

UNIVERSITY OF CAPE COAST

EFFECTS OF SOCIAL INCLUSION OF CHILDREN WITH
DOWN'S SYNDROME ON PEERS IN A REGULAR CLASSROOM AT THE
METHODIST PRIMARY CLUSTER OF SCHOOLS IN CAPE COAST

EMMANUEL KWAME LARBI MANTEY

2010

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BY

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Thesis submitted to the Department of Educational Foundations of the Faculty of
Education, University of Cape Coast, in partial fulfilment of the requirements for
award of Master of Philosophy Degree in Special Education

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature:..... Date:.....

Name: Emmanuel Kwame Larbi Mantey

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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ABSTRACT

This study examined the views regular pupils held for children with Down's syndrome and ascertained the effects an intervention on social interaction between children with and without Down's syndrome would have on the perception and attitude of those without disabilities.

The research design for the study was a pre-test–post-test non-equivalent quasi-experimental design. Cape Coast Aboom Methodist cluster of schools was used for the study. The entire Basic Stage 4 pupils in the schools (56) with 4 Down's syndrome children were the subjects for the study. The instruments for the experiment were questionnaire and observation. The Cronbach's Alpha coefficient of reliability for the two instruments were .88 and .80 respectively.

The finding revealed that inclusive education has a positive effect on social interaction and was consistent with the Social learning theory as regular pupils after watching the researcher and some school children, familiar with children with Down's syndrome interacting, were motivated to do likewise. It was effective in improving pupils' "perception" and "attitude" towards their Down's syndrome peers but not on "friendship".

The recommendations included the need to enhance effective social interaction among children with and without Down's syndrome to lessen associated phobias children without Down's syndrome have for their peers with Down's syndrome. Equally important is educational authorities organising joint programmes such as sports, games and cultural activities for children with and without Down's syndrome.

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DEDICATION

To Mavis, my wife and my daughters, Asi, Ampomaa and Odi Mantey-Larbi.

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CHAPTER ONE

INTRODUCTION

Background to the Study

A sense of social inclusion is most likely achievable when people are able to develop and maintain a set of reciprocal social relationships based upon trust and mutual caring that transcends specific settings or contexts. These associations have an impact on how people view themselves and their world, and meet a myriad of personal needs (Abery, 2007). These factors are crucial for the successful community adjustment of persons with and without disabilities. Taylor (2002) highlighted the fact that educating people through social interaction to understand the concept of individual differences to enable them appreciate one another and to co-exist harmoniously is crucial. This implies that social inclusion is hinged on the idea of being welcomed and feeling belonged to persons one interacts with in the society.

Impact International (2009) indicates that, social inclusion is concerned with changing the circumstances and habits that lead to (or have led to) the alienation or disenfranchisement of certain people within a society. Anyone who deviates in any perceived way from the "norm" of a population can become subject to blatant or more subtle forms of social exclusion and their access to various opportunities may be limited.

According to Abery (2007) the term social inclusion, while appearing frequently over the last few years, is yet to be well defined. Attempts to define it in measurable ways have fallen short, primarily because of the highly personal and individualised nature of it. No guidelines exist for determining the degree, type, and context of social interaction necessary for an individual to feel included in or a part of a community. A set of social relationships that is sufficient to allow one individual to feel “included” may be insufficient for another. Thus social inclusion primarily involves experiencing a sense of belonging; feeling that persons other than family and professionals care for, value, and desire to spend time with Special Educational Needs (SEN) children; knowing that support will be available if when needed; and having regular access to the community and those within it with whom SEN children desire to associate. It is the feelings of being a contributing part of a network of persons whom they know, who knows them (Abery, 2007).

Kirk, Gallagher and Anastasiow (2000, p. 63) posit that, “the overarching concern for those supporting the inclusion movement seems to be the social relationships of the child with disabilities, rather than mastery of certain academic and technical skills”. They further indicate that, if we are to have, as a major goal, the social integration of persons with disabilities into adult society, then the school environment should foster the development of such skills, personal friendships, and relationships with children with disabilities.

Inclusive education is the process of giving all children the opportunity to participate fully in regular classroom activities regardless of their disability, race,

or other characteristics (Ainscow, 2005; Deiner, 2005). It involves providing a variety of activities and experiences so that, all students can participate and be successful in the regular classroom of their neighbourhood schools (UNESCO, 1994). In the view of Stainback (2008), inclusion became widespread in the 1990s and often used in place of mainstreaming or integration. However, inclusion is a more comprehensive term and emphasises the addition of specially designed activities that engage all students collectively.

As a signatory to the United Nations' Salamanca Principle and Framework on Inclusive Education (UNESCO, 1994), the government of Ghana through United Nations Educational Scientific and Cultural Organisation (UNESCO) has initiated some pilot projects in the country. These include the Winneba Initiative, which piloted inclusive education in some selected districts in the country (Avoke & Avoke, 2004). It focused on the context of the classroom as a school-based project. Other projects were more concerned with the social, vocational, health and educational needs of SEN pupils within the context of a Community-Based Rehabilitation (CBR) project. The establishment of Units for Special Needs Children in selected regular schools in the country help promote social interaction between pupils' with and without disabilities.

Lewis and Doorlag (1995, p. 160) are of the view that, "many special students encounter difficulty in social interactions with general education peers and teachers". They added that, many people have little accurate information about special students, and this lack of knowledge can create fear and prejudice. There is therefore the need to foster social inclusion to obviate this glitch

The works of Dworetzky (1996) stressed the importance of social interaction by learning theorists such as Bandura and Vygotsky. He indicates that Bandura (1963) concludes that learning takes place by observation and imitation, while Vygotsky (1978) points out that, at each stage of learning, individuals are prepared to be responsive to a particular environment and the people in it. Through such interactions, children become aware of individual difference and learn to respect the differences that help them to improve upon their behaviours (Deiner, 2005). Research has consistently indicated that inclusive educational settings designed to address the individual needs of children offer expanded possibilities for educational, social, and emotional growth among all students. Educators who practise inclusive schooling also value the increased exposure of students to the natural diversity of the community (Boison, 2006; Okyere, 2003 and Stainback, 2008).

In spite of the fact that most educators consider inclusive education to be ethically and morally sound, a number of obstacles seem to interfere with its widespread implementation. Boison (2006) and Okyere (2003) for instance indicated that some parents and educators have expressed concern that the introduction of students with disabilities into regular classrooms may disrupt school activities or require excessive amounts of class time. They further indicated that some parents of children without disabilities have expressed worry that inclusion slows educational progress for both students with disabilities and the non-disabled peers.

In the same vein, teachers have often found it difficult to adapt traditional methods of educational assessment to meet the needs and concerns of individual students with disabilities. Traditionally, methods of assessment have based on a hypothetical average student (Avoke, 2004). Teachers also often lack the training and expertise needed to understand the individual needs and abilities of children with disabilities. They often perceive the difference or disability rather than the student's ability to learn and actively participate in classroom activities.

Nonetheless, many school systems in the United States have experienced positive results from inclusive education, and resistance to inclusion is diminishing in many areas of education. Educators increasingly view the inclusion of disabled students in the classroom as a valuable contribution to classroom diversity (Stainback, 2008).

Major advocates of inclusive education such as Forest (1987); Harris (1994); Hedeem (1994); Stainback and Stainback (1988) and Strully (1986) cited in Stainback and Stainback (1996), hypothesise that one of the major benefits of inclusion is that; students can learn to interact, communicate, develop friendships, work together, and assist one another based on their individual strengths and needs. Awareness of the need for inclusion has grown worldwide. Stainback (2008) argues that, many international documents, such as the Canadian Commission on Emotional and Learning Disorders Report of 1970, the 1978 Warnock Report in England, and the 1984 Report by the Ministry of Education in Australia, refute educational exclusion. These documents are part of a growing effort among educators around the world to provide children with the opportunity

to learn with and from their peers, regardless of any individual differences they may have.

