UNIVERSITY OF EDUCATION, WINNEBA

EVALUATION OF INCLUSIVE EDUCATION PRACTICES IN SELECTED

PILOT INCLUSIVE BASIC SCHOOLS IN THE WINNEBA TOWNSHIP

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DECLARATION

I, Darko Kenneth Kofi, declare that this thesis, with the exception of quotations and references contained in published works which have been identified and acknowledged, is entirely my own work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE :..

DATE: ....

SUPERVISOR'S CERTIFICATION

I hereby certify that the preparation and presentation of this thesis was supervised in accordance with the guidelines for supervision of Thesis as laid down by the University of Education, Winneba.

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DEDICATION

This thesis is dedicated to the Lord God Almighty for His constant protection over my life and that of my family. It is also dedicated to all the Children with Special Needs in Inclusive schools in the Winneba township.

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ABSTRACT

This study evaluated inclusive education practices in selected schools in the Winneba township. The study considered the physical environment of the inclusive schools, the resources and facilities available, how teachers adapt the curriculum and their instructions, as well as the support services available for inclusive education in the township. Forty teachers in 10 inclusive pilot schools were observed for the study. An observation checklist was the main instrument used to collect data for the study. Data were analyzed with simple frequencies and percentages. The study revealed that 52.2% of the inclusive practices were accepted. Among the recommendations is the need for Ghana Education Service to work together well with teachers to provide ample avenues for fieldwork or practicum experiences in inclusive schools before completion of teacher education programmes. It was also recommended that the physical environment or school compound of inclusive schools must be made safer and comfortable for both teachers and students regarding accessibility to the school buildings and easy movement around the teaching and learning areas. Again there should be effective collaboration between regular teachers and other specialists to enhance the instruction and provision of services for children with disabilities in inclusive schools.

CHAPTER ONE

INTRODUCTION

1.1   Background to the study

Inclusive education has been on pilot basis in some Ghanaian towns and cities as a result of the Salamanca declaration in 1994. In the Salamanca statement, UNESCO declared fundamental policy shifts required to promote the approach of inclusive education, enabling schools to serve all children, particularly those with special educational needs. The statement declared that *s*chools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This included disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalized groups.

In line with this declaration, most of the 92 governments̈ representatives who attended the World Conference on Special Needs Education in Salamanca, Spain, in June 1994 reaffirmed their commitment to Education for All (EFA), recognising the necessity and urgency of providing education for children, youths and adults with special educational needs within the regular education system. They further endorsed the Framework for Action on Special Needs Education and acknowledged a commitment to equity in education by taking diverse steps to provide at least basic education to all of their citizens to ensure that everyone becomes productive (UNESCO, 1994).

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Bowles and Gintis (2002), citing Coleman and James (1988), contend that the promotion of socialisation, and production of human respect for diversity and differences in abilities and experience, as well as promotion of participation and the provision of quality educational capital has often been cited as one of the main reasons for supporting the goal of equality in education.

In line with the contention of Bowles and Gintis (2002), Article 25 (1) of the 1992 Constitution of the Republic of Ghana, for instance, states that all persons shall have the right to equal educational opportunities and facilities. With a view of achieving the full realization of the draft inclusive education policy, basic education shall be free, compulsory and available to all. The Education Strategic Plan (2010-2020) also stipulates that the Ministry of Education shall provide education for those with physical and mental impairments, orphans, and those who are slow or fast learners, by including them, wherever possible, within the mainstream formal system or, only when considered necessary, within special units or schools.

The objective of Act 778 of the Education Act (2008) is to provide for the establishment of an educational system intended to produce well-balanced individuals with the requisite knowledge, skills, values, aptitudes and attitudes (Education Act, 2008). In the same view the 1990 World Declaration on Education for All, adopted in Jomtein, Thailand, set out an overall vision to universalize access to education and promote equity by ensuring girls, women and other under-served groups gain access to education (UNESCO, 1990). Yekple and Avoke (2006) contend that inclusive education is the official policy position for educating persons with disabilities in Ghana as enshrined in the Government of Ghana"s Educational

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Strategic Plan 2003-2015, which argues for inclusion for all children with disabilities by 2015.

Yekple and Avoke (2006) contend that whiles this is a significant policy initiative and direction, there are implementation difficulties in achieving these broad objectives. Some of the difficulties pointed out by Yekple and Avoke (2006) include identification and assessment practices in schools to determine the number of children with special educational needs, as well as readiness of regular schools to open-up to meet the diversity of students" needs.

Programme evaluation has been defined by Administration for Children and Families (2010) as a systematic method for collecting, analysing, and using information to answer questions about projects, policies and programmes, particularly about their effectiveness and efficiency. To Beswick (1990), citing DeRoche (1987), programme evaluation measures the outcome of a programme based on its student-attainment goals, level of implementation, and external factors such as budgetary constraints and community support, environmental adaptations, and other related services. Beswick stipulates further that programme evaluations can involve both quantitative or better still qualitative methods of social research.

In Ghana, the difficulty in finding evaluation documents on inclusive education is evident that not much has been done in the area of evaluation as far as inclusive education is concerned. There is the need, however, for the development of a benchmark against which the practice of inclusive education can be measured. Greenberg (2000) explains that educational institutions require evaluation data to

demonstrate effectiveness to stakeholders, and to provide a measure of performance. Programme evaluations is a professional activity that individual stakeholders need to undertake if they intend to continuously review and enhance the learning they are endeavoring to facilitate (Greenberg).

A considerable amount of studies has been conducted on inclusive education in Ghana. The contexts of such studies have been about teacher preparation, teacher attitudes, skills, and knowledge. However, there appears to be a paucity of research that significantly evaluates the current practice of inclusive education. The focus of this study was to evaluate inclusive education practice in inclusive schools as far as the Winneba municipality is concerned. This has stemmed from the fact that all students regardless of their disabilities need to be given opportunities that will go a long way to address their educational needs as far as practicable.

1.2   Statement of the problem

Inclusive education has been piloted in the Winneba township since 2003, yet a search for empirical studies and there has not been any study to find out the extent of progress of the practice in the township. This has resulted in the difficulty in telling whether the programme is beneficial to all students including those with disabilities in the township or not.

A conversation with some teachers in the Winneba township indicates that there are lots of lapses in the ways by which teachers adapt the Basic school

curriculum. Most of these teachers did complain that the curriculum lacks the needed flexibility for adaptability.

Another important area of concern was the schools" material resources for supporting students with disabilities to participate in learning and other school activities. Concerns raised by Head teachers of the Winneba township at their general meeting on 23rd September, 2013 pointed out to the researcher that there is a lack of teaching and learning resources that go a long way to affect the smooth education of students with special educational needs in the regular classrooms. An observation of the physical environment of the Pilot Inclusive schools gives a indication that the environment is not friendly for most of the students with mobility challenges. Most of the schools had very steep wheelchair ramps and very rough walkways that created mobility challenges for a lot of the low vision and physically impaired students in these schools.

Numerous complaints have being made by teachers and Head teachers as far as the support emanating from collaboration of teachers and other related professionals are concerned. For instance, during a Parent-teacher meeting at the Methodist primary A/B school on 7th November, 2013, the Headmistress mentioned to the house that parents must examine their wards well before they are asked to go to school. She pointed out that it was very important for parents to observe this routine checks since the Community Health nurses and other health professionals who used to come for health screening have stopped.

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It is based on the above discussed challenges that gave the researcher the impetus to conduct an evaluation to find out how children with special educational needs are been educated alongside their regular peers in the same classroom.

1.3   Aim of the study

The aim of the study was to evaluate inclusive education practice regarding the provision of education for all children with and without special needs in the selected pilot inclusive basic schools in the Winneba township.

1.4   Objectives of the study

The objectives of the study were to:

1. assess instruction adaptations teachers make for students with disabilities in their classrooms..

2. examine the schools‟ resources for supporting students with disabilities to participate in learning and school activities.

3. ascertain the nature of the physical environment that exist in inclusive schools in the Winneba township.

4. examine the levels of collaboration between teachers and other professionals in supporting students in inclusive schools in the Winneba township.

1.5   Research questions

The following research questions were formulated as a guide to the study;

    i. How do teachers adapt their instructions to support the learning needs of students with disabilities in their inclusive classrooms in the Winneba township?

    ii. How do teachers adapt available school resources to supporting students with disabilities to participate in learning and other school activities in the inclusive schools in the Winneba township?

    iii. How are the environment made friendly for all students in the inclusive schools in Winneba?

    iv. How do teachers and other professionals collaborate in supporting students in inclusive schools in the Winneba township?

1.6   Significance of the study

This study which is an evaluation of inclusive education in selected schools in the Winneba township is significant for the following reasons. The findings will inform stakeholders in the education sector about the state of inclusive pilot schools in the Winneba township. In this regard, the findings will inform policy decisions and adjustments.

It will also inform stakeholders about the methodologies that are being employed in teaching students with special educational needs in the inclusive schools in the Winneba township.

The study will point out the resources available and their adaptability by teachers for the implementation of inclusive education in the Winneba township. Furthermore, it will also indicate the availability and suitability of school facilities such as play grounds, toilets, water, etc in the inclusive pilot schools in the Winneba township.

1.7   Delimitation

The study was delimited to only schools that practice inclusive education in the Winneba township. This was done in order to have a comprehensive result of the study. Again, in evaluating inclusive education, its components were so numerous that it was not feasible to capture all of them in a single study. The scope of this study was therefore delimited to instructional adaptation, school resources, the physical environmental of the school as well as collaboration of teachers with support staff available.

1.8   Limitations of the Study

The study was concerned with the evaluation of inclusive practices in selected schools in the Winneba township. In view of its delimitation to only selected schools in the Winneba township, the study has limited generalisability. It has to be pointed out also that there were limited literature in file of evaluation studies of inclusive education, as a result, it was quite difficult to obtain enough empirical literature for the study. In spite of the limitations highlighted above, the

researcher believed that the results of the study would significantly contribute towards inclusive education.

1.9   Operational definition of terms

- **Evaluation**

A finding about the amount, number, or value of something.

- **Inclusive education**

Inclusive education is a kind of education that is concerned with the design of classrooms, programs and activities so that all students can learn and participate together.

- **Pilot inclusive school**

A school that focuses on the practice of inclusive education on experimental basis. It is based on the outcome of its results that the practice of inclusion would be accepted and practiced nationwide.

- **Students with Special Needs**

Students with special needs are students who require special attention and specific necessities other than what is required of every child.

- **Social inclusion**

A state of all persons feeling valued, their differences being respected, and their basic needs being met so they can live in dignity.

1.10   Organisation of the study.

This study is presented in five (5) chapters. The chapter one (1) presents the introduction which consists of the background to the study, the statement of the problem and purpose of the study, the scope and limitations of the study, as well as definition of terms. Chapter two entails the review of related literature. It makes use of secondary information such as newspapers, encyclopedia, journals, books and internet blogs related to the research topic whiles the third chapter examines the method used in harvesting data. Chapter four examined the data collection, analysis of findings and discussion of results. Chapter five concludes the study by summarising, concluding, and making recommendations based on the findings. It also covers the implications of the study. References and appendixes follow at the end of chapter five.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1   Introduction

This chapter presents a review of the related literature of the study. The relevant literature for the study was reviewed under the following sub-themes;

1. Piloting Inclusive education in Ghana

2. Resources and facilities for inclusive education

3. Physical environment

4. Support services

5. Curriculum and instructional adaptations

6. Theoretical framework

7. Summary

2.2   Piloting Inclusive education in Ghana

In line with the objective to implement inclusive education by the Ghana Education Service by 2015, Special Education Division of the Ghana Education Service, decided to develop Education Strategic Plan, 2003-2015. As a result of this, some schools were selected to execute the idea on a pilot basis. The content of the plan is to strategize output and specific activities on special needs education

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(Gadagbui & Danso, 1998). According to Gadagbui and Danso (1998), regions that were selected include Greater Accra, Central and Eastern with three and four districts respectively. These districts include Ada, Amasaman and Metropolitan Schools in Greater Accra region. In Central Region, Swedru municipal, Cape Coast, Winneba municipal, and in the Eastern region, Somanya, Koforidua and Oda districts, giving a total of 10 districts implementing inclusive education on a pilot basis.

Kwawu (1998) cited in Gadagbui and Danso (1998) contend that since it was a new philosophy of education as adopted at the Salamanca Conference (1994), personnel to implement this policy were also given some orientation. The personnel include District Special Education Officers, and Special education resource persons. The heads of the inclusive pilot schools were also included. Auxiliary staff such as cleaners or labourers were not left out. School nurses and District Directors were also included in the orientation process.

2.3   Resources and facilities.

Teaching and learning resources generally refer to teaching kits, information Technology (I.T) software, audio-visual teaching materials, books, and teaching materials produced by the Government and educational organisations, which are available in bookstores (Ronald, 2013). Nevertheless, Accessibility for Canadians with Disabilities Act (2005) contend that since it is emphasised that children, including those with special needs, learn through observation as well as manipulation of objects found in their environment (things in nature, such as

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flowers, birds, insects, fishes, trees and fallen leaves in the park) are considered to be good learning resources. As a result of the observation of Ronald (2013), teachers should make flexible use of resources depending on children's learning needs and they should not rely too much on the available teaching kits. Teachers must make use of realia since they depict the natural and true picture of concepts being handled (According to Accessibility for Ontarians with Disabilities Act, 2005).

According to Accessibility for Ontarians with Disabilities Act (2005), teachers should also avoid using too complicated teaching materials, which the children may not understand. According to Carey (2005), if possible, teachers may try to design and develop true-to-type learning materials by themselves. "When selecting learning and teaching resources, inclusive institutions should consider the following: ensure compatibility with their own curriculum plan, set clear and definite objectives, stimulate children's learning interest, encourage children to participate in learning, and also ensure user-friendliness for students (Carey, 2005 p. 23).

The need for resources to facilitate effective teaching may vary from school to school. However, it is generally believed that teachers definitely require the resource support of a special educator to assist them in providing equal opportunities to students with special educational needs. For example, teachers teaching in inclusive classes having a few children with hearing impairment were of the opinion that these children need to learn lip-reading or sign language to communicate (Carolan & O'Leary, 2009).

Nind (2004) contends that teachers must emphasise on adjusting the content and instructional approaches in the context of individual needs so that students will achieve the objectives outlined in the curriculum. Nind (2004) reviewed inclusive education in both primary and post-primary settings reported that the most common pedagogical or classroom technique was adaptation of instruction, such as teaching students to use specific memory techniques to help them remember the material learnt.

Concerns about lack of resources for supporting students with special educational needs in inclusive schools were particularly common in resource-poor countries, such as Ghana (Ocloo & Subbley, 2008 p. 13). However, Dart"s (2007) review of special educational needs provision in Botswana noted that lack of resources was usually attributed to confusion over who was responsible for what resource. Resources were sometimes under-utilised (such as fairly sophisticated equipment for students with visual impairment that had never been used. A lack of adapted teaching and assessment materials, eg, Brailled and talking books) was also seen as a key barrier to accessing the curriculum for those with visual impairments.

