

**UNIVERSITY OF EDUCATION, WINNEBA**

**PROVISIONS TEACHERS MAKE FOR PUPILS WITH SPECIAL  
EDUCATIONAL NEEDS IN THREE SELECTED INCLUSIVE  
PILOT BASIC SCHOOLS AT POKUASE IN THE  
GREATER ACCRA REGION OF GHANA**



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**2015**

**UNIVERSITY OF EDUCATION, WINNEBA**

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Studies, University of Education, Winneba in partial fulfilment of the  
requirements for award of the MASTER OF PHILOSOPHY  
(SPECIAL EDUCATION) Degree**

**JULY, 2015**

## DECLARATION

### CANDIDATE'S DECLARATION

I, hereby declare that this dissertation is the result of my own original research. With the exception of quotations and references contained in published works (which have all been identified and acknowledged) the entire dissertation is my own original work, and it has not been submitted, either in part or whole for another degree elsewhere.

Candidate's Name: Michael Nyavor

Signature: .....

Date: .....



### SUPERVISOR'S DECLARATION

I, hereby declare that the preparation and presentation of this dissertation was supervised in accordance with guidelines and supervision of dissertation laid down by the University of Education, Winneba.

Supervisor's Name: Samuel K. Hayford (Ph.D)

Signature: .....

Date: .....

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## **DEDICATION**

This thesis is dedicated to Irene Attah-Nyavor (Mrs) for her encouragement and support.



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## ABSTRACT

The study focused on finding out the provisions teachers make for pupils with special educational needs in three selected inclusive pilot basic schools at Pokuase in the Greater Accra Region of Ghana. The study employed the descriptive survey design. Purposive and simple random sampling techniques were used to select the sample size of 112 respondents. Descriptive statistical method was used to analyse questionnaire data for the study. Data from the semi-structured interviews were analysed using thematic data analysis. Findings from the study revealed among others that; (i) teachers could not provide supplemental instructions and modify text for pupils with special educational needs; (ii) instructional materials such as tape recorders and text in braille were not provided, computers were not adapted to enhance easy access for pupils with special educational needs; (iii) related services such as interpreting, school health and audiological services were not provided. It was therefore recommended that (a) teachers should expand the teaching methodology to include supplemental instruction; (b) teaching and learning materials should be provided to include tape recorders, text in Braille, adapted computers for easy access especially those with special educational needs; and (c) related services should be expanded to include interpreting, school health, and audiological services.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

Education has to be of the highest possible quality to help every child reach his or her potentials and that quality should be consistent across regions, different populations, urban and rural settings. Quality in education can only be achieved through the development of child-friendly inclusive learning environments, dedicated to a holistic approach to children's development. All learning environments and educational content, teaching and learning processes should reflect human rights principles. This means addressing children's multiple rights, using strategies that build links between the school, the family and community (UNICEF, 2011).

Although, there is no single definition of 'quality education', it is broadly understood to incorporate the opportunity for cognitive developments and opportunities for creative and emotional development (UNICEF, 2011). Individuals with disabilities have the right to quality education both in inclusive and segregated schools. Quality education for students with disabilities in inclusive schools can only be achieved if the learning environment, teaching and learning processes address the unique needs of these students. Hayford (2013), viewed quality education as one that encompass the rights of the whole child, and all children to survival, protection, development and participation are at the centre. Its focus is on learning which strengthens the capacities of children to act progressively on their own behalf through the acquisition of relevant knowledge, useful skills and appropriate attitudes; and which creates for children and others, places for safety, security and healthy interaction.

Quality education for a student with disability includes learning outcomes that are at an individually appropriate level and are pursued within typical class activities (e.g., small cooperative groups, unit-based projects). In order to achieve these goals, education for children with disabilities must encompass positive learning opportunities providing appropriate support for all children, investment in and support for teachers to enable them to teach within inclusive environments, rights-based learning and assessment, and child friendly, safe and healthy environments (UNICEF, 2011).

Education can be considered quality in inclusive settings when pupils' individual needs are put first by making provisions for easy access to the curriculum and the environment where learning takes place. This requires that all children, including children with disabilities, not only have access to schooling within their own community, but that they are provided with appropriate learning opportunities to achieve their full potential. All children should have equivalent and systematic learning opportunities in a wide range of school and additional educational settings, despite the differences that might exist.

In Ghana, a legislative instrument was passed to promote inclusive education. The Persons with Disability Act of 2006 stipulates that pupils with disabilities have the right to inclusive education. In order to accommodate diversity of learning needs through addressing barriers to learning, educational institutions are required to provide support services and positive life experiences to all students including those with disabilities (Centre for Democratic Development, 2006).

Children with special needs cannot simply be placed in inclusive settings with the hope that normality will rub off on them (McNamara & Moreton, 1995). Students with special educational needs, in order to reach their potentials, should have specially

designed instruction that meets their unique needs. Special materials, teaching techniques, equipment and/or facilities might be required. For example, students with visual impairments might require reading materials in large print or braille; students with hearing impairment might require hearing aids or instruction in sign language; those with physical disabilities might need special equipment; those with emotional or behavioural disorders might need smaller and more highly structured classes. Related services- special transportation, psychological assessment, physical and occupational therapy, medical treatment, and counselling might be necessary if, special education is to be effective. The single goal of special education is capitalising on exceptional students' abilities (Kauffman & Hallahan, 2005).

Regular classroom teachers who are aware of the individual needs of students and are skilled in meeting their needs may select appropriate materials or equipment and/or instructional methods. They might also consult with special educators or other professionals in order to acquire special materials, equipment and teaching methods to effectively teach students with special educational needs. In some cases, the special educator might assist the regular classroom teacher to select appropriate teaching strategies and materials or refer the teacher to other resources teachers need to use to enhance students participation in learning (Saskatchewan Special Education Unit, 2001).

During assumption of duty as a special educator in the three selected inclusive pilot basic schools at Pokuase in the Greater Accra Region of Ghana, it was realised that majority of students could not cope with their academic works. Students especially those with special educational needs were often repeated for poor academic performances where some eventually drop out of school. This study was to investigate provisions teachers in the three selected pilot inclusive basic schools

make for pupils with special educational needs in relation to instructional strategies; teaching and learning materials; related services and peer support services to promote learning. The outcome of the study could reinforce the need for regular schools and classrooms to be structured in such a way that teaching and learning become effective and fruitful for individuals with special educational needs in Ghana.

## **1.2 Statement of the Problem**

Gronlund, Lim and Larsson (2010) opined that the challenges and reasons for elimination from the education system is that, teaching methods used to teach students with special educational needs in inclusive classrooms are not conducive enough to help them learn better. As a result, these students do not perform better in their studies; and therefore, get expelled from the education system. This is what pertains in the three selected pilot inclusive basic schools where teachers have been criticised for poor performance of pupils many a time. It appears instructional strategies, teaching and learning materials are not reflective and accommodative to all manner of learners. Some learners appear not to benefit from teaching methodologies and materials used in the inclusive regular classrooms. Also, it appears pupils with special educational needs were not provided related services in the three selected schools of study. Teachers seem not to facilitate peer support for pupils with special educational needs to enhance their participation in learning.

## **1.3 Purpose of the Study**

The purpose of the study was to find out provisions teachers make for pupils with special educational needs in three selected pilot inclusive basic schools at Pokuase in the Greater Accra Region of Ghana.



#### **1.4 Objectives of the Study**

The objectives of the study were to:

- Find out the instructional strategies teachers use to promote learning among pupils with special educational needs in inclusive classrooms.
- Identify what teaching and learning materials are available to enhance the learning for pupils with special educational needs in inclusive classrooms.
- Find out ways teachers work with other specialists to provide related services for pupils with special educational needs.
- Find out how teachers enhance peer support for pupils with special educational needs in inclusive classrooms.

#### **1.5 Research Questions**

The study was guided by the following research questions:

1. What instructional strategies do teachers use to promote learning among pupils with special educational needs in inclusive classrooms?
2. What teaching and learning materials are available to enhance the participation of pupils with special educational needs in learning in inclusive classrooms?
3. In what ways do teachers work with other specialists to provide related services for pupils with special educational needs in inclusive classrooms?
4. How do teachers enhance peer support for pupils with special educational needs in inclusive classrooms?

#### **1.6 Significance of the Study**

The results of the study would help in identifying the extent to which teachers make provisions for pupils with special educational needs in inclusive pilot schools to

support their learning. Results of the study would bring to the fore the instructional strategies that could promote learning for pupils with special educational needs. Also, the results of the study would inform teachers on the teaching and learning materials available to enhance the participation of pupils with special needs in learning. Again, teachers would be informed about ways of working with other specialists in providing related services to pupils with special educational needs. Furthermore, the study would serve as a reference material for other researchers in future. Finally, the results of the study were expected to provide relevant information to educational authorities to inform their decisions to improve programmes on inclusive education. This would cause professionals and policy makers to consider appropriate training programmes for personnel in the education of pupils with special needs.

### **1.7 Operational Definition of Terms**

**Assessment:** It is the systematic procedures of gathering and identifying relevant educational information about a student.

**Differentiated Instruction:** refers to the wide range of strategies, techniques, and approaches that are used to support student learning and help every student to achieve and to realise his or her potential.

**Inclusive Classroom:** A setting where all students receive their education in the mainstream. Thus by providing all students appropriate educational experiences that are challenging yet geared towards their capabilities and needs.

**Pilot Project:** A test of something to discover and solve problems before full implementation.

**Provisions:** These are services that are available to enhance the delivery of set goals in an institution. In other words, they are the arrangements that are put in place in an institution to enhance the learning of students with special educational needs.

**Regular Teachers:** They are cross section of teachers who teach in the inclusive schools.

**Students with Special Needs:** Students that have been identified as having physical-sensory deficiencies or suffering from ability to learn.

**Support Services:** They are services in the form of materials, equipment and personnel render to individuals with special needs in inclusive educational settings.

### **1.8 Delimitation**

The study focused on the provisions teachers make for pupils with special educational needs to maximise their potentials during teaching and learning process in three selected pilot inclusive basic schools at Pokuase. The choice of these schools was due to the fact that, they are practicing pilot inclusive education and within the study area.

### **1.9 Limitation**

The lukewarm attitudes of some respondents in providing responses to questionnaire and participating in the interviews delayed the analysis of the data. Five of the respondents could not return their questionnaire. Failure of the five (5) to return their questionnaires did not affect the validity of collected data. Cohen Manion and Morrison (2007) stated that in a survey research, if the return rate of questionnaires from respondents is 70% and above, then it is within acceptable limit.

### **1.10 Organization of the Thesis**

This work is organized into five chapters. Chapter one discussed the background to the study and statement of the problem. In this case the reasons for carrying out this study were discussed. This is followed by the purpose of the study, objectives of the study and research questions. Finally, the chapter operationalizes terms used in the study, outlined limitations, and delimit the study. Chapter two dwelled on the theories underpinning the study which comprised Vygotsky's Theory of Developmental Learning and Social Model of Disability. Thereafter, literature was reviewed to cover instructional strategies for promoting learning among pupils with special educational needs, teaching and learning materials available to enhance the participation of pupils with special educational needs in learning, ways teachers work with other specialists to provide related services for pupils with special educational needs and teachers' enhancement of peer support for pupils with special educational needs. The chapter ended with a summary. Chapter three described in detail the procedures and methods that were used in collecting and analysing data. The aspects discussed include, research approach, research design, population, sampling procedures, sample, instrumentation, validity, reliability, procedure for data collection and method of data analysis. Chapter four provided records on the data collected and its analysis. This was followed by discussions of findings on each theme. The thesis ends up with chapter five detailing the summary of findings, drawing conclusions, making recommendations and suggestions for further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents the literature reviewed for the study. The literature reviewed first covered the theoretical framework followed by the review on the key themes raised in the research questions:

1. Theoretical Framework.
2. The concept of inclusive education.
3. Models of inclusive education in Ghana.
4. Instructional strategies for promoting learning among pupils with special educational needs.
5. Teaching and learning materials available to enhance the participation of pupils with special educational needs in learning.
6. Ways teachers work with other specialists to provide related services for pupils with special educational needs.
7. Teachers' enhancement of peer support for pupils with special educational needs.
8. Summary of literature review.

#### **2.2 Theoretical Framework**

This study adopted by Vygotsky's Theory of Developmental Learning and the Social Model of Disability.

### **2.2.1 Lev vygotsky's theory of developmental learning**

Lev Vygotsky probed not only the nature of handicapping conditions and the principles of psycho-educational assessment of the disabled, but also a “theoretical framework for the comprehensive, inclusive and humanitarian practice of special education” (Gindis, 1995, p. 155). He conceptualized the challenges of persons with disabilities into “primary and secondary defects,” believing they could have different psychological effects depending on culture and environmental factors (Gindis, 1998).

The theory is based on four principles; (1) children actively construct knowledge; (2) the experience of learning can lead to development; (3) development cannot be separated from its social context; and (4) that language plays a central role in mental development (Vygotsky, 1978). The theory assumes that children build knowledge, not just as the result of their individual learning capacities but also through the guidance of teachers and other students. He claimed that learning is a social practice and the process is therefore based on experiences and guidance (Vygotsky, 1978). Knowledge is thus, a product of humans and is socially and culturally constructed (Ernest, 1996). McMahon (1997) states that learning is not a process that only takes place inside our minds, nor is it a passive development of our behaviours that is shaped by external forces and that meaningful learning occurs when individuals are engaged in social activities. Social constructivism not only acknowledges the uniqueness and complexity of learner, but actually encourages, utilises and rewards individual as an integral part of the learning process.

Vygotsky's most influential aspect in the education of individuals with special educational needs is the Zone of Proximal Development (ZDP). The theory is based on the progress of the learner's degree of Independent Development (ID). ID assumes that learning is acquired through individual's learning styles and capacities which are

the direct result of their previous learning experiences. Teachers are able to build on that learning by providing a level of assisted performance. This includes guidance to ensure that the student firstly identifies, then attempts, and finally achieves a level of success within a new, unknown task. The ZDP is the area that educators target when creating effective and challenging learning environments for all students. This approach can benefit special needs due to its potential to cater for students' individual needs (Vygotsky, 1978).

The ZDP draws on the assumptions that learning is a social function (Vygotsky, 1978) and the delivery of the curriculum to individuals with special educational needs must consider this element in the process. This recognises phases of development but emphasises the importance of the teacher as the provider of guidance and support, thus playing a vital role in the learning process of the students.

Vygotsky's ZPD provides encouragement for educators to explore and support students' difference. This emphasis moves the education from the traditional understanding of limited means of student expression and a lack of consideration for the support needed by students with special education during teaching and learning. The ZPD empowers teachers to support the individual and achieve effective teaching and learning processes through student-centred teaching. The inclusive classroom approach clearly utilizes social degrees of learning as an emphasis for underpinning its structures and principles of equity and social justice through and acknowledgement of the role of social development in learning processes. The role of the environment, and the elements of provisions teachers make contribute towards the progress made by different students. Forlin (2007) argues that Vygotsky approach to education has been posited to produce more effective teaching and learning experiences for the special educational needs student in the regular classroom.