It is common knowledge that in the Ghanaian cultural perspective, people with physical, sensory or mental impairments were and are thought of as being under the spell of witchcraft, curses, or possessed by demons, or as penitent sinners. The belief is that, God, the gods, or the ancestors are punishing them for wrongdoing by themselves, their parents or some family members. Avoke (2002) reported that the attitude of the community were shaped largely by the beliefs in and fear of the deities and gods, who were capable of inflicting punishment on those who had offended or strayed away from the norms of society. He further argued that blame is usually towards many parents and children for bringing disability on themselves. Families and communities regarded the disabled as liabilities. This in effect meant that, there were no provisions made for their balanced growth and development. Ocloo (2003) hinted that they sometimes killed most of these individuals. Others were over protected, misdiagnosed or undereducated such that they led a segregated and debased life.

Children with Down's syndrome are among the special educational needs categories who suffer from these social misconceptions. Every human being should have 23 pairs of chromosome, which should total 46. In the case of children with Down's syndrome, they typically have 47 chromosomes in all. These children show signs such as; short stubby fingers and toes, abnormal thick eyelids, slanted eye shape, tongue usually protruding, small and low set ears and abnormal palm lines with rough palms. Infection in the eye is also common with

children with Down's syndrome because of lack of lip zone, an antiseptic enzyme, which fights infections in the eye. The condition, in most instances, leads to mild or moderate mental retardation and a variety of hearing, skeletal, and heart problems (Avoke, 2004; Kirk, Gallagher & Anastasiow, 2000). Some of these children can be found in some regular classrooms in Ghana, but most of them are in the special schools for children with intellectual disabilities like the Garden City Special School in Kumasi, Dwowulu Special School in Accra and the Twin City Special School in Takoradi.

Due to the features of children with Down's syndrome, and the prejudices associated with their birth, in Ghana, various are called dehumanising names such as "gyimigyimi" or "toke toke" indicating they are stupid. These social misconceptions have led to most non-disabled people in the country fearing to associate with those who have Down's syndrome. From the researcher's personal experience, this has led to a situation where some parents would not even encourage their non-disabled wards or children to mingle with them in the school environment, an affront to the implementation of inclusion in the country. Consequently, of these negative societal attitude towards children with SEN and disabilities, children with Down's syndrome as indicated by Guralnick, (2002) typically have difficulties interacting with their non-disabled peers. These notwithstanding, children with Down's syndrome as well as those with intellectual disabilities are being given the opportunity to be educated.

According to Kniel and Kniel (2008), by the end of 2007, all over Ghana, twenty three Units schools for pupils' with intellectual disabilities had been

established by the partnership project “Support to Special Education” of the Ghana Education Service, Special Education Division (SPED) and the German Technical Cooperation (GTZ). One of such schools is in Cape Coast as Methodist Primary “A” Unit School for Special Needs Children, now registered as Special Needs School. The school admits intellectually handicapped children, some of which have various degrees of disabilities such as Down’s syndrome, cerebral palsy, autism, and some with multiple disabilities. It is located within the compounds of the Methodist Primary cluster of schools in the Aboom Circuit of the Cape Coast Metropolis. The school seeks to foster close contact among pupils of the cluster of schools, thus a means to promote social interaction that is one of the benefits of inclusive education. Though this has been one of the objectives of setting up the unit, the children in the unit actually do not have any activity with those in the regular school. They are not allowed to come out of their school since the hyperactive ones usually get out to roam about when their gates are opened. Since the setup of the schools, there has not been any concrete study done on how they positively or negatively affect the social interaction of children with and without Down’s syndrome or those with intellectual disabilities.

Statement of the Problem

For a successful implementation of inclusive education, the Department for Education and Skills (DfES, 2001) indicated under the Principles and Policies of Special Educational Needs Code of Practise, Article 1:7 that, meeting the needs of children with SEN successfully require partnership between all those involved, that is, Local Educational Authorities (LEAs), schools, parents, pupils, health and

social services and other agencies. The inclusion of pupils (that is other pupils without disabilities) in the partnership is important. For, if inclusive education can be successful, it will require the support of children without SEN in the schools. This is because they can make life comfortable or uncomfortable for the children with SEN through bullying, teasing and rejection as identified by Rose and Shevlin (2004) in their studies conducted in the United Kingdom (UK) and Ireland. A research conducted by Vanderpuye (2003) in Cape Coast, Ghana, revealed that children with disabilities felt sad when their peers teased or called them by the nature of their disability.

In Ghana, it appears that due to some social misconceptions, most non-disabled children show signs of fear for those with Down's syndrome. Apparently, they do not have sufficient information about the causes and characteristics of children with Down's syndrome and tend to rely on what they hear about them. Roberts (1983) in Deku and Gyimah (2003) contends that both individuals with and without disabilities feel a sense of discomfort and uneasiness in interacting, but non-disabled persons feel more uncomfortable in the presence of their disabled peers and tend to avoid interacting with them. These may imply that, for successful practise of inclusive education in the country, Children without Disabilities (CWDs) have to interact with those who have Down's syndrome. However, it appears that such an interaction is not observed among pupils with and without Down's syndrome in regular education in Ghana. The question therefore is; how does inclusive education affect the social interaction between children with Down's syndrome and those without special educational

needs in Ghana? Most studies carried out in Ghana on children with disabilities centre on academic achievements, attitude and perception of teachers' towards the blind, hearing impaired, those with learning disabilities and the intellectually handicapped (which is often generalised) in an inclusive environment. Few children with Down's syndrome find themselves in the regular school in Ghana. Studies on the perception and attitude of their peers without disabilities, and how they interact socially are limited if ever studied. This study therefore experiments and finds out the effects of social inclusion of children with Down's syndrome on their peers in a regular classroom at Aboom Methodist Cluster of Schools in Cape Coast.

Purpose of the Study

This study aimed at examining the effects of inclusive education on social interaction among children with Down's syndrome and their non-disabled peers in Cape Coast, Ghana.

The purpose of the study was therefore to:

1. Examine the views children without disabilities held for children with Down's syndrome as far as their social interaction with them is concerned.
2. Ascertain the effects an intervention on social interaction between children with and without Down's syndrome would have on the perception and attitude of those without disabilities.

Research Questions

The research was guided by two main research questions which ascertained the views children without disabilities held for children with Down's syndrome. The questions were;

1. In the context of social interaction, what views do children without disabilities hold for children with Down's syndrome?
2. To what extent does the attitude of regular pupils promote their desire to become friends to children with Down's syndrome?

Hypotheses

To answer the questions raised, the researcher formulated the following null hypotheses:

H₀1. There is no significant difference existing between the perception of regular pupils' who practise inclusion with the Down's syndrome and their peers who do not.

H₀2. There is no significant difference existing between the attitude of regular pupils' who practise inclusion with the Down's syndrome and their peers who do not.

H₀3. There is no significant difference existing between making friends to children with Down's syndrome by regular pupils' who practise inclusion with them and their peers who do not.