Bulgren, Lenz, McKnight, Davis, Grossen, Marquis, Deshler and Donald (2002) noticed that classroom support in place to assist special educational needs students to succeed in high schools in the United States was based on adapted curricular and quality school resources. Teachers indicated that they adapted their resources and curriculum to accommodate the learning styles of these students and

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that teaching techniques for independent learning often had equal importance to teaching the general curriculum.

Olsen and Slater (2009) reported on a study where a subset of the curriculum materials for a Middle school astronomy package were modified to reflect best practice in working with students with special educational needs. Modifications made use of computer technology, including voice descriptors and visual cues to present information in a range of modalities, to simplify text but not content, to focus student attention onto the lesson's most important details, and to facilitate vocabulary-acquisition by all students. In the end, those with special education needs, who used the regular curriculum, had a post-test decrease of 7 per cent in scores compared with a 7 per cent gain in average post-test scores when they used the modified curriculum, with some students gaining up to 30 per cent in post-test scores. However, absolute numbers of students with special educational needs were small, with only 21 matched pairs. Students without special educational needs seemed not to benefit additionally from the modified curriculum, with an 8 per cent gain score post-test with the normal curriculum and a 9 per cent gain using the modified curriculum.

According to Humphrey and Lewis (2008), employing teaching assistants to fill gaps in teacher resources, to provide extra support for individual or groups of students with special educational needs, can have positive outcomes but can also mask an overall lack of teaching resource.

In setting good standards, Ministry of Human Resources Development (2000) advices that furniture and equipment for inclusive schools should not have protruding corners, nails or splinters. For example, all toys and articles used should be non-toxic and free from lead, broken articles should be repaired or discarded, first aid kits should be easily accessible, and teaching and learning materials must be well stocked to make them readily accessible.

2.5   Physical environment

Humphry and Lewis (2008) grouped a school‟s physical environment under four sub-themes. These are;

- Features of a good inclusive school‟s physical environment, and

- Environmental specifications for successful inclusive schools.

- The universal design (UD) principles

- The "Barrier-Free" concept

2.4.1   Features of a good inclusive school's physical environment.

The school‟s physical environment encompasses the school building and all its contents including physical structures, infrastructure, furniture, and the use and presence of chemicals and biological agents, the site on which a school is located, and the surrounding environment including the air, water, and materials with which children may come into contact, as well as nearby land uses, roadways and other hazards (Patrick, Ryan & Kaplan, 2007). Patrick, Ryan and Kaplan (2007) further

opine that the major importance of the school's physical environment is that it can affect students' comfort and, to some extent, their ability to learn. They go on to argue that a good physical environment of a school goes a long way to promote physical activity among students, which is an essential component of a healthy lifestyle. They further add that in combination with healthy eating, physical activity can help prevent a range of chronic diseases, including heart disease, cancer, and stroke, which are considered the three leading causes of death.

Patrick, et al. (2007) highlight some attributes of a good inclusive school's physical environment as lighting, acoustics, size, comfort, safety, and access to technology. They contend that together, these attributes have a profound effect on the way in which students are able to learn.

From the point of view of Wyon (2001), kids learn best in effective and efficient facilities. Wyon contends that lighting, temperature, sound, and space design are just a few of the important factors that impact learning. He further adds that "common sense tells us that broken windows, leaking roofs, and neglected playgrounds are invitations for disaster" (p 132).

Proper facility maintenance planning not only paves the way for instructional programmes but also wards off unexpected catastrophes. Additionally, Heath and Mendell (2002) contend that negative indoor environmental conditions such as pollutant exposure, thermal discomfort, noise, light that result from building factors can impact student performance directly or indirectly through a decline of health and comfort and may lead to absenteeism.

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To prevent accidents, children‟s safety should always be the top priority when designing the classroom layout and planning the activities. They advice further that children including those with disabilities are active learners who are curious and interested in exploration, therefore, given proper resources and adult assistance, they can construct knowledge on their own. A safe, comfortable, enjoyable and challenging environment that is well stocked with appropriate resources is conducive to children‟s learning (Ministry of Human Resources Development, 2000).

Also, Health and Mandell (2002) contend that current studies of the physical environment have investigated aspects such as class composition, class size, and classroom management, classroom grouping methods including ability grouping of students, single-sex classrooms and cooperative learning groups. To buttress the point of Health and Mandell, Wyon (2001) reports that research has found that classrooms with highly cooperative groups appear to have students with more positive perceptions of fairness in grading, stronger class cohesion, and higher degree of social support, as well as higher achievement scores.

Similarly, Wyon (2001) reports that studies about class size have examined how it influences student and teacher alike in inclusive schools. He opines that in general, smaller classes are associated with students who are less stressed and are more frequently on-task with fewer reported behavior problems than students in larger classes. Although, teachers tend to use similar instructional strategies whether teaching large or small classes. To Wyon, there is some evidence to

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suggest that more class time is spent on administrative tasks for larger classes, leaving less time available for instruction.

2.4.2 Environmental specification

According to Patrick, et al. (2007), level access routes accommodate the widest range of abilities and should be provided in all inclusive schools. A gradient of 1:50 or less steep is considered to be a normal level. Changes in level are difficult for many people to negotiate (e.g, wheelchair users, people using walking aids, pushing buggies, people with visual impairment, etc) and should be avoided. Where it is not possible to provide a level access route, a gentle sloped access route should be provided. Where the ramp has a rise greater than 300 mm, a stepped access route should be provided in addition to the ramped access route (Patrick et al).

Similarly, Fraser (2002) points out that the access route should be clearly identifiable and well lit. He continues to posit that where this is provided by artificial light, it should achieve a minimum luminance of 20 lux on level and gently sloped access routes, with a minimum luminance of 100 lux on ramps or steps, measured at ramp, tread and landing level. The surface of the ramp should be firm, reasonably smooth and durable. Materials such as loose pebbles should not be used, the surface should be slip resistant, especially when wet, and the frictional characteristics of the surface materials used along the access route should be similar to prevent tripping and falling at interfaces between different materials.

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Heath and Mendell (2002) advice that for effective inclusion, the passing places for wheelchair users should be provided. They should be 2000 mm long and 1800 mm wide (inclusive of the width of access route) and located within direct sight of another passing place, or at a maximum spacing of 25 m from another, whichever is closer.

Another important facility that needs mentioning is sanitary facilities. According to Kenrick (2010), the number and location of sanitary facilities required in a school building will be dictated by the nature of the building, the size of the building, the number of students who will use the building, gender ratio, patterns of use and the ease of access. Authorities must ensure that designers have regard to the safety, health and welfare at the school. This provision must be adequate for many wheelchairs.

According to Kenrich (2010), a wheelchair accessible unisex water closet must be designed to meet the needs of independent wheelchair users, it should also be equipped to suit ambulant disabled people who may find themselves in the school setting. Kenrich (2010) adds further that the travel distance to this water closet should be minimised where it is not located within the classroom.

Urinals in inclusive schools must adhere to the following;

▪ where one or more urinals are provided in a washroom, at least one urinal should be suitable for use by ambulant disabled people,

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- where six or more urinals are provided in a washroom at least one accessible urinal and one low wash hand basin should be provided for wheelchair users

- where accessible urinals are provided, a clear area of 900 mm x 1400 mm in front of the wheelchair accessible urinal should be leveled (Kenrick, 2010).

- where wash basins are provided, at least one wash basin with its rim set at between 720 mm and 740 mm above the floor level should be provided.

Wyon (2001) advices that classrooms should be spacious, accessible and have adequate lighting, good ventilation, enough space for activities and appropriate facilities. It is advisable to paint the wall with a soft colour to give a natural and comfortable feeling. The use of bright coloured paints, on the other hand, can arouse children‟s pleasurable feelings. He goes on to advice that walls which are within easy reach of children can be covered with plastic boards or ceramic tiles to facilitate easy cleaning or the display of children‟s work.

The materials used for covering the classroom‟s floor should be of a more durable nature, easy to clean, able to absorb sound and suitable for sitting on, for example, rubber tiles, rubber mats, etc. In addition, mirrors should be installed in suitable places or on walls to offer children more opportunities to examine their own images (Kenrick, 2010).

Patrick et al. (2007) have noted that where artificial lighting is provided in the classroom, it should give good colour rendering all surfaces very clear, and should not create glare or pools of bright light and strong shadows, which poorly located up-lighters may create.

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Similarly, Heath and Mendell (2002) also have it that a well-designed and richly decorated learning environment not only creates a relaxed and pleasurable atmosphere, but also promotes effective learning for young children. "Inclusive teachers should pay attention to properly setting up the classroom with the help of a comprehensive and detailed plan of how the classroom can best be arranged" (p 45) For instance, the use of space, passages between tables and chairs, the separation of "quiet" and "active" activity corners, the design of display boards and the overall layout should be in line with the teaching themes and children"s learning needs" (Heath & Mendell, 2002). These arrangements aim at providing an environment with adequate space for free movement and easy access to toys and learning materials, and serve the purpose of stimulating children to learn.

The type of furniture in an inclusive classroom is another important consideration. Fraser (2002) opines that the height of classroom furniture or partitioning boards should be adjusted to children"s height. The furniture should not be centralised in one specific spot but be appropriately placed. Toy and book cabinets and art racks should be stable and safe, and equipped with locking wheels so that they can be easily moved and used as partitions. The backs of cabinets can also be used for the display of children"s work. Fraser adds that it is advisable to arrange tables and chairs flexibly in groups to facilitate more interaction among children.

According to a research conducted by Kenrick (2010), issues of equity observed in schools and also discussed by school staff and students tended to

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revolve around two main areas. First, was the issue of accessibility of the school buildings. According to the report, in some of the schools visited, it was evident that comprehensive efforts had been undertaken to make them accessible to all students, regardless of need, as there were elevators, ramps, accessible equipment on the playground, and so on. However, in other schools, he noted narrow hallways and secluded classrooms, and that access to gyms, playground facilities, or other areas of the physical plant were not accessible to students with mobility issues.

Wyon (2001) suggests that school compounds need to have playground space and play equipment based on local games and popular sports. He further adds that care should be taken to adapt them suitably to allow all children equal opportunity of use. It is important to ensure that children have proper access to the school as what is the use of a well constructed child friendly school where the route / path that leads to the school is poorly constructed, is unsafe or becomes almost inaccessible during the rains, etc.

"More schools / classrooms, better facilities are essential as classrooms with 80 plus children violate children's rights to quality education since interactive methods fail in overcrowded classrooms" (Heath & Mendell, 2002 p. 223). He further adds that construction of classrooms should be done to ensure comfortably and safeness by ensuring that there is good light and ventilation to promote active learning, display of children's work, and storage space for teachers and children's material.

Heath and Mendell (2002) opine that physical activities promote children‛s fitness, cultivate their will-power and enable them to channel their emotions. They can also improve children‛s adaptation to the environment. For older children, physical play in groups can further cultivate team spirit and help them learn the principle of fair play. As a result, interpersonal and social skills can be enhanced. In this way, children are encouraged to participate actively in group and class activities, and they should be given sufficient time and opportunities to interact with people and the environment, and to experience the social norms.

Fraser (2002) notes that teachers should make good use of the natural environment and community resources to organise suitable activities which allow children to obtain first-hand experience and know more about society. This will also foster children‛s awareness with respect to environmental protection and appreciation of the cultural and historical features of the community.

Kenrick (2010) points out that children are self-centred, active and curious. But they have a short attention span. They need to learn about and experience social life, and learn the proper ways of dealing with people and handling problems. As a result, teachers may allocate time for group learning and play, prepare a relaxed learning environment, and provide children with opportunities to explore individually or play in groups. Children should be allowed to move freely and happily, and exercise a degree of choice in choosing different activities. They may also be allowed to stay alone in one activity corner to read stories or play with toys, or they can chat with friends or participate in creative and play activities with other

children, however, teachers must ensure that students are not exposed to harzardous substances which may go a long way to harm the (Fraser, 2002).

According to Kenrick (2010), strong physical fitness and good habits are the foundation of healthy growth, in that children grow healthily by participating in activities structured in line with their physical and mental developmental needs, and learn to maintain healthy practices throughout their lifetime. Again, physical activities enable children including those with disabilities to experience the capabilities of their bodies and develop a sense of space. As a result of the above, inclusive teachers must make it a routine to execute appropriate training to these children so as to help children develop gross and fine motor skills and effectively develop their concentration and observation abilities.

2.4.3 The universal design (UD) principles

According to Harpur (2013), UD can be applied to any product or environment. For example, a typical service counter in a school canteen may not accessible to everyone, including those of short stature, those who use wheelchairs, and those who cannot stand for extended periods of time. She posits further that applying UD principles might result in the design of a counter that has multiple heights and that the standard height designed for individuals within the average range of height and who use the counter while standing and a shorter height for those who are shorter than average, those who use a wheelchair for mobility, or prefer to interact with service staff from a seated position.

Making a product or an environment accessible to people with disabilities often benefits others. For example, automatic door openers, though benefit individuals using walkers and wheelchairs, it also benefits people carrying groceries and holding babies, as well as elderly citizens. Sidewalk curb cuts designed to make sidewalks and streets accessible to those using wheelchairs, are more often used by kids on skateboards, parents with baby strollers, and delivery staff with carts. When television displays in airports and restaurants are captioned, programming is accessible not only to people who are deaf but also to others who cannot hear the audio in noisy areas (Harpur, 2013).

According to Ronald (2013), UD was formulated by a group of architects, product designers, engineers, and environmental design researchers with seven principles to provide guidance in the design of products and environments. Ronald (2013) lists the principles as;

- equitable use (the design is useful and marketable to people with diverse abilities),

- flexibility in use (the design accommodates a wide range of individual preferences and abilities),

- Simple and intuitive (use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level),

- perceptible information (the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities), and

- tolerance for error (the design minimises hazards and the adverse consequences of accidental or unintended actions) (Ronald, 2013).

Ronald (2013) further has it that there must be low physical effort (eg., the design can be used efficiently, comfortably, and with a minimum fatigue). Doors that open automatically for people with a wide variety of physical characteristics demonstrate the application of this principle, as well as size and space for approach and use (appropriate size and space is provided for approach, reach, manipulation, and use regardless of the user's body size, posture, or mobility).

Similarly, Harpur (2013) contends that UD, as far as social inclusion is concerned, refers to broad-spectrum ideas meant to produce buildings, products and environments that are inherently accessible to older people, as well as people with and without disabilities.

Similar to the U.D is the Design for All (DFA). DFA is about ensuring that environments, products, services and interfaces work for people of all ages and abilities in different situations and under various circumstances (Accessibility for Ontarians with Disabilities Act, 2005). Accessibility for Canadians with Disabilities Act continue to say that the ideology behind DFA is based on the premise of easy-

to-use, accessibility, affordable products and services improvement for improved quality of life of all citizens.

Harpur (2013) contends that DFA permits access to the built environment, access to services and user-friendly products which are not just a quality factor but a necessity for many persons with disabilities. Similarly, Ronald (2013) has it that DFA criteria are aimed at ensuring that everyone can participate in the information society.

Within the DFA, a three-way approach is proposed: goods which can be accessed by nearly all potential users without modification or, failing that, products being easy to adapt according to different needs, or using standardised interfaces that can be accessed simply by using assistive technology.