Vygotsky (1978), however, would not have embraced the contemporary model of Full Inclusion for all. While he identified the need for separate curriculum and differentiated instructional practices consistent with the current day expectations of a full inclusion classroom, Vygotsky also acknowledged that special education requires a “systemic approach, which should take place in a learning environment where the student’s needs were fully understood and where specific methods were adopted to ensure the learners received specifically modified programmes”. While he was highly critical of any educational model which watered down the existing curriculum, lowered expectations or socially isolated children, he more importantly insisted that only a “truly differentiated learning environment can fully develop children with disabilities higher psychological functions and overall personality; a specially designed setting where the entire staff is able to exclusively serve the individual needs of students with special educational needs; a special system that employs its specific methods because students with special educational needs require modified and alternative educational methods” (Gindis, 1995, p. 80).

However, Vygotsky (1983) did not gloss over the fact that many handicapping conditions are indeed caused by biological factors. What he did argue is that, “defects are not subjectively perceived as abnormality until they are brought into the social context.” The human brain, eye, ear, or limbs are not just physical organs; and the impairment of these organs “leads to a restructuring of the social relationships and to a displacement of all systems of behaviour” (Vygotsky, 1983, p. 63).



### **2.2.2 Social model of disability**

The study on the other hand was also located within social model of disability. The social model is designed among others to ensure that individuals with disabilities are treated fairly. A fundamental aspect of the social model concerns equality. Equal rights are said to give empowerment and the ability to make decisions and the opportunity to live life to the fullest. The social model of disability looks to empower individual with disabilities as it emphasizes their rights to make choices and be independent. The social model of disability recognizes that people with impairments are disabled by the barriers in society (Saunders & Kardia, 2009).

Social model sees disability as “all the things that impose restrictions on disabled people; ranging from individual prejudices to institutional discrimination, from inaccessible public building to unusable transport systems, from segregated education to excluding work arrangements, and so on’ (Avoke, 2005)”. The social model of disability recognizes that some people have physical or psychological anomalies which may affect the means by which they function. However, by this model those people are disabled primarily due to the barriers that exist in a society that does not take account of their needs. This model posits that disabled people are to allow enjoying the same freedoms and choices as those who are not considered disabled, and shall be allowed equal rights and responsibility in making life decisions. This model will guide the teachers in inclusive schools to select teaching strategies that will address the learning needs of individuals with special needs. Having this model in mind, the teachers will then create learning environment in which everyone feels safe, supported, and encouraged to express her or his views and concerns on their academic work in their respective classrooms (Saunders & Kardia, 2009).

The teachers shall build an exemplary educational community that offers a nurturing and challenging intellectual climate, a respect for the spectrum of individual diversity, and a genuine understanding of individual differences in the classroom (Bonilla, 2005). It also challenges society to become more inclusive so that individuals with disability are not seen as being problems that need sorting out or victim that needs pity. The social model provides a basis for support and collective engagement of individuals with disabilities and also serves as a means through which the non-disabled are provided with an alternative and positive view of disability. There is recognition within the social model that is a great deal that society can do to reduce, and ultimately remove, some of these disabling physical barriers, and that this task is the responsibility of society, rather than the individuals with disabilities.

The Vygotsky theory of developmental and social model of disability linked together to establish a conducive atmosphere in the classroom for effective teaching and learning. The charge to educate all pupils in the inclusive classrooms, call for a wide range of teaching strategies which are credible enough to address the learning needs of special needs individuals (Vaugh, Hughs, Schumm & Klinger, 1998). The authors stressed that, when teachers incorporate various teaching strategies for individuals with special needs, into lesson planning, individuals with special needs could work towards individual objectives within the context of large group instruction. In inclusive classrooms, it is not only what the teachers cover, but, also how it is covered that determines what pupils learn.

These theories are applicable to the study as they consider the social context to have major influence on learning of students with special educational needs than the students' disability. This means students' disabilities should not be considered as the main inhibiting factor to their learning. Rather, conscious effort should be made by

teachers who believe that it is their duty to make sure students with special educational needs are adequately and effectively taught. The concern of teachers should focus on providing to meet individual needs by using the appropriate methodologies, teaching and learning materials, and working with other specialists to provide related services. The study therefore outlined provisions teachers could make to influence teaching and learning of pupils with special educational needs in inclusive setting. The study mentioned instructional strategies, teaching and learning materials that could promote learning among pupils with special educational needs. Also, the study provides for the need to collaborate with other specialists for effective inclusion and encourage support to pupils with special educational needs from their peers.

### **2.3 The Concept of Inclusive Education**

Inclusive education is a response to a global social concern which grew out of an increased emphasis on human rights (Stubbs, 2008). It differs from previously held notions of ‘integration’ and ‘mainstreaming’, which tended to be concerned, principally, with disability and ‘special educational needs’ and implied learners changing or becoming ‘ready for’ or deserving of accommodation by the mainstream (Foreman 2008; Mitchell, 2004).

Inclusion is about the promotion of quality education for all learners, in inclusive and supportive centres of learning (Mitchell, 2004). Potterton (2003) defines this environment as one which respects the rights of all learners to fully participate in all activities of the school and models the characteristics of a fully democratic society by promoting the full personal and academic development of all learners irrespective

of educational or physical barriers, age, race, gender, culture, religion, disability or human immunodeficiency virus status.

The overall vision of inclusive education, as was set out by the World Declaration on Education for All, adopted in Jomtien, Thailand in 1990, is universalizing access to education for all children, youth and adults, and promoting equity. This means being proactive in identifying the barriers that many encounter in accessing educational opportunities and identifying the resources needed to overcome those barriers (UNESCO, 2009). According to the World Conference on Special Needs Education: Access and Quality, held in Salamanca, Spain (1994), inclusive education is a process of addressing the diversity of barriers to learning in a way that calls for the school system, in all its facets, (content, culture, approaches, structures, curriculum, buildings, assessments, staffing, extra-curricular activities, and school philosophy and ethos) to be transformed along the principles of inclusion in order to allow for an increasing participation of all learners. At this conference a resolution was adopted which became known as the Salamanca Statement on Principles, Policy and Practice in Special Needs Education. The statement reflects the 'new thinking' in special needs education and promoted the concept of the fully inclusive school (Stubbs, 2008). Inclusive education was endorsed and proclaimed as a policy by UNESCO and recognized by 92 countries (including Ghana) and 25 international organizations (Ainscow, 2000; Foreman, 2008). One of the main resolutions of the Salamanca Statement, article 7 calls for the delivery of quality education to all through appropriate curricular, organizational arrangements, teaching strategies, resources and partnerships with communities.

According to UNESCO (2009), inclusive education aims at eliminating exclusion that is a consequence of negative attitudes and lack of response to diversity

in race, economic status, social class, ethnicity, language, religion, gender, sexual orientation and ability. Inclusive education should not be seen as a marginal issue rather it is central to the achievement of high quality education for all learners and the development of more inclusive society. Inclusive education is essential to achieve social equity and is a consistent element of lifelong learning. The aim of inclusion is to prepare all learners to become productive, responsible and non-discriminating members of a democratic society and to be fully part of the community in which they live not just physically, but also spiritually, emotionally, and socially (UNESCO, 2005).

According to the Final Report of the National Policy on Inclusive Education in Namibia (Väyrynen, 2008), inclusive education does not focus exclusively on the integration of learners with disabilities into mainstream school; it also aims to end segregation and the exclusion of learners on the grounds of race, gender, culture, religion, lifestyle, or disability. Inclusive education in Namibia is based on the principle that all learners have the right to be educated alongside family, friends and peers in their own neighbourhood or local community. This is not different from what pertains in Ghana as both countries derive their practices from international conventions.

In Ghana, Act 778 Section 5 sees inclusive education as the “value system which holds that all persons who attend an educational institution are entitled to equal access 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, cited in Hayford, 2013). Inclusion is, therefore, a process that increases participation in learning and that strives to identify barriers to learning.

Hayford (2013) explains that inclusion of children with disabilities means educating them and those without disabilities in the same schools; providing services, support and advice for parents of all children in regular settings; training and supporting regular education teachers and administrators; having them follow the same schedules as other children; encouraging friendships and mutual respect between all children, that is with and without disabilities; teaching all children to understand and accept differences, be it race, colour, sex, ethnicity, language, nationality, social origin, religion, disability, property, birth or other status.

## **2.4 Models of Inclusive Education in Ghana**

In Ghana, there are types of models that underpin the pilot practice of inclusive education and these include demonstration inclusive schools, schools for the deaf as residence for students with visual impairments, units for students with intellectual disability, and inclusive schools with resource teachers among others.

### **2.4.1 Demonstration inclusive schools**

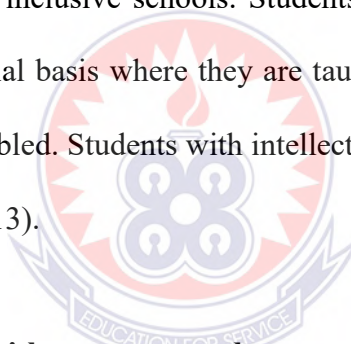
According to Hayford (2013), as a follow up to the directives in the Salamanca Statement and Framework for Action of UNESCO (1994), the Ministry of Education and the Ghana Education Service has as one of its strategies to achieving school for all, to design and implement programmes for the integration of complementary schools with formal schools. Since 2003, the Ministry of Education through the Division of Special Education initiated a number of demonstration projects to pilot inclusive education in order to roll it out in 2015.

#### **2.4.2 Schools for the deaf as residence for students with visual impairments**

This model uses schools for the deaf as residence for children with visual impairments. In this model, students with blindness undergo 2-3years training in braille reading and writing, prior to enrolment in mainstream schools, and get support from special education resource teachers. The students are taught in separate unit classrooms from those who are deaf. When students demonstrate mastery in skills acquired they are move to the nearby mainstream schools (Hayford, 2013).

#### **2.4.3 Units for students with intellectual disability**

Under this model of inclusive practice, two or three unit classroom blocks are built on the premises of inclusive schools. Students with intellectual disabilities are enrolled on non-residential basis where they are taught by special education teachers for the intellectually disabled. Students with intellectual disabilities are taught adapted curriculum (Hayford, 2013).



#### **2.4.4 Inclusive schools with resource teachers**

This model involves the recruitment of special education teachers to work with the district directorates to support both general education teachers and learners with special educational needs in schools. The special education teachers guide general education teachers in the following ways; curriculum adaptations, use of specialised equipment, train students with visual impairments in orientation and mobility skills, provide low vision techniques and application of assistive devices, use sign language to help the deaf, help struggling readers, design individualized educational plan (IEP) (Hayford, 2013). This study employed the model of inclusive schools with resource teachers where it sought to find out provisions teachers make for pupils with special educational needs.



## **2.5 Instructional Strategies for Promoting Learning among Pupils with Special Educational Needs**

Instruction of students with special educational needs should consider approaches such as: interactive teaching, direct teaching, co-teaching, partial participation, structured teaching, group teaching, supplemental instruction, allowance of extra time, alternate assessment procedure, adapting written text in order to maximise the involvement of students with special educational needs in learning.

### **2.5.1 Interactive teaching**

Interactive teaching is a key to effective learning and information exchange. It is a method which encourages and expects learners to participate. The quality of interaction between the teacher and learner in the classroom has been found to be the most important factor in improving the efficiency of lessons taught (Rogoff, 1990). The use of interactive teaching and learning in the classroom, based on the premise that virtually all learners can and, will develop the skills necessary to succeed well in the classroom under appropriate instructional condition. Teachers can facilitate interactive teaching and learning through the use of oral questions to stimulate discussion, emphasizing the value of answers, give participants hands-on experience, using teaching aids to gain and retain attention and, frequent monitoring of all learners in the classroom so as to assess their comprehension of the material as it is presented.

The use of interactive teaching and the role of the teacher are centrally important in scaffolding learners' use of language and visual representation (Vygotsky, 1978). The strategies like leading questions, hints, and discussing representation may help in achieving the goal and objectives. Always the teacher had to maintain an active role in the classroom dialogue by creating atmosphere which



will encourage the learners to participate effectively in formulating answers and solving apparent contradictions. Also as competences grow, the teacher should withdraw support and encourages learners to self-regulate their activities (Rye, 2001).

### **2.5.2 Direct teaching**

Majority of students with special educational needs do not learn incidentally but require direct, explicit and intensive instruction. This approach leaves little to chance; the curriculum and the tasks to be learned are carefully analysed and then each skill is taught in sequence. Teachers state and explain clearly what is being taught and how it is to be done. The difficulty level of tasks is carefully set to ensure some chance of success and the teacher provides immediate feedback, correction and encouragement. Pupils with learning difficulties do best when in more tightly programmes, as direct and explicit instruction increases attention and academic engagement, raises the attainments of all students, and significantly reduces the prevalence of learning failure (Westwood, 2007).

### **2.5.3 Partial participation**

This instructional strategy describes having students with disabilities participate, on a reduced basis, in virtually all activities experienced by all students in general education classroom. It questions the assumption that including students with severe mental and physical limitations is a waste of time because they cannot benefit from the activities in the same way that the non-disabled students can. Instead of excluding anyone from these activities, advocates of partial participation recommend that the teacher accommodate the student with disabilities by such strategies as “providing assistance for more difficult parts of task, changing the ‘rules’ of the game

or activity to make it less difficult, or changing the way in which a task or activity is organised or presented (Greenwood, Arrega-Mayer, Utley, Gavin, & Terry, 2001).

#### **2.5.4 Structured teaching**

Structured teaching involves presenting children with learning difficulties especially the autistic an individualized daily schedule that describes what is going to happen at each time in the school day which becomes a useful support and reduces stress for the child (Kirk, Gallagher, & Anastasiow, 2003).

Students with special educational needs can be provided hand-outs ahead of time, as well as specific questions they will be expected to answer; provide student with a copy of vocabulary words, definitions, and examples ahead of time, so he or she is familiar with concepts as they are introduced. Giving lesson outline will help students focus on what will come next in the small-group or whole-class discussion. From the basis of this outline, the teacher should teach outlining and note-taking skills. Students who are hyperactive and learning disabled can be provided a checklist for lesson activities that he or she checks off as tasks are completed; highlight important instructions (Mathes & Bender, 1997b).

#### **2.5.5 Group teaching**

Teachers use a variety of classroom grouping arrangements. Sometimes they teach the whole class at once, as when they lecture in a content area. Other times teachers may employ small-group or one-to-one instruction. For example, they may teach a small group of students who have similar instructional needs, such as a group of students who all require extra help on multiplication facts, or an individual student who needs extra help with an English assignment. Teachers may also group students of differing interests and abilities in an effort to foster cooperative problem solving or

peer tutoring. Promotion of active, participatory and child centred learning and teaching methods allow children to work at an appropriate pace, in groups or individually, and partnering children with and without disabilities as peer educators enhance mutual learning (Wiederholt & Chamberlain, 1989).

### **2.5.6 Supplemental instruction**

Teachers may pull out students with special educational needs to the resource rooms and provide them additional tuition. Resource rooms are specialized supplemental instructional programmes designed for students that require services outside of the regular or special classroom. Instruction in this setting may be given in small groups or on a one-on-one basis and must constitute at least 21%, but not exceed 50%, of the school day (Davis, 1994).

