, and ability. This definition considers inclusive education beyond disability issues and includes quality teaching, the attendance, involvement and achievement of all students.

As the world moves towards a more inclusive education system, it is imperative to equip teachers to work in more diverse classrooms from the start of their teaching careers. Golder, Norwich and Bayliss (2005), set their accounts in the contexts of policy requirements in England and international trends towards more inclusive teacher education. They report on an initiative designed to enhance the knowledge, skills and attitudes of trainee teachers and to equip them to differentiate their teaching to meet the individual needs of all pupils including those with special educational needs.

In Ghana, Act 778 section (5), has defined inclusive education as the value system which holds that all persons who attend an educational institution are entitled

1

to learning achievement and the pursuits of excellence in all aspects of their education, and which transcends the idea of physical location but incorporates the basic values that promote participation, friendship and interaction (Ghana Government, 2008).

For successful implementation of inclusive education in Ghana, there is the need for teachers who can provide effective instruction to students including those with disabilities in inclusive settings. It is the knowledge, beliefs and the values of the teacher that are brought to bear in creating an effective learning environment for pupils, making the teacher a critical influence in education for inclusion and development of inclusive schools (Reynold, 2009). Florian (2009) states "The task of initial teacher education is to prepare people to enter a profession which accepts individual collective responsibility for improving the learning and participation of all children"(p.596). Savolainen (2009) states that teachers play an essential role in quality education and also added that the quality of education system cannot exceed the quality of its teachers.

The UNESCO Policy Guidelines on Inclusive Education (2009) sets out that, inclusive schools have to develop ways of teaching that respond to individual differences and benefits of all children. Central to successful inclusion are mainstream teachers who take ownership of inclusion and who believe in their own competence to educate students with special educational needs (Walther-Thomas et al., 2009). Teachers need confidence in their ability and the knowledge and skills in inclusive education to meet the school climate (Carroll, Forllin, & Jobling, 2003).

Skills required for inclusive education involve being able to identify and assess special needs children, being able to adapt curricular content, teaching methods to assist special needs children (Downing, 2002). This implies that educators'

2

knowledge, skills and competence are important ingredients in the effective implementation of the inclusive programme. Student achievement can be compromised unless teacher training programmes change course to embrace a new wave of pedagogical practice that value all learners (Carrington, Deppeler, & Mose, 2010).

Teachers are crucial in determining what happens in classrooms and there are those who would argue that the development of more inclusive classrooms requires teachers to cater for different student learning needs through the modification or differentiation of the curriculum

Teachers are crucial in determining what happens in classrooms and there are those who would argue that the development of more inclusive classrooms requires teachers to cater for different student learning needs through the modification or differentiation of the curriculum (Forlin, 2004).

Learning to teach in an inclusive setting is a highly complex and dynamic activity, and this has to do with that context that uses a whole school approach. A school approach to inclusive education involves using multiple strategies that have a unifying purpose and reflect a common set of values. It requires that policy makers, teacher educators, teachers, parents, students and the community working together to create an education environment that promotes equal opportunity for learning well-being on social and emotional levels (Avramidis, 2005). According to Agbenyega and Deku (2011), while we cannot claim a definitive form of inclusive pedagogy, an attempt can be made to stir up a rich and diverse knowledge base that informs the preparation of teachers for inclusive education.

Ross- Hill (2009) stated that traditionally, regular classroom teachers have beenapprehensive towards inclusive practices, either because of their inability to

accommodate students with special needs in their classroom, because they feel they lack necessary time to supplement the curriculum or because they simply do not favour inclusive education practices in general. Teachers who have favourable attitudes toward inclusion generally believe that students with disabilities belong in general education classroom, that they can learn there, and that the teachers have confidence in their abilities (Berry, 2010). Meijer et al (2006) found that there is the need for positive teacher attitudes and for teachers to create a sense of belonging to support effective inclusive practice.

With the increasing diversity among children in today's classrooms, teacher preparation programmes are required to train teachers who areable to respond competently to the challenges of inclusive classrooms (Munby, Lock, Hutchinson, Whitehead, & Martin, 1999). According to Adera (2007) pre-service teacher preparation programme does not equip teacher trainees with enough skills to address the diverse student academic needs and also teaching interns struggle to put into practice the theoretical concepts learned during pre-service training to real world in which they teach.

According to Jenkins, Antil, Wayne, & Vadasy (2003), a major part of responding to the diversity found inside the classroom is through effective and efficient teacher preparation of regular and special education teachers who often feel that they are inadequately prepared to address the needs of learners with various categories of exceptionalities. Research by Kuyini and Desai (2006) also state that Ghanaian teachers are deficient in the necessary competence of making instructional adaptation to meet the needs of pupils with special education needs. They concluded that the increasing diversity in students' population still continue to confront general classroom teachers.

One significant issue raised by Hay (2003), indicated that educators' knowledge, skills and competences have direct impact on their preparedness to implement inclusive education effectively. The education white paper of the Republic of South Africa (DNE, 2001) maintains that educators are the primary resource for achieving the goal of an inclusive education and training system. The UNESCO 2009 report "Inclusive education": The Way of the Future emphasizes the need to reinforce the role of teachers by working to improve their status and their working conditions to develop mechanism for recruiting suitable candidates and retaining qualified teachers who are sensitive to different learning requirement.

Statement of the Problem

Ghana has a laudable policy towards education of children of school going age. This policy aims at including all children with special educational needs within the framework of general education. However, it appears most children with disabilities in the regular classrooms are not receiving effective support from their teachers.

My interactions with some teachers and some pupils of some 11 selected schools in Akuapem North Municipality namely, Mampong Presbyterian Primary A and B, Tutu Methodist Primary, Obosomase Primary Schools, Awukuguah Presbyterian Primary, Aperedi Methodist Primary, Old Asuoya Primary, Osabene English/Arabic Primary, Nifa D/A Primary, Asenema D/A Primary and Asenema D/A Junior High School from 21st to 25th of October, 2013 to find out how these schools are performing in the implementation of the inclusion of pupils with visual impairments in regular classrooms seems to have suggested that the regular classroom

teachers lack the requisite knowledge to provide effective support for children with visual impairments who are included in these regular schools.

It also appears that the regular classroom teachers lack the skills of adapting teaching strategies to meet the learning needs of children with special needs. Further interactions made it to appear that the regular classroom teachers are not well resourced in terms special teaching and learning aids that will help them in easy delivery of lessons and easy assimilation of concept by children.

Finally, it appears that the 4 special education teachers in the Municipal Directorate of Education who are required to provide support to regular classrooms teachers in areas of preparation of teaching and materials, organization of in-service trainings and workshops, assessment of children and collaborating with parentsare falling short of their responsibilities. For example, these teachers fail to provide materials such as reading stands among others which aid low vision children in reading. Also there appears to be absence of professionals like special needs teacher assistants and ophthalmologist to provide support to both teachers and children with special educational needs.

Purpose of the Study

The purpose of the study was to explore teachers' capacity in teaching in three selected schools in the Akuapem North Municipality, namely Mampong Presbyterian Primary B, Tutu Methodist Primary and Obosomase Junior High Schools where children with special educational needs are included.

Objectives:

The objectives of the study were:

- To find out how regular classroom teachers are equipped with requisite knowledge to handle children with special educational needs in the eleven selected schools in Akuapem North Municipality.

- To find out what adaptations teachers use to differentiate teaching and learning activities to meet diverse student needs.

- To find out how regular schools are resourced to help teachers meet the needs of children with special needs in the eleven selected schools in Akuapem North Municipality.

- To find out the support services available for regular classroom teachers from resource teachers, special needs teacher assistants and other professionals for effective inclusive practice in the eleven selected schools.
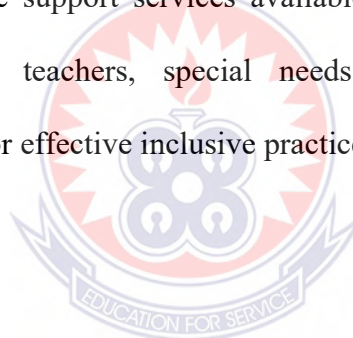
Research Questions

The following research questions were raised to guide the study:

1. To what extent areregular classroom teachers well equipped with requisite knowledge to handle children with special educational needs in the eleven selected schools in Akuapem North Municipality?

2. What adaptations do teachers in the regular classroom use to differentiate teaching and learning activities to meet diverse student needs?

3. To what extent are schools resourced in terms of instructional materials to meet the needs of children with disabilities?

4. What support services are available to teachers for effective inclusion?

7

Significance of the study

The result of the study would help identify some strengths and weaknesses of teachers in teaching in inclusive classes in the eleven selected schools and how that can affect the smooth running of the inclusive programme in the municipality. The result of the study would help the municipal directorate of education to take measures to train teachers through in-service trainings so that they can acquire the requisite knowledge in handling children with special educational needs. This would also enable stakeholders in education to make the necessary educational materials and support services available for successful implementation of inclusive education in the municipality. Finally, the result of the study would add to the existing knowledge on teacher preparation for inclusive education as reflected in the literature reviewed for this study.

Delimitation of the Study

Research into any programme like inclusive education constitutes the basis of strategy to improve that programme. With regard to the assessment of teachers' capacity in eleven selected schools in Akuapem North Municipality, the components of the problem were so numerous that it was not feasible to capture them in a single study. The scope of this study was therefore limited toequipping teachers with requisite knowledge for inclusion, adaptation of teaching and learning strategies in inclusive classrooms, the role of instructional materials in teaching special needs children in inclusive classes and support services for teachers for effective inclusive education

Limitations of the Study

The study was mainly limited by time, finance, fatigue and material resources. This hindered the researcher from covering all the 15 pilot schools running inclusive programme in the municipality. Nonetheless, since the schools sampled had similar characteristics with the rest of the schools practising inclusion, the data gathered were reliable and valid to produce credible results. There was general lack of co-operation from teachers mainly due to the fact that they do not benefit from numerous researches that have been conducted earlier. Some teachers even thought they should be given money before responding to the questions.

Operational definition of terms

Collaborative problem solving: An instructional strategy that allows students to be guided to find solution to physical, social or instructional exclusion together.

Inclusive Education: A system of education in which the special needs students are enrolled together with their able peers in the same regular classroom irrespective of their disabilities.

Regular teacher: A teacher who teaches in regular educational classroom.

Special Needs Teacher Assistant: A person who is employed to work with individual children who have identified special educational needs related to a specific disability in an inclusive classroom.

Students with special educational needs: Students who as a matter of their conditions cannot cope with the normal trend of education and who need special methods and materials to be able to cope with education.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presented the literature reviewed for the study. The literature review covered the following sub-heading:

- Equipping teachers with requisite knowledge for inclusion

- Adaptation of teaching and learning strategies in inclusive classrooms

- The role of instructional materials in teaching special needs children in inclusive classes

- Support services for teachers for effective inclusive education

Equipping teachers with requisite knowledge for inclusive education

Teachers have a central role to play in the achievement of the goals of education in any nation. The teacher's preparation should be such that, the needs of all categories of students must be taken into consideration. Teachers are to be given appropriate training to appreciate the importance of inclusive education. In teacher-training, specific attention is given to preparing all teachers to exercise their autonomy and apply their skills in adapting curriculum and instruction to meet pupils' needs as well as to cooperate with specialists and parents (UNESCO, 1994).

Whitworth (2001) postulates that preparing teachers who can teach in settings that are inclusive and meet the needs of all students will require a differentmodel of teacher preparation. Apart from teachers gaining the requisite knowledge and competencies in handling and preparation, there is also an important factor in improving teacher attitudes towards the implementation of an inclusive policy. Without the requisite training in inclusive education philosophy, it would be difficult

for a teacher to accept and offer the necessary attention to a pupil with disability in the class. It is through training and preparation process that teachers develop the capacity in handling pupils with special needs (Whitworth).

Consistent with the above claim is the submission made by Gerent and Hotz (2003), that today's classroom teachers must prepare all pupils to meet society's complex demands. Not only must teachers address the growing demand for academic excellence but they also become increasingly responsible for meeting the needs of diverse groups of pupils including those with disabilities and those who are at risk for school failure. These demands have resulted in the necessity of providing practical information regarding students' characteristics, effective institutional and behaviour management, techniques, consultation skills and individualized instruction to practicing teachers both in general education and special education roles.

Ferreira and Graca (2006) posited that to take full account of the diversity of the current population, the following aspects should be included in teacher training education: learning difficulties and disabilities; emotional and behavioural problems; communication techniques and technologies; symbolic representation; signification and multiculturalism; different curricular; teaching methods and techniques and educational relationships. Florian (2009) identified three areas that deserve particular attention in the reform of teacher education based on the argument the future progress in education requires new ways of thinking about provision and practice. These are right to education; the need to challenge deterministic views about ability; and shift in focus from difference between learners learning for all.