2.4.4   The "Barrier-Free" concept

Building modification consists of adjusting buildings or facilities so that they can be used by people who are disabled or have physical impairments. According to Ronald (2013), in the case of new buildings, the idea of barrier free modification has largely been superseded by the concept of universal design, which seeks to design things from the outset to support easy access.

From the point of view of Ronald (2013), freeing a building of barriers means, recognising the features that could form to barriers for some people, thinking inclusively about the whole range of impairments, reviewing everything

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(from structure to smallest detail), and seeking feedback from users and learning from.

2.5   Support services.

According to Slife (2004), making support services available in the form of technology, teaching–learning materials and specialists in the field of special education is worthwhile. National Information Center (2007) advocates for the education of children with disabilities in appropriate environment till they attain the age of 18. They describe the educational placement of children with special needs as those with extra educational needs and stated that "as far as possible, every child with special needs should be placed in regular schools, with the needed support services. For instance, a person with physical disability would require disability evaluation and assessment by a team of experts consisting of Orthopaedic surgeon, Physiotherapist, Occupational therapist, Prosthetist, Orthotist, Social worker etc., working together.

Similarly, UNESCO (2001) advices inclusive teachers to consult with special services providers associated with their student"s special needs, e.g. special education teachers, physical, occupational or movement-orientation therapist, psychologists, who may be involved in working with students with special needs in the inclusive classroom.

In a discussion with district teams, Jarvis (2003) reports some common perspectives regarding issues of related services at all levels. He reports that every

district team reported the existence of a strong student services team at the district level, although the specific roles and model for deployment of the team members varied from district to district. According to Jarvis (2003), at the time of the district consultations, all districts had at least one, and in some cases, as many as three learning specialists for student services whose portfolios included various combinations of responsibilities related to resource and methods, guidance, educational assistants, transitions, behaviour psychology services, alternative education, autism, and professional development among others. Some district student services teams also include student services consultants for resource and methods, guidance, alternative education, district psychologists, support services to education social workers, behaviour intervention coaches, and transition coordinators.

Additional supports to student services teams in some districts are drawn from learning specialists responsible for various curricular areas (eg. Literacy, Mathematics, Science, French, etc) and / or for grade levels (eg. elementary, middle school, high school). In all cases, district teams reported that the team meets regularly, generally weekly or bi-weekly to discuss areas of success and to problem-solve areas of difficulty at both district and school levels.

According to Jarvis (2003), as with community and business relationships, schools reported varied experiences and levels of success with inter-agency and inter-department supports. A few schools reported that their students benefit from responsive services from such support services as speech-language pathologists,

occupational therapists, physiotherapists, and also indicated pleasure with the level and timeliness of services they receive from social workers, health nurses and the mobile mental-health team. However, in a large number of schools, there is an extremely high need for increased support from such partner departments as Social Development and Health. Jarvis reports that staff in most schools said the wait times for services from rehabilitation professionals can be up to two to three years and that access to social workers had become more difficult in recent years. In addition, wait times for Mental Health services were reported to be extremely lengthy in many areas, as a result, schools are struggling to figure out how to support students while they await services from other professionals who have the level of expertise necessary to truly address the needs.

Johnson, Thurlow and Stout (2007) have it that special educational needs coordinators and other specialist teaching staff are widely used to support general staff and co-ordinate the education of students with special educational needs. In a related research, King and Youngs (2003) found special educational needs teachers were often used in the United States to help general education teachers deliver an adapted curriculum and assessment for students with special educational needs. This was possibly in answer to teacher concerns about the extra time required for preparing lessons and their own lack of skill in accommodating these students. The specialist teachers seemed to help foster inclusive environments, such as through modeling appropriate instructional techniques.

Special educational needs officers are appointed by the National Council for Special Education and provide a direct service to the parents of children with

special educational needs and to schools within designated geographical areas. Special educational needs officers are mainly involved in resourcing schools to meet the needs of children with special educational needs and by ensuring that resources are used efficiently in schools (Blatchford, Bassett, Brown, Koutsoubou, Martin, Russell, Webster and Rubie-Davies, 2009).

To Blatchford et al. (2009), special educational needs officers also have a role in supporting and advising parents of children with special educational needs. They identify possible placements for children with special educational needs, liaise with the other services personnel, engage in discussions with schools, and assist in planning the transition of children between schools and onwards from schools to further or higher education and other services.

Inclusive teachers typically value support from special educational needs specialists (Special Education Support Service, 2009 p.87). Evidence supports the view that specialist, and trained staff, working in schools alongside teachers, can be effective in both supporting class teachers and also helping students to access the curriculum.

In a similar opinion, Nugent (2007) contends that special educational needs support has been shown to improve basic skills such as reading and writing; specific skills such as knowledge of Braille and Sign language, and more generally, social skills.

Blatchford et al. (2009) posit that evidence supports the view that specialist, trained staff working in schools alongside teachers, such as Special educational needs officers, can support class teachers and help students with special educational needs to access the curriculum and there is some evidence that such specialist support can improve basic skills such as reading and writing, specific skills such as knowledge of Braille and signing, as well as social skills. However, special educational needs officers' resources are often limited and individual Special educational needs officers carry a substantial burden.

2.6   Curricular and instructional adaptation

An inclusive curriculum means one curriculum for all students rather than a separate curriculum for students without SEN and another for students with special educational needs (Quinn & Ryba, 2000). According to Quinn and Ryba (2000) an inclusive curriculum is recognition that under the principle of social justice, participation in education should not involve discrimination on the basis of gender, ethnicity, indigenous group, socio-economic status, and ability or disability. An inclusive curriculum recognises the need that schools be organised, with the individual differences of students in mind and allow for scope and flexibility to enable all students to achieve their goals.

Accessible and flexible curricula can be a key to creating schools that meet the needs of all students. An inclusive approach seeks to discourage teaching that is based on a criterion of averages. This means that some students will inevitably fall behind while others will find work too easy. Curriculum must take into

consideration the different abilities and needs of all students. It must be capable of being adapted to meet diverse needs. Strategies such as flexible time frames for work completion, differentiation of tasks, flexibility for teachers, time for additional support and emphasis on vocational as well as academic goals can be useful (UNESCO, 2005).

According to Wortham (2002), access to the curriculum is so much more than simply including a student in a mainstream classroom, and involves subtler issues such as how students with special educational needs interact with their peers, or how the classroom is structured for effective curriculum adaptation. Stenson (2006) reported an action research project that looked at the impact of curricular adaptation on special educational needs students in an inclusive setting. In practice, head teachers and their staff had considerably more difficulty delivering an appropriate curriculum to students. Specific problems were caused by the nature of the subjects and activities, the responsibilities, attitudes and skills of educational staff, and challenges around the social inclusion of students with special educational needs. Problems in any of these areas could lead to reduced access to the curriculum through non-participation in lessons and activities, a lack of adequate provision, and social isolation. Most students felt the individual support they received in their specially adapted educational environment was a great help and made it easier to cope with the work challenges, but also felt they were missing out on other activities available for pupils without such needs. The adaptation involved schools offering an individual programme where students worked in small groups at their own pace.

Qualifications and Curriculum Authority (2000) contend that one important aspect of curricula adaptation is that of alternative forms of assessment. However, Kostelnik, Soderman, and Whiren (2004) points out that most teachers perceive that alternative test formats such as reducing the number of items on a test page, rewording questions, and teaching test-taking skills, or making other accommodations such as extending time limits, or reading a test aloud, changes the nature of what was being assessed or contaminated the validity of the instrument. As a result, teachers do not feel these adapted tests were a fair assessment of learning outcomes for students with special educational needs (Brackenreed, 2004). Brackenreed found that modifications to mainstream curriculum in the US were most likely to take the form of additional time to complete tests or assignments for high to moderate functioning students, with low-functioning students likely to receive alternative assessments.

Dart (2007) also identified useful tools and strategies to increase curriculum access for students who are visually-impaired in Botswana. The main barrier was the lack of adapted teaching and assessment materials (mainly Braille resources, but also talking books and the means to play them) and sometimes teacher reluctance to allow students the chance to take certain subjects at senior level. Teachers expressed frustration that, for some of their pupils, curriculum content was too great and too complex, and that methods of assessment did not allow the children to demonstrate the skills they did have.

In a U.S study sample of more than 11,000 students with special educational needs aged 13 to 16, Newman (2006) reported that 94 per cent receive some type of

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accommodation or support. Strategies included extra time to complete tests (76 per cent of students) or assignments (67 per cent), and slower-paced instruction (25 per cent). Newman explored support in place to assist special educational needs pupils to succeed in high schools in the US. Teachers indicated that they adapted the curriculum to accommodate the learning styles of these students and that teaching techniques for independent learning often had equal importance to teaching the general curriculum.

2.7   Teaching in inclusive settings

This strand discusses two main sub headings as;

- Teacher pedagogies for effective inclusion, and

- Effective inclusive teaching and learning activities, and

- Alternative assessment forms

2.7.1   Teacher pedagogies for effective inclusion, and

Jupp (1992) suggests that teachers need to be nurtured with worthwhile pedagogies in order to develop a child-centered personal philosophy that begins with the belief that all students can learn and that the skill of effective teachers can enable any student to do so.

In recent years, there has been a debate about whether there is a specific form of pedagogy that is most appropriate for students with special educational

needs in inclusive settings (Kershner & Florian, 2004). Most of the researchers engaged in this debate suggest that, whilst there are certainly teaching approaches which have been developed by teachers of students with special educational needs, these are likely to benefit all learners and are not only of specific value to selected groups of students.

Many teachers who have considerable experience in working with students with complex needs, including those working in special schools, have devised approaches and adopted techniques to promote greater access to learning or have attempted to overcome specific barriers for some students. Examples of this may include the use of an augmentative system of communication, such as Makaton (a form of sign language) or a symbol system to support students who have difficulties with language (Davis & Florian, 2004). However, in a review of teaching strategies and approaches for students with special educational needs, Davis and Florian concluded that whilst many strategies and approaches are being adopted for teaching students with special educational needs in inclusive schools, there has been insufficient investigation into their efficacy in order to reach definitive conclusions about many of these. This conclusion suggests that teachers should give greater consideration to assessing the impact of the strategies that they develop to address the needs of students who challenge their conventional methods.

All teachers should consider two important points when contemplating on the methods that they may adopt in working with students with special educational needs in their schools (Joyce, Calhoun, & Hopkins, 2002). They contend that first, there is little evidence to support a belief that one model of teaching will address the

needs of all students. Joyce, Calhoun and Hopkins have further demonstrated how different learning situations and individual learners benefit from a range of teaching approaches. Whilst some learners, including those with special educational needs, will feel most comfortable when working within one model, learning becomes most effective when they can adapt to a range of different models. Similarly, the teacher who feels at home with one approach to teaching and sticks to this is unlikely to be addressing the needs of all learners in the class. Effective teachers therefore learn to adjust their teaching to address particular teaching situations and the needs of their classes.

A second point relates to the nature of many of the specialist approaches that are seen in use with students with special educational needs. Many of these are used to provide effective access for learners. The use of augmentative communication as described above would be one particular example of this (The Teaching Council, 2007). For students with speech and language difficulties, the use of signs and symbols to augment the spoken word may afford them opportunities to participate in class which would otherwise have not existed. The use of technological aids, such as computer access switches or adapted keyboards for students with physical difficulties or sensory impairments is another example of providing access to enable all students including those with disabilities to learn.

Determining effective teaching in inclusive practice is a complex issue today, however, according to DAWN (2009), while much has been written in regard to what teachers should do when teaching inclusive classes, such recommendations are not usually based on classroom-based research. Moreover, Ainscow (1994)

describes such recommendations as „recipe-like suggestions‟, serving as "teacher Bibles" for practice, without acknowledging the complexities of classrooms.

Similar to the point of DAWN (2009), Hattie (2009) has identified through a synthesis of over 800 meta-analyses relating to student achievement, a substantial number of teaching strategies that have merit. It is important to highlight that Hattie‟s synthesis provides an indication of the interventions that have an impact on student attainment, not whether something will improve student engagement, or other important classroom variables. Many of the strategies identified by Hattie (2009) have been shown to be effective for students with diverse needs. For example, reciprocal teaching has been linked to improved reading, particularly for students with low-level comprehension skills (Slater & Horstman, 2002).

Kulik, Kulik and Bangert-Drowns (1990) found that students with lower ability made strong gains through mastery learning. With respect to peer tutoring, it has been found that students with special needs make gains not only in their academic work but also behaviourally. Much of this improvement is attributed to individualised practice. Finally, Johnson and Johnson (2009) reported that cooperative learning experiences lead to positive relationships between students with differing intellectual abilities. While such classroom strategies have been widely advocated, how teachers implement them in inclusive classroom practice can be a major challenge (Angelides, 2007).

From an interviews with Californian teachers, Villa et al. (2005) identified best inclusive practices. These practices included collaboration, instructional

responsiveness, and expanded authentic assessment, though these were not verified via observation of practice. In another a US study, Udvari-Solner (1996), interviewed and observed five primary teachers to examine how theoretical inclusive practices were used by general educators. Udvari-Solner (1996) reported that teachers who were willing to try new approaches to learning and could "articulate and translate" inclusive practice theory was more likely to create an inclusive environment.

Barron and Darling-Hammond (2008) proposes that teachers should change the ways of grouping, such as arranging children with different abilities or of different ages in one group, to let them help and co-operate with each other. This will also allow children with special needs to improve with the help of their peers. To elaborate, Barron and Darling-Hammond suggest that teachers should create a harmonious environment in which children can learn to respect and accept others with special needs.

Teachers should pay attention to children's daily performance and growth, and set up a "portfolio" for each child to record their development and learning progresses, which can then serve the purpose of assessment. If the learning and teaching strategies are found to be the factor leading to any learning differences, teachers will need to make appropriate adjustment (Barron & Darling-Hammond, 2008).

Griffiths (2009) contends that if a learning difference is an individual problem, teachers will need to communicate with the children and their parents to

formulate appropriate strategies and arrange referral services in a timely manner. In the case of children with outstanding performance in learning, teachers should give them appropriate encouragement and sufficient support to develop their potential to their utmost. Griffiths contends further that teachers should accept learning differences among children rather than demanding standard performance from them.

For effective inclusive teaching, teachers must ensure that assessment addresses the curriculum objectives and children's developmental needs (Barron & Darling-Hammond, 2008). Quinn and Ryba (2000) contend further that assessment should not be conducted solely for its own sake. But, for instance, observation, recording and analysis should be adopted for assessing children's performance in an authentic learning environment. In place of a one-shot assessment procedure, continuous assessment throughout the whole school year is recommended (Gupta & Singh, 1994).

Teachers should show recognition and appreciation of children's achievements, as well as identify areas in which the potential of the children is yet to be developed, and render guidance and support accordingly. From the point of view of Wortham (2002), teachers should inform parents of assessment results in a systematic and positive manner, to enhance parents' understanding of their children, provide a range of learning and responding modes to cater for the different learning needs of the students, for example, supporting reading and writing skills with oral and aural skills.