Significance of the Study

It is obvious that in principle inclusive education holds lots of benefits, but how to go about it is the greatest challenge. Ainscow (2005, p.109) finds it to be

the “big challenge facing school systems throughout the world”. Fobih (2008) contends that, in spite of the challenges faced with inadequate societal attitudes against children with disabilities and special education needs, it should be possible for schools to include all children, regardless of their disabilities and other recognisable differences. The anticipation is that, the results of the study will reveal the perception and attitude children without disabilities hold for those who have Down’s syndrome. This information will go a long way to shape policy direction and guidelines of inclusion in Ghana. It will enable policy makers as well as educationists and other stakeholders to identify the methods to adopt to enhance positive attitudes and socialisation amongst children with and without Special Educational Needs.

The results will stress the need to provide information about the causes and characteristics of SEN. Factors that underpin the causes of disabilities such as biological and environmental factors would be highlighted. It is expected that the study will reveal pupils’ views on the characteristics of children with Down’s syndrome. It is hoped that the intervention strategies that will be applied would help pupils to identify the needs, strengths and capabilities of the children with Down’s syndrome and what can be done to encourage and support them as peers.

Additionally, the results of the study will champion the involvement of other stakeholders such as social services in collaborating with schools to promote socialisation among all pupils’, with or without disabilities. This becomes imperative, as the school alone cannot adequately meet the social needs of children with Down’s syndrome. Finally, the study will enrich the literature on the

approach to adopt to promote social interaction, as available literature is not explicit on how children without disabilities could accept and work together with those who have Down's syndrome.

Delimitation of the Study

There are many SEN categories with intellectual disabilities such as those with Down's syndrome, Autism, Asperger's syndrome, Cerebral palsy, Fragile X syndrome and Turner's syndrome. This study was conducted with children with Down's syndrome. This was because they have physical features such as slanted eyebrows and flat identical faces, which make them easily identified amongst those with intellectual disabilities in the society. The study could have centred on areas such as; Down's syndrome and academic achievement, language and communication in pupils with Down's syndrome, facilities or infrastructure in enhancing the development of the Down's syndrome in an inclusive environment as well as transition programmes to help them live a meaningful life in the outside world. In choosing the area of study, premium was given to relevance and utility of social interaction between children with and without Down's syndrome in inclusive setting as less has been done in this area.

The variables considered under social interaction for the study was based on regular pupils' perception and attitude towards the Down's syndrome and friendship with them at the Cape Coast Methodist Primary Cluster of Schools. It was the hope of the researcher that, because he is a teacher in the Unit school and very familiar with the school environment results of this study can easily be experimented in the school.

Limitations of the Study

The main instrument for collecting data for the study was questionnaire. Since the researcher could not verify the authenticity of the data supplied, there was the fear that pupils might not accurately report on their real views and feelings. Though independent work was required, the possibility of some pupils copying what their friends had ticked could not be ruled out.

Relatedly, the study was conducted at a time when the schools were preparing for examinations. As a result, it was not possible to embark on the study for the six-week period scheduled for the intervention. The lack of sufficient time might have affected the results in some ways. The sample population and number of schools used were limited, which can affect generalisation of the findings. There is therefore the need to interpret the results with some caution.

Definition of Terms

Social Inclusion: it is the process of developing, maintaining a set of reciprocal relationships with others in a community based upon trust, and mutual caring that transcends specific settings or contexts.

Social Interaction: This has to do with understanding the feelings of others in a community (school or home) and relating to them cordially.

Children with Down's syndrome: They are young persons up to about fifteen years who have chromosomal anomaly that often causes moderate to severe intellectual disability, along with certain physical characteristics such as broad flat face and bridge of the nose, large tongue and slightly slanted eyes.

Regular pupils: These are the usual and ordinary learners in the basic school.

Peers without disabilities: They are a class of learners devoid of identified or noticeable shortcomings who are able to perform average motor and academic activities related to their age.

Inclusion: It is an approach that recognises the fact that every individual child is a unique learner and have access to regular education regardless of their physical, intellectual, emotional, financial, linguistic or other differences.

Age-appropriate class: It is placement of pupils' in classes laid down for a child's chronological age and not the mental age.

Organisation of the Study

The entire study examined the effects of social inclusion of children with Down's syndrome on peers without disabilities. The researcher developed the study under five chapters. The first chapter is the introduction. It considered the following: background to the study, statement of the problem, purpose of the study, research questions, hypotheses, significance of the study, delimitations, limitations and definition of terms.

The second chapter is on review of literature. It provides theoretical and empirical evidences on Down's syndrome, inclusive education and social interaction. The issues reviewed are broken down into sub sections to cover salient aspects.

The third chapter is concerned with the methodology. It explains how the study was conducted and comprises the research design, the population, sample

and sampling procedure. It also describes how the instrument was developed and administered as well as the procedure adopted to analyse the data.

The fourth chapter deals with the results and discussion of the data collected from the field. Finally, the fifth chapter provides the summary, conclusions, recommendations and suggestions for further studies.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter presents an overview of some related literature. It is discussed in both theoretical and empirical evidence under the following sub-headings:

- I. History, definition and characteristics of Down's syndrome
- II. Attitude and perception of people towards Down's syndrome
- III. The concept of inclusive education
- IV. Inclusive education in Ghana
- V. Social interaction
- VI. Social learning theory
- VII. Down's syndrome and social interaction

Historical Perspective of Down's Syndrome

The discovery of Down's syndrome was in 1866, by John Langdon Down, a physician of Earlswood Asylum in Surrey, England, hence, the name Down's syndrome. He first characterised it as a distinct form of mental disability in 1862 and in a more widely published report in 1866 (Conor, 1999; Kirk, Gallagher & Anastasiow, 2000). Due to Down's perception that children with Down's syndrome shared physical facial similarities (epicanthal folds) with those of Blumenbach's Mongolian race, he used the term mongoloid, derived from

prevailing ethnic theory to classify them, which Avoke (2004) indicated that it had nothing to do with the Mongolian race. According to Norman (1979), in 1961, eighteen geneticists wrote to the editor of *The Lancet* suggesting that Mongolian idiocy had "misleading connotations," had become "an embarrassing term," which should be changed.

Norman advanced that the World Health Organization (WHO) officially dropped references to mongolism in 1965 after a request by the Mongolian delegate was made in support to what the geneticists had suggested. In 1975, the United States National Institutes of Health convened a conference to standardize the categorization of malformations. They recommended eliminating the possessive form: The possessive use of an eponym was to be discontinued, since the author neither had nor owned the disorder. Although both the possessive and non-possessive forms are used in the general population, 'Down syndrome' is the accepted term among professionals in the USA, Canada and some other countries; whereas 'Down's syndrome' is still used in the United Kingdom and her allies (Len, 2003).

The first World Down's Syndrome Day was held on 21st March 2006. The day and month were chosen to correspond with 21 and trisomy, respectively. Answers.com (2009) reveals European Down's Syndrome Association proclaimed it during their European congress in Palma de Mallorca in 2005. In the United States, the National Down's Syndrome Society observes Down's syndrome month every October as a forum for dispelling stereotypes, providing accurate information, and raising awareness of the potential of individuals with

Down's syndrome (National Down's Syndrome Society, NDSS, 2004). Down's Syndrome South Africa cited in Answers.com (2009) also indicates that, Down's Syndrome Awareness Day is held every October 20 in South Africa. In addition to that, Organizations such as Special Olympics, Hawaii provide year-round sports training for individuals with intellectual disabilities such as Down's syndrome.