As a result of this push towards inclusion in recent years, Brownell et al. (2006) shows how general education teachers play a primary role in the education of students with disabilities but these teacher often appeared unprepared to undertake

this role This is true for not only current general education teachers who are experiencing first-hand the changes that are occurring throughout the national education system, but even pre-service teachers whoare in the process of completing their master's program still believe that they are not learning the skills needed to successfully teach in today's classroom environment. According to Brownell et al, the success of inclusion can only be made a reality if both university educators and staff development programs share the responsibility in helping to train and continue to educate our future and current general education teachers.

The successful implementation of inclusive education will depend on general classroom teacher's ability and willingness to make instructional adaptations. Teachers are the ones that can bring about inclusive classroom and they can only achieve that aim when they are well-trained in inclusive practices and concepts because their views on teaching and learning will influence their classroom practices. Well trained teachers with a good knowledge in special educational needs/individualized education instructional strategies can discontinue the abuse of students with disabilities caused by the socio-cultural and traditional values in Ghanaian schools.

Many studies suggest that a lack of preparation to teach special needs students, and thus a decreased level of confidence, can have a direct influence on one's overall view of inclusion. Increased stress and levels of anxiety that general education teachers may experience when given the responsibility to instruct students with disabilities may be linked to a low level of understanding of the vast range of disabilities that are now a part of the general education system.

Garriott et al. (2003) argue:

> To alleviate the misconceptions about inclusive education and
> the fears general education teachers have about their ability to

teach students with disabilities, pre-service teachers should be provided the knowledge and skills that will enable them to feel competent to accommodate the learning needs of a diverse student population. Pre-service teachers must be aware of and be able to implement teaching approaches that enhance the success of students with special needs in inclusive settings, (p. 51).

A study by Meijer (2004) found that teachers' understanding of how inclusive education works, what works within inclusive settings and the condition for effective inclusive education is very important for its implementation because Individualised Education relies on what teachers do in classrooms. This study found out that more than three-quarters of pre-service final year teachers indicated that they have been introduced to the concept of Inclusive Education, however only half of them demonstrated high knowledge in Inclusive Education concepts with male scoring higher mean than females.

The above finding was similar to the finding of Opoku-Inkoom (2009) in a study conducted in relation to pre-service teacher preparation for inclusion in Ghana. Out of 300 third year pre-service teachers, 87% of the correspondents affirmed that they have been introduced to inclusive education with majority of them demonstrating enough understanding of its principles. However, according to Nketia (2011), although Opoku-Inkoom (2009) described that all the Colleges of Education in Ghana follow the same curriculum, the result of his study indicated two colleges involved in the study demonstrated different level of knowledge on the concepts of inclusive education. This might imply that different colleges deliver the curriculum in different ways.

The most important factor in championing inclusive education is equipping all teachers with the professional knowledge and skills to enable them educate all learners regardless of their individual needs (Watkins, 2003). Teachers' knowledge of

special educational needs is also extremely important for this task as it will equip teachers with knowledge and skills in the identification, provision of interventional measures and strategies for successful inclusion of students with special educational needs in regular classroom.

Golder, Nowich and Bayliss (2005) argue that as part of an effort to move towards a more inclusive education system, there is the need for teachers to be equipped with the knowledge and attitudes to enable them teach students with diverse characteristics from the beginning of their profession. The report also gives a vivid account of the efforts University of Exeter Post Graduate Certificate in Education(PGCE) have undertaken to improve pre-service teachers' knowledge, skills and attitudes to strengthen them to make instructional accommodations for all students.

In Cyprus, Lancaster and Bain's (2007) also examined the effect of inclusive education course and field-based experience on the effectiveness of pre-service elementary education teachers. The findings of the study suggest that inclusive education course has more practical improvement on pre-service teachers' self-efficacy than practical experience. They therefore concluded that direct field-based experience alone is not enough to improve self-efficacy of pre-service teachers. Similar study by Angelides' (2008) which tried to find out how inclusive education expresses itself in the "practices" "activities" and "behaviours" of student teachers in Cyprus indicates that student teachers who were introduced to inclusive education course during their training displayed inclusive practices, activities and behaviours during teaching practice. These findings, he acknowledged that they are in support of the arguments that initial teacher preparation in inclusive education has important role to play in the promotion of inclusive practices in their prospective schools.

14

According to Hoban (2004) a coherent conceptual framework underpinning a clear view of learning and concept of good teacher is widely considered to be a factor in terms of quality teacher education programmes. He also believes that such framework should be based on four key dimensions:

- Conceptual link across the university curriculum

- Theory-practice link between the school and university setting

- Socio-cultural links between the participants in the programme

- Personal links that help shape the identity of each teacher-educator. (p. 32).

In addition to developing the skills of professionals before entering the workforce, it is essential that teachers already teaching be provided skills and techniques for inclusive education, (Dihn & Le, 2010). The report states in-service training programmes offer particularly effective strategy to improve the quality of an entire educational system for all children regardless of their needs. The report suggests four ways by which capacity of teachers can be built through in-service training:

- replicate training received from external experts on inclusive knowledge and skills for the benefit of the classroom teacher.

- organise workshops for classroom teachers on teaching children with specific disabilities.

- create opportunities for teachers to share their experiences in teaching inclusive classes.

- coach classroom teachers on individual or group basis when needed on specific topics or skills (p. 12).

Forlin (2001) in a study express concern about their lack of preparation for inclusion and for teaching all learners, but added that in settings where teachers are

encouraged to try out a range of teaching strategies, they report that they knew more than they thought they knew and, for the most part, children learn in similar ways. Although some children might need extra support, teachers do not distinguish between types of special need when planning this support. Many teachers reported that they did not think that they could teach such children, but their confidence and repertoire of teaching strategies developed over time. This would suggest that by just doing it teachers are capable of developing knowledge and positive attitudes to inclusion.

Rouse (2007) also stated that developing an effective inclusive practice is not only about extending teachers' knowledge, but it is also about encouraging them to do things differently and getting them to reconsider their attitudes and beliefs. In other words, it should be about knowing, doing, and believing.

Adaptation of teaching and learning strategies in inclusive classrooms

The success of inclusive education largely depends on the regular classroom teacher's ability to adapt instruction when students have difficulty acquiring skills and information. Teacher can modify instructional materials and activities, change teaching procedures, and alter the requirements of the learning task (Okyere & Adams, 2003). According to Okyere and Adams, heterogeneous grouping is a feature which states that all students including those with special needs are educated together in groups and the number of students with and without disabilities approximates natural or normal proportions. For example, in a class of 30 students, there is one with a severe disability coupled with less significant disabilityand many without disabilities. Inclusive education avoids being seen as centres or cluster sites for any category of students but accepting varied learning goals in heterogeneous grouping.

16

According to Lewis and Doorlag (1995), the first type of adaptation that should be tried by teachers is modification of instructional materials and activities. Inclusive education challenges educators to develop wide repertoire of teaching strategies. Within the classroom, certain teaching strategies have been identified as helpful to inclusion of students with special educational needs. Examples include cooperative teaching, cooperative learning, individualised planning, collaborative problem solving, heterogeneous grouping and differentiation (EADSNE, 2003). Mowes (2000) states that the school's curriculum is all those activities designed or encouraged within its organisational framework to promote the intellectual, personal, social and physical development of learners. This includes the content of lessons, types of resources, lesson presentation, teaching styles, allocation of time and learner activities.

Rosenzweig (2009) stated that there are a number of ways in which the general curriculum may be adapted and/or modified to meet individual needs. Various curriculum adaptations and/or modifications mayinclude reformatting assignments and tests so that they are broken down into more concrete steps. This task-analysis approach is only one of a variety of ways that adaptations and/or modifications may be helpful. Other ways include large print, use of graphic organizers or visual aids, formatting multiple choice and matching tests and assignments differently and limiting choices, providing alternative ways to answer questions such as through oral responses or by using word processors, using methods such as pre-teaching and re-teaching, and a vast array of others. Although many services and accommodations such as time-extension, separate location, scribe, directions read, and others may be listed on the individualized education plans, teachers are expected to be aware of and prepared to utilize other strategies and modes of instruction in order to ensure their students are learning and understanding the information being taught. It is also

important for teachers to understand that what may help one student may not help another and all modifications and adaptations must be made on an individualized basis.

Walther et al, (2009) suggested a variety of teaching strategies to include:

- Interactive teaching: - teaching alternate roles of presenting, reviewing and monitoring instructions.

- Alternate teaching: - one person teaches, re-teaches or enriches a concept for a small group, while the other monitors or teaches the remaining.

- Parallel teaching: - students are divided into mixed ability groups, and each co-teaching partner teaches the same material to one of the groups.

- Station teaching: - small groups of students rotate to various stations for inclusion, review, and/or practice.

Whitworth (2001) stated that an inclusive teacher preparation model relates to collaborative experiences. Unlike the collaborative teaching, where techniques and strategies primarily apply to the classroom, collaborative experiences relate to the field based experience of a prospective teacher. Collaborative experiences involvemultiple experience, practicum, students teaching, simulation, role-playing which are field based. Such experiences are essential since they bring the prospective teacher much closer to children with disabilities and as well understand them. Hence prospective teachers should be given the opportunity to observe and work in collaborative and in inclusive situations. This means that pre-service teachers should have multiple opportunities to observe and work in actual classrooms, where inclusive practices are being implemented.

Meijer (2004) considered cooperative teaching as an instructional strategy to mean cooperation between general and special education teachers in terms of co-teaching, team-teaching and collaborative teaching. Cooperative teaching involves teachers planning with other teachers (a specialist teacher or colleague), the head teacher and other professionals at various stages of intensity, from regular teamwork on learning activity to teaching lessons to provide an intervention in the same classroom to heterogeneous group of students involving students without special educational needs (Hittie & Peterson 2003, Watkins, 2003).

A qualitative study by Rice and Zigmond (2000) on teachers' views on co-teaching testified that both students and teachers benefit from co-teaching, especially teachers can learn a lot from each other, however they advised that compatibility among teachers and school-wide commitment to inclusion and administrative support are crucial for its successful practice. Cooperative teaching has been found to be effective in improving the time students spend on learning tasks and minimizes classroom behavior problem (Meijer, 2004).

Murray (2000), cited in Thousand, Nevin and Villa (2002), also considered cooperative learning as an instructional strategy to mean group of instructional strategies in which teacher provides guidelines to a group of students to work to help each other to accomplish task that they cannot do alone, especially when they have unequal levels of ability and each benefiting from learning together. Murray explained that during cooperative learning class of students with similar age but different abilities, ethnicities and gender are put into group of four to six while a teacher provides pre-designed instruction to help them work together.

Giorcelli (1995) states cooperative learning practices are in fact one of the key principles of full inclusion. This view, supported by Sapon-Shevin, Ayres and Duncan

(2002) believed that cooperative learning is vital for inclusive schooling because, it benefits all students, it is an integral part of current school reform efforts and lastly it promotes collaboration between educators. They further affirmed that cooperative learning is important in inclusive classrooms because it makes use of heterogeneous grouping and peer support, connection and mutual respect and learning.

Another instructional strategy, Peer Assisted Learning Strategy, according to McMaster, Fuchs and Fuchs (2002) cited in Thousand et al. (2002) described it as one of the empirically validated peer tutoring strategies that has been found to increase student's achievement in reading. According to them it was developed as strategy to provide diverse group of students in general education classroom with challenging and motivating activities.

Fucks et al (1997), as cited in Meijer in 2001, conducted a study that explored the effectiveness of peer assisted learning strategy. Students were put into pairs and were engaged in reading activities such as: partner reading with retell, paragraph summary and prediction relay. They found out that disabled student, non-disabled but low-performing student and student who is average achiever made considerable gains across the three reading activities than their counterparts in No-Peer Assisted Learning Strategy. Meijer described collaborative problem solving as an instructional strategy that allows students to be guided to find solution to physical, social or instructional exclusion together. Students are motivated to begin the process of finding solution themselves and create an atmosphere of shared responsibility. For example, teachers setting clear classroom rules and boarders with all the learners – alongside appropriate disincentives/incentives. This strategy has been proven to be effective in promoting inclusion (Meijer) and decreasing the amount and intensity of disturbances during lessons (Watkins, 2003).

Meijer (2001) reported a study by Salisbury, Evans and Palombaro (1997) on the effects of collaborative problem-solving on heterogeneous elementary consisting of 100 students without disabilities, 17 students with mild/ moderate disabilities, 12 students with severe/profound disabilities. They identified physical, social and instructional instances that illustrate exclusion and students were asked to solve the problem together in the following five steps:

- Identifying the issue: 'What's happening here?'

- Generating all possible solutions: 'What can we do?'