Davis further states that, special programs are designed for students whose educational needs cannot be met, even with related services or resource room programs. These programs include students that require special education services for more than 60% of the school day outside of the normal classroom activities. The supplemental programme is coordinated mostly by the regular classroom teacher and the resource teacher. Resource teachers and classroom teachers work together in designing the contents of a student's individualized program of instruction for the resource room. The purpose of the collaboration is to ensure that the resource room program truly supports the general education program and is likely to support students' transferring what they have learned in the resource room to learning in the general education classroom (Wiederholt & Chamberlain (1989). Though this service of resource room is not available in Ghanaian pilot inclusive schools, they are necessary for effective inclusion of students with special educational needs.

### **2.5.7 Allowance of extra time**

Students with special educational need to complete their work very slowly due to the nature of their impairment (Mastropieri & Scruggs, 2010), therefore, extra time allowance is extremely important for them to process visual information, and complete their written assignments (Salisbury, 2008). For example, students with low vision take longer time to read a text than students with normal vision. Also, reading and writing in Braille, as well as getting information from tactile sources for students with blindness consumes a lot of time. At the same time, students with blindness need much time to integrate information coming through hearing (Mastropieri & Scruggs, 2010). Generally, it is acceptable to add half of the time for students with low vision, and twice as much for students with blindness (Spungin, 2002). Many external examinations recognize this requirement and, therefore, give them allowance of up to 100% additional time for students with visual impairments (Salisbury, 2008).

### **2.5.8 Alternate assessment procedures**

Oral method of giving instructions and receiving responses from students can also be a good option, especially for students with poor finger dexterity. They can be assessed orally instead of writing in print or Braille. Moreover, a tape recorder can be used to record the answers the student is giving. However, through this way, a student cannot review the answers he or she has given for possible correction. Therefore, special educational needs students and teachers should be consulted before test is taken, in order to find a better way of assessing a student with visual impairment (Spungin, 2002). Minimize coping as this is laborious task for some of the students with special educational needs. Allow written work to be done on a computer using appropriate hardware or software, and or allow student to record results instead of

writing them. Any assessment that demands much copying can be altered for reading (Government of Newfoundland, 2001).

Students who are hyperactive and learning disabled will need frequent opportunities to stand up and move around the classroom. Building 30-second “stretch-breaks” every fifteen minutes or so into your class period can help alleviate many problems. A student may need frequent breaks to avoid fatigue (Wright State University & Ohio University <http://www.ohiorc.org>).

### **2.5.9 Adapting written text**

During instruction printed text can be adapted through increasing the font size, bolding the text, increasing contrast, adding colour, and adjusting spaces between characters. Print enlargement (and general modification to text, for example font, spacing) is a common and successful technique for increasing access to print for children with low vision. Perhaps inevitably, there is little clarity about which print size is best for most efficient reading among the population (Corn & Koenig, 2002).

## **2.6 Teaching and Learning Materials Available to Enhance the Participation of Pupils with Special Educational Needs in Learning.**

Tamakloe, Amedahe and Atta (2005) noted that a teaching resource is what the teacher prepares or uses to make learning easier than it would have been without it. Similarly, a learning resource is that which the student or learner himself/herself prepares or uses to make learning easier than it would have been if he had not prepared and used it. In this study, the researcher group teaching and learning materials into materials and assistive technology.

### 2.6.1 Materials

Nacino-Brown, Oke and Brown (1985) identified teaching and learning materials, which could influence the participation and understanding of pupils in learning to include: objects, models, specimens, printed materials like textbooks, workbooks. Others are chalkboards, flannel or felt boards, felt pens, spectacles, handheld magnifiers, braille machines, hand frames and stylus, braille sheets and bulletin, still pictures like photographs and illustrations, charts, graphs, maps, large print books and globes, posters and diagrams, reading stand. These instructional materials are termed non-projected materials.

Teachers in inclusive settings need to augment their teaching with the use of such materials. It is only then that their teaching can be meaningful and beneficial to children with special education needs. Teachers may use a variety of textures, models, shapes, foods, ingredients, to either replace visual material, or supplement it. Using a variety of sensory inputs such as words, pictures, and sounds enhances the understanding of students and sustain their interest in lesson. It is recommended that a combination of simple, self-made material and ready-made commercially produced teaching aids is utilized (Ajayi & Faremi, 2008).

Sorting tray is another instructional material which is used in teaching pupils with disabilities in schools. Sorting trays are made from plywood or aluminium plates in a rectangular form. As trays they have hollow in them to serve as a good receptacle for various materials. Usually teachers fill these trays with colourful beads, geometric shapes, counters, cowries, and pebbles among others. This tray enables pupils to sort out items in terms of similarity in texture, shape, weight, and colour (Ocloo, 2003).

Engelbrecht and Green (2007), Florian (2008), Foreman (2008), Stubbs (2008) and Potterton (2010), emphasized that teaching resources and materials as well as the

school facilities, are part of the contributing factors in supporting inclusive practice. Stubbs maintained that 'education for all' will not work unless there is more grassroots participation and effective allocation of resources. More resources such as classrooms, laboratories, learner and teacher support material and quality instruction need to be directed to and ensure that children learn effectively. When a school is well equipped with basic teaching and learning resources, it makes teachers' jobs easier and the learning outcomes of the children will improve.

Teachers have to ensure that students with special educational needs, especially those with orthopaedic disorders, have ample space to move around the room and interact with groups; use adaptive devices to hold papers in place, for example clips and desks are at an appropriate height for the student and are adjustable. Reading stands can also be substituted for non-adjustable tables to enhance the posture and distance from which students with disabilities will prefer to read (Wright State University & Ohio Resource Centre for mathematics, science and reading <http://www.ohoirc.org>).

Projected instructional materials, on the other hand, are materials that require high amount of power in the form of electricity in order to operate. These include video-tapes, filmstrips, overhead projectors and opaque projections, audio aids like radio, record players and tape recorders, audio-visual aids in the form of motion pictures, television, closed circuit television, talking calculator, and talking books among others. These aids are usually termed assistive technology (Ajayi & Faremi, 2008).



### 2.6.2 Assistive technology

Another class of devices that impact on successful inclusive education is the use of assistive technology (Torreno, 2011). Many learners who experience barriers to learning may need to rely on technology to facilitate access and participation in the general classroom. This technology is available in the form of assistive devices. Some of these resources are sophisticated and expensive computers and word processors that offer learners independence and the opportunity to enjoy maximum success. Learners may also benefit from using digital personal organisers, multi-media such as film clips and assistive devices such as microphones and Braille translators (Walton, Nel, Hugo, & Muller, 2009).

Ntukidem and Ashi (2009) noted that a wide range of products have been developed for individuals with learning disabilities that are referred to as “adaptive” or “assistive” technologies. These include traditional devices such as raised line drawings, as well as more recent technology associated with the computer, such as software and hardware modifications to suit their learning needs. Lere (2009), on the other hand, classified assistive technology into electronic devices, such as radio, television, tape recorder, overhead projector and computer.

Provenzo, Brett, and McCloskey (1999) explained how computers, adaptive computer interfaces, and specialized software are especially important to children with disabilities. They believed output devices such as monitors, printers, and speakers can be adapted for children with disabilities in order to encourage access. Adaptive input devices enable children with special needs to activate and send information: keyboards can be modified, and alternative keyboards (usually larger in size) can provide access. Touch Windows, a touch-sensitive screen, is a direct way for students with disabilities to interact with the computer. Output devices such as



monitors with enlarged text and graphics, printers producing large print or Braille, tactile devices produced using Braille, output hardware, and speakers are important for children with disabilities and also help meet the criteria mandated by the IDEA.

Students with communication problems can benefit from augmentative communication devices, which are computers equipped with speech synthesizers that can type, text, and produce speech heard by everyone. Text-to-speech functionality can assist a variety of students, including those who are motivated by more advanced materials but are frustrated by reading comprehension difficulties; those who will profit from the reinforcement of both print and oral reading; and those who hate to read but are willing to listen. It can be used with a whole class, with groups, or with individual students for previewing new information or as part of a final proofreading exercise. Kindergarteners can listen to individual letters and work in an exploratory fashion. Talking text is an important additional tool for supporting comprehension for some students, and several research studies have identified its promise for helping students with reading disabilities comprehend written materials (National Institute of Child Health and Human Development, 2000).

Students with learning disabilities can compensate for poor handwriting, spelling, and grammatical skills using word-processing equipment. The dyslexic or cognitive impaired student may benefit, in particular, from the use of simpler language or alternative text formats, such as Easy Read, as well as from the clear and logical layout of an uncluttered structure of information. Activating just punctuation and capitalization might be more helpful with younger children, while turning on only passive sentences, possessives and plurals, or subject-verb agreement could be more helpful with older students. These devices can also be programmed with words and phrases for particular situations (UNESCO, 2006).

In addition, there are other assistive technology devices that are needed to provide academic services to students with special needs. These include text-to-braille translation software thus programs that translate print to braille, embosser thus braille printer, a device used to emboss text in braille, Scanner with Optical Character Recognition (OCR) software thus a device used to convert paper text into digital format. Optical Character Recognition OCR is software that converts the image of the text on pages that are being scanned and turns it into e-text, image simplifying software programs that convert images from visual to textual by simplifying their content, image embossing devices hardware that makes flat print images tactually accessible, colour copier with enlarge function a device that allows enlargement of print material, text-to-audio software programs that convert electronic text into an audio format. Some programs also save files as portable audio files like, voice recording software programs that allow digital voicing recording and editing. Files can be saved in various formats and subsequently either listened to on the computer, or transferred to portable media players. In addition to the above solutions, various simple tools and materials can complete the inventory of adaptive material (Wiazowski, 2009).

## **2.7 Ways Teachers Work with other Specialists to Provide Related Services for Pupils with Special Educational Needs**

Related services means developmental, corrective, and other supportive services as are required to assist a child with a disability to benefit from special education, and includes speech-language pathology and audiology services, interpreting services, psychological services, physical and occupational therapy, recreation, including therapeutic recreation, early identification and assessment of

disabilities in children, counseling services, including rehabilitation counseling, orientation and mobility services, and medical services for diagnostic or evaluation purposes. Related services also include school health services and school nurse services, social work services in schools, and parent counseling and training (Department of Education, 2008). For example, a student using braille may require specialized instruction from a qualified teacher of the visually impaired, and a student with a physical disability may need the support of an occupational or physical therapist. Additional supports, such as, case management, classroom organization and arrangement, equipment management and maintenance, and file acquisition.

Related services personnel can provide students with disabilities access to an appropriate education and facilitate students' pursuit of important learning outcomes through the application of the specific skills associated with their respective disciplines and the collaborative skills required to work effectively with others in the context of a family-centered approach in general education classrooms and other inclusive environments (Rainforth & York-Barr, 1997).

The importance of proper resourcing for inclusion is highlighted in the United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities (UNESCO, 2003). This call was repeated in the United Nations General Assembly on the 4th of March 1994 where it was resolved that education in mainstream schools presupposes the provision of interpreter and other appropriate services and that adequate accessibility and support services designed to meet the needs of persons with different disabilities should be provided (Engelbrecht & Green 2007).

In inclusive settings, teachers need to value the importance of sharing educational responsibilities of students with and without educational disabilities with

other professionals. The main function of team of specialists is to provide a coordinated professional support service that draws on expertise in further and higher education and local communities, targeting special schools, and regular schools. The team of specialists is supposed to build the capacity of schools to address severe learning difficulties and to accommodate a range of learning needs. To achieve this they have to help teachers with the development of good teaching strategies that will be of benefit to all learners by providing pre-service and in-service education and training to them (Friend, 2008).

### **2.7.1 Teacher assistance teams approach**

Teacher assistance teams comprised of professionals such as teachers, administrators, and specialists for example, school psychologist or a special educator, who collaborate to identify tactics that will help the general education teacher increase the student's success in the general education classroom. Often a structured, collaborative, problem-solving, team approach is used to create successful intervention strategies (Bangert & Cooch, 2001). On the other hand, teacher assistants could include any individual who helps the regular classroom teacher in accomplishing the teaching tasks. Their roles are diverse, ranging from academic subjects, teaching functional life skills, assisting with the teaching of vocational skills in community settings, supporting learners with challenging behaviours, facilitating interaction with peers, providing personal and intimate care, engaging in clerical tasks, and preparing teaching/learning materials (Giangreco, Broer, & Stephen, (2005).

### 2.7.2 Co-teaching

One model of instruction utilized in school systems to meet the requirements of No Child Left Behind (NCLB) and Individuals with Disabilities Education Act (IDEA, 2004) is co-teaching. Co-teaching is a model for collaboration, cooperative learning, and a form of inclusion that impacts student achievement. The definition of collaboration is, “the interactions between professionals who offer different areas of expertise yet share responsibilities and goals” (Murawski and Hughes, 2009; p. 269). The definition of co-teaching by Cook and Friend (1995) (as cited in Murawski and Swanson, 2001) is “two or more professionals delivering substantive instruction to a diverse or blended group of students in a single physical space” (p. 2). No single teacher can have all the skills necessary to meet students’ diverse needs in inclusive classroom (Lipsky & Gartner, 1997). A special teacher will be helping a general teacher in preparation of teaching materials and learning environment that suits students with special educational needs. A co-teacher will also be responsible for teaching skills like reading and writing by using braille, using glasses and lenses (Spungin, 2002).

As general education and special education teachers’ work together to meet the needs of the students in the classroom, attention to effective practices must be considered. Six co-teaching structures were identified as possible service delivery models: (a) one teach, one observe; (b) team teaching; (c) alternative teaching; (d) parallel teaching; (e) station teaching; (f) one teach, one drift.

#### **One teach, one observe**

The first structure explained by Sileo and van Garderen (2010) was ‘one teach, one observe’ where one teacher provided the instruction to the class as a whole, and

the other teacher observed students. This model was used by the teachers more frequently during the initial implementation process and periodically when data needed to be collected, and to support or monitor student behavior. Observed student behaviors included time on task, participation, and difficulty with material.

### **Team teaching**

The second structure of co-teaching Sileo and van Garderen (2010) identified was team teaching. Team teaching was defined as teachers who shared all aspects of instruction to include planning and direct instruction. In this structure, teachers taught side by side to the class or through jigsaw instruction where students learned material individually or in small group then brought the new knowledge to a larger group of students to then teach to the larger group. Teachers assisted with group interactions and instruction. The frequency this model was used was not stated, but an example of application was reported during a unit on contextualized problem types. The teachers believed this structure supported their need, as well as benefitted the students.

### **Alternative teaching**

Defined as one teacher who taught to a small group while the other teacher taught to the remaining class, Sileo and van Garderen (2010) described alternative teaching as an excellent opportunity to provide students with intense and individualized instruction. This method was used a minimum of two times per week to assist students' comprehension of word problems. One teacher engaged students with explicit instruction for 15 – 20 minute sessions, while the other teacher provided word problem-solving activities to the remainder of the class.