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Dodge, Colker and Heroman (2002) opine that there are four areas to consider when planning teaching and learning activities which are inclusive of all students in a class. In the area of content, teachers need to consider the core content to be covered from the syllabus and to sequence a particular unit of work or series of lessons to ensure all students will learn and be successful. For example, if the goal of a lesson is to have students draw up their own timetable in the target language, the prerequisite knowledge students would need to bring to the task would include but not limited to days of the week, time concept, ordinal numbers, school subjects, etc. Teachers need to work with students to brainstorm this prerequisite knowledge before completing the task.

For assessment tasks, the teacher should plan for students experiencing learning difficulties including those with motor skill deficits to access and become familiar with the appropriate support that will allow them to complete assessment tasks. This may include the provision of a scribe and/or reader, additional time, rest breaks, additional assessment opportunities, for example performing a written task orally (Applebee, 1998).

Applebee (1998) suggests that instruction should be explicit and systematic. He explains explicit instruction as the active and deliberate development of all aspects of students" learning rather than leaving anything to chance, whiles systematic instruction refers to the selection and sequencing of activities in order to ensure that students develop comprehensive knowledge, skills and understanding which are relevant to the identified needs of the student and to the task at hand.

Visser (1997) argues that the way teachers instruct students vary from one teacher to the other. Many students experiencing difficulties learning have problems recognising and adapting to different teaching styles in an inclusive school setting. He advises that teachers need to be aware of their instructional style and consider the needs of particular students.

To be explicit and systematic, teachers need to define the purpose of every task and explain to students what is required in fulfilling the purpose of a lesson. Barron and Darling-Hammond (2008) and clearly state the criteria which will be used to assess student achievement, provide a range of learning and responding modes to cater for the different learning needs of the students, for example, supporting reading and writing skills with oral and aural skills, thinking about how they interact with the students, for example time spent by only the teacher talking, involving students in discussions, varying the levels and variety of questions and ensuring all students contribute ideas and feel their contributions are valued.

They continue to add that as an inclusive teacher, one need to consider their questioning techniques, including rephrasing questions, simplifying language or providing alternative formats for information to be provided. For example teachers can use more visual cues, and be aware which students require additional instruction and/or support, be aware that, for some students modeling occurs frequently, followed by guided or peer practice and then independent practice.

According to Barron and Darling-Hammond (2008), to provide an effective scaffold for success, provide additional support, for example through group work, peer tutoring, direct assistance and frequent feedbacks. Additionally, inclusive

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teachers need to rephrase or adjust questions using fewer words or less complex language when necessary, wait a few seconds longer before expecting an answer, and be descriptive when praising students.

With respect to the classroom atmosphere, Murry and Murry (2000) were of the view that inclusive teachers might need to have rules clearly displayed and clarified regularly, ensuring all students know the procedures and routines of the class, consider arranging the room in a way which maximises the student"s participation and/or comprehension. Examples of such arrangements include small group work, peer work, and possibly, quiet individual work area.

Murry and Murry (2000) posit further that teachers must use grouping and cooperative learning as a strategy. They must think of other ways for information to be relayed to students if copying from the board or overhead projector is difficult, allow additional time for practice and/or task completion for those students who need it, be discreet when assisting students and providing them with adjusted material and/or activities, and more importantly, reward students via incentive charts or card systems.

When selecting or developing resources and materials to be used in a lesson, the inclusive teacher should be aware that some students may require more prompts or scaffolds to complete an activity, as a result, teachers must design worksheets which use the same font throughout and have a predictable layout. They should also consider using multiple choice answers in place of sentence completion, include mnemonic devices or graphic organisers that assist students to remember new

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material, for example visual webs, organisational charts, first letter acronyms and visual prompts and icons. Furthermore, successful teachers provide visual cues (both gesture and illustrations), and are consistent as much as possible.

From the viewpoint of Barron and Darling-Hammond (2008), if one gesture represents "open your book", always use that same gesture. The authors also suggested that teachers must provide concrete learning aids which facilitate learning by using a „hands on" approach, remove unnecessary detail from textbooks or worksheets, highlight critical features that are the most important for students to learn, and enable students to access alternate formats, such as large print, computers, and simplified texts.

2.7.2 Effective teaching and learning in inclusive schools

An inclusive curriculum means one curriculum for all students rather than a separate curriculum for students without special education needs, and another for students with special educational needs (Quinn & Ryba, 2000). According to Quinn and Ryba, an inclusive curriculum is the recognition that under the principle of social justice, participation in education should not involve discrimination on the basis of gender, ethnicity, indigenous group, socio-economic status, and ability or disability. An inclusive curriculum recognises the need that schools be organised, with the individual differences in students in mind and allows for scope and flexibility to enable all students to achieve their goals.

Accessible and flexible curriculum, therefore, is a key to creating schools that meet the needs of all students. An inclusive approach seeks to discourage

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teaching that is based on a criterion of averages. This means that some students will inevitably lag behind, while others will find work too easy. Inclusive curriculum must take into consideration the different abilities and needs of all students. It must also be capable of being adapted to meet diverse needs. Strategies such as flexible time frames for work completion, task analysis, differentiation of tasks, time for additional support and emphasis on vocational, as well as academic goals can be useful in adapting the curriculum (UNESCO, 2005).

According to Wortham (2002), access to the curriculum is so much more than simply including a student with special educational needs in a mainstream classroom, but involves subtler issues such as how students with special educational needs interact with their peers, how they are strategically placed, or better still how the classroom is structured for effective curriculum adaptation.

Stenson (2006) reports on an action research that looked at the impact of curricular adaptation for special educational needs students in an inclusive setting. In practice, head teachers and their staff had considerably more difficulty delivering an appropriate curriculum to students. Specific problems were caused by the nature of the subjects and activities, poor classroom organisation, the responsibilities, attitudes and skills of educational staff, and challenges around the social inclusion of students with special educational needs. According to Stenson, problems in any of these areas could lead to reduced access to the curriculum through non-participation in lessons and activities, a lack of adequate provision, and social isolation.

Most students felt the individual support they received in their specially adapted educational environment was a great help and made it easier to cope with the work challenges, but also felt they were missing out on other activities available for students without such needs. The adaptation involved schools offering an individual programme where students worked in small groups at their own pace.

Qualifications and Curriculum Authority (2000) contends that one important aspect of curricula adaptation is that of alternative forms of assessment. However, Kostelnik, Soderman and Whiren (2004) point out that most teachers perceive that alternative test formats such as reducing the number of items on a test page, rewording questions, and teaching test-taking skills, using assorted question types or making other accommodations such as extending time limits, or reading a test aloud changes the nature of what was being assessed or contaminated the validity of the instrument.

As a result, teachers do not feel these adapted tests were a fair assessment of learning outcomes for students with special educational needs (Brackenreed, 2004). Brackenreed found that modifications to mainstream curriculum in the U.S for example, were most likely to take the form of additional time to complete tests or assignments for high to moderate functioning students, with low-functioning students likely to receive alternative assessments.

Dart (2007) also identified useful tools and strategies to increase curriculum access for visually-impaired students in Botswana. The main barrier was the lack of adapted teaching and assessment materials (mainly Braille resources), but also talking books and the means to play them and sometimes teacher reluctance to

allow students the chance to take certain subjects at senior level. Teachers expressed frustration that, for some of their students, curriculum content was too great and too complex, and that methods of assessment did not allow the children to demonstrate the skills they did have.

Lack of training on adapting the curriculum for students with special educational needs is clearly an international problem (Loreman, 2001). Loreman found that teachers in Africa felt under-skilled, under-trained, and pushed for time when it came to educating students with disabilities. Many teachers did not modify curriculum standards for the subjects they taught, largely because of their need for training and expertise. Similar concerns about lack of training were expressed by teachers in the United States (Murry, 2000), New Zealand (Piggot-Irvine, 2009), Ghana (Ocloo & Subbley, 2008), Botswana (Dart, 2007), and the United Arab Emirates (Arif & Gaad, 2008) cited in Kokkinos and Davazoglou (2009).

The effects of co-teaching as a form of curriculum adaptation in inclusive settings were explored by Dymond, Renzaglia, Rosenstein, Chun, Banks, Niswander, and Gilson (2006), they evaluated the implementation of Universal UDL approach to developing a high school science course in the United states of America. Development of this empowered the class teacher to deliver the instruction of students with special educational needs with co-teachers or other paraprofessionals.

The co-teacher's role changed from adapting the curriculum during class sessions towards co-planning of lessons, co-delivering of the curriculum, and working with small groups of students with and without special educational needs.

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The main benefit for students was an improvement in social skills and increased interaction with others. Because the UDL curriculum is designed to meet the needs of any learner, the co-teacher‟s role can be more of a general educator rather than an adapter of the curriculum.

In a U.S study a sample of more than 11,000 students with special educational needs, aged 13 to 16, Newman (2006) reported that 94 per cent receive some type of accommodation or support within the curriculum. Strategies included extra time to complete tests (76 per cent of students) or assignments (67 per cent), and slower-paced instruction (25 per cent).

Similarly, Bulgren, Lenz, McKnight, Davis, Grossen, Marquis, Deshler, and Donald (2002) explored support in place to assist students with special educational needs to succeed in high schools in the United States. Teachers indicated that they adapted the curriculum to accommodate the learning styles of these students and that teaching techniques for independent learning often had equal importance to teaching the general education curriculum.

Effective instruction for students with special educational needs requires regular assessment, evaluation and feedback than those without disabilities (Newman, 2006). Newman found that it is important that assessment measures meaningful outcomes, not just those that are easy to measure, and a wide range of tools are available for assessment (Kontu & Pirttimaa, 2008).

Kontu and Pirttimaa (2008) contend that in the inclusion process, assessment is crucial to determine areas of particular difficulty and to evaluate

progress. Standardised assessments in the form of national examinations and tests at key educational stages are widely used internationally. But to be useful to students with special educational needs, these forms of certification should either have to encompass a very broad range of achievement or offer alternative tests for different ability levels.

According to Dodge et"al (2002), for instance, younger children with special needs require more time for meals and washing of hands, because their self-care abilities are not yet developed. Moreover, as children with disabilities" concentration span are short, the duration of activities that call for a high degree of concentration, such as listening to stories or music, should be kept as short as possible. They continue to add that these children should be given enough time and resources to take part in various group learning and free choice activities. As a result, teachers may organise these children to play in large groups, small groups or on their own.

Similarly, from the point of view of Smith and Thomas (2006), inclusive teachers may consider forming different groups by age consideration. Children can learn to communicate and co-operate with peers, or teachers can arrange for children of different ages to be in a group so that older children can help and thus learn to take care of the younger ones, while the younger ones can learn from the older ones and widen their vision for learning.

For a successful inclusion, teachers must assign a peer to provide help or assistance when needed. "To incorporate socialisation goals, and also to help

promote acceptance and learning about differences in the classroom, select different peers for different subjects or activities" (Smith & Thomas, 2006, p 254).

A previous National Commission on Science Education report on inclusion concluded that useful strategies for any successful inclusion includes flexible timeframes for work completion, differentiation of tasks, flexibility for teachers, time for additional support, emphasis on vocational as well as academic goals and flexible teaching-learning methodologies, and that access to the curriculum involves how students with special educational needs interact with their peers, or how the classroom is structured (Winter & O"Raw, 2010).

2.7.3   Alternative assessment forms

Quinn and Ryba (2000) have suggested collaborative forms of assessment for inclusive classrooms. According to them collaboration between, and consultation with the student, parents, caregivers, and other relevant people enable educators to gain a good understanding of the students" strengths and needs.

Rose, McDonnell and Ellis (2007) suggest that instructors should plan to introduce alternative forms of assessment gradually, in conjunction with traditional forms of testing. Using a combination of alternative assessments and more traditional measures allow the instructor to compare results and obtain a more comprehensive picture of students' performance than either alternative or traditional measures alone would provide. At first, the instructor should use checklists and rubrics to evaluate student performance but not ask students to do self and peer evaluation.

When creating checklists and rubrics, instructors can ask students to provide input on the criteria that should be included in each. This approach gives the instructor time to become more comfortable with the use of alternative assessments while modeling their use for students. This process helps students to understand how they will benefit from alternative assessment and how they can use it effectively (Roach & Elliott, 2006).

Persson (2008) proposes that because alternative assessment depends on direct observation, instructors can most easily begin to use it when evaluating the student with disability"s writing assignments and individual speaking tasks such as presentations. Once an instructor has reached a level of comfort with checklists and rubrics, they can also be used when observing students interacting in small groups. When doing this, however, the instructor needs to be aware that group dynamics will have an effect on the performance of each individual.

Li, Tse and Lian (2009) also add that once students are familiar with the use of checklists and rubrics for evaluation, they can gradually begin to assess their own learning and provide feedback to their peers. This aspect of alternative assessment can easily be included in the evaluation segment of a lesson. In classrooms where traditional forms of assessment are required, this gives the instructor multiple ways of measuring progress without increasing the time students spend taking traditional tests.

Ee and Soh (2005) concluded that the concept of children with special educational needs extends beyond those who may be included in handicapped

categories to cover those who are failing in school, for a wide variety of reasons that are known to be likely impediments to a child"s optimal progress. Whether or not this more broadly defined group of children are in need of additional support depends on the extent to which schools need to adapt their curriculum, teaching, and/or to provide additional human or material resources so as to stimulate efficient and effective learning for these students.

2.7.4   Teacher Preparation and experiences

The practice of including pupils with special educational needs in mainstream schools and classes is now firmly established in many jurisdictions worldwide. However, successful implementation of such policy depends on teachers having the requisite knowledge, skills and experiences. For that reason, there has been increasing attention being paid to the nature of teacher development (Whitworth, 2001).

In support of Eileen"s (1999) views, Hardman, Drew and Egan (2002) contend that preparing a teacher who will teach children with special needs demands skills, expertise and knowledge that cannot simply be taken for granted. Rather, there is a need for such skills, expertise and knowledge to be carefully examined, articulated and communicated so that the significance of the role of the teacher might be more appropriately highlighted and understood within the inclusive education institution.

Whitworth (2001), postulates that preparing teachers who can teach in settings that are inclusive and meet the needs of all students will require a different

model of teacher preparation. Apart from teachers gaining the requisite knowledge and competencies in handling and preparation, there is also an important factor in improving teacher attitudes towards the implementation of an inclusive policy. Without the requisite training in inclusive education philosophy, it would be difficult for a teacher to accept and offer the necessary attention to a pupil with disability in the class. It is through training and preparation process that teachers develop the capacity in handling pupils with special needs (Whitworth, 2001).

This is true to the extent where segments of teachers in teacher training college (now Colleges of Education) as well as other tertiary institutions in Ghana lack the capacity to help pupils with special needs in class (Deku, 2008). It is obvious that inclusive education demands that all manner of pupils are educated under one roof hence the need for adequate preparation of teachers. Deku espoused that in Ghana, the increasing demand to educate learners with disabilities in inclusive education setting has received little consideration. Several researchers have noted the lack of professional training in inclusive teaching and practices for general and special education at the pre-service level (Burstein & Sears, 1998 in Hardman et al. 2002). To Whitworth (2001), if teacher education programmes are to prepare educators to be successful in the classrooms of the future, they must reconceptualize and design their approach to pre-service preparation of teachers.