- Screening solutions for feasibility: 'What would really work?'

- Choosing a solution to implement: 'Take action.'

- Evaluate the solution: 'How did we do? Did we change things?'

The findings of the study indicate that collaborative problem –solving is vital strategy for enhancing physical, social and instructional inclusion of students with disabilities in the classroom. They argue that through this approach students learn to work with others to solve problem and empathize with other and more importantly cultivates acceptance, understanding and friendship among diversity of students (Meijer, 2001).

Heterogeneous grouping has proven to be one of the effective inclusion instructional strategies. It involves teachers compiling a brief of profiles about students in terms of variables such as academic abilities, behavioural and social challenges and needs, socio-economic status, race, gender and how students relate to one another to make mixed level groups (Hittie & Peterson, 2003). In heterogeneous groups, students become very important resources for student support and it offers a more differentiated approach to teaching diversity of learners in classroom.

Delquadri, Greenwood, Whorton, Carta and Hall (1986), cited in McLeskey, (2007) described Class-wide Peer Tutoring as effective instructional strategy for an inclusive setting. This strategy was developed as part of an effort to improve instructions for minority, disadvantaged and /or learning disabled children. Class-wide Peer Tutoring system according to them, are based on the following three principles; opportunity to respond, functionality of key academic skills areas, and behavioural principles that facilitate responding.

According to them learning is viewed as the product of eco-behavioural interaction in the class; that is, environmental factors (e.g time allocated for instruction, curriculum, tasks presented to students, and teacher behaviors) and the level of active students responding (e.g reading aloud, writing and talking academic) are considered as critical to student achievement. They are of the view that there is an important link between teaching procedures, students' reaction and attainments, therefore, students' active involvements in instructional process and the availability of continuous and organized opportunities to respond through correction and feedback brings about an improvement in student's academic performance.

Similarly, Gyimah (2010) carried out a study which examined teachers' use of instructional strategies in primary schools in Ghana and their implication for inclusive education. The study examined the responses of 500 regular education primary school teachers from three of the ten regions in Ghana on 22 instructional strategies for creating an inclusive classroom. The result of the study indicates that teachers most often use instructional strategies such as; ensuring that classroom environment is comfortable for all children, ensuring that classroom is spacious to allow for movement, ensuring that questions are fair and evenly distributed to allow children to

22

contribute to lessons, trying to arrange the classroom to encourage participation and constantly monitor all children while they do class work.

The result further states that in-service primary school teacher sometimes; selects instructional material that make it possible for all children to learn, vary the pace to help the children to learn, give sufficient time to all children to complete tests and assignments, give individual attention to children who need help, give sufficient time to all children to practice what they learn, present tasks in bits to allow children to learn efficiently, set instructional objective(s) to cover all children including those with special educational needs and disabilities, keep daily records of the progress children make in class, mix up the children when they are performing assignments and ask children to help each other.

However, several studies have found out that of all the instructional strategies that are at the disposal of teachers to use to create an inclusive classroom, some of them are more desirable and feasible than others and some of them are most used by teachers while others are sometimes or less frequently used (Gyimah, 2010).

The role of instructional materials in teaching children with special needs in inclusive classes

Instructional materials play a critical role in the learning process of children with disabilities as they help to build a broad background of concrete experiences which is an important factor for future learning. Teachers should remember that through interaction with teaching and learning materials, children with disability learn of their capabilities in investigating and acquiring new experiences from the environment. Ocloo (2000), states that interaction with teaching or instructional

materials builds a store of knowledge of information and develops the curiosity in children to learn.

It is through play with teaching aids that thoughts are organized actively to explore and handle learning materials. With reference to children with visual impairment, Ocloo (2000) states that instructional materials help the child with visual impairment in the following ways:

- contribute to capture attention and motivate learners to want to learn more

- provide meaningful and important information to the learner

- provide the opportunity for the learner to practice on his/her own

- help the learner to overcome physical difficulties in communication (p.20).

Use of materials has been the basis for quality of opportunities in the process of education. In other words, it provides the opportunity to present the educational environment which is improved and enriched by the help of every kind of educational technology to all people in every part of the country and the world. As a result everybody will have the chance to have quality high education. By the help of educational technology, equality of opportunity, problems in our country can be prevented (Isman, 2005). According to him, educational materials are the tools that enrich the learning process and make the learning concrete. He added that research indicated that educational materials have positive effects on making education effective. Educational materials are elements that teachers cannot overlook as they facilitate the process of learning and provide permanence of what is learned.

Isman (2005) further stated that the materials that classroom teachers use differ. He analyzed this to include students' book, worksheets, models, posters, and real objects among others. According to him in recent years there have been some positive

improvements regarding the use of educational materials as a result of the ministry of education and publication companies' support in their country. According to World Conference on Educational Sciences (2009) the use of materials in education eases the perception and learning for students at all levels. This is especially true for students who have difficulty in learning. The report states that the teacher should use the appropriate materials to make learning process concrete, to practice and revise, and to increase the participation of the students into the learning process. The most important part of material in the inclusive education is the selection and preparation of the material. It further stated that in the process which the teachers have to create solutions themselves, factors such as the characteristics of the inclusive learner, the easiness or difficulty level of preparing a material are influential. It is important to analyze and evaluate the solutions that the teachers create themselves regarding materials preparation and sharing with the other partners in the field.

Marilyn and William (2006) also stated that the types of instructional materials teachers use can have a major impact on the academic success of students with special needs. Although many teachers are choosing to develop or collect their own materials, published textbooks are most commonly used. Published textbooks include basic skills texts called basal, often used in reading and mathematics, and texts that stress academic content in areas such as history and science. Other materials commonly used by teachers include concrete representational items such as manipulative and technological devices, including audiovisual aids, telecommunication systems, and computers.

Support services for regular classroom teachers for effective inclusive practice

Amoako-Gyimah (2007) noticed in a research study on pre-school children with special educational needs in Ghana that, collaboration agency provides members with the opportunity to learn from each other and from one another. By working with one another, members of a team act as both professional and learners sharpen their reflexes and increase their skills and expertise. Teachers should as a result have a support service system through collaboration with trained experts and peer assistance. The role of support staff within the classroom has been identified as critical to the success of inclusion (Farrell, 2000). The presence of in-class support staff has an indirect effect on teaching by increasing pupil engagement and freeing up the teacher to focus more effectively on instruction.

The provision of support staff is seen as facilitating inclusion by bringing additional skills to the classroom, enabling joint planning and reducing pupil-teacher ratios (OECD, 2005). According to Okyere and Adams (2003) there should be flexible planning time for special education and regular teachers to meet and work together. Teachers, therefore, might need support in the form of classroom teacher assistants especially for those with large classes. They also added that students with special needs might need support in the form of extra learning materials and aids to facilitate their learning in the regular class.

Inclusive and collaborative models are only possible when there is on-going teamwork between special and general education teachers and the professionals such as speech and language pathologists, physical therapists, and others. As described by Cahill and Mitra (2008) "This sharing of ideas will build on the teacher's existing knowledge of curriculum and typical instructional methods," (p. 150). Little experience in dealing with other teachers in collaborative situations may cause many

26

general education teachers to neglect using special educators as a resource to help them improve their knowledge and skills needed to teach their inclusive classes.

Special Needs Teacher Assistants have become fundamental component of the inclusive model of education in regular schools and there is little doubt that they now assume an important role in the classroom. Special Needs Teacher Assistants are employed to work with individual children who have identified special educational needs related to a specific disability that is recognised by the appropriate funding authority within each district in Australia.While there is littleresearch available to demonstrate the efficacy and/or long term benefit ofSpecial Needs Teacher Assistant in buildingeffective inclusive classrooms, these front line workers can become very significant adults in the lives of these students and therefore have a significant positive impact on the development of their attitudes, skills and learning (Wasykowski, 2002).

Similarly, Hopkins, Cohn, Campbell and Matais (1994) found that class helpers can work very effectively, lessen teachers' loads and support both teachers in mainstream classrooms and learners experiencing barriers to learning. Class helpers can be of great value when teachers have to adapt the lesson plan for the learner or learners who experience barriers to learning. The teacher can then deal with the curriculum lesson with the class, while the class helper covers the adapted lesson with the learners who experience barriers to learning which will benefit them and produce better results. In this way, the other learners in the class are in no way disadvantaged because the pace at which the work is explained is not at all affected.

Hayford (2013) indicates that Ghana has struggled over the years to offer support services for all learners, and in particular those who manifest special educational need. For instance, personnel with different job titles such as iterant

teachers, resource teachers, and now special needs coordinators have been deployed since the seventies to support learners with specific disability such as deafness or special educational needs in mainstream classrooms. He however, states that, these initiatives have often not progressed beyond the pilot stages; they had never received recognition and/attracted requisite resources. Learners with diverse needs in mainstream classrooms do not receive appropriate support services to enhance their participation in learning.

Heward and Orlansky (1988), cited in Ocloo (2000), identified the function of special education resource teacher as follows:

- Instruct children with visual impairments directly

- obtain or prepare specialized learning materials

- put reading assignments into Braille, large print or tape-recorded form

- interpret information about the child's visual impairments and visual functioning to other educators and parents

- suggest classroom and programme notification that may be advisable because of the child's vision

- help plan the child's goal; initiate and maintain contact with various agencies and keep records of services provided

- consult with the child's parents and other teachers

Support personnel in inclusive schools additionally provide direct help as team teachers, by offering help to empower teachers to adapt and Individualize instructions to meet the needs of all pupils. Collaboration and teamwork are essential aspects of inclusive practice, according to recent research (Lindsay, 2007).Tait and Purdie (2000) have claimed that there is a need to develop a well-planned programme of subjects and experiences where pre-service teachers have opportunities for

28

collaborative endeavours that reflect what occurs in authentic school situations e.g. forging links with stakeholders such as support teachers and teacher aides.

Muthukrishna (2002) emphasized the point that, without a new mind-set and right support system in place, inclusive education will remain no more than idealistic education system. According to him one of the tasks of the Department is to successfully change the character of their schools and to ensure the establishment of inclusive education, which is due to be implemented by 2019, with the necessary support systems in place.

Shavhani's (2004) research into support system in South Africa, pointed to the general absence of support systems in remote areas like Thohoyandou in Limpopo where, in the past, the emphasis was white education. The findings show that these areas have suffered a serious shortage of resources and facilities, leading to negative attitudes of teachers towards learners who experience barrier to learning. Consequently inclusive education could be jeopardized and learners who experience barriers to learning could be deprived of adequate support.

Tommlinson, Brimijoin and Narvaez (2008) point out that, parents must play a more central role in the school, since teachers have to coordinate with the parents of learners with special needs in particular to assist their children to learn. Cooperation between parents and the school is one of the most important forms of support (Pottas, 2000). McLeskey and Waldron (1996) pointed out that, if there is cooperation between parents and learners, who experience barrier to learning and the teachers concerned, it improves the understanding and expectation of the parents regarding the teachers' position and the support that is actually available for the children. Muthukrishna (2002) maintains that if support systems focused on supporting teachers

instead of addressing barriers to learning and development, learners would have benefited as a consequence.

Teachers maintain that if the aim of inclusive education is to be successful, support systems must be available. If however, parents are not prepared to pay for support, the aim will not be realized. Bartlett, Weisenstein, and Etscheidt, 2002; Hornby, Atkinson and Howard, (1997) are of the opinion that this support includes a speech therapist, a psychologist, an occupational therapist as well as a remedial teacher who is prepared to provide the other teachers with in-service training. According to Landbrook (2009) the best support experience by a learner with barriers to learning is to be assisted by a specialist in the field of the barrier.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter describes the methodology adopted for the study. These include the research design, population, sample size, sampling techniques, instrumentation, procedure for data collection, and data analysis.

Research design

The research design for the study was a descriptive survey. According to Cohen, Morrison and Manion (2004) in descriptive survey design, researchers gather data at a particular point in time with the intention of describing the nature of existing conditions. The descriptive survey helps to deal essentially with questions concerning what exists with respect to variables or prevailing conditions in a situation.

Population

Population refers to the entire universe of elements or cases the researcher is interested for the study.In this study, the target population was all the 97teachers in the 11 selected schools in the Akuapem North Municipality.

SampleSize

A total of 85 out of 97 teachers formed the sample size of the study. The sample was made up of 35 males and 50 females.

Sampling

The respondents for the study were randomly selected to complete the questionnaire. This technique was used because it gives all units of the target population equal chances of being selected. According to Amedahe (2002), simple random sampling is appropriate when a population of study is similar in characteristics of interest. Alist of all teachers in the 11 selected schools were written on a piece of paper and put in a box. Eighty five teachers were picked out of the 97 teachers to constitute respondents for the study. The sample population was made up of 35 males and 50 females.