### **Parallel teaching**

Sileo and van Garderen (2010) described parallel teaching as teachers planning collaboratively and concurrently while providing the same instruction. The class was divided equally and created two small heterogeneous student groups. One teacher presented instruction to one group of students while the other teacher provided instruction to the other group. Benefits included small group instruction with an opportunity to provide individualized instruction and remediation. Parallel teaching was used by the co-teachers during a geometry unit requiring the use of manipulatives through the use of concrete-representational-abstract (CRA) instructional practices as it allowed a hands-on approach with supplementary individualized instruction.

### **Station teaching**

The fifth co-teaching structure identified by Sileo and van Garderen (2010) was station teaching. Station teaching was described as teachers dividing the responsibility of providing instructional content. The class was divided into groups with a different activity assigned to each group. Students circulated to each station and learned a specific learning objective either throughout a class period or during established times during a class period. This method was used in March of the school year, but did not state the length of time. The co-teachers assigned students to a group who were required to work at a station for a period of 5 – 10 minutes three times a week to review math facts. Students rotated at the start of each new lesson. The station teaching structure enforced the research-based strategy of practice to reinforce retention. Additional research-based strategies at the stations included visual mnemonics and drill model/peer tutoring.



### **One teach, one drift**

The final structure in co-teaching identified by Sileo and van Garderen (2010) was ‘one teach, one drift.’ One teach, one drift was compared to the structure of one teach, one observe. The difference between the two structures was based on the actions of the teacher not providing instruction. Instead of noting student observations, the teacher drifted through the classroom to check student comprehension. When the one teach, one drift method was used; the teachers were able to quickly identify students’ misunderstandings and levels of frustration. The article did not state how frequently this structure was used, but did give examples of how this process allowed the co-teachers to provide additional one-on-one assistance, prompts, or provide definitions to assist with understanding new material.

In considering the use of co-teaching to enhance the learning of pupils with special educational needs in inclusive setting, there is the need to co-plan activities prior to the execution of the strategy. Dieker and Murawski (2004), suggested to those involved in the use of co-teaching activities to talk with colleagues, administrators, and read literature to understand the necessity of proper student schedules, teacher compatibility, and co-planning time.

Co-planning time provided teachers opportunities for creating differentiation within lessons and developing areas of expertise each co-teacher provided to the classroom. The programmes to be taught to the students and the teaching and learning strategies to be used should be agreed in advance. They must work together to plan the entire teaching process including preparing class lessons, sharing materials and resources, co-teaching the lessons while managing the inclusion classroom, and making decisions about assessment of common goals for teaching and for student learning.



Suggestions for co-planning included seeking administrative support for an established time period either daily or weekly, and exploring options to meet outside of school if scheduling conflicts arose. Suggested procedures included: (a) begin with what will be taught and how (leaving student-specific issues for the end of the meeting); (b) create a co-teaching plan book; (c) establish when each teacher will assume the role of lead teacher and planner.

Related services purported to be provided in inclusive settings include; audiological services, interpreting services, medical services, occupational therapy, orientation and mobility services, counselling services, psychological services, behaviour specialists, school health/nurse services, social work services, speech-language pathology services, vocational rehabilitation counsellors, and special educator.

### **2.7.3 Audiological services**

Audiology includes the identification of children with hearing loss; determination of the range, nature, and degree of hearing loss, including referral for medical or other professional attention for the habilitation of hearing; provision of habilitative activities, such as language habilitation, auditory training, speech reading (lip-reading), hearing evaluation, and speech conservation; creation and administration of programs for prevention of hearing loss; counseling and guidance of children, parents, and teachers regarding hearing loss; and determination of children's needs for group and individual amplification, selecting and fitting an appropriate aid, and evaluating the effectiveness of amplification (Department of Education, 2008).

#### **2.7.4 Interpreting services**

Interpreting services includes the following, when used with respect to children who are deaf or hard of hearing: Oral transliteration services, cued language transliteration services, sign language transliteration and interpreting services, and transcription services, such as communication access real-time translation (CART), C-Print, and Type Well; and special interpreting services for children who are deaf-blind (Department of Education, 2008).

#### **2.7.5 Medical services**

Medical services, as a related service, may only be authorized by an IEP team for diagnostic or evaluation purposes. Medical services mean services provided by a licensed physician to determine a child's medically related disability that results in the child's need for special education and related services (UNESCO, 2006).

#### **2.7.6 Occupational therapist**

Occupational therapists are services provided by qualified personnels which includes improving, developing, or restoring functions impaired or lost through illness, injury, or deprivation; improving ability to perform tasks for independent functioning if functions are impaired or lost; and preventing, through early intervention, initial or further impairment or loss of function (UNESCO, 2006).

#### **2.7.7 Orientation and mobility specialists**

Orientation and mobility services are services provided to blind or visually impaired children by qualified personnel to enable those students to attain systematic orientation to and safe movement within their environments in school, home, and community; and includes teaching children the following, as appropriate: Spatial and

environmental concepts and use of information received by the senses (such as sound, temperature and vibrations) to establish, maintain, or regain orientation and line of travel (e.g., using sound at a traffic light to cross the street); to use the long cane or a service animal to supplement visual travel skills or as a tool for safely negotiating the environment for children with no available travel vision; to understand and use remaining vision and distance low vision aids; and other concepts, techniques, and tools (Marschark, 2009).

Mobility is an important issue for children with visual impairment and for children with a physical disability who may require additional physiotherapy or other physical supports in order to achieve the same levels of mobility as other children. Teaching mobility and the physical therapies that many children with a physical disability need require specialist skills, which most mainstream class teachers are unlikely to have (Marschark, 2009). Therefore it is important for collaboration between regular teachers and the orientation and mobility specialists so that teachers can have the basic knowledge in handling students with visual/physical disabilities to move about.

### **2.7.8 Counselling personnel**

The purpose and focus of the counselling provided is determined by an evaluation of the student's needs and the extent to which they interfere with educational performance. The purpose of counselling is to help students with disabilities recognize and modify behaviors that interfere with learning. The type of counselling (individual and/or group), along with the IEP goals and objectives, frequency, and duration are determined by the IEP team in collaboration with students, parents/guardians, and general and special education teachers. Counseling is

an interpersonal activity which addresses specific school related counseling goals in order to enable students to succeed in school. It is designed to improve students' social and emotional school functioning in the areas of appropriate school behavior and discipline, social skills, self-control, conflict resolution, problem solving skills, self-esteem, decision-making skills and vocational and transition planning. Counseling may be provided in combination with the development of an individual behavior intervention plan. Counseling may be recommended for students who have chronic social emotional difficulties which significantly interfere with their learning. These problems can include difficulty interacting appropriately with adults or peers, withdrawal or acting-out, low self-esteem, or poor coping skills (Department of Education, 2008).

Also, parent counseling and training is very important as it assist parents in understanding the special needs of their child; providing parents with information about child development; and helping parents to acquire the necessary skills that will allow them to support the implementation of their child's IEP (Department of Education, 2008).

### **2.7.9 Psychologists**

Psychologists are qualified personnel who provide services to include, administering psychological and educational tests, and other assessment procedures; interpreting assessment results; obtaining, integrating, and interpreting information about child behavior and conditions relating to learning; consulting with other staff members in planning school programs to meet the special educational needs of children as indicated by psychological tests, interviews, direct observation, and behavioral evaluations; planning and managing a program of psychological services,

including psychological counseling for children and parents; and assisting in developing positive behavioral intervention strategies (UNESCO, 2006).

#### **2.7.10 Behavioural specialists**

The behaviour specialist may provide technical expertise to address complex student behaviour issues; assist school staff in development, implementation, and education of student behaviour management plans; and provide technical expertise to assist parents in addressing complex student behavioural issues (Department of Education, 2008).

#### **2.7.11 School health and school nurse personnel**

School health services are designed to address the specific health needs of the student and to ensure a safe educational environment that allows the student to benefit from his/her primary educational program. They are also designed to enhance the student's ability to access the least restrictive environment and participate to his/her full potential within it. School nurse services are services provided by a qualified school nurse or paraprofessional. The nature of the health services determines whether they are provided by a nurse or a paraprofessional. Those medically-related school health services that can only be provided by a professional registered nurse in a school setting and/or on the bus to and from school usually include, but are not limited to, tracheal suctioning; gastrostomy tube feeding; catheterization; administration of oxygen; blood glucose monitoring; administration of insulin and other injectable medication; nebulizer treatments; postural draining; and oro-nasal suctioning (UNESCO, 2006). Those school health services that can be provided by a paraprofessional are designed to provide students with assistance in activities of daily living (ADL), and usually include, but are not limited to, transfers from wheelchair to

adaptive equipment, ambulation assistance, diapering and toileting assistance, feeding, dressing, managing orthotics and use of assistive communication or writing devices.

Health professionals may provide for the student's physical well-being; make referrals, as appropriate, to other health professionals; assist in coordination of health services between educational specialists and other medical personnel; communicate to the educational personnel the specific medical needs of the student; provide information related to medication for the students; provide assistance in implementing the school medical program; and provide specific diagnostic information (UNESCO, 2006).

#### **2.7.12 Social workers**

Social work services in schools includes preparing a social or developmental history on a child with a disability; group and individual counseling with the child and family; working in partnership with parents and others on those problems in a child's living situation (home, school, and community) that affect the child's adjustment in school; mobilizing school and community resources to enable the child to learn as effectively as possible in his or her educational program; and assisting in developing positive behavioral intervention strategies (Department of Education, 2008).

#### **2.7.13 Speech-language pathologists**

Speech-language pathology services includes identification of children with speech or language impairments; diagnosis and appraisal of specific speech or language impairments; referral for medical or other professional attention necessary for the habilitation of speech or language impairments; provision of speech and language services for the habilitation or prevention of communicative impairments;

and counseling and guidance of parents, children, and teachers regarding speech and language impairments (UNESCO, 2006). The speech-language pathologist may provide speech and language assessments; provide speech and language therapy; interpret test information; provide in-service training for special and basic education teachers; provide parent training; and assist in the development and implementation of an appropriate individual educational plan (UNESCO, 2006).

#### **2.7.14 Special education teachers**

Persons trained to provide instruction to meet the special learning needs of an exceptional child; special education teachers are qualified (certified) to teach in certain areas of exceptionality (e.g., specific learning disabilities, hard of hearing, intellectual disabilities, etc.) (UNESCO, 2006). Regular classroom teachers can work with special educators in providing appropriate instruction to children with special needs in inclusive classrooms.

Teamwork is well established as one of the most critical components of quality inclusive schooling (McGregor & Vogelsberg, 1998). When a speech-language pathologist serves students with low-incidence disabilities (e.g., autism, deaf-blindness, multiple disabilities, and severe intellectual disabilities) in the capacity of a related services provider in inclusive classrooms, a couple of points are inescapable. The purpose of the support team is to provide a suitable organisational structure to enable teachers in specialist roles related to inclusion to collaborate with one another and with mainstream teachers in an efficient and effective manner for the benefit of the students in their target groups. The members of the team should work collaboratively in the development, implementation and review of policies and

procedures for identifying and meeting the special educational needs of individual students.

Teachers need to liaise with community resources such as hospitals and clinics and procure the necessary resources, to address the unique educational needs of learners. In consultation with professional, teachers would address educational barriers, and in the process, gain valuable knowledge and skills which could be applied to the broader learner population (UNESCO, 2006).

The team engage in activity which includes examining data, but also involves designing assessment, instruction and interventions and making decisions at individual, school and district levels. The existence of a well-defined, effective team process is essential to ensure that a student has access to appropriate general education interventions before a referral to special education is considered (Drame, 2002). According to Meleen (1992) eligibility for special education and related services is determined by a committee that reviews the findings of the assessment team.

Teachers have to pay attention to students' different learning difficulties. They must not be identified wrongly as problems of attitude or as emotional and social problems that students might experience. In order to identify these problems correctly, teachers have to cooperate with parents, psychologists and other professionals involved in the practice of inclusion. The Education for Persons with Special Educational Needs Act (Government of Ireland, 2004) clearly states that where a student is not benefiting from a school's education programme (after the school has put measures in place) and where it is considered that his/her problems may arise from a special educational need, the school should arrange for an assessment of need. People considered qualified to carry out such assessment include a psychologist;



medical practitioner; the principal of the school which the child is attending or a teacher of that school nominated by the principal; an appropriately qualified social worker; and a therapist who is suitably qualified to provide support services for the child's special educational needs. For students who are deaf or have a significant hearing impairment, the opportunity to learn sign language from an early age is widely seen as being critical in maximizing educational achievement (Marschark, 2009).

Douglas, McCall, McLinden, Pavey, Ware, and Farrell (2009) argue that interventions and teaching are necessary in order for children with visual impairment to acquire orientation and mobility skills. For these children, additional teaching is also required to compensate for the incidental learning that occurs for children without visual impairment. Marschak (2009) makes similar arguments in relation to children who are deaf or have a hearing impairment, pointing out that evidence suggests that they may need long-term intensive help in developing flexible approaches to problem-solving and integrating information from different sources. Similarly, teaching alternative communication systems such as sign language or Braille require specialist skills and knowledge. There is general agreement that access to specialist teaching in these areas is vital if children with sensory and/or a physical disability are to gain the fullest possible access to the curriculum.

A study conducted by Leatherman (2007) confirmed that the availability of support services was a factor that teachers perceived as important in order to have a successful inclusive classroom. The types of services considered beneficial are consultation with psychologists, speech and language therapists, physiotherapists, occupational therapists, and special educators (Foreman 2008; Stubbs 2008). Giangreco (1996) citing Mitchell (2004) confirmed that schools become more

effective when teachers and other professionals use collaboration to facilitate effective learning. Collaboration promotes positive learning relationships which help to address the needs of learners with special educational needs; it creates responsive classrooms; it helps with problem solving which in turn helps to resolve conflicts, and the general interaction impact on the success of inclusive school programs (Mitchell, 2004). In a study conducted in England, nearly 80% of respondents named collaboration with others as one of the main factors that support them in maintaining and improving teaching quality. Such collaboration could also help children with special needs to gain confidence and learn and develop good social relationships within the learning environment (Smith & Leonard, 2005). The best interest of the learners should always be the focus of such collaborative interaction but it could also lighten the burden on teachers and thus facilitate positive experiences.

## **2.8 Teachers' Enhancement of Peer Support for Pupils with Special Educational Needs**

The Saskatchewan Special Education Unit (2001) recognizes practices in support to students with disabilities as far as peer interactions are concern. These include; social interaction through the use circles of friends, peer buddies, peer tutors, cross age tutoring, and cooperative learning.

In providing peer support to pupils with special educational needs, it is expected of teachers to inform students who are to provide supports, of the, rationale for their involvement in delivering support to their classmates, their teachers' expectations related to this role, and information about how their classmates communicate, interact with their environment, and learn most effectively. Peers are then shown basic strategies for supporting their classmates with disabilities by

adapting class activities to facilitate their participation; supporting behaviour intervention plans when appropriate; providing frequent, positive feedback; modelling age-appropriate and contextually relevant communication skills (Kennedy & Burstein 2004). The study discussed teachers' enhancement of peer support for pupils with special educational needs to include; cooperative learning, peer-mediated instruction (peer tutoring), class wide peer tutoring (CWPT), peer-delivered support and peer buddy.