It is common to find research reports that reveal traditional teacher education programmes that generally consist of a collection of separate courses in which theory is presented without much connection to teaching practice. Findings such as this lead to what Hardman et al. (2002) calls a fragmented view of

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knowledge both in course work and in field experiences. Supporting this idea, Hardman et al (2002), citing Brunner (1997) stated that teaching of theoretical conception must be inextricably linked to its application. An extensive review of 25 years of research report, into teacher education by Wideen, May, Smith, and Moon (1998) concluded that the impact on student teachers" teaching as a result of traditional teacher education programme was relatively meagre.

According to Hardman et al. (2002), teachers" education could well be argued only on students if the total ecology of the teacher preparation programme is coherently constructed and purposefully conducted. This very point is highlighted in the work of Hamilton and McWilliams (2000), who noted that teachers" education needs to be integrated and organized in ways that address the too often disjointed nature of formal education.

In a move towards inclusive education, preparation of a professional teacher should not only focus on pre-service training but also on in-service training as well. Pugach (1988) argues that there should be a complete refashioning of teacher education programmes where the expertise of those who are currently aligned with education or with curriculum and instruction are blended. However, Pugach (1988) stated that the contention lies in how this blending will occur, what forms new teachers" education programmes should take and how the new organizational structure will support such programmes. Further, as a way of showing high levels of commitments to inclusive education, it is incumbent on special education professionals to be particularly proactive in the design of teacher education.

Currently, there is a new development in teacher preparation whereby all teachers should be encouraged to develop positive attitudes to the education of children with special educational needs in mainstream schools. The purpose is to enhance conceptions about teaching needs, assessment and teaching skills. It is also for trainees to build a special personal relationship with one pupil in order to develop a positive attitude which could be generalized to their teaching (Garner, 1996).

In Ghana, teacher educational institutions have a course in special needs education as part of the reforms towards inclusiveness. This course is taught at the Training Colleges in order to equip the trainees and prepare them for the tasks ahead. Previously, many of the teacher training institutions were meant for specialist and general or regular schools. For instance, Specialist Training College for the Deaf was established to cater for teachers to teach pupils with hearing problems. There was no compulsion for teacher trainees to learn about special education needs at the initial teacher training colleges. There was an option for teachers to be in the regular schools or a school for individuals with disabilities. As already stated, many of the educational institutions have now included special education needs in their curriculum.

At the tertiary levels, both Universities of Winneba and Cape Coast have special education programmes as part of their curriculum. At University of Education, Winneba, special needs education form part of the core courses. At the University of Cape Coast, the non-basic education students take one general course

while the basic and psychology students take three courses in special educational needs programmes (Faculty of Education, UCC, 2005).

In Whitworth's (2001), submission, in conceptualizing and designing an approach to pre-service preparation of teachers, there was a provision of an inclusive teacher preparation model. This model consists of two major dimensions. One dimension deals with the outcomes of the model and the other focuses on specific programme components. For a teacher to be effective in an inclusive environment, teacher preparation programmes must instill in the teacher an understanding and appreciation of diversity.

Preparing teachers to be flexible and creative is vital if teachers must be trained to meet situations and challenges that would demand their ability to deal with and adapt to change. To do this successfully, they must also have the ability to be flexible and creative in meeting these challenges and solving problems. This can be accomplished by providing experience that requires prospective teachers to develop creative problem-solving skills and to view situations from different perspectives. The other dimension which is the programme components includes collaborative teaching techniques and strategies as well as collaborative experiences (Whitworth, 2001).

Collaborative teaching is an instructional approach used in the typical classroom setting. It consists of co-teaching, collaborative planning, cooperative learning, integrated curriculum activities, collaborative evaluation and group process skill. To Whitworth (2001), the techniques and strategies model include accommodations, effective practice, modifying materials, resources and supports as

well as instructional arrangements. Pre-service preparation should address appropriate accommodations in curriculum, instructional activities and evaluation procedure and the effective identification, development and utilization of resources. In addition, the pre-service programme should prepare teachers to use various types of instructional arrangements such as multi-level teaching, cooperative learning and peer tutoring.

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

2.8   Theoretical framework

Theories are formulated to explain, predict, and / or understand phenomena and, in many cases to challenge and extend existing knowledge within the limits of critical bouncing assumptions (Swanson, 2013). Swanson explains that a theoretical framework is the structure that can hold or support a theory of a study. It introduces

and describes the theory that explains why the research problem understudy exists. According to Swanson, a framework must demonstrate an understanding of theories and concepts that are relevant to ones research topic.

The researcher used one theory and a model respectively to support this study, namely; Utilisation-focused evaluation (UFE) theory (Cousins and Shulha, 2006), and the Content, input, process and product (CIPP) evaluation model (Joint Committee on Standards for Educational Evaluation, 1994).

2.8.1   Utilisation-focused evaluation (UFE) theory

Cousins and Shulha (2006) contend that the utilisation-focused evaluation (UFE) theory developed by Michael Quinn Patton, is based on the principle that an evaluation should be judged on its usefulness to its intended users. Therefore evaluations should be planned and conducted in ways that enhance the likely utilisation of both the findings and of the process itself to inform decisions and improve performance.

The UFE can be used to enhance different types of evaluation (formative, summative, process, impact) and it can use different research designs and types of data (Patton, 2008). To Patton, UFE begins with the premise that evaluations should judge programme utility and actual use. Therefore, evaluators should facilitate the evaluation process and design any evaluation with careful consideration of how everything that is done, from beginning to end, will affect use.

The UFE is based on the principle that an evaluation should be judged by its utility. So, no matter how technically sound and methodologically elegant, an evaluation is not truly good unless the findings are used. UFE is a framework for enhancing the likelihood that evaluation findings will be used and lessons will be learnt from the evaluation process (Ghere, King, Stevahn & Minnema, 2006).

According to Patton (2008), UFE requires active and skilled guidance and facilitation from an evaluation facilitator. Time resources available for the evaluation must be clearly negotiated, built in from the beginning, and stated in the agreement. The essentially collaborative nature of UFE demands time and active participation, at every step of the entire process, from those who will use the evaluation results. He continues to add that financial resources available for the evaluation must be clearly stated. They must include financial resources beyond mere analysis and reporting. Resources that facilitate use must be available. And in UFE, the evaluator must give careful consideration to how everything that is done, from beginning to end, will affect use.

"Utilisation-focused evaluation theory does not advocate any particular evaluation content, model, method, theory, or even use. Rather, it is a process for helping primary intended users select the most appropriate content, model, methods, theory, and uses for their particular situation (Patton, 2008). Patton contends further that situational responsiveness guides the interactive process between evaluator and primary intended users.

Again Patton has it that UEF can include any evaluative purpose (formative, summative, developmental), any kind of data (quantitative, qualitative, mixed), any

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kind of design (e.g., naturalistic, experimental), as well as any kind of focus (processes, outcomes, impacts, costs, and cost-benefit) among many possibilities. Utilisation-focused evaluation is a process for making decisions about these issues in collaboration with an identified group of primary users focusing on their intended uses of evaluation (Patton, 2008 citing Patton, 2002).

1.1.1 Content, input, process and product (CIPP) Evaluation Model

An important model that underpins this study is the Content, Input, Process and Product (CIPP) evaluation model. The CIPP was developed by the Phi Delta Kappa Committee on Evaluation in 1971 (Smith, 1980). Joint Committee on Standards for Educational Evaluation (1994) citing Stufflebeam (1971) describes evaluation according to the CIPP model as a "process of delineating, obtaining and providing useful information for judging decision alternatives". In other words, CIPP is based on providing information for decisions. Boulmetis and Dutwin (2005) named the CIPP model as the best decision-making model.

According to Cousins and Shulha (2006), each of the four different types of evaluation that comprise CIPP has important role to play in a larger whole with the functions of each described by Stufflebeam (1971) as follows:

1. Context evaluation serves to plan decisions by identifying unmet needs, unused opportunities and underlying problems that prevent the meeting of needs or the use of opportunities,

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2.   Input evaluation serves to structure decisions by projecting and analysing alternative procedural designs,

3.   Process evaluation serves to implement decisions by monitoring project operations,

4.   Product evaluation serves to recycle decisions by determining the degree to which objectives have been achieved and by determining the cause of the obtained results.

Both the components of Michael Quinn Patton's UFE theory, and that of Stufflebeam's CIPP evaluation model played important roles in the planning, implementation, and assessment of inclusive education in the Winneba township. It helped to assess the overall environmental readiness, curriculum and resource adaptation as well as teacher collaboration with special education related personnel involved in the inclusion process and also to examine whether existing goals and priorities are attuned to needs, and assess whether proposed objectives are sufficiently responsive to assessed needs.

2.9   Summary of Literature Review

Major issues emerged from the theoretical and empirical review of literature on the evaluation of inclusive education in the Winneba township. The chapter has outlined the concern regarding curriculum adaptation, curriculum adaption, suitable environmental, as well as effective collaboration of teachers and support services personnel availabile for inclusive education. With respect to curriculum adaption, the

review indicated that most authors agree that an accessible and flexible curriculum is the key to creating schools that meet the needs of all students.

Equipments and resources for inclusive schools were also discussed extensively in the literature. Most authors made mention that teachers should make flexible use of resources depending on children"s learning needs and they should not rely too much on the available stock of materials in the school alone, but try to create their own materials and also use some natural resources such as fallen leaves, and rainfall.

In selecting curriculum resources, inclusive institutions are advised to ensure that there is compatibility of the resources with their own curriculum plan, teachers must set clear and definite objectives, stimulates children"s learning interest, and above all encourage children to participate in learning.

Another important component of the inclusive school discussed in the review was the schools" physical environment. Numerous researchers argued that the relationship between academic achievement and characteristics of the school environment can result from direct environmental influences of the school, or from placement of children into particular school environments based on prior ability. As a result of this a lot of attention must be given to the environment.

Support services as a component of a purposeful inclusive practice was not left out. Throughout in the literature, teachers are advised to consult with special services providers who are associated with their student"s special needs, e.g. special education teachers, physical therapists, occupational or movement-orientation

therapist, as well as psychologists, who may be involved in working with students with special needs in the inclusive classroom.

The UD and the DFA principles were also discussed. It was made clear that the UD is not just about accessibility for students with disabilities, but it is about access for all. As a result, teachers must consider the potential needs of all students when designing and delivering instruction.

CHAPTER THREE

METHODOLOGY

3.1   Introduction

The qualitative method was employed by the researcher. The study adopted a qualitative, cross-sectional, descriptive method that was used to evaluate the practice of inclusive education in the Winneba township. The highlights of this chapter include the research method, research design, population, sample and the sampling technique, instrumentation, validity and reliability of the instruments, data collection procedure and statistical design adopted for the study.

3.2   Research method

This study made use of qualitative method of research. Kulbir (1984) is of the view that qualitative research considers the holistic description of whatever is been observed, rather than comparing the effects of a particular treatment as quantitative research does. Moreover, qualitative researchers employ vivid description of observed phenomenon to its minimum level that it becomes clearer to the ordinary person.

Qualitative research also seeks insight into issues rather than statistical analysis. It studies phenomena in its natural settings. Moreover, data gathered are sometimes expressed in quantitative terms such as graphs, tables and charts.

3.3   The Research Design

The researcher used a descriptive research design which enabled him to collect snapshot information on the current state of inclusive education in the township. Shields and Rangarjan, (2013) contend that a descriptive research design

is a design which involves observing and describing the behavior of a subject without influencing it in any way. It is used when the researcher wants to describe specific occurrences in the environment.

According to Patton (1990), descriptive research can be either quantitative or qualitative methodologies. It can involve collections of quantitative information that can be tabulated along a continuum in numerical form. Patton continues to stipulate that descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collected (Jackson, 2009 p. 233). According Jackson, researchers often use visual aids such as graphs and charts to aid the reader in understanding the data distribution. Because the human mind cannot extract the full import of a large mass of raw data, descriptive statistics are very important in reducing the data to manageable form. When in-depth, narrative descriptions of small numbers of cases are involved, the research uses description as a tool to organize data into patterns that emerge during analysis. Those patterns aid the mind in comprehending a qualitative study and its implications.

According to Shields and Hassan (2006), descriptive research design can be disadvantageous since it may not be suitable for use as a basis of a causal relationship where one variable affects another. In other words, descriptive research design can be said to have a low requirement for internal validity. Shields and Hassan continue to point out that the results from a descriptive research design can in no way be used as a definitive answer or to disprove a hypothesis but, if the

limitations are understood, they can still be a useful tool in many areas of scientific research.

The descriptive research design was considered by the researcher as the most appropriate because it gives the opportunity to observe subjects in a natural environment. As a result of this, descriptive research is often used as a pre-cursor to quantitative research designs, the general overview giving some valuable pointers as to what variables are worth testing quantitatively.

3.4   Population

Population refers to the entire universe of elements or cases the researcher is interested in for the particular study (Fraenkel & Wallen, 1993). The target population for the study consisted of 132 teachers in the 22 inclusive Basic schools in the Winneba township. The population was made up of 46 males and 86 female. The pilot inclusive schools in the Winneba township are Anglican primary"A", Anglican primary"B", Anglican primary"C", Presby primary school, Zion A/B primary school, New Winneba primary school, Ntekofem primary school, University Inclusive practice school (inclusive), University practice school (North campus), Roman Catholic school, ACM primary school, Ansa Rudeen Islamic primary school, University Practice School (South), Methodist Primary A/B, Methodist primary C/D, Nsuakyir M/A primary school, Don Bosco Boys school, Don Bosco Girls school, Zion C/D primary school, Gyahadze primary school, Ateitu Primary school, and Osobonpanyim primary schools.

Table 1 summarises the demographic information of the population for the study.

Table 1 : Summary of demographic data on the population

Gender	frequency	percentage
Female	86	65.15
Male	46	34.85
Total	**132**	**100**

Source: field data (2015)

Table 1 presents the targeted population for the study. The frequency distribution shows the percentages of the observees.

3.5 Sample size and Sampling Techniques

A sample size denotes a small and representative proportion of the research population (Cohen, Manion & Morrison, 2004). The sample for the study was made up of teachers selected from the inclusive schools in the Winneba township.

A sample size of 40 teachers and their classrooms were observed. The sample comprised of 21 female and 19 males. In total, the participants were selected from 10 inclusive pilot schools randomly selected from schools in Winneba. 4 teachers each were selected from each of the 10 schools.

Sarantakos (1998) contends that sampling enables the researcher to study a relatively small number of units in place of the target population and to obtain data that is representative of the whole population. Sarantakos suggests that a sample size of thirty is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data. However, the writers

caution that the size of the sample would depend on the relationship researchers want to explore within the sub-groups of the entire sample.

Basically, the simple random sampling technique was used to select the 10 schools out of 24 schools from the 3 circuits using the lottery procedure. This technique was used because it gave all units of the target population equal chances of being selected. According to Amedahe (2002), simple random sampling is appropriate when a population of study is similar in characteristics of interest. In the process, a   list of all the inclusive schools in the Winneba township were written on pieces of papers and put in a bowl. 10 schools were however picked.

In each of the schools, the target classes were from Basic one to six. This was because the pilot inclusive scheme in Winneba particularly runs in the primary streams only. In each school, 4 classes were sampled base on the simple random technique as described above. Two classes each were selected from the lower and upper streams respectively. Below is table 2 below showing the schools and the respective classes sampled for the study.