Instrumentation

The data for this study were obtained through the use of questionnaire. The questionnaire was intended to collect both theoretical and practical information from respondents as far as teachers' capacity in teaching in inclusive classes is concerned. The items in the questionnaire for this study were in five parts. Part A was the personal data of the respondents such as age and gender, part B dealt with the extent of teachers' knowledge about inclusive education, part C was to find out teachers' knowledge of adaptations to differentiate teaching activities to meet diverse student needs, part D was to explore the extent to which the selected schools are resourced materially to meet the needs of all children in inclusive settings and finally, part E was intended to find out the level of support services available for teachers for effective inclusive practice.

Validity and Reliability

Gall et al (2003) advised that it is extremely relevant that questionnaire and interview designs satisfy the same requirements of validity and reliability applicable to other data collection measures in educational research. There is no numerical way to express content validity however, Gall et al indicated that content validity can be determined by a panel of experts in the field who can judge its adequacy. Therefore, the researcher ensured content validity of the research instruments by asking some colleagues as well as experts such as my supervisor to review and judge the content validity of the research instruments. The questionnaire was also pre-tested using 20 teachers from Presbyterian College of Education to ensure their validity.

Reliability of research instruments is the consistency of their measurement. For the purpose of this study, the researcher estimated internal consistency of the instruments by using Cronbach's coefficient alpha. The purpose of estimating the internal consistency was to assess the extent to which scores on certain items of the instruments correlate with scores of other items of the instruments.

Pre-testing of research Instruments

Gall et al (2003), admonished that in developing rating scale such as likert scale for questionnaire study, the researcher should pilot-test it in order to check its reliability, validity and to find out if respondents have sufficient knowledge and understanding to express meaningful opinion about the topics, otherwise their responses will be questionable. The questionnaires were developed by the researcher himself and therefore there was the need to pilot test them to establish their reliability and validity. The pilot test was done on the 6th of December, 2013 in the Presbyterian College of Education in Akropong Akuapem. The researcher chose that college

because of its closeness to where he was teaching. Twenty questionnaires were given out but only twelve were retrieved the following day. It was done to determine any difficulties such as ambiguity associated with any item, understanding of terminologies, finding out of any typographical errors, or any incoherencies or doubt that they may encounter.

Analysis of pre-testing

In this study, the researcher used Cronbach's coefficient alpha which is a general form of the K-R 20 formula to test for internal consistency. According to Gliem and Gliem (2003), Cronbach's alpha is a test reliability technique that requires only a single test administration to provide a unique estimate of the reliability for a given test. They noted that Cronbach's alpha reliability coefficient normally ranges between 0 and 1 and the closer the Cronbachs alpha coefficient is to 1.0 the greater the internal consistency of the items. The Cronbach's alpha for the pilot study was 0.534 which according to the rules of thumb by George and Mallery (2003) was poor. Therefore, the researcher saw the need to make some changes to the quantitative questionnaire to improve upon clarity and make it unambiguous. The lengths of some of the items in the questionnaire were reduced to keep them as short as possible. Also after continuous checking and rechecking of thequestionnaire items to the research questions, some of the items on the questionnaire that were not directly related to the research questions were removed in order to get good questionnaire items.Upon the changes made after the pre-testing, Cronbach's alpha was again used to test the internal consistency for the questionnaire items.

Procedure for data collection

As part of fulfilling ethical issues relating to this research, the researcher obtained a letter of introduction from the head of Department of Special Education at the University of Education, Winneba. The purpose of the study was explained to the headteachers and teachers of the selected schools. The time for the collection of the questionnaire was set and agreed on with the respondents. Two weeks was agreed upon by the respondents to complete the questionnaire.

In order to ensure clarity of how the questionnaire was to be completed, the researcher administered the questionnaire to respondents personally during normal school time. This was to ensure that headteachers and teachers cooperated and participated and helped greatly in obtaining a high return rate of questionnaire. A total of 85 questionnaires were assigned to the teachers in the 11 selected schools however, 72 were retrieved which gave the total return rate of 84.7%. Table 1 below shows the distribution and collection of questionnaire from the respondents.
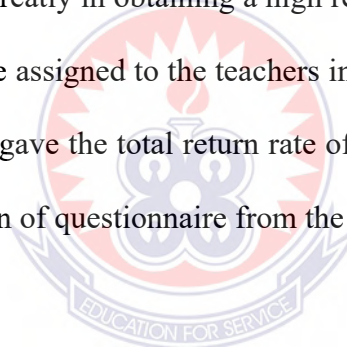
Table 3.1: Distribution and collection of questionnaires from respondents

School	No. Distributed	No. Retrieved	Percentage (%)
Mampong Presby Primary A	9	8	88.9
Mampong Presby Primary B	9	8	88.9
Tutu Methodist Primary	7	5	71.4
Obosomase Methodist Primary	8	8	100
Awukuguah Presby Primary	7	7	100
Aperedi Methodist Primary	9	6	66.7
Old AsuoyaPresby Primary	7	6	85.7
Osabene Eng/Arabic Primary	6	5	83.3
Nifa D/A Primary	8	7	87.5
Asenema D/A Primary	9	7	77.7
Asenema D/A JHS	6	5	83.3
Total	85	72	100

Source: Field data June, 2014

In all 85 questionnaires were distributed out of which 72 were retrieved constituting 84.7% return rate.

Data analysis

The data collected were quantitatively and statistically analyzed. As the study was a descriptive survey, the statistical analysis used consisted mainly of frequencies and percentages. Besides, the results were discussed with references to available literature where appropriate. In order to facilitate clear understanding of the analysis

of the data, responses of "strongly agree" and "agree" were interpreted as "agree" while those of "strongly disagree" and "disagree" as "disagree".

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF FINDINGS

Introduction

This chapter presents an analysis of the data collected from the field in relation to assessing capacity of teachers in teaching in inclusive classes. The chapter has been divided into two main parts. The first part of the questionnaire covered an analysis of demographic data while the second part focused on the main data. The first part looked at variables like gender, age range, teaching experiences, years of teaching at present school and professional qualification. The biographical data is important because it helps the researcher to know the background of the respondents. It provides a fair data of their level of maturity, experience and depth of knowledge about their profession.

Analysis of Demographic Data

The demographic data were analyzed in terms of gender, age range, teaching experience, years of teaching at present school and professional qualification. Table 4.1 below shows gender distribution of respondents.

Table 4.1

Teachers' gender (N=72)

Gender	Frequency	Percentage (%)
Male	32	44.4
Female	40	55.6
Total	**72**	**100**

Source: Field data July, 2014

38

Table 4.1 shows that there were 32 (44.4%) male teachers and 40 (55.6%) females. This means that more female teachers participated in the study than males. This disparity goes to confirm the general dominance of female teachers in most basic schools in Ghana.This is no exception for the inclusive pilot schools selected for the study.

Age of respondents

It is relevant to know the age group of the respondents in order to determine level of maturity of those teaching in inclusive schools. This information is represented in Table 4.1 below:

Table 4.2

Age range of respondents (N=72)

Range	Frequency	Percentage (%)
25-30	24	33.3
31-35	15	20.8
36-40	13	18.1
41-45	11	15.3
46 and above	9	12.5
Total	**72**	**100**

Source: Field data, July 2014

From Table 4.1, the age range of 25-30 years constituted the majority group making up 33.3%. This was followed by 31-35 years which constituted 20.8%. The age range 36-40 had a percentage of 18.1 and 41-45 age range constituted a

39

percentage of 15.3 whilst the age range of 46 and above had a percentage of 12.5. This showed an indication that there are many younger teachers in these selected inclusive schools which could be a platform for promoting effective inclusive education in Ghana. This assertion could be due to the fact that the younger generation is more exposed to the issues concerning inclusive education at both pre-service and in-service levels than in the past and therefore tend to be more supportive. Such younger teachers have been found to be more supportive of inclusion and exhibit favourable attitudes than older ones (Clough & Lindsay, 1991).

Teaching Experience of respondents

Teaching experience is very important because it helps determine the length of time teachers have been teaching at various schools. Table 4.3 has information on teachers' experience.

Table 4.3

Teachers' Teaching Experience (N= 72)

Years	Frequency	Percentage (%)
0 -5	19	26.4
6-10	17	23.6
11-15	22	30.6
16 and above	14	19.4
Total	**72**	**100**

Source: Field data July, 2014

From table 4.3, 19 (26.4%) teachers had teaching experience of 5 years and below whilst 53 teachers, representing 73.6% had taught for 6 years and above. The

above statistics showed that the number of teachers who had taught for 6 years and above were in majority. This means that teachers in these inclusive schools have some amount of teaching experiences with children with special educational needs.

Number of Years Teachers Have Taught at Current School

The number of years teachers had spent at their current school was determined to make it easier to know the turnover rate of teachers in inclusive schools. Table 4.4 shows this information.

Table 4.4

Years teachers had taught at current school (N=72)

Years at Current School	Frequency	Percentage (%)
1-2	26	36.1
3-4	21	29.2
5-6	14	19.4
7 and above	11	15.3
Total	**72**	**100**

Source: Field data July, 2014

From table 4.4, it is evident that 26 (36.1%) of teachers had taught at their schools for 2 years or less whilst 21 (29.2%) had taught for 3-4 years. Fourteen of the respondents constituting 19.4% had taught for 5-6 years whilst 11(15.3%) teachers had taught for 7 years and above. The above findings indicated that the turnover rates of teachers in these schools were low. This phenomenon would ensure that teachers gained relevant experience by acquiring some requisite skills, knowledge, attitudes

and values for effective inclusive education practice. This experience is essential to overcoming some negative attitudes that serve as barriers to inclusion.

Professional Qualification of Respondents

Data on the academic qualification of teachers for the study are shown in table 4.5 below.

Table 4.5

Teachers' professional qualification (N=72)

Professional Qualification	Frequency	Percentage (%)
M.A/Med/MPhil	8	11.1
BEd	19	26.4
Diploma	33	45.8
Teachers' Certificate 'A'	12	12.7
Total	**72**	**100**

Source: Field Data, July 2014

Table 4.5 indicates that 33 (45.8%) of the teachers had diploma in education. Nineteen (26.4%) of them had bachelor degree in education while 12 (12.7%) had Teachers' Certificate 'A'. Only 8 (11.1%) of these teachers had second degree. This showed that majority of the teaching staff had the academic qualification which can be the basis for effective classroom teaching but as to whether they would be capable of teaching all children irrespective of their special educational needs, can only be determined by data collected on research question one

Analysis of research questions

The main research questions were analysed question by question in terms of teachers' knowledge about inclusive education, instructional strategies, roles of instructional materials in the teaching of special needs children in inclusive classes and support services for effective inclusive practices. Section B of the questionnaire was used to answer research questions 1-6 which consisted of 28 statements. For easy and quick analysis teacher responses to 'Strongly Agree' and 'Agree' were placed in the 'Agree' category while 'Strongly Disagree' and Disagree were placed in the 'Disagree' category.

Research question 1

To what extent are regular classroom teachers well equipped with requisite knowledge to handle children with special educational needs in the eleven selected schools in Akuapem North Municipality?

To answer this research question, the frequency distributions of teachers' responses to items 1-6 were used. This is shown in table 4.6 below.

Table 4.6: Frequency distribution of teachers' responses to teacher preparation for inclusive education

Key: **F= Frequency   %= Percentage**

Statement	Agree		Disagree	
	F	**(%)**	**F**	**(%)**
1 Pre-service preparation exposed teachers to understand and appreciate students with diverse needs.	43	(59.7)	29	(40.3)
2. Pre-service preparation provided opportunities for practicum experiences in inclusive schools.	14	(19.4)	58	(80.6)
3. Teachers have in-service training programme in inclusive education practices to complement their knowledge in handling special needs children	55	(76.4)	17	(23.6)
4. Pre-service preparations adequately equipped me with knowledge and skills to effectively manage all children in an inclusive setting.	16	(22.2)	56	(77.8)
5. In-service training programmes focus on collaborative teaching skills such as co-teaching classes.	56	(77.8)	16	(22.2)
6. Inclusion will retard academic progress of non-disabled students.	51	(70.8)	21	(29.2)

Source: Field data July, 2014

44

Table 4.6 presents the frequency distributions of teachers' responses to items 1-6 on teacher knowledge in handling children with special needs in inclusive classes. These responses were used to determine the level of teachers' knowledge and skills regarding inclusive education as the key and independent variable and the various elements in the variables that border on equipping regular classroom teachers for inclusive education. The variables include pre-service preparation exposes teachers to understand and appreciate students with diverse needs, pre-service preparation provides opportunities for practicum experiences in inclusive schools as well as teachers having in-service training programme in inclusive education. The rest are pre-service preparations adequately equip teachers with knowledge and skills to effectively manage all children in an inclusive setting, in-service training programmes focus on collaborative teaching skills such as co-teaching classes and finally, inclusion retards academic progress of non-disabled students.