### **2.8.1 Cooperative learning**

Cooperative learning is an approach of teaching that many proponents of inclusion believe is an effective way of integrating students with disabilities into groups of non-disabled peers. In cooperative learning, students work together in heterogeneous small groups to solve problems or practice responses. The emphasis is on assisting each other in learning rather than on competition. Some educators have suggested that cooperative learning leads to better attitudes on the part of non-disabled students toward their peers with disabilities as well as to better attitudes of students with disabilities toward themselves (Pomplun, 1997).

It is believed that in a learning process students differ in capabilities. Students with low ability will learn from their fellow capable peers. Cooperative learning among students of different learning capabilities and learning needs, in an inclusive classroom, has proved to be effective in promoting academic achievement, positive attitude towards the subject, and improving social interaction among students (Lypsky & Gartner, 1997; Mastropieri & Scruggs, 2010; Vygotsky, 1978).

Cooperative group learning helps each student to carry out different tasks. The teacher puts students with different abilities and talents into a small group and assigns

that group a specific task, with the requirement that the students work together to achieve this goal (Howden & Kopiec, 1999; Perrenoud, 1998a). The teacher needs to structure the task so that no member of the team can complete it on his or her own (Arcand, 2004). It is a good strategy of teaching students with special educational needs, particularly in the mixed ability groups. It is especially important in third world countries where classes are very large (Mitchell, 2008). In these groups, students with special needs should be paired with their fellow sighted students who will help them to organize their works, find correct pages and repeat teacher's instructions (UNESCO, 2001).

Cooperative learning groups foster both positive interdependence and responsibility. All the students share the same goal as well as knowledge, expertise, and resources, and together actively participate in searching for a solution. They grow to understand that their own involvement and their efforts provide solid support for their teammates and are essential for the success of the team (Arcand, 2004). Students use their social interactions within the group to verbalize and reformulate their ideas, confront each other with new ideas, and discuss and compare their ways of learning. As a result, they are able to clarify and better understand important concepts. In addition, students learn appropriate social behaviour and skills when they are put into a learning situation that requires them to work constructively with a group. They learn to listen to one another, help and provide constructive criticism to one another in a courteous manner, and encourage others to express themselves (Arcand).

### **2.8.2 Peer-mediated instruction (peer tutoring)**

Maheady, Harper and Mallette (2001) described peer-mediated instruction or peer tutoring, as the use of peer confederates in managing behaviour problems, or any

other arrangement in which peers are deliberately recruited and trained to help teach academic or social skills to a classmate. This is quite different from cooperative learning, in which students simply work together to accomplish a task. In most examples of peer-mediated instruction, professionals have advocated having students with disabilities act as tutors as well as tutees. Peer-mediated approaches have long been utilized to improve the learning outcomes and social interactions of students with and without disabilities, especially students with high incidence disabilities. Peer-mediated approaches, which are also referred to as peer-mediated interventions, utilize other students as the primary instructional interventionist. As students with disabilities increasingly are spending more of their school day in general education classes alongside their classmates without disabilities, peer-mediated strategies are being recognized as an especially promising vehicle for promoting full participation and success in school. Indeed, the involvement of peers without disabilities increasingly is a core element in many intervention packages used to support students with disabilities within inclusive classrooms.

Mastropieri, Scruggs, and Graetz (2005) compared the outcomes of secondary level students with disabilities associated with peer tutoring in inclusive science classes in contrast to similar students engaged in teacher-directed instruction. These results support the effectiveness of peer tutoring in a science inclusive classroom. Peer tutoring may be crucial in increasing student learning when students lack the literacy skills needed for independent learning from textbooks (Mastropieri, Scruggs, & Graetz, 2005; Spencer, Scruggs, & Mastropiere, 2003). When peer tutoring strategies are utilized, students with disabilities have outperformed peers on a post-test of content knowledge (Mastropieri, Scruggs, & Graetz, 2005). These results

suggest that appropriately employed peer tutoring programmes can be used to increase comprehension and content area learning for students with disabilities.

### **2.8.3 Class wide peer tutoring (CWPT)**

In this approach, peer tutoring is routinely done by all students in the general education classroom for particular subject matter, such as reading and math. CWPT is a form of intra-class, same-age, reciprocal peer tutoring. Unlike other forms of peer tutoring, CWPT is designed to operate only with the children in one particular classroom, not involving upper-grade or higher-skilled tutors from other classrooms. CWPT are designed to be reciprocal; that is, each student serves as both the tutor and the tutee during each CWPT session (Utley, Mortweet, & Greenwood, 1997). CWPT does not mean that the teacher provides no instruction. On the contrary, teachers must provide instruction in how to do peer tutoring and in the content of the tutoring sessions. Peers tutor each other to provide drill and practice of skills they already has (Greenwood et al, 2001).

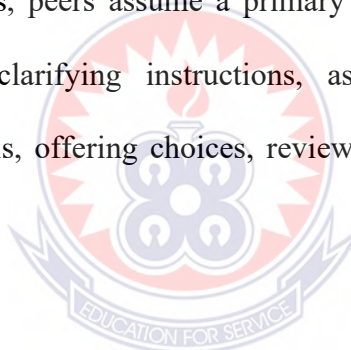
Data on the instructional effectiveness of CWPT show that students retain more of what they learn and make greater advances in social competence with CWPT compared to traditional teacher-led instruction (Greenwood, Maheady, & Carta, 1991; Mathes & Fuchs, 1993). As a teaching strategy, CWPT has proven effective for improving students' test performance and improvement in accuracy (Kamps, Barbetta, Leonard, & Deiquadri, 1994).

### **2.8.4 Peer-delivered support**

The support strategies just mentioned are modeled by a paraprofessional or special educator as students with and without severe disabilities work together.

Initially, curricular and instructional adaptations are made by these adults, with some input and involvement from peer supports (Cushing et al., 2003).

While peers are providing support to their classmates, peers receive on-going monitoring, periodic feedback, and any necessary assistance from paraprofessionals, special education teachers, and general education teachers. These educators continue to ensure that adaptations, assistance, and interactions are appropriate and educationally relevant. As peers evidence greater confidence in their new role and demonstrate their capacity to deliver appropriate support, active adult involvement is systematically faded. Students with severe disabilities do not lose access to individualized supports; they simply begin receiving those supports from someone else (Shukla et al). Thus, peers assume a primary support role which may include paraphrasing lectures, clarifying instructions, asking comprehension questions, modifying class materials, offering choices, reviewing work, and supporting partial participation in activities.



### **2.8.5 Peer buddy**

They are an inexpensive way to facilitate inclusion in the classroom and also to promote social inclusion of students with disabilities. Peer buddy supports can be used in a variety of ways: writing if the student has physical limitations; assisting with academic work (reviewing a lesson or detailing instructions if needed); assisting student with mobility (pushing wheelchair, sighted guide); using student's mode of communication (e.g., voice output device, sign language, symbol boards); help student keep attention directed toward the teacher; provide corrective feedback; be a positive role model; facilitate social interactions between student and peers (Carter, Cushing & Craig, 2009).



Peers are expected to provide academic supports by modifying the general curriculum and using appropriate learning strategies to teach their classmate. For students serving as peer supports, improved academic performance may be attributable to multiple factors. Increased contact with educators and paraprofessionals appears to be one influential variable (Shukla et al., 1998). For low-achieving students in particular, serving as a peer support may provide them with a denser schedule of adult feedback and behaviour-specific praise relative to what they receive when working alone. Such adult contact also provides peers with access to instructional assistance and may introduce additional reinforcement contingencies for improved engagement. The academic support strategies demonstrated by educators during initial peer support training, as well as the opportunity to practice those strategies through teaching them to others, may also promote increased engagement and learning. Students more readily acquire academic content when they must explain it to others and are responsible for ensuring another's learning. To convey accurate information to their classmate, adapt class activities, and facilitate participation, peers must attend closely to lectures and teacher instructions (Shukla et al., 1998).

Peer support interventions have the propensity of increasing both access to the general education curriculum and facilitating social interactions in general education settings that might not otherwise occur in these contexts. These interventions involve one or more classmates without disabilities providing academic and social support to a student with disabilities. These classmates then take a direct role in accessing the general curriculum under the supervision of one or more adults. As with other peer-mediated strategies, peer support interventions comprise a structured approach to involving classmates directly in the delivery of educational and social supports (Maheady, Harper, & Mallette, 2001).



Peer support arrangements serve to restructure students' instructional environment by establishing teacher-sanctioned, interdependent interactions between students with and without disabilities. Such arrangements create additional communication opportunities by increasing the number of initiations directed to the student with severe disabilities, as well as increasing the likelihood that students' interaction attempts will be reinforced by their peers. Also, many students with severe disabilities have substantial difficulties in the areas of communication, language, and social interaction skills (Downing, 2006). Peer support arrangements promote these skills by providing additional practice opportunities and peer modelling, whereby students receive peer feedback regarding the appropriateness of their social behaviour. As the real experts on both critical conversation skills and adolescent peer culture peers may be more effective than adults at shaping appropriate conversational behaviours. Finally, the initial training provided to peers, coupled with on-going information and feedback from educators, ensures that students demonstrate confidence when interacting with and supporting their classmates with disabilities (Downing, 2006).

Carter, Cushing, Clark, and Kennedy (2005) demonstrated that middle and high school students with disabilities maintained high levels of engagement in instructional activities that were aligned with the general curriculum when working with one or two peer supports in core academic classrooms. These findings challenge the prevailing view that paraprofessionals are always necessary as direct, one-on-one support to students enrolled in inclusive classrooms.

Moreover, they offer evidence that peer support interventions may enable educators to differentiate instruction within their classrooms and increase all students' access to challenging content. Educators, administrators, and parents sometimes raise

concerns about the possible detrimental impact of peer support interventions on the academic performance of participating students without disabilities. Research suggests, however, that peers are not hampered academically by their support role and actually may improve their academic performance when assuming responsibility for assisting their classmates with disabilities (Shukla et al., 1998).

## **2.9 Summary of Literature Review**

Two major theories comprising Social Constructivism and Social Model of Disability were used. These theories have it in common that people are social beings who construct their own knowledge through their interactions with others. Thereafter literature was reviewed to cover the concept of inclusive education and models of inclusive education in Ghana. The study discussed the instructional strategies for promoting learning among pupils with special educational needs, teaching and learning materials available to enhance the participation of pupils in learning, ways teachers work with other specialists to provide related services for pupils with special educational needs, and teachers' enhancement of peer support for pupils with special educational needs. The literature is related to my study as it outlined instructional strategies to include among others co-teaching, supplemental teaching, adapting written text. Assistive technology and other low-tech materials were discussed. Specialists who could work with teachers in providing related services to pupils with special educational needs were mentioned with their corresponding duties. The study discussed ways teachers could enhance peer support for pupils with special needs to include peer tutoring, peer buddy among others. This study explored the provisions teachers make for pupils with special educational needs in three selected inclusive pilot basic schools at Pokuase in the Greater Accra Region of Ghana.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter discussed the methods that were used in collecting data for the study. It comprised the research approach, research design, population, sample size, sampling technique, instrumentation, validity, reliability, procedure for data collection and method of data analysis.

#### **3.2 Research Approach**

The study used the mixed methods approach to establish the provisions teachers make for students with special educational needs in three selected inclusive pilot basic schools at Pokuase in the Greater Accra Region of Ghana. This is because both quantitative and qualitative procedures were combined and used in the study. As described in mixed methods, (Tashakkori & Teddlie, 1998), quantitative data can be used hand in hand with the qualitative research efforts to enhance what can be learned. Mixed methods research is an approach of enquiry that combines both qualitative and quantitative methods in a study such that the strength of the study is greater than either quantitative or qualitative research when used alone (Creswell & Plano-Clark, 2007).

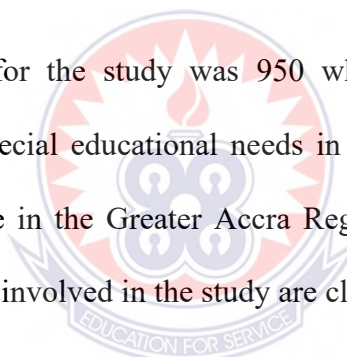
#### **3.3 Research Design**

The study explored provisions teachers make for students with special educational needs in three selected inclusive pilot basic schools at Pokuase in the Greater Accra Region of Ghana. As a result of this, the descriptive survey design was adopted for study. Descriptive survey research design set out to describe and to

interpret what is, and a cross sectional study is one that produces a snapshot of a population at a point in time (Cohen, Manion, & Morrison, 2003). On the basis of the nature of this study, therefore, descriptive survey design was adopted. Aside the strengths that a descriptive survey design produces, there are some reservations about its use. According to Fraenkel and Wallen (2006), the descriptive survey may produce untrustworthy result. This is because researchers may develop into private matters that people may not be completely truthful about. Despite its limitations, the descriptive research was the most appropriate, since it would lead the researcher to draw meaningful conclusion, from the data obtained.

### **3.4 Population**

The population for the study was 950 which comprised all teachers and students with/without special educational needs in the three selected inclusive pilot basic schools at Pokuase in the Greater Accra Region of Ghana. The population is high because the schools involved in the study are cluster.



### **3.5 Sample Size**

A sample of 112 respondents was selected comprising all teachers and pupils with special educational needs from three pilot inclusive schools. In all, ninety-seven (97) teachers and fifteen (15) pupils with special educational needs from the three schools were involved. Five pupils with special educational needs were selected from each school. The sample of teachers seemed high because the researcher worked with cluster of schools.

Table 3 shows the breakdown of the sample size for the study.

**Table 3: Breakdown of Sample Size for the Study**

<b>Name of Schools</b>	<b>No. of Teachers</b>	<b>No. of Pupils</b>	<b>Total</b>
Pokuase A.M.E Zion Basic	30	5	35
Pokuase Methodist Basic	32	5	37
Nii Otto Kwame Memorial Basic	35	5	40
<b>Total</b>	<b>97</b>	<b>15</b>	<b>112</b>

Source: Field data (2014)

Table 3 shows the sample size involved in the study.

### 3.6 Sampling Technique

The purposive and simple random sampling techniques were used to select teachers and pupils for the study. Teachers were sampled strictly by purposive sampling technique where the researcher solicits from persons with specific characteristics to participate in a research study (Johnson & Christensen, 2004). The census sample was employed where all teachers from the three selected pilot schools were involved in the study. The census sample was used because every teacher had, at least, one or more pupils with special educational needs in his or her class. Purposeful sampling was used because it economizes time and specific information can be obtained at a much reduced cost and time. For example, if a researcher wants to carry out research on students with disability in a university, one can easily fall on the students with disability in the university concerned and all of them automatically become the sample. This is why it is called census sample.

Students were initially selected purposively and, thereafter, sampled randomly for the study. The reason of selecting students randomly was that, the researcher does not mean to include all students with special educational needs from the selected

schools in the study. The random sampling technique was used in order to give each pupil with special educational needs from the three selected schools an equal chance of being selected. According to Creswell (2005), the most popular, and rigorous form of probability sampling from a population is simple random sampling. With this technique, each member of the population has an equal chance of being selected. In all, 15 pupils were selected randomly from the three schools with each school having 5 respondents forming a focus group.