Table 2: Schools and their respective classrooms sampled from the Winneba township for observation

Schools Observed	Classrooms Observed			
Anglican primary"A"	BS1	BS2	BS5	BS6
Presby primary school	BS2	BS3	BS4	BS6
Zion A/B primary school	BS1	BS3	BS4	BS5
Ntekofem primary school	BS1	BS2	BS4	BS6
New Winneba primary school	BS2	BS3	BS4	BS6
University practice school (North)	BS2	BS3	BS5	BS6
University practice school (inclusive)	BS2	BS3	BS4	BS6
Roman Catholic school	BS1	BS2	BS4	BS5
ACM primary school	BS1	BS2	BS4	BS6
Islamic primary school	BS2	BS3	BS4	BS6

Source: field data (2015).

Table 2 presented the names of schools and the respective classes sampled for the study. From the Table, it can be observed that ten schools were observed and in each school four classrooms were involved. Two classes each from the lower and upper primaries each were observed respectively. There was the need for a random sampling since all the classes were practicing inclusive education but all could not have been sampled due to the resulting high numbers of classes to observe.

A total of 21 of 86 female teachers representing 52.5% and 19 of 46 male teachers representing 47.5% were sampled for the study. Table 3 is a summary of the sample for the study.

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Table 3: Demographic Data on the Sample size

Gender	frequency	percentage
Female	21	52.5
Male	19	47.5
Total	**40**	**100**

Source: field data (2015)

Table 3 presents the sample used for the study. The frequency distribution shows the percentage of observees.

3.6   Research Instrumentation

The instruments used to collect the data were observation checklists (appendix A-D) developed by the researcher. An observation checklist was used because the study sought to collect data from teachers and the same time the schools" physical environment. Sarantakos (1998) contends that using observation checklist is a way of translating research topics into variables, variables into indicators and indicators into questions.

According to Amedehe (2002), observation in research involves collecting data directly from a practice. This approach allows researchers to gather data directly from the study site. Amedehe continues to say that to administer an observation checklist, the researcher must develop a protocol that is based on a sampling plan and data collection instruments. The sampling plan describes who will be engaged in the study and the criteria by which the participants will be selected to participate.

Burke (1994) describes an observation checklist as a tool for monitoring specific skills, behaviors, or dispositions of individual students or all the students in the class.

Amedehe (2002) advices that researchers must always remember that when developing observation or survey, items should be:

- well-constructed, easily understood, unambiguous, and objective.
- short, simple, and specific.
- grouped logically.
- devoid of vague qualifiers, abstract terms, and jargon.

The observation guide for data collection was designed with the use of "yes" and "no" format. The observation guide was made up of four segments. The first part sought to discover the means by which teachers adapt the curriculum in inclusive schools whiles the second section looked at the nature of equipment and materials being used in inclusive schools and how they are also adapted. The third section covered the suitability of the schools" physical environment, and the last section brought to light the level of collaboration among teachers and support services available to the inclusive schools.

3.7   Validity of Research Instrument

In order to enhance the validity of the instruments, a number of measures were employed. First, the observation checklist was given out for peer judgment involving   three   colleagues   who   checked   on   the   clarity   of   statements,

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appropriateness of language and clarity of constructions after the researcher had taken his time to carefully design it.

The items were further given out to the researcher's supervisor and some other lecturers in the Department of Special Education for expert evaluation. They examined whether the items were related to the research questions and comprehensively covered the details of the study. Suggestions made were incorporated to refine the content to improve the checklist. This enhanced both the face validity and content validity of the observation checklists Secondly, the instruments were pre-tested by the researcher to strengthen its usefulness. Observation checklists items that sounded ambiguous and unclear were deleted before they were used for the final data collection exercise.

3.8   Pre-testing of the Research Instrument

A pre-testing of the instrument was carried out on 6 randomly selected teachers in three inclusive schools in the Winneba township. The schools involved were Ntakofem M/A primary school, Gyingyinadze M/A Primary School, and University Practice school "A/B". These teachers were however excluded from the main study. The purpose of the pre-testing was to establish the validity and reliability of the research instruments by checking for clarity of the observation checklist items, instructions, the layout as well as to gain feedback on the checklist (Cohen, Morrison & Manion, 2004).

Four research assistants were trained to assist in the completion of the checklists. The research assistants were asked to discuss verbally and frankly with

the researcher any ambiguity, incoherence or incomprehension whatsoever that came up on any aspect of the draft checklist after the pre-testing.

The necessary corrections were effected after the trial testing. The results that evolved from the trial study (Appendix E-H) heightened the zeal and enthusiasm of the researcher to proceed with the study.

3.9   Reliability of Instrument

In order to ensure that the checklist will provide a reliable data, first, the researcher gave out the checklist out to be scrutinsed by his peers, supervisor and other lecturers. Second, the researcher used trained research assistants who were not aware of the aim of the study to complete the checklists. According to Ary, Jacobs and Razavieh (1990), when using observation checklists as a primary data collection tool, the data can be greatly influenced by the observer"s expectations about what they are observing which can influence the selection of the specific incidents to which they pay attention, which in turn influences the amount and type of information that is recorded.

The researcher compared the results of the pilot tests and discussed the difficulties of the trained researchers assistants with them before the main data were collected. Based on the recommendations of the trained researchers assistants, the researcher redesigned the instruments in order to get rid of all ambiguities, incoherence, etc. As a result of this, the checklist items were reduced from forty to thirty-one. Ary, Jacobs and Razavieh (1990) pointed out that ways to reduce the impact of the expectations of the observer include but not limited to:

- Having a well-prepared checklist which lists the specific behaviour to be observed, and

- Using an observer who is not familiar with the aims of the study

3.10   Statistical design

The purpose of the study and procedure for data collection were discussed with the participants and the respective head teachers of the selected schools. After permission was granted for the collection of data, the research assistants were given the list of teachers they were supposed to observe. In each school, the four teachers sampled were observed by the four researchers assistants trained by the researcher. Teachers were observed during their normal teaching and learning periods with their pupils. The trained researchers assistants were also tasked to observe the equipment that were present in the classrooms and also the facilities found in the school compound such as wheelchair ramps.

A day each was spent in each school for the observation. The trained researchers assistants were also inquire for clarification from the teachers whenever the need arose. The trained researchers assistants were supposed to tick either "yes" or "no" to indicate on the checklist to point out whether a practice or an equipment exist in the school.

In order to ensure a high reliability of the data being gathered, the researcher did not take part in the completion of the checklists. He only went round intermittently to ensure that the right procedures were being followed and also to assist in times of need. The researcher and trained researchers assistants used ten

days to gather the required data from the 10 selected inclusive schools. A day each was used to gather data in each of the schools.

3.11   Procedure for data analysis

The observation checklists were serially numbered. This was done to facilitate easy identification of errors and also for easy analysis of the data. Responses to the various items in the observation checklist were then analysed by the use of frequency distributions and percentages since the study was a descriptive research. Besides, the results were discussed with references to available literature where appropriate.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1   Introduction

This chapter presents analyses of the data gathered from the field in relation to the evaluation of inclusive education in selected pilot inclusive schools in the Winneba township of Ghana. The main research questions were analysed question-by-question in terms of instructional adaptation, availability of teaching equipment, provision of support services, and the physical properties of the school environment in the Winneba township.

4.2   Research Question 1

How do teachers adapt their instructions to meet the learning needs of all students in their inclusive classrooms?

The observation checklist was used to answer research question one which consisted of twelve observation statements. Table 4 gives an overview of how teachers adapted their instructions to meet the learning needs of students in the inclusive classrooms.

Table 4: Trained researchers assistants observation on teachers Instructional adaptations.

Teacher adaptation to classroom instruction	YES (%)	NO (%)
Teacher provides preferential seating for all students	35(87.5)	5(12.5)
Teacher provides frequent feedbacks to encourage all learners to partake actively in lessons.	32(80)	8(20)
Teacher reframes assessment questions to make it clear to all learners.	11(28)	29(72)
Teacher uses oral assessment to assess students with fine motor deficits.	5(12.5)	35(87.5)
Teacher uses assorted question types in assessment. to participate in the assessment.	21(52.5)	19(47.5)
Teacher gives flexible time frames for work completion.	18(45)	22(55)
Teacher makes changes to curriculum resources. Eg the increase of print to aid those with low vision.	14(35)	26(65)
Teacher uses varieties of memorisation techniques to help all learners to remember facts, eg. Use of mnemonics.	24(60)	16(40)
Teacher presents lessons step-by-step in a systematic way	24(60)	16(40)
Teacher encourages formation of small groups for students to study together	16(40)	24(60)
Teacher considers individual students" capabilities in the delivery of their lessons.	14(35)	26(65)
Teacher emphasises on structuring the content and instructional approach in the context of individual needs so that the students achieve the objectives outlined in the approved curriculum.	18(45)	22(55)

Source: field data (2015)

Table 4 shows the pattern of observations on how teachers adapt their instructions and the curriculum.

Placement of students with special needs at places in the inclusive classroom that support their learning is essential for the success of inclusive education. From Table 4, 35(87.5%) against 5(12.5) of teachers conformed to the statement that "teacher positions students with special needs at place in the classroom that support their learning". The teachers" practice of appropriate strategic placement of students with special needs in the classroom is consistent with the assertion of Wortham (2002) that access to the curriculum is so much more than simply including a student with special educational needs in a mainstream classroom, but involves subtler issues such as how students with special educational needs interact with their peers, how they are strategically placed or better still how the classroom is structured for effective curriculum adaptation.

On the quest to find out if teachers use frequent feedbacks to encourage slow learners to partake actively in lessons, it was found that 32 representing 80% of the teachers conformed to the statement, while 8 (20%) teachers practiced contrary to the statement. According to Barron and Darling-Hammond (2008), there is the need to provide an effective scaffold for success, provide additional support, for example through group work, peer tutoring, direct assistance and frequent feedback.

In finding out whether teachers reframe their assessment questions to make it clear to slow learners, it was observed that 11 of the 40 teachers (27.5%) do vary their questions with 29(72.5%) not varying their questions. This indicate that most

of the teachers in inclusive classrooms do not make any form of adjustment to the questions they asked in order to motivate slow learners to answer the questions. This behavior goes contrary to findings of Brackenreed (2004) that modifications to mainstream curriculum in the United States for example, were most likely to take the form of additional time to complete tests or assignments for high to moderate functioning students, with low-functioning students likely to receive alternative assessments. The data collected point out that the situation in inclusive schools in the Winneba township is quite different from that of the US as reported by Brackenreed.

There was the quest to find out whether teachers use oral assessment to assess students with fine motor deficits. Although most of the classes observed did not have students with fine motor challenges, teachers were asked to tell what they will do in such a situation and they answered as follows; 5(12.5%) answered positive while 35(87.5%) answered negatively to the statement. The low percentage of teachers responding against the affirmative makes the practice in Winneba quite opposite to what is generally practiced as reported by Applebee (1998) that for assessment tasks, the teacher should plan for students experiencing learning difficulties including those with motor skill deficits to access and become familiar with the appropriate support that will allow them to complete assessment tasks. This may include the provision of a scribe and/or reader, additional time, rest breaks, additional assessment opportunities, for example performing a written task orally, etc.

In finding out whether teachers use assorted questions in their assessment, eg. filling in, true or false, etc to encourage slow learners to participate in assessments, 21(52.5%) teachers were observed conforming to the practice whiles 19(47.5%) went contrary to the good practice. It was observed that some of the teachers posed only one question for the students to answer whiles the rest who gave more questions did not vary them. This positive observation moves in line with the contention of Kostelnik, Soderman and Whiren (2004) pointing out that most teachers perceive that alternative test formats such as reducing the number of question items on a test page, rewording questions, teaching test-taking skills, using assorted question or making other accommodations such as extending time limits, or reading a test aloud, etc.

The statement "teacher gives flexible time frames for work completion" attracted a negative response. 18 teachers representing 45% were observed engaging in good practices whiles 22(55%) were observed practicing the contrary. In their view UNESCO (2005), inclusive curriculum must take into consideration the different abilities and needs of all students. It must also be capable of being adapted to meet diverse needs by employing strategies such as the use of flexible time frames for work completion, differentiation of tasks, time for additional support and emphasis on vocational as well as academic goals. The practice of teachers in Winneba as observed in the study does not match with the advise of UNESCO.

Barron and Darling-Hammond (2008) maintained that if one gesture represents "open your book", always use that same gesture, provide concrete

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learning aids which facilitate learning by using a „hands on" approach, remove unnecessary detail from textbooks or worksheets, highlight critical features that are the most important for students to learn, enable students to access alternate formats, such as large print, computers, and simplified texts. From Table 4, there is clear indication that teachers don"t conform to good practices such as the increase of print to aid those with low vision. Whereas 14(35%) of teachers were positive, 26(65%) practiced in the contrary.

Teacher uses varieties of memorisation techniques to help slow learners to remember fact was also observed. It was observed that most teachers in inclusive schools in the Winneba township use memorisation techniques that go a long way to help all students including those with disabilities to remember facts learnt in the classroom. However while 24(60%) teachers used assorted memorisation techniques to assist students to remember facts, 16(40%) taught their lessons without any memorisation techniques. "One systematic review of inclusive education in both primary and post-primary settings reported that the most common pedagogical or classroom technique was adaptation of instruction, such as teaching students to use specific memory techniques to help them remember the material" (Nind, 2004).

As to whether teachers employ task analysis to enable all students to understand what they teach, 24(60%) were observed kowtowing. The remaining 16(40%) taught their lessons without paying much attention to task analysis. According to UNESCO, accessible and flexible curricula can be a key to creating

schools that meet the needs of all students. An inclusive approach seeks to discourage teaching that is based on a criterion of averages. This means that some students will inevitably fall behind, while others will find work too easy. As a result, inclusive curriculum must take into consideration the different abilities and needs of all students. It must also be capable of being adapted to meet diverse needs. Strategies such as flexible time frames for work completion, task analysis, differentiation of tasks, time for additional support and emphasis on vocational as well as academic goals can be useful (UNESCO,2005).

In the observation, it was found that 16 teachers representing 40% observed good practice of encouraging peer teaching to ensure that no student is left behind in class activities. However, 24(60%) used other strategies but does not include peer teaching as proposed by Smith and Thomas (2006) that for successful inclusion, teachers must assign a peer to provide help or assistance when needed. To incorporate socialisation goals, and also to help promote acceptance and learning about differences in the classroom, teachers must select different peers for different subjects or activities (Smith & Thomas, 2006).

The statement; "teacher uses task differentiation in their lesson delivery to ensure that all students reach their learning goals" received a discouraging observation of 14(35%) in favour of, with 26(65%) not practicing task differentiations. This development goes contrary to a National Commission on Science Education report on inclusion that useful strategies for any successful inclusion includes flexible timeframes for work completion, differentiation of tasks,

flexibility for teachers, time for additional support, emphasis on vocational as well as academic goals and flexible teaching-learning methodologies, and that access to the curriculum involves how students with special educational needs interact with their peers, or how the classroom is structured (Winter & O"Raw, 2010).