Findings

Regarding questionnaire item number 1 in table 4.6 above which focused on finding out whether pre-service preparation taught teachers to understand and appreciate students with diverse needs, the responses skewed toward the positive value of agree. Out of a total of 72 respondents, 43 (59.7%) agreed with the statement indicating that pre-service preparation enabled teachers to understand and appreciate students with diverse needs. Twenty nine representing (40.3%) of respondents disagreed with the statement.

Practicum experience gained during pre-service preparations for teachers was found to be woefully inadequate as shown in table 4.6. Fourteen representing (19.4%) of the respondents agreed to the statement whilst as many as 58 (80.6%) disagreed. It

is clear from the table that much is not being done in making practicum an essential component in the training of teachers for inclusive education. From table 4.6, there is clear indication that in-service trainings were organised for teachers in inclusive schools. Whereas 55 (76.4%) teachers said that they attended in-service training on inclusive practices to complement their knowledge in handling children with special needs, only 17 (23.6%) did notattend in-service training on inclusive education.

Item 4 focused on whether pre-service preparations adequately equipped teachers with requisite knowledge and skills to effectively manage all children in an inclusive setting. A total of 16 (22.2%) agreed to the statement whilst 56 (77.8%) of the teachers disagreed. From the above responses it is clear that pre-service training is not equipping teacher trainees with adequate requisite knowledge and skills to teach in an inclusive setting. With regard to item 5 which focused on finding out whether in-service training programmes focused on collaborative teaching skills such as co-teaching classes, 56 (77.8%) agreed with the statement whilst the a total number of 16 (22.2%) respondents disagreed with the statement.

Regarding item 6 which sought to find out whether inclusion would retard the progress of non-disabled students, 51 (70.8%) agreed with the statement whilst the rest 21 representing 29.2% disagreed. The responses to the item indicated that majority of teachers had the view that in inclusive classes, pupils with disabilities would retard the progress of their 'normal' peers.

Discussion of findings on research question 1

Research question 1 focused on finding out how regular classroom teachers were equipped with requisite knowledge to handle all children in an inclusive setting. The data analyzed on teacher knowledge on inclusive education, revealed that most

teachers in the selected inclusive schools in the Akuapem North Municipality had varied levels of knowledge in handling pupils with special needs in inclusive settings. For instance, the major findings of the study from the teachers' data analyzed showed that pre-service preparation would expose teachers to understand and appreciate students with diverse needs. The teachers' assertion for the need for a comprehensive pre-service preparation is consistent with the position of Golder, Norwich and Bayliss (2005) who stated that as part of an effort to move towards a more inclusive education system, there the need for teachers to be equipped with the knowledge and attitude to enable them teach students with diverse characteristics from the beginning of their profession. The finding also corroborates the research result of Angelides (2000) who noted that student teachers who were introduced to inclusive education course during their training displayed inclusive practices, activities and behaviours during teaching practice.

The opinions expressed by teachers revealed that not much is being done to make teacher trainees practice in pilot inclusive schools. Practicum experiences gained during pre-service preparations for teachers were woefully inadequate. Cook (2007) observed that teaching practice plays a key role in shaping future teaching behaviour to address the research to practice gap. Jordan et al. (2006) stress the need for practicum experiences in which there are opportunities to examine and foster their beliefs and then learn about how to address the needs of diversity in the classroom, a dimension which is neither typically nor rigorously addressed in teacher education programmes.

Another major finding was that teachers agreed that in-service training programmes in inclusive education practices complement their knowledge in handling special needs children. This was an indication that in-service training plays a critical

47

role in the professional development of the teacher. This confirms the view held by Cameron and Cook (2007) who state that in-service training is important for professional development since it makes teachers feel more confident in teaching pupils with special needs.

In addition, the data collected revealed that majority of the respondents disagreed that pre-service preparation adequately equipped them with the requisite knowledge to handle all children in an inclusive setting. This finding corroborates a similar finding made by Cameronand Cook (2007) where they stated that9 out of 10 pre-service general education teachers who are about to finish or who have already finished their preparation program feel that if given a job in an inclusion classroom they would be less than adequately prepared to instruct the student(s) with specific disabilities.

Collaborative teaching skills are essential ingredient for teachers in inclusive education. Thus, most teachers engage in collaborative learning, integrated activities, collaborative evaluation and group process skills in inclusive schools (Whitworth, 2001). The opinions expressed by respondents regarding collaborative teaching skills overwhelmingly revealed that majority of them benefited from trainings in collaborative teaching skills that confirmed the position of Whiworth (2001).

The opinion expressed by respondents with regard to whether inclusion of special needs children would retard the progress of children without disabilities revealed some fundamental challenges. The findings pointed to the fact that the teachers believed that inclusive practice would delay the progress of other children without disabilities. The finding corroborates the research result of Smith (1998) who noted that teachers had opinions that many children with   special educational needs have learning deficits that can affect regular classroom teaching.

48

Research question 2

What adaptations do teachers in the regular classroom use to differentiate teaching and learning activities to meet diverse student needs?

To answer this research question, the frequency distributions of teachers' responses to items 1-8

were used. This is shown in table 4.7 below:

Table 4.7: **Frequency distribution of teachers' responses to adaptation of teaching and learning strategies**

Key: F= Frequency   %= Percentage

Statement	Agree		Disagree	
	F	(%)	F	(%)
1. I ensure that classroom environment is comfortable for all children.	55	(76.4%)	17	(23.6%)
2. I consider heterogeneous grouping as my teaching strategy.	57	(79. 2%)	15	(20.8%)
3. Grouping children with unequal abilities encourages cheating and copying	18	(25 %)	54	(75 %)
4. Allow children with special educational needs to engage in certain activities elsewhere outside the classroom.	16	(22.2%)	56	(72.8%)
5. Mix up children when they are performing assignments and ask them to help each other.	19	(26.4%)	53	(73.6%)
6. Allow children who have difficulties in writing the chance to answer questions by saying it orally or verbally	20	(27.8)	52	72.2%)
7. I use collaborative problem solving strategy that allows students to find solution to physical and social problems together.	13	(18.1%)	59	(81.9%)
8. Give sufficient time to all children to practice what they learn and complete tests and assignments.	23	(31.9%)	49	(68.1%)

Source: Field data: July, 2014

Table 4.7 presents the frequency distribution of teachers' responses to items 1-8 on adaptation of instructional strategies. The questionnaire items 1-8 were used to seek information regarding strategies teachers in these selected inclusive schools used to meet student diverse needs as the key independent variable and the various dependent variables such as ensuring that classroom environment is comfortable for all children, considering heterogeneous grouping as teaching strategy, grouping students with unequal abilities encourages cheating, allowing children with special educational needs to engage in certain activities elsewhere outside the classroom, mixing up children when they are performing assignments and asking them to help each other. Others are, allowing children who have difficulties in writing the chance to answer questions by saying it orally or verbally, using collaborative problem solving strategies that allow students to find solution to physical and social problems together and giving sufficient time to all children to practice what they learn and complete tests and assignments.
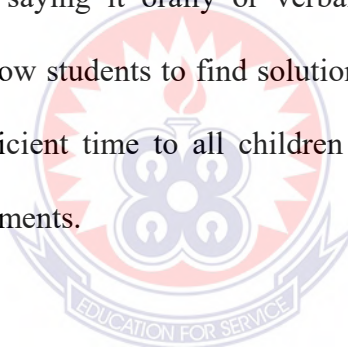
Findings

Regarding item 1 in table 4.7 which focused on finding out whether teachers ensure that classroom environment is comfortable for all children, majority of respondents agreed with the statement. A total of 55 teachers representing (76.4%) of the respondents agreed with the statement whilst 17, representing 23.6% disagreed. The finding clearly indicated teachers were doing well to ensure comfortable environment for all children.

With regard to item 2 which sought to find out whether teachers consider heterogeneous grouping in their teaching strategies, 57 (79.2%) agreed with the statement whilst 15 representing (20.8%) disagreed with the statement. The agreement

by majority of the respondents pointed to the fact that the teachers were doing well in that regard. Item 3 was meant to find out whether grouping students with an unequal abilities could encourage cheating. It was found out that 18 (25%) agreed with the statement whilst 54 representing 75% of the respondents disagreed.

Considering item 4 which sought to find out whether teachers allow children with special educational needs to engage in certain activities elsewhere outside the classroom, 16 respondents, representing 22.2% agreed with the statement whilst 56 (72.8%) disagreed with the statement.

With regard to item 5 which focused on finding out whether teachers mix up children when they are performing assignments and ask them to help each other, 19 teachers representing 26.4% of the respondents agreed to the statement while 53 (73.6%) disagreed with the statement. The disagreement by majority of the respondents suggested that the teachers still held the view that it is wrong for a student to help each other performing assignment in class. Regarding item 6 which intended to find out whether teachers allow children who have difficulties in writing the chance to answer questions by saying it orally or verbally, 20 teachers representing 27.8% agreed with the statement whilst 52 representing 72.2% disagreed.

Item 7 in table 4.7 was to find out whether teachers in these selected schools use collaborative problem solving strategy that allows students to find solution to physical and social problems together. It came out that only 13 (18.1%) agreed with the statement whilst 59 representing 81.9% disagreed. The responses showed an indication that these teachers did not think their pupils could collaborate to solve physical and social problems.   Referring to item 8 which sought to find out whether teachers give sufficient time to all children to practice what they learn and complete tests and assignments 23 of the respondents, representing 31.9% agreed with the

statement with 49, representing 68.1% showing their disagreement. The responses gave the indication that majority of the teachers least used this strategy in teaching in inclusive classrooms.

Discussion of findings on research question 2

The questionnaire data analyzed research question 2 on instructional strategies teachers use in adapting teaching and learning to meet students' diverse needs in the selected schools revealed some findings. The result of study indicates that the teachers mostly ensured that the classroom environment is comfortable for all children. Similarly, a study by Gyimah (2010) indicates that in-service primary teachers most often arrange classroom to encourage participation.

The respondents also considered heterogeneous grouping as their teaching strategies. One of the instructional approaches identified by several studies as effective within inclusive classroom is heterogeneous grouping (Watkins, 2003). Okyere and Adams (2003) also espoused heterogeneous grouping as a feature that ensures that all students including those with special needs are educated together in groups and the number of students with and without disabilities approximates natural or normal proportions. More than one third of the respondents also agreed in principle that, students with unequal abilities helping each other does not encourage cheating or copying. This finding, therefore, suggest that teachers are receptive to that principle of inclusive education

However, mixing up children when they are performing assignment was one of the least preferred instructional strategies by the respondents and was not used as one of the supports they provided to students they identified as having special educational needs during their teaching process. This finding was inconsistent with a

53

finding by Gyimah (2010) in a study carried out to examine teachers' use of instructional strategies in primary schools in Ghana and their implication for inclusive education.The result of the study indicated that teachers in most primary schools in Ghana mix up children when they are performing assignment.

The study further revealed per the responses of respondents that allowing children with special educational needs to engage in certain activities elsewhere in the classroom was one of the least preferred instructional strategies identified by the teachers. Similarly, it was one of the less frequently used instructional strategies identified by Gyimah (2010). This implies that the large class sizes in Ghanaian schools can interfere with teachers' willingness to implement certain inclusive instructional strategies in the mainstream classrooms (Gyimah, 2010). The study also showed that majority of the teachers would in the least prefer to allow children who have difficulties writing the chance to answer questions by saying it orally or verbally.

This assertion by the respondents suggested that these teachers did not know that the strategy in question could be used to help students who have difficulty in writing. For example,a student with a severe learning disability in writing needs to take an oral essay tests in history if the test is to be a valid measure of her history knowledge rather than her writing disability.

In addition, another major finding by the study suggested that the teachers had little or no idea on collaborative problem solving strategies. Contrary to the views of the respondents, Meijer (2001) states that this strategy has been proven to be effective in promoting inclusion and decreasing the amount and intensity of disturbances during lessons. According to Meijer, during this strategy, students are guided to find solution to physical, social or instructional exclusion together. Students are motivated to begin the process of finding solution themselves and create an atmosphere of

shared responsibility. He argued that through this approach students learn to work with others to solve problem and empathize with other and more importantly cultivates acceptance, understanding and friendship among diversity of students.

Finally, the study also found out that giving sufficient time to all children to practice what they learn and to complete tests and assignments was one of the instructional strategies that were least used by the teachers as a strategy to provide support for students they identified as having special educational needs and disabilities in their inclusive classes. This finding is in line with Gyimah's (2010) study which reported that primary school teachers only use this strategy sometimes. This implies that insufficient time still remains a problem for teachers in creating an inclusive classroom.