### **3.7 Instrumentation**

In this study, questionnaire and interview were used for data collection.

#### **3.7.1 Questionnaire**

The questionnaire was used for teachers. The questionnaire had 30 close-ended items. The questionnaire contained two sections, the demographic and items based on the major themes in the research questions for the respondents. The items were built on a 4 likert scale points ranging from Strongly Agree (SA) =4; Agree (A) =3; Disagree (D) =2; and Strongly Disagree (D) =1. The respondents were to choose one options from which were closer to their own opinions.

The questionnaire were constructed to cover the key themes raised in the research questions such as, instructional strategies for promoting learning among pupils with special educational needs, teaching and learning materials available to enhance the participation of pupils with special educational needs in learning, ways teachers work with other specialists to provide related services for pupils with special educational needs, and teachers' enhancement of peer support for pupils with special educational needs.

### **3.7.2 Interview**

A semi-structured interview schedule was used to obtain data from pupils with special educational needs. The choice of this interview was to offer sufficient flexibility to approach different respondents differently while still covering the same areas of data collection. The researcher conducted the interview in a focus group of 5 participants from each school. The items were developed to cover encouraging of peer support for pupils with special educational needs in the three selected schools. The interviews were tape recorded to secure an accurate account of the conversations and avoided losing data since it was not possible to write everything during interview. Each cassette tape was numbered and labeled with name of interviewee to avoid a mix up of details. The interview was meant to support results from teachers on enhancement of peer support for pupils with special educational needs. Interviews were used in the study because according to Cohen, Manion and Morrison (2007), interviews enable participants to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view.

### **3.8 Validity**

Best and Khan (1998), posit that, ensuring validity of questionnaires was asking the right questions framed in the least ambiguous way. To ensure validity, the entire questionnaire and interview guide were subjected to peer reviews. They were scrutinized by colleagues M.Phil students in order to offer the necessary suggestions and corrections. Again, the researcher took the questionnaire for review by an expert in item analysis for his comments. The expert suggested that, some of the statements should be re-phrased in simple and clear terms for easy understanding. The questionnaire was then given to some of the lecturers in the Department of Special

education for their judgments. Their suggestions were used to improve upon the quality of the instrument. Finally, the questionnaire was given to the researcher's supervisor for his expert advice and suggestions. He suggested that some of the statements should be worded in the negative and re-organized in an orderly manner. Cohen et al. (2007) purport that validity is the demonstration that a particular instrument measures what it is intended to measure. An effective way to ensure validity is by peer debriefing, this strategy involves locating a person who reviews and asks questions about the study so that the account will resonate with people other than the researcher (Creswell, 2009).

Another strategy researchers frequently use is triangulation that is, comparing multiple data sources in search of common themes, to support the validity of their findings (Leedy & Ormrod 2005). Engagement with credibility issues such as cross-validation or triangulation is very important as it is likely to increase the reader's confidence (Smith, 2007). The researcher therefore used questionnaire and interview to ascertain teachers' enhancement of peer support for pupils with special educational needs in inclusive classrooms.

### **3.9 Reliability**

In ensuring reliability of the study, a pilot study was conducted to see the consistency of the responses with those of the actual study. According to Bell (2005), data-gathering instruments should be piloted to test how long it takes respondents to complete them, to check that all questions and instructions are clear and to enable the researcher to remove any items that do not yield usable data. The reliability of the question is however, not proof that the answers given reflect the respondent's true feeling. The study employed the pilot testing in determining the reliability of results.



The respondents for the pilot study were selected from schools believed to possess the same or similar characteristics as the respondents for the actual study. A pre-test was conducted for respondents in Amasaman M.A Junior High Cluster of Schools. After, the pre-test, the instruments were further given to experts for judgement and comments on suitability. A post-test was conducted and the reliability score was 0.82. Nunnally and Bernstein (1994) and DeVellis (2003) pointed out that the acceptable variables for alpha, range from 0.70 to 0.95.

### **3.10 Procedure for Data Collection**

The researcher sought permission from heads of the three selected schools in writing of which the head subsequently informed the teachers about the study in order to solicit their cooperation and assistance. This was supported by an introductory letter from the Head of Department, Special Education from the University of Education, Winneba for the Heads of the various schools to support the researcher in his study. After the permission was granted, the researcher arranged with the respondents the day of responding to the items. This is consistent with what Creswell (2005) says that it is important to respect the site where a research takes place. This respect, according to Creswell (2005), is shown by gaining permission before entering the site.

With regard to the data collection, the researcher went to the schools of study to administer the questionnaires and granted a focus group interview to the respondents personally to ensure maximum response. The researcher explained the purpose of the study, and re-assured the participants of the necessary confidentiality on the information to be gathered. The two instruments were administered on different days. The researcher explained the instructions and the various items to the

respondents. This helped to obtain desired responses. Forty (40) minutes was allotted for responding to the questionnaires and forty-five (45) minutes for the interview. Answered questionnaires were retrieved on the same day. The interview was tape recorded and notes taken down to aid in the analysis.

### **3.11 Method of Data Analysis**

#### **3.11.1 Questionnaire data**

Descriptive approach was used for analysing data from the questionnaire. This was influenced by the nature of the research questions. The statistical package for service solutions [SPSS] version 20 software was used in analysing data from the questionnaire.

The data were initially analysed into frequency distribution and results were further converted into percentages for easy discussion. Descriptive statistics, in the form of percentages and frequencies, were employed to analyze the collected data. Frequency tables were constructed in line with the variables raised in the research questions to support the data analysis.

#### **3.11.2 Interview data**

Thematic analysis was used to analyse the data collected from the interviews. The process of analyses began with the reading through the interview notes. Data was then transcribed and reviewed for accuracy. Minor adjustments to some specific language were made. Each transcription was coded by the interviewer. The participants were coded, **A**, **B**, and **C** respectively. This coding helped to maintain some level of confidentiality. The interview analysis was based on the fourth research question which sought to find out from pupils with special educational needs, how teachers enhance peer support for them in inclusive classrooms.

## CHAPTER FOUR

### ANALYSIS AND DISCUSSION OF FINDINGS

#### 4.1 Introduction

This chapter presents the analysis and discussion of findings for the study. The results from the semi-structured interviews were transcribed and interpreted using thematic analysis. The completed questionnaires were analysed using SPSS software 20.0 where the descriptive statistical method was adopted. The results of the study are presented according to the four research questions raised that guided the study which include:

1. What instructional strategies do teachers use to promote learning among pupils with special educational needs in inclusive classrooms?
2. What teaching and learning materials are available to enhance the participation of pupils with special educational needs in learning in inclusive classrooms?
3. In what ways do teachers work with other specialists to provide related services for pupils with special educational needs in inclusive classrooms?
4. How do teachers enhance peer support for pupils with special educational needs in inclusive classrooms?

#### 4.2 Background Information on Participants

Table 4.1 highlights background data on teachers who participated in the study concerning their qualifications.

**Table 4.1: Qualifications of Teachers**

<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Trs' Cert. 'A'	6	6
Diploma/HND	40	41
B.A/B.ED/BSC	50	52
M.ED/MPHIL/M.A	1	1
<b>Total</b>	<b>97</b>	<b>100</b>

Table 4.1 shows the qualification of respondents involved in the study; 52% of the teachers hold first degrees in various fields, 41% of teachers hold varying diploma, 6% of teachers have teachers certificate 'A', while only 1% of the teachers hold masters: The following table (4.2) provides detailed information on teaching experiences of teachers who participated in the study.

**Table 4.2: Teaching Experience**

<b>Years</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1-3	2	2
4-6	30	30
7-10	55	55
10+	10	10
<b>Total</b>	<b>97</b>	<b>100</b>

Table 4.2 revealed that majority of teachers served between 7 and 10 years. Thirty of the respondents had served between 4 and 6 years. Ten of the teachers served 10 years and above. Two of the respondents served between 1 and 3 years.

### 4.3 Results from the Questionnaire

#### Research Question 1:

**What instructional strategies do teachers use to promote learning among pupils with special educational needs in inclusive classrooms?**

To answer this research question, respondents' responses to questionnaire 1-7 were used. Table 1 shows the frequency distributions of respondents' responses to items 1-7.

**Table 1: The frequency distributions of teachers' responses to the questionnaire items 1-7**

Statement	SA	A	D	SD	TOTAL
1. I make lesson interactive for pupils to enhance their participation in learning	55 (57%)	42 (43%)	0 (0%)	0 (0%)	97 (100%)
2. I allow some of the pupils with special educational needs participate in activities on a reduced basis	60 (62%)	7 (7%)	30 (31%)	0 (0%)	97 (100%)
3. I use a variety of classroom groupings during teaching and learning	25 (26%)	57 (59%)	8 (8%)	7 (7%)	97 (100%)
4. I provide supplemental instruction to pupils with special educational needs	9 (9%)	10 (10%)	60 (62%)	18 (19%)	97 (100%)
5. I extend the time for completing task for pupils with special educational needs	58 (60%)	34 (35%)	5 (5%)	0 (0%)	97 (100%)
6. I adapt classroom assessment to suit the needs of pupils with special educational needs	25 (26%)	30 (31%)	27 (28%)	15 (15%)	97 (100%)
7. Text are modified to suit the needs of pupils with special educational needs	3 (3%)	8 (8%)	56 (58%)	30 (31%)	97 (100%)

Source: Field data (2014)

Table 1 shows the frequency distributions of teachers' responses to questionnaire items 1-7. The first item was to find out from teachers whether they make lesson interactive for pupils to enhance their participation in learning. A total of 97 (100%) teachers agreed with the statement. This is an indication that quite a

number of teachers make lesson interactive for pupils including those with disabilities in inclusive classrooms.

As regards item 2, which was to find out whether teachers allow some of the pupils with special educational needs participate in activities on reduced basis, a total of 67 (69%) of teachers agreed with the statement while 30 (31%) of them disagreed with the statement. This is an indication that quite a number of teachers allow for partial participation in activities by pupils with special educational needs.

Regarding item 3, that was to find whether teachers use a variety of classroom groupings during teaching and learning, a total of 82 (85%) of the teachers agreed with statement. It was only 15 (15%) of the teachers who disagreed with the statement.

The fourth item was to find out whether teachers provide supplemental instructions to pupils with special educational needs. The result shows that, 19 (19%) of teachers agreed with the statement while 78 (81%) of the teachers disagreed with the statement. This is an indication that, most of the teachers do not provide supplemental instructions to pupils with special educational needs.

Item 5 was to find out whether teachers extend the time for completing task for pupils with special educational needs, and the results were that, 92 (95%) of teachers agreed to the statement while 5 (5%) of the teachers disagreed with the statement.

The sixth item was to find out whether teachers adapt the classroom assessment to suit the needs of pupils with special educational needs, a total of 55 (57%) teachers agreed to the statement while 42 (43%) of the teachers disagreed with the statement.

Responding to item 7, that was to find out whether text are modified for pupils with special educational needs, a total of 86 (89%) of teachers disagreed with the statement while 11 (11%) of the teachers agreed with the statement. This shows that majority of teachers do not modify text for pupils with special educational needs.



**Research Question 2:****What teaching and learning materials are available to enhance the participation of pupils with special educational needs in learning in inclusive classrooms?**

To answer this research question, respondents' responses to questionnaire 8-16 were used. Table 2 shows the frequency distributions of respondents' responses to items 8-16.

**Table 2: The frequency distributions of teachers' responses to the questionnaire items 8-16**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>TOTAL</b>
8. I always use tactile materials during the teaching process	42 (43%)	33 (34%)	17 (18%)	5 (5%)	97 (100%)
9. I often use real objects during the teaching and learning process	53 (55%)	39 (40%)	5 (5%)	0 (0%)	97 (100%)
10. Models of objects are used in teaching pupils to enhance their understanding of concepts	38 (39%)	52 (54%)	7 (7%)	0 (0%)	97 (100%)
11. Tape recorders are provided to pupils with special educational needs to record lessons during teaching	15 (15%)	20 (21%)	45 (46%)	17 (18%)	97 (100%)
12. Magnifying glasses are provided to pupils with low vision to enhance their learning	31 (32%)	51 (53%)	13 (13%)	2 (2%)	97 (100%)
13. Pupils with visual impairments are provided with text in Braille	0 (0%)	10 (10%)	69 (71%)	18 (19%)	97 (100%)
14. Pupils with low vision are provided with text in large print	40 (41%)	20 (21%)	21 (22%)	16 (16%)	97 (100%)
15. Computers are provided during teaching and learning	51 (53%)	36 (37%)	7 (7%)	3 (3%)	97 (100%)
16. Computers are adapted with software for easy access by pupils with special educational needs	0 (0%)	5 (5%)	40 (41%)	52 (54%)	97 (100%)

Source: Field data (2014)



Table 2 shows the frequency distributions of teachers' responses to questionnaire items 8-16. For item 8, 75 (77%) of the teachers agreed that they always use tactile materials during the teaching process whereas 22 (23%) of the teachers disagreed with the statement.

Regarding item 9, a total of 92 (95%) of teachers agreed that, they often use real objects during the teaching and learning process while 5 (5%) of the teachers disagreed with the statement. This is an indication that majority of teachers use real objects to enhance pupils understanding of concepts.

Concerning item 10, 90 (93%) of teachers agreed to use models of objects in teaching to enhance the understanding of pupils with special educational needs, whereas, 7 (7%) disagreed with the statement.

With regard to item 11, a total of 62 (64%) of teachers disagreed to provide tape recorders to pupils with special educational needs to record lessons during teaching, while 35 (36%) of the teachers agreed with the statement.

Item 12 was to find out from teachers whether magnifying glasses are provided for pupils with low vision to enhance learning and the results were that, a total of 82 (85%) of teachers agreed with the statement while 15 (15%) of the teachers disagreed with the statement. This is an indication that quite a number magnifying glasses are provided for pupils with low vision.

Regarding item 13, which was to find out whether pupils with visual impairments are provided with text in Braille, 87 (90%) of teachers disagreed with the statement, whereas, 10 (10%) agreed to the statement.

Responding to item 14, which was to find out whether pupils with low vision are provided with text in large print, a total of 60 (62%) agreed with the statement while 37 (38%) of the teachers disagreed with the statement.

With regard to item 15, which was to find out whether computers are provided during teaching and learning, 87 (90%) of teachers agreed with the statement, whereas, 10 (10%) of the teachers disagreed with the statement.

Regarding item 16, a total of 92 (95%) of teachers disagreed that the computers were adapted with software for easy access by pupils with special educational needs, while 5 (5%) agreed with the statement.



**Research Question 3:****In what ways do teachers work with other specialists to provide related services for pupils with special educational needs in inclusive classrooms?**

To answer this research question, respondents' responses to questionnaire 17-24 were used. Table 3 shows the frequency distributions of respondents' responses to items 17-24.