By the 20th century, Down's syndrome had become the most recognizable form of mental disability (Answers.com, 2009). Most individuals with Down's syndrome were institutionalised; few of the associated medical problems were treated, and most died in infancy or early adult life. With the rise of the eugenics movement, 33 of the then 48 US states and several countries began programmes of forced sterilization of individuals with Down's syndrome and comparable degrees of disability (Answers.com, 2009). The ultimate expression of this type of public policy was "Action T4" in Nazi Germany, a programme of systematic murder. Court challenges, scientific advances and public revulsion led to discontinuation or repeal of such sterilization programs during the decades after World War II (Answers.com, 2009). Notwithstanding the challenges faced by people living with Down's syndrome, the following notable persons Stephane Ginnsz and Paula Sage among others could not be left unrecognised. Stephane Ginnsz in 1996 was declared the first actor with Down's syndrome in the lead part of a motion picture. Paula Sage was also a Scottish film actress and Special Olympics netball sportsperson. Her role in the 2003 film 'AfterLife' brought her a

BAFTA Scotland award for best first time performance and Best Actress in the Bratislava International Film Festival, 2004 (Answers.com, 2009).

Until the middle of the 20th century, the cause of Down's syndrome remained unknown. However, the presence in all races, the association with older maternal age, and the rarity of recurrence had been noticed. Standard medical texts assumed it was caused by a combination of inheritable factors, which had not been identified. Other theories focused on injuries sustained during birth. Trepanier and Feldman in Answers.com (2009) point out that, in 1959 French geneticist Jerome Lejeune recognized that individuals with Down's syndrome have forty-seven (47) chromosomes instead of the usual forty-six (46).

Later it was determined that it is an extra copy of chromosome 21 that causes the condition. It is not yet clear how the extra chromosome causes the clinical features, although it is believed that an "extra dose" of one or more of the genes on the chromosome is responsible. Chromosomes are the units of genetic information that exist within every cell of the body (Encyclopaedia Britannica, 2004). Twenty-three distinctive pairs, or 46 total chromosomes, are located within the nucleus (central structure) of each cell.

When a baby is conceived by the combination of one sperm cell with one egg cell, the baby receives 23 chromosomes from each parent, for 46 chromosomes. Sometimes, an accident in the production of a sperm or egg cell causes that cell to contain 24 chromosomes. This event is referred to as non-disjunction. When this defective cell is involved in the conception of a baby, that baby will have 47 chromosomes. The extra chromosome in Down's syndrome is

labelled number 21. For this reason, the existence of three such chromosomes is sometimes referred to as Trisomy 21 (Answers.com, 2009 and Encyclopaedia Britannica, 2004).

Down's syndrome is the most common single cause of human birth defects. Prenatal tests such as amniocentesis and chorionic villus sampling can be used to detect the chromosomal abnormality causing Down's syndrome (Lewis and Kirmse, 2007 and Microsoft Encarta Encyclopaedia, 2006). In addition, maternal blood tests can suggest the presence of a foetus with Down's syndrome when levels of a protein, alphafoetoprotein, are lower than usual, or when levels of the female sex hormone oestriol (a form of oestrogen) and human chorionic gonadotrophin (a pituitary hormone that controls the sex hormones) are abnormal. It can be diagnosed prenatally by the presence of the abnormal chromosome in samples of foetal cells taken from the amniotic fluid (Answers.com, 2009; Encyclopaedia Britannica, 2004; Lewis and Kirmse, 2007 and Microsoft Encarta Encyclopaedia, 2006).

Heward (1996) posits that in recent scientific advances, amniocentesis can be used as an early intervention strategy to reduce or eliminate the mental retardation aspect of a child at risk, like those with Down's syndrome. By this, some fluid is drawn from the amniotic sac surrounding the foetus. This is analysed within the 14th to 17th weeks for symptoms and treatment. Lewis and Kirmse (2007) add that, with modern medical care, most persons with Down's syndrome except those with major heart defects that cannot be corrected by surgery live into adulthood.

They do have a shorter life expectancy of about fifty-five (55) years than normal adults because they develop the degenerative conditions of old age prematurely. There have been dramatic increases in the survival rates of people with Down's syndrome since the 1970s. As the risks of medical problems specific to Down's syndrome have become known, doctors are now able to recognize those problems earlier, and develop more treatments that are effective. Lewis and Kirmse (2007) purport that 44 percent of people with Down's syndrome can now survive to age sixty, and this life expectancy is slowly approaching that of people without Down's syndrome.

Definition of Down's Syndrome

Lewis and Kirmse (2007) define Down's syndrome as a genetic condition in which a person has 47 chromosomes instead of the usual 46. Mattheis (2006) adds that, Down's syndrome results when a person inherits all or part of an extra copy of chromosome 21. This can occur in a variety of ways, the causes of which are unknown. Gregory (2004) submits that there are three different types of Down's syndrome: standard trisomy 21, translocation and mosaic Down's syndrome.

The most common chromosomal abnormality that produces Down's syndrome (accounting for about 95 percent of all cases) is Trisomy 21, a defect in which an extra third copy of chromosome 21, is present in every cell in the body. Translocation Down's syndrome accounts for 3 percent to 4 percent of cases. It occurs when the extra copy of chromosome 21 is attached to another chromosome. In about one-fourth of the cases where a person has translocation

Down's syndrome, he or she inherited the translocation from a parent (Answers.com, 2009). Mosaic Down's syndrome occurs in 2 percent to 3 percent of cases. In mosaic Down's syndrome, a person has some cells with an extra copy of chromosome 21 and some cells with the usual two copies. People with mosaic Down's syndrome may or may not have milder symptoms than people with "full" trisomy 21 (Answers.com, 2009; Gregory, 2004 and Microsoft Encarta Encyclopaedia, 2006).

The incidence of Down's syndrome is estimated at one per 800 to one per 1000 births. Answers.com (2009) reports that, in 2006 the Centres for Disease Control and Prevention estimated the rate as one per 733 live births in the United States with 5429 new cases per year. The incidence of the disorder increases markedly in the offspring of women over the age of 35. This is illustrated by the fact that Down's syndrome's incidence in the offspring of young women is only about 1 in 1,000, while its incidence in those of women over age 40 is about 1 in 40. Mattheis (2006) point out that, the number of Down's syndrome births is relatively low for 18-year-old mothers, about 1 in 2,100 births. In the later childbearing years, the risk increases significantly from 1 in 1,000 births for 30-year-old women to 1 in 100 births for 40-year-old women.

Estimate from "National Down's Syndrome Centre" cited in Answers.com (2009) adds to the aforementioned that maternal age influences the chances of conceiving a baby with Down's syndrome. At maternal age 20 to 24, the probability is one in 1562; at age 35 to 39 the probability is one in 214, and above age 45 the probability is one in 19. The above records though diverse confirm

that, women above 35 years are more likely to bring forth to children with Down's syndrome.

Cognitive development in children with Down's syndrome in the view of Bird and Thomas (2002) is quite variable. They observe that it is not currently possible at birth to predict the capabilities of any individual reliably, nor is the number or appearance of physical features predictive of future ability. The identification of the best methods of teaching each particular child ideally begins soon after birth through early intervention programmes. Children with Down's syndrome may not age emotionally, socially and intellectually at the same rates as children without Down's syndrome, so over time the intellectual and emotional gap between children with and without Down's syndrome may widen (Bird and Thomas, 2002). The level of mental retardation is considered mild-to-moderate. Complex thinking as required in sciences, history, the arts, and other subjects can often be beyond the abilities of some, or achieved much later than in other children.

In the submissions of Microsoft Encarta (2006), although people with Down's syndrome have a range of learning disabilities, physicians, educators, and parents now recognize that these people's achievements may be most influenced by what is expected of them. This expectation is perhaps the most important factor in determining the educational and vocational potential of people with Down's syndrome. Intelligence quotient (IQ) test scores, once considered an authoritative indicator of educational potential, are now seen to be of questionable value.