Research question 3

3. To what extent are the selected schools resourced with instructional materials to meet the needs of children with disabilities?

To answer this research question, the frequency distributions of teachers' responses to items 1-8 were used. This is shown in Table 4.8 below:

Table 4.8: Frequency distribution of teachers' responses to roles of instructional materials

Key: F= Frequency   %= Percentage

Statement	Agree		Disagree	
	F	**(%)**	**F**	**(%)**
1 There is enough supply of instructional materials to support inclusive education.	4	(5.6%)	68	.4%)
2 Instructional materials help to capture attention of learners and motivate them to learn more.	69	(93.1%)	5	(6.9%)
3 Instructional materials serve as meaningful and important source of information to learners.	70	(97.2%)	2	2.8%)
4 Learning materials enrich the learning process and make the learning concrete.	61	(84.7%)	11	15.3%)
5 Use of instructional materials in inclusive classes eases the perception and learning for students at all levels	55	(73.4%)	17	(23.6%)
6 Instructional materials and other assistive devices help the teacher to vary strategies in the teaching and learning process.	48	(66.7%)	24	(33.3%)
7 Instructional materials and other assistive devices provide avenue for the learner to practice on his/her own.	47	(65.3%)	25	(34.7%)
8 Instructional materials help to overcome physical difficulties in communication.	30	(41.7)	42	(58.3%)

Source: Field data July, 2014

Table 4.8 shows the frequency distribution of teachers' responses on the roles of instructional materials in the education of all children in inclusive setting. The questionnaire items 1-8 were used to explore the opinions of respondents in respect the extent to which the schools are resourced with instructional materials to meet the needs of all learners as the independent variable and the various dependent variables such as there is enough supply of instructional materials to support inclusive education, instructional materials help to capture attention of learners and motivate them to learn more, instructional materials serve as meaningful and important source of information to learners and learning materials enrich the learning process and make the learning concrete. Others are, use of instructional materials in inclusive classes eases the perception and learning for students at all levels, instructional materials and other assistive devices help the teacher to vary strategies in the teaching and learning process and instructional materials and other assistive devices provide avenue for the learner to practice on his/her own. These opinions expressed were transferred into frequency counts and percentages were further derived in order to determine how the independent variable and the key elements in the statement as outlined, influenced teachers' capacity in inclusive classes.

Findings

Regarding questionnaire item number 1, which focused on finding out whether there was adequate supply of instructional materials to support inclusive education, only 4 (5.6%) of the respondents agreed with the statement whilst as many as 68 representing 94.4% showed their disagreement. The responses to item 1 clearly indicated that there was inadequate supply of instructional materials.

Regarding item 2 which sought to find out whether instructional materials helped to the capture attention of learners and motivate them to learn more, 67 representing 93.1% of respondents agreed with the statement whilst 5, representing 6.9% disagreed. With regard to item 3 which focused on whether instructional materials served as a meaningful and important source of information to learners, as many as 70 (97.2%) of the respondents agreed with the statement whilst only 2 representing 2.8% disagreed with the statement. Response to item 4 showed that 61 (84.7%) of the teachers agreed that instructional materials enrich the learning process and make the learning concrete whilst the rest 11, representing 15% disagreed with the statement.

On item 5, 55 representing 75% of the respondents agreed to the statement that the use of instructional materials in inclusive classes eases the perception and learning for students at all levels whilst 17 (23%) disagreed with the statement. To find out whether instructional and other assistive devices help the teacher to vary strategies in the teaching and learning process, the responses by the respondents to the statement in item 6 showed 48 (66.7%) agreeing to the statement whilst 24 (33.4%) disagreed.

Finally, with regards to item 7 which intended to find out whether instructional materials and other assistive devices provide opportunity for the learner to practice on his/her own, 47 (65.3%) disagreed whilst 25 (34.7%) agreed with the statement.

Discussion on research findings on research question 3

Research question 3 which focused on resourcing inclusive schools with instructional materials to promote the education of special needs children in the Akuapem North Municipality confirmed that most of the teachers in the 11 selected

schools appreciated the important roles instructional materials play in the education of children including those with special educational needs. While it was worth noting that overwhelming majority of respondents appreciated the roles of instructional materials in the teaching and learning process, a major finding of the study from teachers' data analysis revealed that there were not enough instructional materials for effective implementation of inclusive education. This result corroborates the observation made by Amoako-Gyimah (2007) who stated that the challenges that derailed effective inclusive education is lack of adequate resources.

The result pointed to the fact that the teachers admitted that instructional materials play a very important role in capturing and sustaining the attention of special needs children as well as motivating them in the teaching and learning process. Ocloo (2000) stated that instructional materials help the visually impaired child in several ways one which is capturing the attention of the visually impaired child and motivating him to learn more.

Another major finding through the responses of the respondents revealed that they did not underrate the power of instructional materials in serving as a source of meaningful and important source of information to learners. This result again consolidated the position held by Ocloo (2000) which noted that instructional materials help to provide meaningful and important source of information.

The responses to item 4 showed that teachers were very much aware that teaching and learning materials enrich the learning process and make learning concrete. This result is in agreement with Isman (2005) who noted that educational materials are the tools that enrich the learning process and make the learning concrete. Isman added that educational materials are elements that teachers cannot overlook in

the instructional process as they facilitate the process of learning and provide permanence of what is learned.

Majority of the respondents by their responses were of the view that the use of teaching and learning materials in inclusive classes made perception and learning for students irrespective of their level of education. The result also suggested that special needs students would do better at learning with teaching and learning materials irrespective of the level they find themselves in the educational ladder. World Conference Educational Science (2009) in a report stated that materials in education ease the perception and learning for students at all levels especially for students who have difficulty in learning. The report further stated that the teachers should use the appropriate materials to make learning process concrete and to increase participation of the students into the learning process.

Furthermore, majority of the teachers per their responses to item 6 confirmed that instructional materials and other assistive devices enabled them vary their strategies of presenting lessons in class. This was corroborated by Ocloo (2000) who stated that instructional materials and other assistive devices help to vary techniques and introduce structure in the teacher presentation of information.

The teachers saw instructional materials and other assistive devices as an avenue for the learner to practice on his/her own. This assertion was indicated in their responses on item 7 of the research question 3. Again, this result confirmed what was noted by Ocloo (2000) that instructional materials provide opportunity for the teacher to practice on his/her own. He added that interaction with teaching or instructional materials builds a store of knowledge of information and develop the curiosity in children to learn.

Research question 4

What support services are available to teachers for effective inclusion?

To answer this research question, the frequency distributions of teachers' response to items 1-7 were used. This is shown in Table 4.9 below:

Table 4.9: Frequency distribution of teachers' responses to the availability of support services

Key: F= frequency, % = percentage

Statement	Agree		Disagree	
	F	**(%)**	**F**	**(%)**
1.For inclusion to succeed support services are essential	56	(77.8)	16	(22.2)
2.Special educators provide support for the teachers in inclusive classrooms	35	(48.4)	37	(51.4)
3. There is in-class support from special needs teacher assistants.	0	(0)	72	(100)
4. Resource teachers prepare or obtain specialised learning materials for low vision students.	32	(44.4)	40	(55.6)
5. Resource teachers consult with regular classroom teachers and parents on matters relating to special needs children.	52	(72.2)	20	(27.8)
6. Professionals like psychologists, ophthalmic nurses, audiologists, speech therapists and occupational therapists provide technical supports to teachers and students.	6	(8.3)	66	(91.7)
7. Special educators to be attached to each class that has special educational needs children.	68	(94.4)	4	(5.6)

Source: Field data July, 2014

62

Findings

Most teachers, 56 (77.8%) were of the conviction that for inclusion to succeed support services are essential whilst 16 (22.2%) disagreed. Item 2 from table 4.9sought to find out whether the special educators provide support for teachers in inclusive classrooms. Thirty five representing 48.6% of the respondents agreed with the statement whilst 37 of them representing 51.4% disagreed. With regard to item 3 which intended to find out whether there was an in-class support from special needs teacher assistants, all the respondents, 72 (100%) overwhelmingly disagreed with the statement.

Regarding item 4 which sought the opinions of the teachers on whether resource teachers obtain or prepare specialised materials for low vision students, 32 (44.4%) agreed to the with statement with 40 representing 55.6% registering their disagreement. In finding out whether resource teachers consult with regular classroom teachers and parents on matters relating to special needs children, item 4 from the table 10 above showed responses from respondents indicating that 52 (72.2%) of them agreed with the statement whilst 20 representing 27.8% of the teachers disagreed.

Item 6 sought to find out whether professionals like psychologists, ophthalmic nurses, audiologists, speech therapists and occupational therapists provide technical supports to teachers and students. Six of the respondents representing 8.3%, agreed with the statement whilst as many as 66 representing 91.7% disagreed with the statement.

Finally, in finding out whether the regular classroom teachers would like special children with educators to be attached to each class that has special educational needs, only 4(5,6%) of the respondents disagreed whilst an overwhelming majority of 68, representing 94.4%, agreed with the statement.

Discussion on research findings on research question 4

Research question 4 which focused on support services available to teachers for effective inclusion of pupils with special educational needs in the eleven (11) selected schools in the Akuapem North Municipality produced interesting varied results. The opinion expressed by the teachers on whether special educators provide support for teachers in inclusive classroom revealed that enough support was not coming from the resource teachers to promote the education of special needs children.

This finding contradicts that of Bala (2004) who noted that special educators are needed to provide support for the teachers and special educational needs children. One major revelation from the study was the fact that majority of the teachers were of the conviction that support services contribute to the success of inclusive education. The availability of support services at the classroom and school levels is a major factor associated with positive attitude towards inclusion and its success. Support services in all forms are important if a teacher in an inclusive school is to be effective (Clough & Lindsay, 1991). Teachers who had expressed a contrary view about the role of support of services may be unaware of their availability and benefits of such services for inclusion.

It also came out that came out of the study was that there was an absence of in-class support from special needs teacher assistants. The fact that all the respondents indicated that they did not benefit from the services of special needs assistants brought to the fore that the practice of having special needs teacher assistants is completely missing in our educational system in Ghana.This is in a sharp contrast with what is practiced in Australia where Special Needs Teacher Assistants have become a fundamental component of the inclusive model of education in regular schools and there is little doubt that they now assume an important role in the

classroom. According to Wasykowski (2002) while there is little research available to demonstrate the efficacy and/or long term benefit of Special Needs Teacher Assistant in building effective inclusive classrooms, these front line workers can become very significant adults in the lives of these students and therefore have a significant positive impact on the development of their attitudes, skills and learning.

Furthermore, the study revealed a major finding which showed that resource teachers consult with regular classroom teachers and parents on matters relating to special needs children. This particular result could mean that there is a proper collaboration among these three key players namely, the resource teacher, the regular classroom teacher and the parent in the education of children with special needs. The finding corroborates with the position of Tomlinson, Brimijoin and Narvaez (2008) who pointed out that, parents must play a more central role in the school, since teachers have to coordinate with the parents of learners with special needs in particular to assist their children to learn. In addition, Pottas (2000) also stressed that cooperation between parents and the school is one of the most important forms of support.

Also, the study revealed a major finding which painted a gloomy picture about the roles professionals like psychologists, ophthalmic nurses, audiologists, speech therapists and occupational therapists play in providing technical supports to regular classroom teachers and students with special needs. The result clearly indicated that the above mentioned professionals are doing little to contribute to the smooth running of the inclusive programme in the Akuapem North Municipality. However, Bartlett et al. (2002) are of the opinion that a support team which includes a speech therapist, a psychologist, an occupational therapist as well as a remedial teacher should provide support to teachers during in-service trainings. According to Landbrook (2009) the

best support experience by a learner with barriers to learning is to be assisted by a specialist in the field of the barrier.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter presented the summary of findings, conclusion and recommendations for the study. The main purpose of the study was to assess the capacity of teachers in teaching in inclusive classes in eleven selected schools in Akuapem North Municipality. The descriptive survey design was employed for the study. The study involved 72 teachers from these 10 selected pilot schools. The random sampling method was used in selecting the 72 teachers in these oriented inclusive schools. A Likert-scale structured questionnaire was used for the data collection

The data collected was quantitativelyand statistically analyzed. As the study was a descriptive survey, the statistical analysis used consisted mainly of frequencies and percentages. Besides, the results were discussed with references to available literature where appropriate.
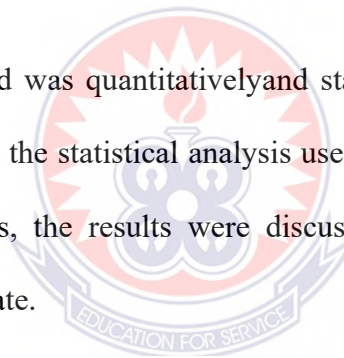
Summary of main findings

Research question 1

The research questionnaire data analyzed on research question 1 regarding teachers' knowledge to handle children with special educational needs in inclusive classrooms in the eleven selected schools in Akuapem North Municipality showed some interesting findings. These include:

The study indicated that there was inadequate pre-service preparation to equip teachers with requisite knowledge and skills to effectively manage all children in an inclusive setting.