**Table 3: The frequency distributions of teachers' responses to the questionnaire items 17-24**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>TOTAL</b>
17. I work with the special educator to co-teach pupils with special educational needs	53 (55%)	29 (30%)	15 (15%)	0 (0%)	97 (100%)
18. I consult the special educator in selecting the appropriate teaching and learning materials	62 (64%)	32 (33%)	3 (3%)	0 (0%)	97 (100%)
19. I provide a list of pupils with the behavioural problems to the guidance and counselling personnel for counselling	70 (72%)	25 (26%)	2 (46%)	0 (0%)	97 (100%)
20. I work with the counseling personnel to counsel parents on their wards special educational needs	56 (58%)	41 (42%)	0 (0%)	0 (0%)	97 (100%)
21. Pupils with hearing difficulty are provided interpreting services	0 (0%)	0 (0%)	50 (52%)	47 (48%)	97 (100%)
22. School health services are provided to pupils with special needs	3 (3%)	7 (7%)	57 (59%)	30 (31%)	97 (100%)
23. I consult the audiologist to assess pupils who show signs of hearing problems	9 (9%)	10 (10%)	60 (62%)	18 (19%)	97 (100%)
24. In consultation with the special educator, pupils with intellectual disability are referred for psychological assessment	50 (52%)	16 (16%)	17 (18%)	14 (14%)	97 (100%)

Source: Field data (2014)

Table 3 shows the frequency distributions of teachers' responses to questionnaire items 17-24. Concerning item 17, which was to find out whether teachers work with special educators to co-teach pupils with special educational needs, a total of 82 (85%) of teachers agreed with the statement, whereas, 15 (15%) disagreed.

In response to item 18, a total of 94 (97%) of teachers agreed to consult the special educator selecting the appropriate teaching and learning materials, while 3 (3%) of the teachers disagreed with the statement.

Responding to item 19, a total of 95 (98%) of teachers agreed to provide a list of pupils with behavioural problems to the guidance and counselling specialists for counselling, whereas, 2 (2%) disagreed with the statement.

With regard to item 20, a total of 97 (100%) of teachers agreed to work with the guidance and counselling specialists to counsel parents on their wards special educational needs.

Regarding item 21, a total of 97 (100%) of the teachers disagreed with the statement that they provide pupils with hearing difficulty an interpreting services. This is an indication that pupils with hearing difficulty are not provided with sign language to enhance their learning.

As regards item 22, most of the teachers totalling 87 (90%) disagreed with the statement that school health services are provided to pupils with special educational needs, whereas, 10 (10%) of the agreed with the statement.

In response to item 23, most of the teachers numbering 78 (81%) disagreed with the statement that they consult the audiologist to assess pupils who show signs of hearing problem, while 19 (19%) of the teachers agreed with the statement.

With regard to item 24, a total of 66 (68%) of the teachers agreed that in consultation with the special educator, pupils with intellectual disability are referred for psychological assessment, while 31 (32%) of the teachers disagreed with the statement.

#### Research Question 4:

#### How do teachers enhance peer support for pupils with special educational needs in inclusive classrooms?

To answer this research question, respondents' responses to questionnaire 25-30 were used. Table 4 shows the frequency distributions of respondents' responses to items 25-30.

**Table 4: The frequency distributions of teachers' responses to the questionnaire items 25-30**

Statement	SA TOTAL	A	D	SD	
25. Assign pupils with learning difficulty to a peer tutor for support	61 (63%)	27 (28%)	9 (9%)	0 (0%)	97 (100%)
26. I make sure pupils who need support sit in close proximity to peers during lessons	67 (69%)	30 (31%)	0 (0%)	0 (0%)	97 (100%)
27. I engage pupils in cooperative learning	61 (63%)	35 (36%)	1 (1%)	0 (0%)	97 (100%)
28. Peers are allowed to copy notes for pupils with writing difficulties	70 (72%)	25 (26%)	2 (2%)	0 (0%)	97 (100%)
29. Peers are allowed to read to pupils with reading difficulties	48 (50%)	36 (37%)	13 (13%)	0 (0%)	97 (100%)
30. Teachers allow peers to clarify instructions to pupils with special educational needs	53 (55%)	35 (36%)	9 (9%)	0 (0%)	97 (100%)

Source: Field data (2014)

Table 4 shows the frequency distributions of teachers' responses to questionnaire items 25-30. In responding to item 25, which focused on finding out

whether teachers assign pupils with learning difficulties to a peer tutor for support, a combination of 88 (91%) of teachers agreed with the statement. It was only 9 (9%) of teachers who disagreed with the statement.

As regards item 26, that was to find out whether teachers make sure that pupils who need support sit in close proximity with peers during lessons, a total number of 97 (100%) of teachers agreed with the statement.

Responding to item 27, which focused on finding out from teachers whether they engage pupils in cooperative learning, most of the teachers totalling 96 (99%) agreed with the statement. It was only 1 (1%) of the teachers who disagreed with the statement. Regarding item 28, which sought to find out from teachers whether peers are allowed to copy notes for pupils with writing difficulties, 95 (98%) of teachers agreed with the statement. It was a handful of teachers totalling 2 (2%) that disagreed with the statement.

With regard to item 29, which focused on finding out from teachers whether they allow peers to read to pupils with reading difficulties, 84 (87%) of the teachers agreed with the statement, whereas 13 (13%) of the teachers disagreed with the statement.

As regards item 30, a total of 88 (91%) of teachers agreed that they allow peers to clarify instructions to pupils with special educational needs. It was only 9 (9%) of teachers who disagreed with the statement.

#### 4.4 Results from the Interviews

##### Research Question 4:

##### **How do teachers enhance peer support for pupils with special educational needs in inclusive classrooms?**

Confirming the findings from teachers on how they enhance peer support for pupils with special educational needs in inclusive classrooms, few of the students with special educational needs were interviewed in focus groups of five. The groups were labelled **A**, **B**, and **C** representing students from the three schools involved in the study. Participants **A** represented students from Pokuase A.M.E Zion School, Participants **B** stand for students from Pokuase Methodist Basic School, and Participants **C** stand for students from Kutunse Basic School.

Responding to whether teachers' enhance peer support for pupils with special educational needs, the three groups of participants agreed that there existed provision on peer support. Talking about the kinds of peer support services teachers make, all the participants mentioned cooperative learning.

Participants **A** had this to say: *teachers assign us in groups to read passages during reading comprehension lessons.*

(Source: Verbatim expressions of participants' responses).

*We are put into groups to learn together most often* (Participants **B**).

(Source: Verbatim expressions of participants' responses).

*Teachers provide us group work to do* (Participant **C**).

(Source: Verbatim expressions of participants' responses).

Asking pupils if teachers assign pupils with special educational needs peer tutors to assist them, they had this to say:

*Teachers only put us in groups to learn without anyone taking the lead in teaching or explaining concepts to us (Participants A).*

(Source: Verbatim expressions of participants' responses).

Participants **B** made this statement:

*Friends that are very good are sometimes made to assist those of us that have difficulty in understanding some concepts in class. We are seated close to pupils who offer us peer support.*

(Source: Verbatim expressions of participants' responses).

Participants **C** agreed that teachers provide them with peer tutors in class. They had this to say:

*During and after lessons pupils who are good are made to give us support in order to understand concepts that we find difficult. This is usually done to any other pupils who have difficulty in understanding a concept. Teachers pair us with intelligent pupils where we seated close to them.*

(Source: Verbatim expressions of participants' responses).

Pupils were asked how does the provision of peer tutors aid in their learning and they had this to say;

Participants **A** remarked: *there is no peer appointed to take the lead in supporting those with learning difficulties during and after lessons therefore cannot talk much on the relevance of peer tutoring.*

(Source: Verbatim expressions of participants' responses).

*We feel better working with peers because they do have time to explain concepts better to our understanding. We sometimes shy away asking*



*for clarification from teachers just to avoid being rebuked with insults but in company with friends we understand better (Participant, B).*

(Source: Verbatim expressions of participants' responses).

*Our understanding of concept is enhanced when working with peers. They take time to explain things to us unlike teachers who rush so much that in case you ask a question for clarification they shut you down that you are delaying them. Our performance in the lower class was poor because there wasn't any peer assistance in class (Participants, C).*

(Source: Verbatim expressions of participants' responses).

Concerning the monitoring of peer support students provide to pupils with special educational needs, participant A had this to say:

*Teachers go round to see what we are doing in each group but on no occasion did the teacher advice on the support that were given us.*

(Source: Verbatim expressions of participants' responses).

Participants, B remarked:

*Teachers go round and see to it that everybody is participating in any activity assigned. Peer tutors are sometimes re-directed on the exact assistance they should provide to those of us with special educational needs.*

(Source: Verbatim expressions of participants' responses).

Participants, C commented:

*Lead peer tutors are asked to withdraw from some of the activities and give chance to those with special educational needs. Teachers re-direct activities sometimes when peer tutors deviate from the expected assistance they are to provide.*

(Source: Verbatim expressions of participants' responses).

As part of the interview, students with special educational needs were asked if they were provided scribes and respondents from the three selected schools agreed that there is a provision by teachers to that effect. In citing instances on the provision of scribes, respondents from the three selected schools mention copying of notes.

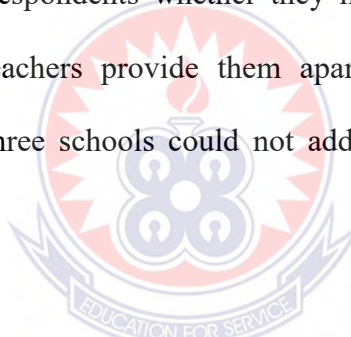
*Teachers encourage friends to help me get my notes written says a low vision student (Participants C).*

(Source: Verbatim expressions of participants' responses).

*Peers are made to read and copy notes for us because of our conditions (Participants A & B).*

(Source: Verbatim expressions of participants' responses).

The interviewer asked respondents whether they have other things to say on peer support services that teachers provide them apart from those they were asked. Respondents from the three schools could not add anything up to what they were asked.



#### **4.5 Discussion of Findings from the Questionnaire**

##### **Finding on Research Question 1:**

This was a descriptive survey that explored the provisions teachers make for pupils with special educational needs in three selected inclusive pilot basic schools at Pokuase in the Greater Accra Region of Ghana. The study employed the cross reference discussion. The above analyses substantiate the provisions teachers make for pupils with special educational needs in inclusive classrooms. The revealed the types of provisions teachers make for pupils with special educational needs to support their learning in inclusive settings.

In responding to item 1 on table 1, teachers' responses revealed that, they make lesson interactive for pupils to enhance their participation in learning. This result corroborates Rogoff, (1990) that, interactive teaching is a key to effective learning and information exchange. It is a method which encourages and expects learners to participate. The quality of interaction between the teacher and learner in the classroom has been found to be the most important factor in improving the efficiency of lessons taught.

The results on item 2 revealed that most of the teachers allow pupils with special educational need to participate in activities on a reduced basis.

The findings on item 3 revealed that, teachers use a variety of classroom groupings during teaching and learning to enhance the participation of students in learning. This confirms the assertion of Wiederholt and Chamberlain that, teachers use a variety of classroom grouping arrangements. Sometimes they teach the whole class at once, as when they lecture in a content area. Other times teachers may employ small-group or one-to-one instruction.

Responding to results on item 4, it was found out that, most of the teachers could not provide supplemental instructions to pupils with special educational needs. This is an indication that, most of the teachers do not provide supplemental instructions to pupils with special educational needs. Supplemental instructional programmes are designed for students that require services outside of the regular or special classroom. Instruction in this setting may be given in small groups or on a one-on-one basis and must constitute at least 21%, but not exceed 50%, of the school day (Davis, 1994).

The findings on item 5 revealed that, majority of teachers extend the time for completing task for pupils with special educational needs. This is an indication that

teachers make provisions for extension in time for pupils with special educational needs to complete task as a result of their unique problems. Reading and writing braille, and getting information from tactile sources for students with visual impairments consumes a lot of time. Generally, it is acceptable to add half of the time for students with low vision, and twice as much for students with blindness (Spungin, 2002).

In responding to item 6, teachers' responses indicated that most of them adapt classroom assessment to suit the needs of pupils with special educational needs. This corroborates Spungin (2008) that students may need to provide responses orally rather than in writing. This is acceptable in the case of pupils with writing and visual challenges which interfere with their ability to write. Also, a teacher of students with visual impairment can write down the answers given out orally by a student with visual impairment.

Regarding the findings on item 7, it was revealed that majority of teachers could not modify text for pupils with special educational needs. This result debunks the assertion of Corn and Koenig, (2002) that printed text can be adapted through increasing the font size, bolding the text, increasing contrast, adding colour, and adjusting spaces between characters.

### **Findings on Research Question 2:**

The results on item 8 revealed that teachers always use tactile materials during the teaching process to enhance the understanding of pupils in learning. Teachers provide tactile materials to compensate for pupils who find it difficult to visualise materials due to their special educational needs. Ajayi and Faremi (2008) noted that teachers in inclusive settings need to augment their teaching with resources. It is only

then that their teaching can be meaningful and beneficial to children with special education needs.

As regard findings on item 9, it was found out that most of the teachers often use real objects during the teaching and learning process to enhance pupils understanding of concepts. This means teachers as much as possible bring to class real objects to influence the understanding of pupils during teaching. This confirms Tamakloe, Amedahe and Atta (2005) assertion that a teaching resource is what the teacher prepares or uses to make learning easier than it would have been without it.

The findings on item 10 revealed that teachers use models of objects in teaching to enhance the understanding of pupils with special educational needs. This confirms Tamakloe, Amedahe and Atta (2005) assertion that a teaching resource is what the teacher prepares or uses to make learning easier than it would have been without it.

With regard to item 11, the results of the study revealed that most teachers could not provide tape recorders to pupils with special educational needs to record lessons during the teaching process.

In response to item 12, the results of the study indicated that majority of the teachers provide magnifying glasses for pupils with low vision to enhance their learning in inclusive classrooms.

Regarding item 13, the findings of the study brought to the fore that, most of the teachers could not provide text in Braille for pupils with visual impairments to enhance their learning. This debunks the assertion of UNESCO (2006) that, text be translated into an audible format by specially designed screen-reading devices or made accessible by the means of printed Braille text for pupil with special educational needs.

The results on item 14 indicated that, pupils with low vision are provided with text in large print by teachers to enhance their participation in learning.

With regard to item 15, the findings of the study revealed that, computers were provided by teachers during teaching and learning. This confirms Provenzo, Brett, and McCloskey (1999) who explained how computers, adaptive computer interfaces, and specialized software are especially important to children with disabilities.

Regarding item 16, it was found out from the results of the study that most of the computers were not adapted with software for easy access by pupils with special educational needs. This contrasts the view of Provenzo, Brett, and McCloskey who believed that output devices such as monitors, printers, and speakers can be adapted for children with disabilities in order to encourage access.

### **Findings on Research Question 3:**

Concerning item 17, the finding of the study revealed that, most of the teachers work with special educators to co-teach pupils with special educational needs in inclusive classrooms. This result supports the assertion of Lipsky & Gartner, (1997) that no single teacher can have all the skills necessary to meet students' diverse needs in inclusive classroom. For instance, a teacher who has specialized in visual impairments therefore, should be part of the teaching in an inclusive classroom having students with visual impairments. A co-teacher will also be responsible for teaching skills like reading and writing by using braille, using glasses and lenses.

In responding to item 18, teachers' responses revealed that they consult the special educator in selecting the appropriate teaching and learning materials that suit the learning needs of pupils with special educational needs.