Whether teachers emphasise on tailoring the content and instructional approach in the context of individual needs so that the students achieve the objectives outlined in the approved curriculum was also observed. In the end 18(45%) of the teachers were observed performing this all-important inclusive practice with 22(55%) of teachers not engaged in any form of tailoring the instructional approaches towards the needs of students individually. This conduct is unrelated with Nind"s (2004) advise that teachers must emphasise on tailoring the content and instructional approaches in the context of individual needs so that the students achieve the objectives outlined in the approved curriculum.

4.2.1   Extent of teacher adaptation of curriculum and teaching pedagogies.

Adaptation of the curriculum and pedagogies is very essential for the promotion of inclusive education. A summary of the extent of teacher adaptation of their curriculum and pedagogies is presented in Table 5.

Table 5: Summary of trained researchers assistants observation on teachers instructional adaptations (Basic 1 to 6).

Level of Teacher Adaptation	Frequency	Percentage (%)
Yes	232	48.3
No	248	51.7
Total	**480**	**100**

Source: field data (2015).

Table 5 shows a summary of trained researchers assistants observation on teachers instructional adaptations.

As shown in Table 5, as low as 232 (48.3%) observations indicated that regular teachers'' adaptation of the curriculum as well as their teaching methodologies in effectively handling students with diverse background in the regular classrooms was adequate, whilst 248 (51.7%) of observations indicated that teachers adaptation of the curriculum and teaching methodologies were inadequate. This means most teachers in inclusive schools in the Winneba township do not possess the relevant competencies in terms of curriculum adaptation and teaching pedagogies in handling all manner of children with disabilities in their inclusive classrooms. The inadequacy of teacher efficacy in the area will go a long way to hamper the philosophy of inclusive education practice.

4.3   Research Question 2

What school resources are available for supporting students with disabilities to participate in learning and other school activities in the inclusive schools in the Winneba township?

The section of the checklist that was used to answer research question two consisted of six statements. Table 6 gives an overview of how teachers select and adapt teaching and learning resources to ensure effective teaching and learning in the inclusive classrooms.

Table 6: Selection and adaptation of school resources available for supporting students with disabilities to participate in learning and other school activities in the inclusive schools in the Winneba township.

Availability and adaptation of teaching equipment	YES	NO
Teacher uses assorted real materials to ensure that lessons are well understood by all students including those with disabilities.	27(45)	13(32.5)
Teacher organises field trips to observe things eg. Birds, fishes, and trees.	29(67.5)	11(27.5)
Teacher use simple artificial and true-to-type materials in their lesson delivery to make lessons easy to understand by all the students including slow learners.	36(90)	4(10)
Teacher has a good stock of materials at his/her disposal in order to ensure that TLM are always ready for use.	29(67.5)	11(27.5)
Teacher invites special education resource teacher to help address the needs of children with special needs.	27(67.5)	13(32.5)
There are no hazardous materials in classrooms.	23(57.5)	17(42.5)

Source: field data(2015).

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In observing the extent to which teachers use assorted realia to ensure that their lessons are well understood by all students including those with disabilities, it was found that 27(45%) of the teachers use some forms of realia (real materials) to enhance the quality of their lesson delivery with 13(32.5%) not practicing the use of realia. The high numbers of teachers using realia to enhance their lesson delivery makes the advise of Accessibility for Canadians with Disabilities Act (2005) credible. They contend that teachers should make flexible use of resources depending on children‟s learning needs and they should not rely too much on only available teaching kits. Teachers must make use of realia since they depict the natural and true picture of concepts being handled.

A lot of teachers in the Winneba township engages in the good practice of making good use of the naturalistic environment in their lesson delivery. According to Accessibility for Ontarians with Disabilities Act (2005), children including those with special needs learn through observation as well as manipulating of objects found in an environment full of sensory stimulation, things in nature, such as flowers, birds, insects, fishes, trees and fallen leaves in the park, are considered to be good learning resources. Majority of teachers 29(67.5%) engage in this practice with the remaining 11(27.5%) relying on the use of teaching and learning resources that are not necessarily natural.

It was observed that some 36(90%) teachers use simple artificial but true-to-type materials in their lesson delivery with the remaining 4(10%) relying on other materials. This vast difference in teachers‟ choice of true-to-type materials goes

contrary to the view of Accessibility for Ontarians with Disabilities Act (2005) that teachers should avoid using too complicated teaching materials, which the children may not understand. Otherwise, learning effectiveness will be hampered. If possible, teachers may try to design and develop true-to-type learning materials by themselves.

It is important that teachers maintain a good stock of resources at their disposal in order to ensure that these recourses are readily available for use. In observing with the statement; "teacher has a good stock of resources at their disposal in order to ensure that TLM are always ready for use", 29(67.5%) of the teachers were in conformity, while 11(27.5%) did not conform to this important hallmark towards effective teaching. This development is consistent with the views expressed by Ministry of Human Resources Development (2000) that broken articles should be repaired or discarded. First aid kits should be easily accessible and teaching-learning materials must be well stocked to make them readily accessible.

In trying to ascertain whether inclusive teachers in the Winneba township do invite special education resource teachers to help address the educational needs of children with special needs or not, it was observed that 27(67.5%) of teachers as against 13(32.5%) invite Special education resource teachers to their classrooms intermittently. This advancement is in line with the recommendation of UNESCO (2001) that suggest that inclusive teachers must consult with special services providers associated with their student''s special needs, e.g. special education

teachers, physical, occupational or movement-orientation therapist, and psychologists, who may be involved in working with students with special needs in the inclusive classroom.

To establish whether teachers ensure that students are not allowed to handle any hazardous material in the classroom, 23(57.5%) of teachers were observed in practices that avoided students from handling toxic substances whiles 17(42.5%) of them practiced the contrary. This tendency is concomitant with the contention of Fraser (2002) that children should be allowed to move freely and happily, and exercise a degree of choice in choosing different activities. They may also be allowed to stay alone in one activity corner to read stories or play with toys, or they can chat with friends or participate in creative play activities with other children, however, teachers must ensure that students are not exposed to harzardous substances which may go a long way to harm the (Fraser, 2002).

4.3.1 Adaptation of school resources for effective inclusive teaching.

The adaptation of school resources is an important concern in inclusive education. Table 7 shows observational responses on the effective adaptation of the school resources in inclusive schools.

Table 7: Adaptation of inclusive school resources (40 classrooms)

Level of resource adaptation	Frequency	Percentage (%)
Yes	171	71.3
No	69	28.7
Total	**240**	**100**

Source: field data (2015).

Table 7 shows the how school resources are adapted in the schools observed.

On the adaptation or otherwise of resources for inclusive schools, 171(71.3%) teachers were observed in good practice in meeting diverse needs of children with disabilities, but 69(28.7%) teachers went contrary to the statement. Inappropriate curriculum resources in inclusive schools may lead to exclusion of children with disabilities. Therefore, appropriate and suitable curriculum resource adaptation is important for achieving inclusive education.

4.4   Research Question 3

How are the schools' environment made friendly for all students in the inclusive schools in Winneba?

The checklist was used to answer research question three which consisted of twelve statements on how the schools environment are being made friendly for all students in the Winneba township.

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Table 8: Researcher's observations made on the suitability of the schools physical

environment.

Physical properties of the school environment	YES	NO
The school has ramps on the compound that facilitate the movement of students using wheelchairs.	16(40)	24(60)
The school has toilets and urinals that are adapted to make them accessible to all categories of students.	13(32.5)	27(67.5)
The school has wash basins and other hand hygiene facilities are readily within reach of all persons with disabilities.	19(47.5)	21(52.5)
The school classrooms are accessible to all categories of students.	18(45)	22(55)
The classroom floor surfaces are well designed to make it slip-free.	19(47.5)	21(52.5)
The school has chairs and tables that are of good height and strength for all the students.	14(35)	26(65)
The school has playgrounds that are accessible to students	16(40)	24(60)
The school has classrooms with windows that supply enough light to aid the vision of students.	34(85)	6(15)

Source: field data (2015)

Table 8 shows the observations made on the suitability of the schools physical

environment.

In ascertaining the extent to which schools make their environments friendly

for ease of access to persons with special needs, the researcher sought to find out

whether the schools have ramps on the compound that facilitate the movement of

students who use wheelchairs. It was observed that 16(40%) of the schools visited

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had good ramps whiles 24(60%) had no ramps. Most of these schools had very high stair cases that led to important quarters of the school. This trend of presence of ramps in some schools and the absence in other schools is similar to the report of a research conducted by Kenrick. According the research conducted by Kenrick (2010), issues of equity observed in schools and also discussed by school staff and students tended to revolve around two main areas. First was the issue of accessibility of the school buildings. According the report, in some of the schools visited, it was evident that comprehensive efforts had been undertaken to make them accessible to all students, regardless of need, as there were elevators, ramps, accessible equipment on the playground, and so on. However, in other schools, he noted narrow hallways and secluded classrooms, and that access to gyms, playground facilities, or other areas of the physical plant were not accessible to students with mobility issues.

The researcher also sought to find out whether the schools visited had toilets and urinals that are adapted to make them accessible to students with disabilities. 13(32.5%) of the observations pointed out that the schools had toilets and urinals with some sorts of adaptations to make them accessible to persons with disabilities whiles 27(67.5%) indicates that the toilets and urinals were with absolutely no adaptations to make them accessible. This state of affairs in most of the schools does not conform to the standards of Kenrick (2010). Kenrick contends that a wheelchair accessible unisex water closet must be designed to meet the needs of independent wheelchair users, but it is also equipped to suit ambulant disabled people who may find themselves in the school setting. "The travel distance to this

water closet should be minimised where it is not located within the classroom"
(Kenrick, 2010). He goes on to add that urinals in inclusive schools must adhere to
the following; where one or more urinals are provided in a washroom, at least one
urinal should be suitable for use by ambulant disabled people. Where six or more
urinals are provided in a washroom, at least one accessible urinal and one low wash
hand basin should be provided for wheelchair users. Where accessible urinals are
provided, a clear area of 900 mm x 1400 mm in front of the wheelchair accessible
urinal should be leveled (Kenrick, 2010).

The issue whether the schools in the Winneba township have wash basins or
other hand hygiene facilities that are readily within reach of all persons with
disabilities, 19(47.5%) of them were reported to have the standard facility whiles
21(52.5%) either do not have it or have it but not within the range of persons who
might be using wheel chairs. Even though more than 50% of the schools have the
facility set within reach of persons with disabilities, the 47% on the other hand is
quite significant to worry about, and it goes contrary to the standard of Wyon
(2001) that where wash basins are provided, at least one wash basin with its rim set
at between 720 mm and 740 mm above the floor level should be provided.

In the quest to find out whether schools have classrooms that are accessible
to the persons with physical impairments, only 18(45%) classrooms were found to
be accessible with 22(55%) being inaccessible. This development is in opposition to
the advice of Kenrick (2010) that classrooms should be spacious, accessible and

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have adequate lighting, good ventilation, enough space for activities and appropriate facilities.

From Table 8, it is conspicuous that the classroom floor surfaces are not well maintained and slip-free. 19(47.5%) of the classrooms were found to be good whiles 21(52.5%) were bad. This situation contradicts the standards of Kenrick (2010) that the floor surface of the classroom must be kept clean and dry at all times. The materials used for covering the floor should be of a more durable nature, easy to clean, able to absorb sound and suitable for sitting on, for example, rubber tiles, rubber mats, etc.

The issue of whether the school has chairs and tables that are of good height and strength for all the students with disabilities attracted much negative responses. 14(35%) of classrooms have chairs and tables with good height and strength whiles 26(65%) have not got such facilities in good shape. Some of these facilities are either too high or too low for ease of usage to all students with disabilities. This situation contradicts the opinion of Fraser (2002) that the height of classroom furniture or partitioning boards should be adjusted to children''s height. Fraser continues to ad that the furniture should not be centralised in one specific spot but be appropriately placed. Toy and book cabinets and art racks should be stable and safe, and equipped with locking wheels so that they can be easily moved and used as partitions.

Another subject of importance to the researcher was to find out whether the school has playgrounds that are accessible to students with disabilities. There was a

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positive observation of 16(40%) and a negative observation of 24(60%). This occurrence is in line with the quote of Wyon (2001) that "common sense tells us that broken windows, leaking roofs, and neglected playgrounds are invitations for disaster".

Pertaining to the statement; the school has classrooms with good windows that supply enough light to aid the vision of students with low vision, 34(85%) of classrooms were found to have this property whiles 6(15%) either have windows that are too tiny to allow enough light and air in or have barristers that do not allow enough light rays and air to enter the room. This positive property existing in most of the schools move in line with Wyon"s (2001) statement that "common sense tells us that broken windows, leaking roofs, and neglected playgrounds are invitations for disaster".

Table 9: Summary of observation responses on how the environment is made friendly for all students in the inclusive schools in Winneba?

User-friendliness of the schools' environment	Frequency	Percentage (%)
Yes	149	46.6
No	171	53.4
Total	**320**	**100**

Source: field data (2015)

Table 9 summerises the user-friendliness of the school"s physical environment for children with disabilities in the Winneba township.

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It is clear from Table 9 that the physical environment is not accessible and / or suitable for inclusion. Evidently, at the end of the observation, it was concluded that the physical layout was inaccessible to all children with a total of 171 (53.4%) observations depicting that the environment is not comfortable especially those with disabilities. This means that children with disabilities especially those with neuromotor problems would have difficulty accessing the environment.

Again, 149 (46.6%) of the observations found the physical environment suitable for school activities such as games and physical education as far as the students with disabilities are concerned. This finding indicates that there will be just a little comfort in organising games and physical education activities. The conclusion is that children in inclusive schools in the Winneba township would not derive the enjoyment and benefits of mobility in their respective schools.

4.5   Research Question 4

How do teachers collaborate with support service personnel in their day-to-day teaching of atypical students in their inclusive classrooms?

The observation checklist was used to answer research question four which consisted of six statements. Table 10 gives an outline of how teachers collaborate with support service personnel in the teaching of students with special needs in the inclusive classroom.

Table 10: Teachers" collaboration with support service personnel **(40 teachers).**

Teacher collaboration with support service personnel	YES	NO
Teacher invites co-teachers to help her	11(27.5)	29(67.5)
Teacher occasionally invites the community health nurse to check on students" health.	13(32.5)	27(67.5)
Teacher invites Special education resource teacher to assist the students with special needs.	32(80)	8(20)
Teacher meets with parents to plan interventions for students with disabilities s	19(47.5)	21(52.5)
Teacher arranges with support personnel to assess, and plan appropriate learning experiences for all students	7(17.5)	33(82.5)

Source: field data (2015)

In the quest to ascertain whether teachers use co-teaching in order to ensure that maximum attention is provided and sustained to assist students with learning challenges, only 11(27.5%) teachers reported that they engage in some form of co-teaching in their lesson deliver. On the contrary, a total of 29(67.5%) of the teachers observed and questioned indicated that they have not used any form of co-teaching in their classrooms. This development is directly opposite to Dodge, Colker and Heroman (2002) which indicates that teachers need to plan for children"s activities that suit their interests and individual needs. In doing so, Dodge, Colker and Heroman (2002) contended that the amount of time allocated for various activities should be adjusted flexibly to include healthy grouping and co-teaching.