Approximately 81% of teachers were not provided opportunities for practical experience in inclusive setting during their pre-service preparation.

There was an indication that teachers attended in-service training on inclusive practices to complement their knowledge in handling children with special needs. This was shown by the affirmative responses from the teachers as shown in Table 7.

Research question 2

The research questionnaire data analyzed regarding adaptation of teaching and learning strategies in inclusive classrooms revealed the following:

The findings from the study revealed that teachers were doing well to ensure comfortable environments for all children including those with special needs. There was an indication that teachers consider heterogeneous grouping in their teaching strategies to meet the needs of children with special needs and that grouping students with an unequal abilities would not encourage cheating.

The study revealed that allowing children with special educational needs to engage in certain activities elsewhere in the classroom was one of the least preferred instructional strategies used by the teachers. The study showed that majority of the teachers would not allow children who have difficulties writing the chance to answer questions by saying it orally or verbally. In addition, the study suggested that the teachers had little or no idea on collaborative problem solving strategies.

The study also indicated that giving sufficient time to all children to practice what they learn and to complete tests and assignments was one of the instructional strategies that were least used by the teachers as a strategy to provide support for students they identified as having special educational needs and disabilities in their inclusive classes. The teachers were of the opinion that including children with

special educational needs in the inclusive classrooms would retard the progress of other children without disabilities.

Research question 3

The question which focused on the role of instructional materials in teaching special needs children in inclusive classes revealed the following:

The study clearly indicated that there was inadequate supply of instructional materials for effective implementation of inclusive education. The result pointed to the fact that the teachers admitted that instructional materials play a very important role in capturing and sustaining the attention of special needs children as well as motivating them in the teaching and learning process.

Another major finding through the responses of the respondents revealed that they did not underrate the power of instructional materials in serving as a source of meaningful and important source of information to learners. Teachers were very much aware that teaching and learning materials enrich the learning process and make learning concrete.

The study revealed that, the use of teaching and learning materials in inclusive classes made perception and learning easier for students irrespective of their level of education. The result also suggested that special needs students would do better at learning with teaching and learning materials irrespective of the level they find themselves at the educational ladder. There was an indication that instructional materials and other assistive devices enabled them vary their strategies of presenting lessons in class. The teachers saw instructional materials and other assistive devices as an avenue for the learner to practice on his/her own.

69

Research question 4

The research questionnaire data analyzed on the support services for teachers for effective education came out with the following findings:

The study indicated that support services are very essential for the successful implementation of inclusive education. The opinion expressed by the teachers on whether special educators provide support for teachers in inclusive classroom revealed that enough support was not coming from the resource teachers to promote the education of special needs children.

It also came out of the study that there was an absence of in-class support from special needs teacher assistants. The fact that all the respondents indicated that they did not benefit from the services of special needs assistants brought to the fore that the practice of having special needs teacher assistants is completely missing in our educational system in Ghana.

The study revealed a major finding which showed that resource teachers consult with regular classroom teachers and parents on matters relating to special needs children. This particular result could mean that there is a proper collaboration among these three key players namely, the resource teacher, the regular classroom teacher and the parent in the education of children with special needs.

Also, the study revealed a major finding which painted a gloomy picture about the roles professionals like psychologists, ophthalmic nurses, audiologists, speech therapists and occupational therapists play in providing technical supports to regular classroom teachers and students with special needs. The result clearly indicated that the above mentioned professionals are doing little to contribute to the smooth running of the inclusive programme in the Akuapem North Municipality.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

Teachers in inclusive oriented schools are academically qualified but not professionally equipped enough to handle pupils with disabilities. This is due to the unavailability of practicum avenues for the teacher trainees and adequate courses in inclusive practices.

Teaching strategies teachers used in inclusive schools have some level of flexibility but not devoid of individual teacher's judgment in terms of adaptation to suit the pupils' needs.

Special instructional materials that exist in inclusive schools are inadequate and have affected effective teaching and learning especially for children with special educational needs.

Support services are found to be important ingredient in the education of children with special educational needs, but not enough is seen in terms of roles played by key professionals like psychologists, ophthalmic nurses, audiologists, speech therapists occupational therapists special education resource teachers.

It is evident that there are concrete efforts towards inclusive education in Ghana and other countries due to its multi-dimensional benefits for children with and without disabilities, teachers, school administrators, parents and society at large. The establishment of inclusive pilot schools in Akuapem North Municipality and most parts of Ghana is a key testimony of government's mandate and commitment to provide education for all children with and without disabilities. However, for inclusive education to succeed and meet the diverse needs of all children, quality teacher preparation, adaptation of teaching and learning strategies, supply of adequate instructional materials and support services for teachers are paramount and cannot be

71

discounted.

Recommendations

Based on the research findings and conclusions, the following recommendations have been made:

The Ghana Education Service in collaboration with Colleges of Education should provide ample avenues for fieldwork or practicum experiences in inclusive schools before completion of teacher education programmes. And that pre-service preparation in inclusive education should go beyond one semester course that is currently pursued at the Colleges of Education. This should be periodically complemented with seminars and in-service participation to broaden teachers' knowledge on current development about inclusive education practices.

Pre-service preparation and in-service training should critically focus on equipping teachers with teaching strategies that would help them to adapt lessons to meet diverse needs of all children in inclusive classrooms including children with special educational needs.While it is clear that the idea of inclusive classrooms may be turning into a permanent fixture in our education system, it is imperative that all teachers be prepared and given the necessary support and assistance to meet the needs of all their students.Teachers also need to take personal responsibility in keeping themselves knowledgeable on matters pertaining to special needs education in addition to knowing about and understanding the extremely diverse list of disabilities and the instructional strategies and services needed to accommodate those who have them.

Special training/learning materials should be provided to all schools and the teachers trained to use these materials effectively in teaching children with special educational needs in an inclusive setting.

There should also be effective collaboration between regular teachers and other specialists like psychologists, ophthalmic nurses, audiologists, speech therapists occupational therapists and special education resource teachers to enhance the instruction and provision of services for children with disabilities in inclusive schools.

Suggestions for further research

The study explored the capacity of regular teachers in teaching in inclusive classes in ten selected schools in Akuapem North Municipality of Ghana. It is suggested that:

A study in community involvement in inclusive education should be undertaken in the Akuapem North Municipality.

Further studies should be conducted on the nature of curriculum for pre-service training of teachers for inclusive education in Ghana.

REFERENCES

Adera, B. A., (2007). T*eacher turnover among teachers of students with emotional and behaviour disorders.* Doctoral dissertation, University of North Texas.

Agbenyega, J., & Deku, P (2011). Building new identities in teacher preparation for inclusive education in Ghana. *Current Issues in Education,* (1). Retrieved from http://cie.asu.edu/ on 12/10/2013.

Amedahe, F. K. (2002). *Fundamentals of educational research methods.*Mimeograph, University of Cape Coast (Unpublished).

Amoako-Gyimah, S. K. (2007). *Educating pre-school children with special needs,* Winneba: University of Education.

Angelides, P. (2008). *Patterns of inclusive education through the practice of student teachers. education,* (3), 317-329. DOI: 10.1080/136013110601103253.

Avramidis, E. (2005). *Developing inclusive schools: changing teachers' attitudes and practice through critical professional development.* Paper presented at the International Special Educational Conference (August 1-4), Glasgow, Scotland.

Bala, M. (2004).Teacher preparation in inclusive education. *Journal of National Council for Exceptional Children,* (1), 37-41.

Bartlett, L. D., Weisenstein, G. R. & Etscheidt, S. (2002*). Successful inclusion for educational leaders.* Upper Saddle River, New Jersey: Merrill Prentice Hall

Berry, R. (2010). Pre-school and early carrier teacher's attitudes toward inclusion, instructional accommodations, and fairness: *The Teacher Education,* 45, 75-95.

Brownell, M. T., Adams, A., Sindelar, P., Waldron, N., & Vanhover, S. (2006). Learning from collaboration: The role of teachers' qualities. *Exceptional Children, 72*,169-185.

Cahill, S. M. & Mitra, S. (2008). Forging collaborative relationships to meet the demands of inclusion. *Kappa Delta Pi Record,*44*,* 149-51

Cameron, D. L., & Cook, B. G. (2007). Attitudes of pre-service teachers enrolled in an infusion preparation program regarding planning and accommodations for included students with mental retardation. *Education and Training in Developmental Disabilities. 42,* 353-63.

Carrington, S., Deppeler, J., & Moss, J. (2010).Cultivating teachers' beliefs, knowledge and skills for leading change in schools.*Australia Journal of Teacher Education.* (10), 1-13.

Carroll, A., Forlin C., & Jobling, A. (2003).The impact of teacher training in special education attitudes of Australian pre-service general educators towards people with disabilities. *Teacher Education Quarterl,* (3), 65-79.

Clough, P., & Lindsay, G. (1991). *Integration and the support service.* Slough: NFER.

Cohen, L., Morrison, L., & Manion, K. (2004). *Research methods in education.* London: Routeledge Falmer.

Department of National Education (2001). Education white paper 6: Special Needs Education. Pretoria: Government Printer.

Dihn, D. N. & Le, T. H. (2010). *Preparing teachers for inclusive education.* Vietnam: Catholic Relief Services.

Doorlag, D. & Lewis, R. (1995). *Teaching special students in the mainstream* (4th Ed.).Englewood Cliffs, NJ: Merrill.

Downing, J. E. (2002). *Including students with severe and multiple disabilities in typical classrooms.* Baltimore: Paul Bookes Publishing Company.

EADSNE (2003). I*nclusive education and classroom practices, summary report:* European Agency for Development in Special Education: Middlefast.

Farrell, M. (2000).The impact of research on developments in inclusive education. *International Journal of Inclusive Education.*12, 34-38.

Ferreira, H., & Grace, R. (2006). Special educational needs: An experiment in teacher education in Portugal. In Gash, H. (Ed.) *Beginning teachers and diversity in school: A European study.* Instituto Politecnico de Braganca Report of research undertaken within Comenius Project 94158-CP-1-2001-FR.

Florian, L. (2009).Preparing teachers to work in schools for all. *Teaching and Teacher Education,* (4), 533-534.

Florian, L. & Rouse M. (2009).The inclusive practice project in Scotland.Teacher education for inclusive education.*Teaching and Teacher Education,* (4), 594-601.

Forlin, C. (2001). Promoting inclusivity in Western Australian schools. *International Journal of Inclusive Education,* 8, 183-200.

Gall, M. Gall, J., & Borg, W. (2003). Educational Research: An Introduction*. Person Education.* (7^{th}ed).

Garriott, P. P., Miller, M., & Snyder, L. (2003). Preservice teachers' beliefs about inclusive education: What should teacher educators know? *Action in Teacher Education,* 5, 48-54.

George, D., & Mallery, P. (2003).*SPSS for Windows step by step: A simple guide and reference, 11.0 update* (4th Ed.). Boston: Allyn & Bacon.

Gerent, C. M., & Hotz, J. Z. (2003).Preparing teachers to teach in inclusive schools. *Academic Exchange Quarterly,* (3), 2-10.

Ghana Government (2008). *Education Act, 2008, 778.Ghana Government.* Accra: The Ghana Publishing Company Ltd.

Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting , and reporting Cronbach‟s alpha   reliability coefficient for likert-type scales. Presented at the Midwest-to-   Practice Conference in Adult, Continuing, and Community Education, The Ohio State University. Columbus. Retrieved :http//www.alumini

osu.org/Midwest%papers/Gliem%20&20%Gliem%20GliemDone.pdf10/10/2014.

Golder, G., Norwich, B., & Bayliss, P. (2005). Preparing teachers to teach pupils with special educational needs in more inclusive schools: Evaluating a PGCE development. *British Journal of Special Education,* (2), 92-99.

Gyimah, E. K. (2009). *Inclusive education: definition, goals, objectives, principles and benefits.* Paper presented at Ghana Education Service Staff Development Institute, Ajumako in the Central Region of Ghana (6th – 10th September 2009). International Conference on Inclusive Education under the sponsorship of UNESCO

Gyimah, E. K. (2010). *An Examination, Teachers' use of Instructional Strategies in Primary Schools in Ghana: Implication to inclusive Education.*Cape Coast: University of Cape Coast.

Hay, J. F. (2003). Implementation of the inclusive education. Paradigm shift in South Africa education support services: *South Africa Journal of Education,* (2) 135-138.