Teachers' responses to item 19 indicated that teachers provide a list of pupils with behavioural problems to the guidance and counselling personnel for counselling. This supports the literature that, counseling may be provided in combination with an individual behaviour intervention plan to students who have chronic social emotional difficulties which significantly interfere with their learning (Department of Education, 2008).

With regard to item 20, the findings of the study revealed that, all teachers work with the guidance and counselling personnel to counsel parents on their wards special educational needs. Parent counseling and training is very important as it assist parents in understanding the special needs of their child; providing parents with information about child development; and helping parents to acquire the necessary skills that will allow them to support the implementation of their child's IEP (Department of Education, 2008).

The findings of item 21 indicated that, majority of teachers did not provide pupils with hearing difficulty an interpreting services. This is an indication that pupils with hearing difficulty are taught without support in sign language to enhance their understanding of lessons.

As regards item 22, teachers' responses revealed that pupils with special educational needs are not provided school health services. This is an indication that, health professionals who are to provide health related supports to students with special educational needs such as making referrals to other health professionals, coordinating of health services between educational specialists and other medical personnel, communicating to the educational personnel the specific medical needs of the students are not given.

In response to item 23, most of the teachers' responses revealed that they did not consult the audiologist to assess pupils who show signs of hearing problem. This is an indication that pupils who are hard of hearing are not assessed and given the appropriate support service to enhance their participation in learning.

Regarding item 24, teachers' responses revealed that total in consultation with the special educator; pupils with intellectual disability are referred for psychological assessment. This result corroborates Leatherman (2007) that the availability of support services was a factor that teachers perceived as important in order to have a successful inclusive classrooms.

#### **Findings on Research Question: 4**

In responding to item 25, teachers' responses show that they assigned pupils with learning difficulties to peers for support. This result is in line with that of Carter, Cushing, Clark, and Kennedy (2005) who asserted that middle and high school students with disabilities maintained high levels of engagement in instructional activities that were aligned with the general curriculum when working with one or two peer supports in core academic classrooms.

Responses of teachers to item 26 revealed that, majority of teachers make sure pupils who need support sit in close proximity with peers during lessons. This result confirms the literature of Kennedy & Burstein (2004) that students who agree to work together need to be moved within the classroom so that they can sit next to each other and remain in close proximity during instructional activities.

In responding to item 27, teachers' responses revealed that they engage pupils in cooperative learning. This result corroborates with that of Lypsky and Gartner, (1997) that cooperative learning among students with different learning capabilities



and needs in an inclusive classroom has proved to be effective in promoting academic achievement, positive attitude towards the subject, and improving social interaction among students. The social model on the other hand provides a basis for support and collective engagement of individuals with disabilities and also serves as a means through which the non-disabled are provided with an alternative and positive view of disability (Bonilla, 2005).

Findings on item 28 revealed that, teachers allowed peers to copy notes for pupils with writing difficulties. This means pupils who have difficulties in writing are assigned peers who assist in copying of notes. Also, results from item 29 revealed that, teachers allow peers to read to pupils with reading difficulties. As regards item 30, responses from teachers revealed that they allow peers to clarify instructions to pupils with special educational needs. This supports the assertion of Carter, Cushing and Craig (2009) that peer supports can be used in a variety of ways: writing if the student has physical limitations; assisting with academic work (reviewing a lesson or detailing instructions if needed).

#### **4.6 Discussion of Findings from the Interviews**

It was evident from the responses of the pupils that teachers assigned those with learning difficulties to peer tutors for support even though respondents from participants **A** do not see much on peer tutoring where good students take lead roles in discussing concepts. Participants **B** and **C** confirmed that teachers provide them with peer tutors.

From the responses of participants **A**, **B**, and **C**, it was evident that teachers' sit pupils with special educational needs in close proximity to peer tutors for support. Students with special educational needs feel better working with peers. Peer

assistance and support, is very helpful in improving academic achievements of all students in the class (Lipsky & Gartner, 1997).

Responses from pupils with special educational needs from the three selected schools confirmed the involvement in cooperative learning by teachers. This confirms the assertion of Lipsky & Gartner, 1997; Mastropieri & Scruggs, 2010; Vygotsky, 1978; Wade, 2000 that cooperative learning among students of different learning capabilities and learning needs in an inclusive classroom proved to be effective in promoting academic achievement, positive attitude towards the subject, and improving social interaction among students.

Responses from participants **A**, **B**, and **C** revealed that teachers allow peers to serve as scribes by writing notes, detailing lessons and instructions and reading notes to them during instructions. This is consistent with the claim that, assistance from other students can help students who are academically lagging behind to accomplish activities, and achieve higher performances, they could not do achieve on their own (Vygotsky, 1978; Wade, 2000).

Also, it was evident from the interview with the special educational needs pupils that teachers monitor the support peer tutors provide to pupils with special educational needs. Teachers in most cases re-direct activities to suit the needs of pupils with special needs. This corroborates Cushing et al., (2003) that in providing support to their classmates, peers receive on-going monitoring, periodic feedback, and any necessary assistance from paraprofessionals, special education teachers, and general education teachers. These educators continue to ensure that adaptations, assistance, and interactions are appropriate and educationally relevant.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary, conclusions, recommendations of the study and areas for further research.

#### 5.2 Summary of Findings

The research used the descriptive survey design. The sampling techniques adopted for the study were purposive and simple random sampling. Teachers were strictly sampled purposively while pupils were sampled purposively and later randomly. A sample of 112 respondents participated in the study that is 97 teachers and 15 pupils with special educational needs from the three inclusive pilot basic schools. A close-ended questionnaire in the form of a likert scale type anchored on a four point ranging from strongly agree (SA) =4, agree (A) =3, disagree (D) =2, and strongly disagree (SD) =1, and a semi-structured interview were the major data collecting instruments. The questionnaires were administered to teachers and focus group interviews granted to pupils with special educational needs. Descriptive statistical method was used in analysing data from the questionnaire while the semi-structured interview was analysed using the thematic data analysis.

In finding out the instructional strategies teachers use to promote learning among pupils with special educational needs in inclusive classrooms, it was evident from the findings of the study that teachers make lesson interactive to enhance the participation of pupils in learning, they allow some of the pupils with special educational needs participate in activities on reduced basis, also, they use a variety of classroom groupings during teaching and learning, they extend the time for

completing task for pupils with special educational needs. However, teachers could not provide supplemental instructions to pupils with special educational needs in inclusive classrooms and modify text to suit the learning needs of pupils with special educational needs.

With regards to the teaching and learning materials available to enhance the participation of pupils with special educational needs in learning, the findings revealed that teachers always use tactile materials during the teaching process, they often use real objects during the teaching and learning process, magnifying glasses are provided to pupils with low vision to enhance their learning, computers are provided during teaching and learning. Notwithstanding, teachers could not provide tape recorders to pupils with special educational needs during lessons, teachers could not provide text in Braille for pupils with visual impairment and computers were not adapted with software for easy access by pupils with special educational needs.

The study revealed that teachers work with other specialists such as the special educator to co-teach pupils with special educational needs, select the appropriate teaching and learning materials. Also, teachers cooperate with the counselling personnel to provide counselling to both pupils and parents, teachers work with the special educator to refer pupils with intellectual disability for psychological assessment. Even though teachers assisted in providing the above related services, pupils with hearing difficulty were not provided with interpreting services, school health services, audiological assessment.

Both teachers' questionnaire and pupils' interview data analysis revealed that, teachers assigned pupils with learning difficulty to a peer for support during the teaching and learning process, pupils who needed support are seated in close proximity to peers during lessons, teachers engage pupils in cooperative learning .

Also, peers are allowed to copy, review and explain lessons to pupils with special needs during teaching. This room was purposely created for pupils with poor finger dexterity and slow learners.

### **5.3 Conclusion**

Making the necessary provisions is a key to the successful inclusion of pupils with special educational needs. This can be achieved when teachers make provisions to include the use of appropriate teaching methodologies, teaching and learning materials, related services, and the use of peer support. However, the findings of the study revealed that teachers did not use teaching methods such as supplemental instructions; modifying text to suit the learning needs of pupils with special educational needs, provide teaching materials to include, tape recorders, text in braille and adapted computers for easy access. Teachers' could not work with specialists to provide related services such as interpreting, school health, and audiological services. The study therefore concludes that if these issues are looked into carefully and actions taken, there would be improvement in the performance and participation of pupils with special educational needs in inclusive classrooms.

### **5.4 Recommendations**

Based on the findings derived from the study, the following recommendations were made:

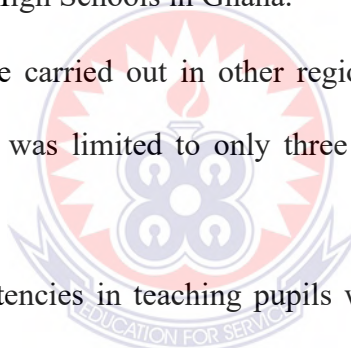
- Teachers need to expand their teaching methodologies to include supplemental teaching and modifying text to suit the learning needs of pupils with special educational needs in inclusive classrooms.

- Teaching and learning materials should be provided to include tape recorders, text in Braille, adapted computers for easy access to pupils with special educational needs.
- Related services should be expanded to include school health services, interpreting services, and audiological services.

### **5.5 Suggestions for Further Research**

In relation to the study, the researcher suggested the following areas for further research:

- Provisions teachers make for students with special educational needs in inclusive Senior High Schools in Ghana.
- This study can be carried out in other regions practicing the pilot inclusive education as this was limited to only three schools from the Greater Accra Region.
- Teachers' competencies in teaching pupils with special educational needs in inclusive schools.



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## APPENDIX A

### DEPARTMENT OF SPECIAL EDUCATION UNIVERSITY OF EDUCATION, WINNEBA (UEW)

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March 3, 2015

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Dear Sir/Madam,

#### LETTER OF INTRODUCTION

I write to introduce to you, Mr. Michael Nyavor an M.Phil student of Department of Special Education of the University of Education, Winneba, with registration number 8130150009.

He is currently working on his thesis on the topic: "Provisions Teachers Make for Pupils with Special Educational Needs in Three Selected Inclusive Pilot Basic Schools at Pokuase in the Greater Accra Region of Ghana".

I should be grateful if you could give him the needed assistance to enable him carry out his studies.

Thank you.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "Samuel Hayford".

**SAMUEL HAYFORD (PHD)**  
**HEAD OF DEPARTMENT**



## APPENDIX B

### QUESTIONNAIRE FOR TEACHERS ON THE PROVISIONS TEACHERS MAKE FOR PUPILS WITH SPECIAL EDUCATIONAL NEEDS IN THREE SELECTED INCLUSIVE PILOT BASIC SCHOOLS AT POKUASE IN THE GREATER ACCRA REGION

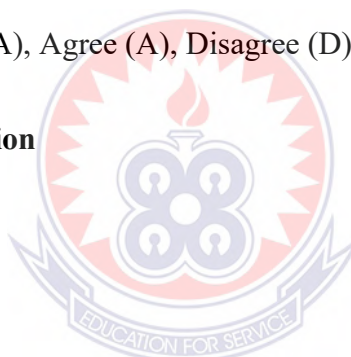
This questionnaire is to explore the provisions teachers make for pupils with special educational needs in your school. The results of this study could provide important information when dealing with pupils with special educational needs in inclusive classrooms. Please, answer the questions as fully as possible. Your responses will remain totally confidential and at no time will it be directly attributed back to you. You are requested to respond to the items below using the following scale; Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

#### Demographic Information

School:

Educational level:

Years of experience:



#### STATEMENT

#### RESPONSES

<b>Instructional Strategies for Promoting Learning among Pupils with Special Educational Needs.</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
1. I make lesson interactive for pupils to enhance their participation in learning				
2. I allow some of the pupils with special educational needs participate in activities on a reduced basis				
3. I use a variety of classroom groupings during teaching and learning				
4. I provide supplemental instruction to pupils with special educational needs				
5. I extend the time for completing task for pupils with special educational needs				
6. I adapt classroom assessment to suit the needs of pupils with special educational needs				
7. Text are modified to suit the learning needs of pupils with special educational needs				

<b>Teaching and Learning Materials Available to Enhance the Participation of Pupils with Special Educational Needs in Learning</b>				
8. I always use tactile materials during the teaching process				
9. I often use real objects during the teaching and learning process				
10. Models of objects are used in teaching pupils to enhance their understanding of concepts				
11. Tape recorders are provided to pupils with special educational needs to record lessons during teaching				
12. Magnifying glasses are provided to pupils with low vision to enhance their learning				
13. Pupils with visual impairments are provided with text in Braille				
14. Pupils with low are provided with text in large print				
15. Computers are provided during teaching and learning				
16. Computers are adapted with software for easy access by pupils with special educational needs				
<b>Ways Teachers' Work with other Specialists to Provide Related Services for Pupils with Special Educational Needs</b>				
17. I work with the special education teacher to co-teach pupils with special educational needs				
18. I consult the special educator in selecting the appropriate teaching and leaning materials				
19. I provide a list of pupils with behavioural problems to the guidance and counseling personnel for counselling				
20. I work with the counseling personnel to counsel parents on their wards special educational needs				
21. Pupils with hearing difficulty are provided with interpreting services				
22. School health services are provided to pupils with special educational needs				
23. I consult the audiologist to assess pupils who show signs of hearing problem				
24. In consultation with the special educator, pupils with intellectual disability are referred for psychological assessment				
<b>Teachers' Enhancement of Peer Support for Pupils with Special Educational Needs</b>				
25. Assign pupils with learning difficulty to a peer tutor for support				
26. I make sure pupils who need support sit in close proximity to peers during lessons				
27. I engage pupils in cooperative learning				
28. Peers are allowed to copy notes for pupils with writing difficulties				
29. Peers are allowed to read to pupils with reading difficulties				
30. Teachers allow peers to clarify instructions to pupils with special educational needs				

## APPENDIX C

### **SEMI-STRUCTURED INTERVIEW GUIDE FOR PUPILS WITH SPECIAL EDUCATIONAL NEEDS ON PROVISIONS TEACHERS MAKE FOR PUPILS WITH SPECIAL EDUCATIONANAL NEEDS IN THREE SELECTED INCLUSIVE PILOT BASIC SCHOOLS AT POKUASE IN GREATER ACCRA REGION.**

Dear Respondent,

Thank you for being willing to take part in an interview. Can I first of all assure you anonymity where information provided remains confidential and in no case will they be attributed back to you. Please, answer the questions as fully as possible.

#### **RESEARCH QUESTION 4: What Peer Support Services do Teachers Provide to Pupils Including those with Special Educational Needs in Inclusive Classrooms?**

1. Can I first of all ask whether teachers encourage peers to provide you support?
2. What kind of peer support do teachers provide to you?

Prompt:

Do your teachers provide peer support such as:

- a) Cooperative learning during teaching and learning
  - b) Peer tutoring
  - c) Scribe
3. Scribes are provided to pupils with special educational needs to assist during teaching and learning. Give instances where scribes are used.

4. Do your teachers' monitor the peer support provided during teaching and learning process? How is it done?
5. What other peer support services are provided to aid in your studies in this school?