The actual IQ range of Children with Down's syndrome is quite varied, but the majority of such children are in what is sometimes known as the trainable range. This means that most people with Down's syndrome can be trained to do regular self-care tasks, function in a socially appropriate manner in a normal home environment, and even hold simple jobs. Bird and Thomas (2002) therefore agree that children with Down's syndrome may benefit from mainstreaming or inclusion if some adjustments are made to the curriculum. Lewis and Kirmse (2007) concur that the majority can be taught to contribute usefully in the home or in a sheltered working or living environment after they are grown.

In the recent past, children with Down's syndrome were relegated to institutions, receiving minimal social interaction or educational opportunities since they were classified as mentally retarded or intellectually handicapped. Mattheis (2006) posits that today children with Down's syndrome usually remain with their families and are enrolled in public schools. Often they attend regular classes and learn skills such as reading and writing alongside children without Down's syndrome. He maintains that adults with Down's syndrome are employed in a range of fields. Some may live in supervised group homes, while others live independently. Educational and vocational opportunities have also advanced to help them to be useful to themselves and their families.

From the researchers own experience at the Special Needs School at Aboom, Cape Coast with some children with Down's syndrome, he observed that it is obvious that when early intervention is provided, the children can grow to be independent. The older Down's syndrome girl in the school sweeps all the two

classrooms very well, without prompt, each morning she comes to school. She is able to serve her colleagues at lunch by collecting their food and sending it to their tables. She also collects the used plates and dishes and cleans them effectively, needing little or no supervision.

Characteristics of Children with Down's Syndrome

Down's syndrome symptoms vary from person to person and can range from mild to severe. However, children with Down's syndrome have a widely recognized characteristic appearance. Lewis and Kirmse (2007) provide the following common physical signs as some symptoms:

- I. Decreased muscle tone at birth
- II. Excessive skin at the nape of the neck
- III. Small low-set ears
- IV. Small mouth
- V. Upward slanting eyes
- VI. Wide, short hands with short fingers

They further indicate that physical development is often slower than normal in the Down's syndrome and that most of them never reach their average adult height. They may also have delayed mental and social development. This they confirmed by citing the National Institute of Child Health and Human Development that, most persons with Down's syndrome have mild to moderate mental retardation. Persons born with Down's syndrome are characterised by several of the following:

- I. Broad, flat face;

- II. Short neck;
- III. Up-slanted eyes, sometimes with an inner epicanthic fold;
- IV. Flattened small nose and enlarged tongue and lips;
- V. Sloping under chin;
- VI. Poor muscle tone (Avoke, 2004; Lewis & Kirmse, 2007; MedicineNet Doctors, 2009).

Other types of defects often accompany Down's syndrome. About 30 to 50 percent of all such children are found to have heart defects including abnormal openings (holes) in the walls that separate the heart's chambers (atrial septal defect, ventricular septal defect). Other medical conditions that occur in patients with Down's syndrome in the provisions of Answers.com (2009) include an increased chance of developing infections, especially ear infections and pneumonia; certain kidney disorders; thyroid disease (especially low or hypothyroid); hearing loss; vision impairment that requires corrective lenses; and a 20-times greater chance of developing leukaemia (a blood disorder).

Malformations of the gastrointestinal tract are present in about 5–7 percent of children with Down's syndrome. The most common malformation is a narrowed, obstructed duodenum (the part of the intestine into which the stomach empties). As people with Down's syndrome age, they also have an increased chance of developing a number of other medical difficulties, including cataracts, diabetes, and seizure disorders (Answers.com, 2009 and MedicineNet Doctors, 2009). Treatment of individuals with Down's syndrome depends on the particular manifestations of the disease. For instance, individuals with congenital heart

disease may need to undergo major corrective surgery soon after birth. Other individuals may have relatively minor health problems requiring no therapy (Parens, 2006).

Development in a baby and child with Down's syndrome occurs at a much slower than normal rate. Because of weak, floppy muscles (hypotonia), babies learn to sit up, crawl, and walk much later than their normal peers. Their ability to talk delayed. Like all teenagers, individuals with Down's syndrome undergo hormonal changes during adolescence. Therefore, teenagers with Down's syndrome should be educated about their sexual drives (MedicineNet Doctors, 2009). Fertility amongst both males and females is reduced; males are usually unable to father children. Scientists have medical evidence that males with Down's syndrome generally have a reduced sperm count and rarely father children.

Available records indicate that there have been only three recorded instances of males with Down syndrome fathering children (Pradhan, Dalal, Khan and Agrawal, 2006). Females with Down's syndrome have regular menstrual periods and are capable of becoming pregnant and carrying a baby to term (MedicineNet Doctors, 2009). They demonstrate significantly lower rates of conception relative to unaffected individuals. Approximately half of the offspring of someone with Down syndrome also have the syndrome themselves (Sheridan, Llerena, Matkins, Debenham, Cawood & Bobrow, 1989).

Attitude and Perception towards Children with Down's syndrome

Individuals who have visible or observable disabilities suffer dehumanising treatments, some of which include those with Down's syndrome, physical and visual impairments. Individuals who suffer visual and physical impairment are not necessarily intellectually disabled unlike the children with Down's syndrome who are associated with intellectual difficulties (Avoke, 2004; Lewis & Kirmse, 2007 and MedicineNet Doctors, 2009). These put the Down's syndrome at a disadvantaged position. According to Heward (1996), the Greeks and Romans were among the first to recognise people officially as mentally retarded (MR) or intellectually disabled. Survival in the days of old was the primary goal of human beings. Others applied euthanasia which is 'mercy killing' to the intellectually disabled and the physically challenged to decrease the chance of survival. He added that where they were allowed to live, some kings, queens and other wealthy people kept them as clowns or court jesters.

Lusthaus and Lusthaus (1996) put forward that, in the first part of the 20th century, children and adults with intellectual disabilities were treated as sub humans, locked away in institutions, uneducated, neglected, and abused. They said during this period, they were considered a threat to social well being, and were viewed as the source of illiteracy, poverty, and crime. Due to this fact, they sterilized and forced people with disabilities into lifelong segregation. This attitude appears to be reducing. It could be realised that many persons with disabilities can be found in communities while many interventions and rights are

being adopted for their goodwill. Some of which include the promotion of inclusion and the various disability acts.

A 2002 literature review of elective abortion rates found that 91–93% of pregnancies in the United States with a diagnosis of Down's syndrome were terminated. Data from the National Down's Syndrome Cytogenetic Register in the United Kingdom indicates that from 1989 to 2006 the proportion of women choosing to terminate a pregnancy following prenatal diagnosis of Down's syndrome has remained constant at around 92% (Horrocks, 2008). A 1998 study of Finnish doctors found that very few, paediatricians somewhat more often, thought that Down's syndrome is not a good enough reason for pregnancy termination, but more (15-21%) thought that current prenatal screenings in general are (partly) based on eugenic thinking (Olbrisch, 1982).

He further pointed out that some members of the Disability Rights movement believe that public support for prenatal diagnosis and abortion based on disability contravenes the movement's basic philosophy and goals. Wishart (1991) in Eaves, Ho, Laird and Dickson (1996) points out that improved social and educational opportunities for children with Down syndrome may cause some families to consider it not a sufficient reason to terminate a pregnancy. Throughout the period, changing societal values and beliefs about people with disabilities have created changes in their education and treatment.

Traditional believers in Ghana are of the view that any child born with a disability is due to a curse or a punishment from the gods or ancestors for an offence committed. Thus, disability similarly tends to be associated with sin, and

In Ghana, the negative attitudes stem mainly from the cultural/social perspective because of the superstitions that cloud the perceptions of majority of people irrespective of their social status and Christian beliefs. A study conducted by Gadagbui and Essel (1997) revealed that, people view disabilities as taboos and punishment from the gods, witchcraft, evil spirits and curses according to the hierarchy were found to be beliefs that citizens considered as traditional causes to disabilities and hence the unfriendly attitudes, or lack of acceptance of such people by the able bodied people.