The researcher was also interested to find out whether teachers work closely with community health nurses to ensure that the students obtain their healthcare

even as they are in school. The results indicated that 13(32.5%) of teachers in one way or the other did interacted and worked with community health nurses whiles 27(67.5%) of the teachers never interacted with community health personnel in their classrooms. This affirmation is differing from the view point of Emam and Farrell (2009) having it that support of resource teachers, community health nurses, caregivers, parents, volunteers, etc may be sought for in identifying and understanding learning needs, communication needs, use of assistive devices and therapeutic management.

"Teacher collaborates with Special education resource teacher in order to assess and understand the needs of students with disabilities" was another area that received some attention from the researcher. In an effort to find out the level of teachers'' collaboration with special education resource person in their assessment processes, 32(80%) of the teachers reported that they do collaborate with the special education teachers with a few of them 8, representing 20% of teachers did not consult the special education teacher in times of assessment. This development is in line with the findings of King and Youngs (2003) indicating that special educational needs teachers were often used in the United states to help general education teachers to deliver an adapted curriculum and conduct assessment for students with special educational needs.

In the quest for find out whether teachers meet with related professionals to plan interventions for students with disabilities, 19(47.5%) reported that they met with and plan interventions with some related professionals to plan interventions
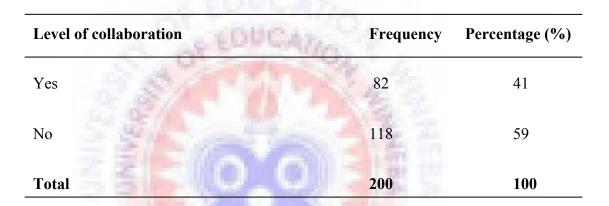
that go a long way to help students with special needs. However a comparably higher number of the teachers (21 teachers representing 52.5%) reported that they don''t meet with any related professional in order to plan any form of interventions for students with disabilities in their classrooms. This practice is clearly not in line with UNESCO (1994) statement that ''we must understand that a child with disability''s evaluation and assessment need to meet certain expected criteria to be identified as experiencing these conditions and to receive related and required educational interventions and services.

As to whether teachers meet with parents and other related professions to discuss the challenges of students with learning challenges, 7(35%) responded in the affirmative. But majority of 23(65%) teachers had not met with parents and / or other related professionals with the aim of discussing the challenges faced by individuals with learning challenges in their classrooms. This negative trend move concomitantly with the research finding reported by Johnson, Thurlow and Stout (2007) that stakeholders indicated that collaboration relating to special education plan development is a critical element that is often missing. Many of the professionals and support service providers involved in the consultation process indicated that they had expressed a desire to collaborate with the school team in the development of special education plan goals and outcomes for students with whom they worked, but that they were not invited to do so.

The low affirmative response rates kicks against Bronfenbrenner's Ecological Systems Theory. According to Heath and Mendell (2002),

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Bronfenbrenner's Ecological Systems Theory encompasses the layered environmental system of microcosms in which human development takes place and emphasises the importance of family, teachers, schools, and the larger socio-cultural environment in the developmental process.

Table 11: Data collected on how teachers collaborate with support service personnel in the practice of inclusion (40 =teachers)

Level of collaboration	Frequency	Percentage (%)
Yes	82	41
No	118	59
Total	**200**	**100**

Source: field data (2015)

Table 11 shows the level of collaboration of teachers with support service personnel.

The researcher sort to find out whether teachers arrange with support service personnel to assess, plan, and facilitate appropriate learning experiences for all students. In the process, 82 (41%) of the observations indicated that teachers do assess, or facilitate appropriate learning for all students through effective collaboration with support service personnel. 118 (59%) of the observations also indicated that they don''t arrange with support personnel to assess, plan, and facilitate appropriate learning.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1   Introduction

This is the final chapter of the study. It presents the summary, conclusions and recommendations for the study.

5.2   Summary

The purpose of the study was to evaluate inclusive education practice in selected pilot inclusive schools in the Winneba township of Ghana. The descriptive research design was adopted for the study. The sampling technique adopted for selecting the study sites and participants was the simple random technique. An observation checklist was used for the harvesting of data. The study was guided by four main research questions. Data gathered were analysed using frequencies, percentages and pie charts.

5.3   Main Findings

1.   The study indicated that there was inadequacy of teacher adaptation of the curriculum and their teaching pedagogies. This was shown by the total of "no" observations of 51.7% made as shown in Table 5. Notwithstanding, a significantly high percentage of 48.3% of teachers were observed not adequately adapting the curriculum and using teaching methods that could help students with learning difficulties to achieve their learning goals.

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2.   The findings from the study also revealed that the adaptations of inclusive school resources were being done adequately. A total of 71.3% of the teachers were observed to have adapted the school resources to suit the learning needs of all the students.

3.   The study also revealed that the physical environment is not suitable for all the students in the inclusive schools in the Winneba township. Majority of the observations (53.4%) revealed that the physical environment affected movement of children with disabilities especially those with physical disabilities. Parts of the school compounds were undulating, stony and weedy which may pose challenges to mobility.

4.   It came to light that majority of the teachers in the inclusive schools did collaborate with support service personnel. Approximately, 41% percent of teachers said they work with support service personnel whiles the remaining 59% they never worked with support sevice persons in any way.

5.3   Conclusions

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

i.   Teachers in the pilot inclusive schools in the Winneba township inadequately adapted the curriculum and their teaching pedagogies. This may be due to inadequate teacher preparation in terms of practicum.

ii.   Curricula used in the inclusive schools have some good level of flexibility but devoid of individual teacher‟s judgment in terms of modification to suit the students‟ needs.

iii.   The physical environment that exists in inclusive pilot schools in the Winneba township is unsuitable and affected mobility for children with disabilities especially those with neuromotor problems.

iv.   Teachers in the inclusive pilot schools in the Winneba township do not collaborate well with related professionals such as community health professionals, audiologists, special education resource persons, etc.

It is evident that there are concrete efforts and movements toward inclusive education in Ghana due to its multi-dimensional benefits for children with and without disabilities, teachers, school administrators, parents and the society at large. The establishment of inclusive pilot schools in most regions of Ghana is key testimony to government‟s mandate and commitment to providing education for all children with and without disabilities. However, for inclusive education to succeed and meet the diverse needs of all children, effective adaptation of curriculum content and resources, promotion of suitable physical environment, as well as encouraging healthy collaboration between teachers related professionals are paramount and cannot be discounted.

5.4   Recommendations

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

- The Ghana Education Service in collaboration with initial teacher education centres must provide ample avenues for fieldwork or practicum experiences in inclusive schools before completion of teacher education programmes. This should be periodically complemented with seminars and in-service training to broaden teachers" knowledge on current developments about inclusive education practices, especially in the area of curriculum and instructional adaptation.

- The physical environment or school compound of inclusive schools must be safe and comfortable for both teachers and students regarding accessibility to the school buildings and easy movement around the teaching and learning areas.

- There should also be effective collaboration between regular teachers and other specialists to enhance the instruction and provision of services for children with disabilities in inclusive schools.

5.5   Areas for further research

The current research is based on curriculum and instructional adaptation, resources adaptation, environmental adaptation and effective collaboration with related personnel. It is suggested that:

1.   Studies are conducted around teacher preparedness and motivation towards inclusive education.

2.   Again, studies must be conducted on barriers to inclusive education.

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APPENDIX

OBSERVATION CHECKLIST FOR TEACHERS ON EVALUATION OF INCLUSIVE PRACTICES IN SELECTED BASIC SCHOOLS IN THE WINNEBA TOWNSHIP.

Direction: Please, indicate with a tick (√) in the appropriate column, the extent of practice of inclusive education considering how teachers adapt the curriculum to suit students with special needs, availability of teaching and learning materials for inclusive teaching, the support services available in the school for effective teaching of students with special needs as well as the nature of the school‟s physical environment for effective inclusion are concerned. Please, check with teacher if you are not sure.

APPENDIX A

Curriculum and instructional adaptation.

S/N	STATEMENT	YES	NO
1	Teacher provides preferential seating for all students with special needs		
2	Teacher provides frequent feedbacks to encourage all learners to partake actively in lessons.		
3	Teacher reframes their assessment questions to make it clear to all learners.		
4	Teacher uses oral assessment to assess students with fine motor deficits.		
5	Teacher uses assorted question types in assessment. Eg. Filling in, true or false, etc to encourage all learners to participate in the assessment.		
6	Teacher gives flexible time frames for work completion.		
7	Teacher makes changes to curriculum resources. Eg the increase of print to aid those with low vision.		
8	Teacher uses varieties of memorisation techniques to help all learners to remember facts, eg. Use of mnemonics.		
9	Teacher presents lessons step-by-step in a systematic way.		
10	Teacher encourages formation of small groups for students to study together		
11	Teacher considers individual students‟ capabilities in the delivery of their lessons in order to ensure that all students achieve their learning goals.		
12	Teacher emphasises on structuring the content and instructional approach in the context of individual needs so that the students achieve the objectives outlined in the approved curriculum.		

APPENDIX B

Availability and adaptation of teaching equipment

S/N	STATEMENT	YES	NO
1	Teacher uses assorted real materials to ensure students understands the lessons well.		
2	Teacher organises field trips to observe things eg. Birds, fishes, and trees.		
3	Teacher uses simple artificial but true-to-type materials in their lesson delivery.		
4	Teacher has a good stock of materials at his/her disposal in order to ensure that TLM are always ready for use.		
5	Teacher invites special education resource teacher to help address the needs of children with special needs.		
6	There are no hazardous materials in classrooms.		

APPENDIX C

Provision of support services

S/N	STATEMENT	YES	NO
1	Teacher invites co-teachers to help her.		
2	Teacher occasionally invites the community health nurse to check on students¨ health.		
3	Teacher invites Special education resource teacher to assist the students with special needs.		
4	Teacher meets with parents to plan interventions for students with disabilities		
5	Teacher arranges with support personnel to assess, and plan appropriate learning experiences for all students.		

APPENDIX D

Physical properties of the school environment

S/N	STATEMENT	YES	NO
1	The school has ramps on the compound that facilitate the movement of students using wheelchairs.		
2	The school has toilets and urinals that are adapted to make them accessible to all categories of students.		
3	The school has wash basins and other hand hygiene facilities are readily within reach of all persons with disabilities.		
4	The school classrooms are accessible to all categories of students.		
5	The classroom floor surfaces are well designed to make it slip-free.		
6	The school has chairs and tables that are of good height and strength for all the students.		
7	The school has playgrounds that are accessible to students.		
8	The school has classrooms with windows that supply enough light to aid the vision of students.		

APPENDICES

OBSERVATION CHECKLIST FOR TEACHERS ON EVALUATION OF INCLUSIVE PRACTICES IN SELECTED BASIC SCHOOLS IN THE WINNEBA TOWNSHIP.

Direction: Please, indicate with a tick (√) in the appropriate column, the extent of practice of inclusive education considering how teachers adapt the curriculum to suit students with special needs, availability of teaching and learning materials for inclusive teaching, the support services available in the school for effective teaching of students with special needs as well as the nature of the school″s physical environment for effective inclusion are concerned. Please, check with teacher if you are not sure.

Appendix E

Curriculum and Instructional adaptations	YES(%)	NO (%)
Teacher places students with special needs at places in the classroom that support their learning.	5	1
Teacher ensures that classroom organisation such as seating arrangement is suitable for the students with learning challenges.	4	2
Teacher uses frequent feedbacks to encourage slow learners to partake actively in lessons.	4	2
Teacher reframes their assessment questions to make it clear to slow learners.	1	5
Teacher uses oral assessment to assess students with fine motor deficits.	**1**	**4**
Teacher uses assorted question types in assessment. Eg. Filling in, true or false, etc to encourage slow learners to participate in the assessment.	4	2
Teacher gives flexible time frames for work completion.	2	4
Teacher makes changes to curriculum resources. Eg the		

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increase of print to aid those with low vision.	2	4
Teacher uses varieties of memorisation techniques to help slow learners to remember facts, eg. Use of mnemonics.	3	3
Teacher employs task analysis to enable all students to understand what he/she teaches	2	6
Teacher encourages peer teaching to ensure that no student is left behind in class activities	2	6
Teacher encourages students to make free choice of activities in order to sustain their interest in lessons	1	5
Teacher uses task differentiation in their lesson delivery to ensure that all students reach their learning goals	2	4
Teacher considers individual students" capabilities in the delivery of their lessons in order to ensure that all students achieve their learning goals	2	4
Teacher encourages co-operative learning among students to ensure that there is peer teaching	1	5
Teacher emphasises on tailoring the content and instructional approach in the context of individual needs so that the students achieve the objectives outlined in the approved curriculum	2	4

Source: field data (2015)

Appendix F

Availability of teaching equipment	YES	NO
Teacher uses assorted real materials to ensure that lessons are well understood by all students including those with disabilities.	4	2
Teacher makes arrangements for students to observe nature eg. birds, fishes, trees, etc in the environment in order for them to have the natural feel of lessons.	4	2
Teacher use simple artificial but true-to-type materials in their lesson delivery to make lessons easy to understand by all the students including slow learners.	5	1
Teacher has a good stock of resources at his/her disposal in order to ensure that TLM are always ready for use.	4	2
Teacher invites special education resource teacher to help address the needs of children with special needs.	4	2
Teacher ensures that students are not allowed to handle any hazardous material in the class.	5	1

Source: field data(2015).

Appendix G

Physical properties of the school environment	YES	NO
The school has ramps on the compound that facilitate the movement of students using wheelchairs.	4	2
The school has toilets and urinals that are adapted to make them accessible to students with disabilities.	1	5
The school has wash basins or other hand hygiene facilities are readily within reach of all persons with disabilities.	3	3
The school has classrooms that are accessible to the physically impaired persons	3	3
The classroom floor surfaces are well maintained and slip-free.	3	3
The school has chairs and tables that are of good height and strength for all the students with disabilities.	4	2
The school has playgrounds that are accessible to students with disabilities.	2	4
The school has classrooms with good windows that supply enough light to aid the vision of students with low vision.	5	1
Teacher ensures that classrooms are always safe and comfortable without impediments to the students especially those with physical impairments.	4	2
Teacher arranges the classroom to ensure that there are good spaces for easy passage by students with physical impairments and those with low vision.	4	2

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Teacher ensures that chairs are arranged in smaller group formations that make the classroom attractive and promote communal spirit and peer assistance among students.	3	3
Teacher has well spelt out rules to ensure a noise-free classroom.	4	2

Source: field data (2015)

Appendix H

Provision of support service	YES	NO
Teachers use co-teaching in order to ensure that maximum attention is provided to assist students with learning challenges.	2	4
Teacher works closely with community health nurses to ensure that the students obtain their health.	2	4
Teacher collaborates with Special education resource teacher in order to assess understand the needs of students with disabilities	5	1
Teacher meets with related professionals to plan interventions for students with disabilities	3	3
Teacher meets with parents and other related professions to discuss the challenges of my students with learning challenges	2	4
Teacher arranges with support personnel to assess, plan, and facilitate appropriate learning experiences for all students	1	5

Source: field data (2015)

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