Hayford, S. K. (2013). Special educational needs and quality education for all. Dansoman, Accra: Salt n Light.

Hoban, G. F. (2004). Seeking quality in teacher education design: A four dimensional approach: *Australian Journal of Education,* 48(2), 117.

Hopkins, J., Cohn, J.F., Campbell, S.B. & Matais, R., (1994).*Strategic plan for the US Department of Education: Working document*. Washington DC: Government Printing Office.

Hornby, G., Atkinson, M., & Howard, J. (1997).*Controversial issues in special education*. London: David Fulton Publishers.

Huttie, M. M., & Peterson, J. M. (2003). *Inclusive teaching: Creating effective schools for all learners.* New Jersey: Pearson Education, Inc.

Isman, A. (2005). *Educational technology and materials.* Ankara: Pegem Publication.

Jenkins, J., Antil, L., Wayne, S., & Vadasy, P. (2003). How cooperativelearning works for special education and remedial students. *ExceptionalChildren*, *69,* 279–292.

Jordan, R., & Powell, S. (2006). Skills without understanding: A critique of a competency based model of teacher education in relation to special needs.*British Journal of Special Education,* (3), 120-124.

Kuyini, A. B., & Dessai, I. (2009).Principals' and teachers' attitudes toward and knowledge of inclusive education in Ghana.*IFE Psychology*. 14(2): 225-244.

Lancaster, J., & Brain, A (2007). The Design of Inclusive Education Course and the Self-efficiency of Pre-Service Teacher Education Students.*International Journal of Disability, Development and Education,* (2), 245-256. DOI 110.1080/1034912071330610.

Landbrook, W. M. (2009). *Challenges experienced by educators in the implementation of inclusive education in primary schools in South Africa.* Med dissertation, University of South Africa: Pretoria.

Lewis, R., & Doorlag (1995). *Teaching special students in the mainstream* (4th Ed.), Eaglewood Cliffs, Nj: Merrill.

Lindsay, G. (2003). Inclusive education: A critical perspective. *British Journal of Special Education,* (1), 3-12.

Lindsay, G. (2007). Educational Psychology and the effectiveness of inclusive education/mainstreaming. *British Journal of Educational Psychology*, 77, 1-24.

Marilyn, F., & William, B. (2006).*Including students with special needs: A practical guide for classrooms teachers.*Boston: Allyn & Bacon.

McLeskey, J. & Waldron, N. (1996). *Inclusive schools in action. Making differences ordinary.* UK: Lock Printers.

McLeskey, J., (Ed.). (2007). *Reflections on inclusion: Classic articles that shaped our thinking.* Arlington: Council for Exceptional Children.

Meijer, J. W. (2001). *Inclusive education and effective classroom practice.* Retrieved(12/4/14)website:http://www.europeanagency.org/publication/ereports/inclusive education-and –classroom practice-in-secondary-education/iecp-secondary en.pdf.

Meijer, J. W. (2004). *Inclusive education and effective classroom practice in secondary* .Retrieved (23/5/13) from European Agency for Development in Special Education (EADSNE) website:http://www.europeanagency.org/publications/reports/inclusive-education-and-effective-classroom-practice/IECP-Literaure-Review.pdf.

79

Meijer, C. J., W., Soriano, V., & Watkins, A. (2006). *Provision in Post-Primary Education.* Odense, Denmark: European Agency for Development in Special Needs Education.

Mowes, D. (2000). *The attitudes of educators in Namibia towards inclusive education.* Unpublished Doctoral Dissertation, University of Stellenbosch.

Munby, H., Lock, C., Hutchinson, N. L., Whitehead, L. E., & Martin, A. K. (1999). Evaluation by teacher candidates of a field based teacher education program using focus groups. *Teacher Education Quarterly,* (2), 35-5

Muthukrishna, N. (2002*).* Policy legislation to special needs education in South Africa has been undergoing transformation since the democratic government came into power in 1994. *International Journal of Special Education,* (1), 16-21.

Nketia, W. (2011*). Teacher education and inclusion in Ghana: Pre-Service Teacher Preparedness for creating an inclusive classroom* (Unpublished master's thesis). University of Jyvaskyla, Finland.

Ocloo, M. A. (2000). *Effective education for persons with visual impairment in Ghana.*Cape Coast: Premod Press.

OECD (2005). *Teacher matter: attracting, developing and retaining effective teachers*. Retrieved (22/03/14)[http://www.oecd.org/document/52/03343.en_2649_39263231_3499 98811,oo.html](http://www.oecd.org/document/52/03343.en_2649_39263231_349998811,oo.html).

Okyere, B. A., & Adams J.S. (2003*). Introduction to special education: African perspective.* Legon, Accra: Adwinsa Publication (Gh) Ltd.

Opoku-Inkoon, I. (2009). *Examining Pre-Service Teacher Preparation for Inclusive Education in Ghana* (Unpublished master's thesis).University of Cape Coast, Cape Coast, Ghana.

Pottas, L. (2005). *Inclusive education in South Africa: The challenges posed to the teacher of the child with a hearing loss*. DEd thesis, University of Pretoria, Pretoria.

Rice, D., & Zigmond, N. (2000).*Co-teaching in secondary schools: Teacher reports of development in Australian and American classrooms.* US: Authors.

Rouse, M. (2007) *Enhancing effective inclusive practice: Knowing, doing and believing.* Kairaranga. Wellington: New Zealand Ministry of Education.

Ross-Hill, R. (2009). Teacher attitude towards inclusion practices and special needs students. *Journal of Research in Special Educational Needs,* (3), 188-98.

Rosenzweig, K. (2009). *Are today's general education teachers prepared to meet the needs of their inclusive education?* New York: Brookville Centre for Children's Services.

Sapon-Shevin, M., Ayres, B. J., & Duncan, J. (2002). *Cooperative Learning and Inclusion.* Baltimore: Paul, H. Brookes Publishing Company.

Savolainein, H. (2009). Responding to diversity and striving for excellence: The case for Finland. In Acedo C (Ed.) *Prospects Quarterly Review of Comparative Education,* (3) 41-45.

Shavhani, N. (2004*). Inclusive education in the rural areas of Limpopo.* Med dissertation, University of the North, Polokwane.

Smith, A. (1998). Crossing borders: learning from inclusion and restructuring research in   Sweden, Denmark, Norwayand the United States, *International Journal of Educational Research,* 29, 161-166.

Tait, K., & Purdie, N. (2000) Attitudes toward disability: teacher education for inclusive environments in an Australian university. *International Journal of Disability, Development and Education,* (1), 25-38.

Thousand, J. S., Nevin, A. I., & Villa, R. A. (2002). *Creativity and Collaborative Learning: The practical guide to empowering students, teachers and families*. Baltimore: Paul H. Brookes Publishing company.

Tomlinson, C., Benjamin, K., & Narvaez, L. (2008). *The differentiated school*. Alexandria, Egypt: Association for supervision and curriculum development.

UNESCO (1994). *The Salamanca statement and framework of action for Africa on special needs children.* Salamanca: United Nations.

UNESCO (2009). *Policy guidelines on inclusive education.* Paris: UNESCO.

Walther-Thomas, C., Korinek, L., McLaughin, V., & Williams, B. (2009*). Collaboration for inclusive education: Developing successful programs*. Boston: Allyn & Bacon.

Wasykowski, J. (2002). *Perspectives of teacher assistants working with students with diverse learning needs,* MEd. Thesis, Canada: University of Lethbridge.

Watkins, A. (2003). *Key principles for special needs education: recommendations for policy*

*Makers.*Retrieved(13/09/2013)website:http://www.europeanagency.org/publications/ereports/key-principles-in-special-education/key-en-pdf.

Whitworth, J. (2001). *A model for inclusive teacher preparation*. Abiline, Texas: Department of Education, Abiline Christian Education.

World Conference Educational Science (2009). *New Trends in Educational Sciences*. Nicosia, North Cyprus: Curran Associates, Inc.

APPENDIX A

Questionnaire for Teachers in Inclusive Pilot Schools

Dear Sir/Madam,

I am a master of education student of University of Education, Winneba, researching into the topic 'Assessing teachers' capacity in teaching in inclusive classes in three selected schools in Akuapem North Municipality', to find out: a) how regular classroom teachers are equipped with requisite knowledge to handle children with special educational needs in their classrooms; b) what adaptations teachers use to differentiate teaching and learning activities to meet diverse student needs; c) how regular schools are resourced to help teachers meet the needs of children with special educational needs; d) the available support services for regular classroom teachers for effective inclusive practice. The research is purely for academic purposes; therefore the confidentiality and anonymity of the respondents is assured in all phases of the study. Please respond to the statement and questions on the basis of your personal opinions. There is no 'right' or 'wrong' responses

Thank you.

………………..

DOYI GIDEON

PART A: Background information

Please tick/fill in your responses in the spaces provided.

Gender ………….male………female 2.Age range: 25-30, 31-35, 36-40, 41-45, 46 and above

3. Number of years of teaching: 0-5, 6-10, 11-15, 16-20, 21 and above.

4. Number of years in present school: 1-2, 3-4, 5-6, 7 and above

5. Your highest educational qualification:

   i.   M.A/ MEd/M Phil

  ii.   BEd

 iii.   Diploma

 iv.   Teachers' Certificate 'A'

PART B: Teachers' knowledge about inclusive education

The statements below relate to your understanding of inclusive education. After each statement, tick (√) in the appropriate box of scores numbered 1-4 which represent your personal opinion. 1= Strongly Disagree, 2= Disagree, 3= Agree, 4= Strongly Agree.

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
1 Pre-service preparation exposed teachers to understand and appreciate students with diverse needs.				
2 Pre-service preparation provided opportunities for practicum experiences in inclusive schools.				
3 Teachers have in-service training programme in inclusive education practices to complement their knowledge in handling special needs children.				
4 Pre-service preparations adequately equipped me with knowledge and skills to effectively manage all in an inclusive setting.				
5.In-service training programmes focus on collaborative teaching skills such as co-teaching classes				
6 Inclusion will retard academic progress of non-disabled student.				

PART C: Instructional strategies

The statements below relate your understanding of instructional strategies used in inclusive education settings. After each statement, tick (√) in the appropriate box of scores numbered 1-4 which represent your personal opinion. 1= Strongly Disagree, 2= Disagree, 3= Agree 4= Strongly Agree.

STATEMENT	Strongly Disagree	Disagree	Agree	Strongly Agree
1 I ensure that classroom environment is comfortable for all children.				
2. I consider heterogeneous grouping as my teaching strategy.				
3. Grouping children with unequal abilities encourage cheating and copying.				
4. Allow children with special educational needs to engage in certain activities elsewhere outside the classroom.				
5. Mix up with children when they are performing assignments and ask them to help each other.				
6. Allow children who have difficulties in writing the chance to answer questions by saying it orally or verbally.				
7. I use collaborative problem solving strategy that allows students to find solution to physical and social problems together.				
8. Give sufficient time to all children to practice what they learn and complete tests and assignments.				

PART D: Roles of instructional materials in the teaching of children with special educational needsin inclusive classrooms

The statements below relate to your understanding of the roles play by instructional material in the education of children with special needs in an inclusive setting. After each statement tick (√) in the appropriate box of scores numbered 1-4 which represent your personal opinion. 1= Strongly Disagree, 2= Disagree, 3= Agree, 4= Strongly Agree.

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
1. There is enough supply of instructional materials to support inclusive education.				
2 Instructional materials help to capture attention of learners and motivate them to learn more.				
3 Instructional materials serve as meaningful and important source of information to learners.				
4 Learning materials enrich the learning process and make learning concrete.				
5 Use of instructional in inclusive classes eases the perception and learning for students at all levels.				
6 Instructional materials and other assistive devices help the teacher to vary strategies in				

the teaching and learning process.				
7 Instructional materials and other assistive devices provide avenue for the learner to practice on his/her own.				
8 Instructional materials help to overcome physical difficulties in communication.				

PART: E Support services for effective inclusive practices

The statements below focus on the support services for inclusive practices. Indicate your level of agreement or disagreement with each statement by ticking an option. The response options are 1= Strongly Disagree, 2= Disagree,3= Agree, 4= Strongly Agree.

Statements	Strongly Disagree	Disagree	Agree	Strongly Disagree
1 For inclusion to succeed support services are essential.				
2, Special educators provide support for the teachers in inclusive classrooms.				
3. There is an in-class support from special needs teacher assistants.				
4. Resource teachers prepare or obtain specialized learning materials for low vision students.				
5. Resource teachers consult with regular classroom teachers and parents on matters relating to special needs children.				
6. Professionals like psychologists, ophthalmic nurse, audiologists, speech therapists and occupational therapists provide technical supports to teachers and students.				
7. Special educators to be attached to each class that has special educational needs children.				