Ocloo et al (2002, p. 21) confirm, "Until recently, a greater majority of Ghanaian communities and individuals have negative attitude towards person with disabilities." They submit that the attitudes towards them were:

- I. Abhorrence/hatred
- II. Rejection
- III. Detestation/dislike
- IV. Objects of scorn and
- V. A disgrace to family/families

These social misconceptions discourage most non-disabled people in the country from associating with those who have Down's syndrome. They further indicate that although the feelings are now enhanced, there are still some traces of superfluous attitude towards persons with disabilities. Most of them are still "denied access to formal education, right to inheritance, access to public places of leisure, access to job and right to take informed decisions for themselves among others"(Ocloo et al., 2002, p. 22).

The MedicineNet Doctors (2009) points out that, Federal laws are in place to ensure each State has as a goal with the intention of, making it possible for all handicapped children to have free public education and related services designed to meet their unique needs. They advance that, the decision of what type of school a child with Down's syndrome should attend is an important one made by the parents in consultation with health and education professionals. A parent must decide between enrolling the child in a school for children with special needs or, where most of the children do not have disabilities. Over the past decade, inclusion has become the policy direction advocated for all children with disabilities including those with Down's syndrome.

The Concept of Inclusive Education

Inclusive education is an approach that recognises the fact that every individual child is a unique learner and has access to regular education regardless of their physical, intellectual, emotional, financial, linguistic or other differences. To discuss this further, the review looks at the following sub-headings; History of inclusive education, Definition of inclusive education, Theory and practise of inclusion, Benefits of inclusive education and Challenges of inclusive education.

History of Inclusive Education

Former Assistant Secretary of Education, Madeleine C. Will, first introduced an initiative known as the Regular Education Initiative (REI). According to Hallahan and Kaufman (2002) through speeches and articles, she called for general educators to become more responsible for the education of students who have special needs in school, including those who are economically disadvantaged as well as those with disabilities. Although for several years other professionals had been advocating mainstreaming, Will went a step further. She questioned the legitimacy of special education as a system of education distinct from general education.

This was where children with disabilities were separated to attend special schools, the concept known as segregation. As a high-ranking government official, Will made sure that funding priorities of the federal government shifted dramatically to include many more projects focusing on mainstreaming in the United Kingdom. Mainstreaming was the concept of placing students with

disabilities in general education classroom settings. Kaufman et al (1975) in Okyere and Adams (2003) defined mainstreaming as:

...the temporal, instructional, and social integration of eligible exceptional children with general education peers based on an on-going, individually determined, educational planning and programming process and requires clarification of responsibility among general and special education administrative, instruction, and supportive personnel (p. 44).

Generally, according to Huston (2007) mainstreaming has been used to refer to the selective placement of special education students in one or more "regular" education classes. Proponents of mainstreaming generally assume that a student must "earn" his or her opportunity to be placed in regular classes by demonstrating an ability to "keep up" with the work assigned by the regular classroom teacher.

Hallahan and Kaufman (2002) posit that various legislative instruments were passed and reviewed. These included the PL 90 – 538 that established the Handicapped Children's Early Education Programme (HCEEP). This instrument funded model demonstration projects for delivering experimental education programme for children with disabilities, through PL 94-142 to PL 99-457. It extended the requirement of PL 94-142 to children aged 3 to 5 with special incentives to States for instituting programmes for ages birth to 3 years. This has continued to be amended until today. Inclusive education is the order of the day but its implementation worldwide becomes the cause of disagreement. Ainscow

(2005) supports this when he indicates that inclusion is the “big challenge facing school systems throughout the world” (p. 109).

Definition of Inclusive Education

Although it would be satisfying to be able to provide the “correct” definition of inclusion, the word means different things to different people. Pearson (2005) affirms that, there has not been a universally accepted definition for inclusion. Hunt and Marshall (1999) are of the view that, inclusion is usually used to refer to placement of the child with disabilities in the general education classroom, with the supports the child needs also provided there.

Shea and Bauer (1997) posit that, inclusion is the organization of a school so that all students who would usually be assigned to it are educated with their age-peers. They continue that, this concept subsumes integration, in which learners with disabilities attend the same schools, but not necessarily the same classes, and mainstreaming in which learners with disabilities are included in general education classes to increase their social interaction opportunities but not to address their educational goals. Hallahan and Kauffman (2002) define inclusion as the belief that all students with disabilities should be educated solely in the regular classroom in their neighbourhood schools.

In the Research Bulletin Number 11, 1993, from Phi Delta Kappa's Centre for Evaluation, Development, and Research cited in Huston (2007) defined inclusion as a term that expresses commitment to educate each child, to the maximum extent appropriate in the school and classroom he or she would otherwise attend. It involves bringing the support services to the child (rather than

moving the child to the services) and requires only that the child will benefit from being in the class (rather than having to keep up with the other students).

Inclusion thus, is as an approach that recognises the fact that every individual child is a unique learner and must have access to regular education regardless of their physical, intellectual, emotional, financial, linguistic or other differences. Inclusion stresses that no matter the strengths or weaknesses of a child, they must learn in the same classroom. Inclusion is much concern about the appropriateness of instruction given to children but not necessarily, where it is given. Kunc (1992), cited in Tomko (1996) indicates that:

The fundamental principle of inclusive education is the valuing of diversity within the human community.... When inclusive education is fully embraced, we abandon the idea that children have to become "normal" in order to contribute to the world.... We begin to look beyond typical ways of becoming valued members of the community, and in doing so, begin to realize the achievable goal of providing all children with an authentic sense of belonging (pp. 38-39).

There are a number of reviews and various forms of analyses that consistently report little or no benefit for students when they are placed in special education settings (Kavale & Glass, 1982; Madden & Slavin, 1983). However, in 50 studies comparing the academic performance of mainstreamed and segregated students with mild handicapping conditions, Weiner (1985) reported that the mean academic performance of the integrated group was in the 80th percentile, while the segregated students score was in the 50th percentile. Using this

evidence, inclusion proponents claim that segregated programmes are detrimental to students and do not meet the original goals for special education.

Recent reports confirm a small to moderate beneficial effect of inclusive education on the academic and social outcome of special needs students (Carlberg & Kavale, 1980; Baker, Wang & Walberg, 1994). Inclusion is being a part of what everyone else is. It is also a means of welcoming and embracing everyone as a member who belongs (Tomko, 1996). He indicates that inclusion can occur in schools, churches, play- grounds, work and in recreation.

The Theory and Practise of Inclusion

In a growing number of schools across the United States, it is now possible to walk into elementary, middle and secondary classrooms and observe students with Down's syndrome and other cognitive and physical disabilities learning with their non-disabled peers (National Down's Syndrome Society, NDSS, 2004). This practise of welcoming, valuing, empowering and supporting diverse academic and social learning among students of all abilities is called inclusive education.

Children living with disabilities progressively and purposely were denied regular school system of education because schools were not sensitive to their learning styles and backgrounds. In a gesture of compassion, these children were categorised and placed in special schools that were away from their peers (Kisanji, 1999). This led to the development of two separate systems of education within countries, regular and special education. Open University (2003) adds to

the assertion that some disabled people, often for social or political reasons, were deemed incurable and placed in long-stay institutions and special schools.

It was based on assessments of impairments from a deficit point of view against normality, thus, what one cannot do, instead of what one can do. This led to the term 'medical model'. The 'medical' or 'within individual' model according to Johnson (1994) in Ocloo et al (2002), is considered to be the main approach to understanding disability. It is a more scientific understanding of the causes of impairment and, with it, a sense of confidence in medical science's ability to cure, or at least rehabilitate, disabled people.

According to Rieser and Mason (1992) medical approaches to impairment have given rise to the view that people are individual objects to be "treated", "changed" or "improved" and made more "normal". The medical model of disability views the disabled person as needing to fit in rather than thinking about how society itself might change. Medical model thinking would say these problems are due to the disabled person's lack of rehabilitation. Notwithstanding these, the medical model enhanced the provision of SEN as it provided good health, 'a sound mind in a healthy body'.

In Individualised Education Plan (IEP) formulation, it is expected that some medical personnel be part of the Child Study/Multidisciplinary team (Hunt & Marshal, 2002; Heward, 1996). According to Eaves et al (1996), pediatricians, Infant Development Program workers and family physicians were all found to be important and helpful to parents of children with Down's syndrome. This is an

indication that the medical approach no matter its shortcomings can not be totally eliminated from providing services to special education.

The Disability Movement perceives the difficulties disabled people experience as the barriers that disable them and curtail their life chances. These difficulties include in school and higher education, in finding work and suitable work environments, accessing leisure and entertainment facilities, using private and public transport, obtaining suitable housing, or in their personal, family and social life (Open University, 2003). In schools, for instance, special educational needs are considered the problem of the individual, who are seen as different, faulty and needing to be assessed and made as 'normal' as possible.

Rieser and Mason (1992) argue that, today, the medical model is being rejected. This is because many people feel strongly that treating disabled people as needing to be adapted to existing circumstances or, if this is not possible, caring for them in specialised institutions, is wrong. In recent years, the disability movement has advocated a different way of looking at disability, which they call the 'social model'. This starts from the standpoint of all disabled adults and children's right to belong to and be valued in their local community. Using this model, a look at the strengths of the person with the impairment and at the physical and social barriers that obstruct them, whether at school, college, home or work is to be addressed.

The 'social model' approach suggests disabled people's disadvantage is due to a complex form of institutional discrimination, as fundamental to society as sexism, racism or heterosexism. Disabled People's International (1981) in Open

University (2003) believes the 'cure' to the problem of disability lies in changing society. Unlike medically based cures, this is an achievable goal and benefits everyone.

According to Lusthaus and Lusthaus (1996), in the 1950s, reformers concerned with human rights succeeded in establishing legislation that protected the rights of people who had been institutionalised. The society realised that individuals with disability had been victims of social abuse. The Warnock Report (1978) in Stakes and Hornby (1997) made various recommendations, some of which included mainstreaming all disabled children, management of statements of special education need, financing of resources and budgeting arrangements specifically for pupils with special educational needs (SEN).

The Salamanca Statement and Framework for Action also recommended that all children can learn and so the need to provide all basic needs to support them (UNESCO, 1994). Inclusive education was a strong feature in the Salamanca Statement on Principles, Policy and Practise in Special Needs Education. This can be figured out from five key clauses of the statement from which it specify that every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning.

It goes on to indicate that those with special educational needs must have access to regular schools, which should accommodate them within a child-centred pedagogy capable of meeting these needs. The statement adds that regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive

society and achieving education for all (UNESCO, 1994). This statement sides with the need to develop the social model where persons with disabilities are to be integrated into the society. For that reason, the medical aspect though important should not to be pursued to demean people living with disabilities, but physical and social barriers be removed to grant them opportunities to take part in the normal life of the community on an equal level. Thus, all communities must support and adopt the inclusion agenda.

Benefits of Inclusive Education

NAEYC Resources (2009) assert that the benefits of inclusive classrooms reach beyond academics. This is particularly important for young children, who learn best when they feel safe, secure, and at home in their classrooms. An environment that encourages young children's social and emotional development will stimulate all aspects of their learning. According to NAEYC Resources, children in inclusive classrooms:

- I. demonstrate increased acceptance and appreciation of diversity;
- II. develop better communication and social skills;
- III. show greater development in moral and ethical principles;
- IV. create warm and caring friendships; and
- V. demonstrate increased self-esteem.

Baker, Wang and Walberg (1994) concluded that special-needs students educated in regular classes do better academically and socially than comparable students in non-inclusive settings. Tomko (2008) further points out that research by Hollowood et al (1995) found inclusion was not detrimental to students

without disabilities. Students without disabilities can serve as positive speech and behaviour role models and offer acceptance, tolerance, patience and friendship to children with disabilities.

Demchak (2009) in support to the above adds that, the benefits of inclusive education are numerous for both students with disabilities as well as those without. She points out that, students with disabilities serve as peer role models to one another as they find each other in the regular school. She also indicate that, inclusion helps to decrease the rate of inappropriate behaviour of those with disabilities as they find themselves to be in others putting up acceptable behaviours and being reinforced. Since no individual is an island or will want to be, inclusive education will lead to increased inclusion in future environments; both in the community and in other educational institutions where no one will be discriminated against.

It is a good opportunity to increase interactions among peers, which can lead to increased social initiations. Inclusion also promotes friendships among children as they play, learn, and do all other things together. It promotes improved appearance of children with disabilities since they will not be isolated to do their own thing. Parents or guardians will thus see them as the other non-disabled children, and so provide for them some of the basic needs to help them look neat.

On the benefits of inclusion for students without disabilities, Demchak (2009) is of the view that, it leads to increased understanding and acceptance of diversity as the children without disabilities appreciates individual differences. This intends promotes meaningful friendships and respect for all people. It also

prepares children without disabilities for a future inclusive society and provides for them opportunities to master activities by practicing and teaching others.

Soodak and Erwin (2000) provide the following key findings about the benefits of inclusion for children and families:

Parents' visions of a typical life for their children can come true:

All parents want their children to be accepted by their peers, have friends and lead "regular" lives. Inclusive settings can make this vision a reality for many children with disabilities.

Children develop a positive understanding of themselves and others:

When children attend classes that reflect the similarities and differences of people in the real world, they learn to appreciate diversity.

Friendships develop:

Schools are important places for children to develop friendships and learn social skills. Children with and without disabilities learn with and from each other in inclusive classes.

All children learn by being together:

Since the philosophy of inclusive education is aimed at helping all children learn, everyone in the class benefits. Children learn at their own pace and style within a nurturing learning environment.

Deiner (2005) provides a befitting point that through inclusion, children without disabilities or special educational needs will become aware of individual differences and learn to respect these differences to celebrate it. This becomes very befitting because everybody has a right to life and dignity, as such the need

to be giving the opportunity to get in touch with the diversities of life, accept it and learn to live with it. The above benefits of inclusion skew towards social interaction. This is an indication that inclusive education can help in the improvement of social interaction among children with and without Down's syndrome.

Challenges of Inclusive Education

A principal issue to be addressed for the achievement of the right to education of persons with disabilities is the identification and management of challenges that prevent effective inclusion. According to Munoz (2006), potential challenges worthy of noting include existing negative attitudes and values towards persons with disabilities, where neglect, derogative names and discrimination against them is rampant. Another point was inadequate skills among teachers and administrators, to help meet the needs of persons with disabilities. In addition to these was inaccessibility of education, particularly physical access to building and access to learning materials, to welcome the persons with disabilities making them comfortable wherever they found themselves. He finally touched on resource constraints, and inadequate attention to the special education needs of learners in mainstream education.

The principal challenge according to UNESCO (2008) is the deeply embedded social stigmatization of persons with disability. Stereotypical images, often combined with hostility and traditional attitudes towards persons with disabilities, currently prevalent among teachers, regular school pupils, local

authorities, communities and even families, can reinforce exclusion of learners with disabilities, and clearly hinder inclusion.

Indeed, this is recognized in the Convention on the Rights of Persons with Disabilities, which formally records that it is not “disability” that hinders full and effective participation in society, but rather “attitudinal and environmental barriers” in that society (UNESCO, 2008). Such barriers and stigmatization underscore the imperative of keeping rights clearly articulated and entrenched in policy and legislative frameworks.

It was estimated in the Education for All 2000 Assessment that achieving education for all globally would require an increase in financial support by donors of approximately US\$ 8 billion a year (UNESCO, 2003). Given that many countries have limited resources that have to be divided among a range of social sectors, it is important that States use the “maximum of available resources” in such a way that resources are used optimally and focused on meeting clear benchmarks. This implicates the necessity of early identification and implementation of appropriate, cost-effective measures. National action plans for human rights as well as rights-based budgeting will contribute to the success of all such measures. Similarly, it is important to ensure the sustainability of education funding. If education programmes are set to ensure greater inclusion and then their budget is reduced, the adverse effects on inclusion are obvious.

A particular challenge in the context of promoting and protecting the general right to education is, clearly, the need to ensure that the education system meet the special education needs of persons with disabilities. The current

challenge is how best to provide appropriate opportunities for these learners within mainstream schools since provisions for the regular school children alone is difficult to come by in Ghanaian schools.

The relationship between special education and inclusive education remains extraordinarily complex. For example, Markku (2006) advances that it is necessary for deaf learners to learn sign language and blind learners to study Braille at the beginning of their education. Such learning may take place, even in a school committed to inclusion, by way of separation of, for instance, a deaf learner from those that hear. Here, therefore, the goal of inclusion might be thwarted. Another challenge as indicated by Munoz (2006) arises when “integration” is confused with “inclusion”. He states that this is where learners with disabilities are merely placed in mainstream schools without the additional support required to accommodate their individual needs. The “integration” of learners with disabilities without full inclusion can lead to isolation of the learner and ultimately, an obstacle to meeting the education needs of all learners.

Munoz (2006) further underlines the fact that the inclusive education paradigm should not be seen as a “one-system-fits-all” solution. Embracing principles of participation and non-discrimination, innovative, individually focused and flexible implementation, which addresses all disabilities and cultural variability, he specifies is crucial. A challenge that cannot be overlooked is the fact that some non-disabled children in developing countries like Ghana are not in school, are not having the opportunity to be in school or are even dropping out of

school due to various reasons. How much more selling the idea that, all children with disabilities should be enrolled in regular schools.

Gyimah, Sugden and Pearson (2008) confirms that, in spite of the call for all countries to include children with special educational needs (SEN) and disabilities in regular education programmes and welcome any measure that makes activities fruitful, there is evidence that not all pupils with SEN and disabilities are in the mainstream.

Inclusive Education in Ghana

Education, the backbone to national development, cannot remain static in this dynamic world. As such, educational reforms take place to change or improve upon policies for the better and Ghana is no exception. According to Avoke (2005), Ghana started working on special education since 1959 when the government set up a six-member committee to prepare for the approval of cabinet, a comprehensive programme for the care and rehabilitation of the disabled. The committee recommended that, children with disabilities be sent into the mainstream and where necessary be provided with special training facilities. This recommendation was an indication that, if it had been fully implemented, inclusive education in Ghana would have started long time ago.

In 1961, the Education Act emphasized the need for the education of all Ghanaians. Since all Ghanaians include the able, disabled, rich, poor, healthy, unhealthy, intelligent or mentally retarded citizens, then it was expected that all persons were to enjoy every educational opportunity available.

The Kwapong Review Committee in 1966 addressed the issue of the majority of pupils from elementary schools who could not gain entry to the restricted number of places in secondary “grammar” school by introducing continuation schools. This policy was later criticized as elitist and for that matter could not make room for children with disabilities more especially, those with intellectual disabilities. According to Ocloo, Dogbe and Gadagbui (2006) the Dzobo Committee Report of 1972 mentioned the educational needs of both the slow learners and the gifted. This provision mandated parents to send their children to school no matter their performance. This could be seen in the constitution of Ghana and in the Education Reform of 1987 that led to the concept of the Free Compulsory Universal Basic Education (fCUBE). This is an indication that basic education in Ghana is to be obligatory for all her citizens not withstanding their needs or background.

Ghana recognizes the numerous international conventions and declarations and therefore aspires to promoting and protecting the human rights of the individual citizens. These are enshrined in the 1992 constitution of the country that is in use to date. The 1992 constitution of Ghana makes various provisions that support inclusion. Some of which are: Article 25(1) - that all persons shall have the right to equal educational opportunities and facilities with a view to achieving the full realization of the right to basic, secondary and high education as well as functional literacy. Article 29(3) - that if the stay of a disabled person in a specialized establishment is indispensable, the environment and living conditions

there shall be as close as possible to those of the normal life of a person of his age (Republic of Ghana, 1992).

According to the Government's White paper (pp. 33, 34) of the Ministry of Education, Youth and Sports (2004) on the report of the education reform review committee chaired by Professor Jophus Anamuah-Mensah, some provisions were made for the improvement of special education. It indicated that, institutions that deliver education to children with special education needs would receive additional attention, through the improvement of existing infrastructure and the provision of additional facilities. It added that, parents and guardians would be encouraged to take advantage of special education facilities to send their children with special needs to school. These two statements closely looked at; seem to be trying to advance segregation rather than inclusive education.

Assessing the provisions made by the reform vis-à-vis seven factors necessary for inclusive education to succeed, as proposed by Lipsky and Gartner (1996), that is, Visionary leadership, Collaboration, Refocused use of assessment, Support for staff and students, Funding, Effective parental involvement and Curriculum adaptation and adopting of effective practises, it could be indicated that Ghana has some work to do. Policies though are been made and at least special education been categorically stated, the onus therefore lies on the educational authorities, to also sit down as visionary leaders to plan strategies to make sure that inclusive education is carried to the grassroots. Special educationist would have to take up the opportunity provided to push ahead

important factors in their field and seek legal address or due process when their effort are being stifled.

For collaboration, a provision was made for the GES to liaise with the Ghana Health Service to undertake screening exercise for early identification (Ministry of Education Youth & Sports, 2004). Teachers on the other hand will have to work together with the specialists in the field to achieve this cause. Okyere and Adams (2003) point out that this will help share collective experience to advice and make suggestions regarding particular classroom challenges that may include how to handle children with special needs.

According to Lipsky and Gartner (1996), funding inclusive education is less costly than in segregated institutions. In developing countries like Ghana, funding education is crucial which affects the provision of special educational services. Okyere and Adams (2003) specify that, the “Government of Ghana provides about 95% funding to special education with the remaining 5% coming from voluntary organizations” (p. 26). Though a good effort, the question is how often and early do these funds get to the institutions for use?

There is provision in the reform guaranteeing special attention to the training of teachers in special education in Teacher Education Colleges. Currently, few teachers gain study leave to pursue special education in the universities both for the bachelors and masters degrees of which the researcher offering his Master of Philosophy in Special Education with three of his colleagues were victims. These needs to be improved upon to encourage teachers pursue programmes in special education to attend to this inclusive ideology.

Teacher effectiveness and support for the children with special needs will also depend on how the regular school curriculum can be adapted to suit the students who have difficulty in acquiring skills and information. The reform makes provision for that.

Teachers therefore need to be equipped with strategies to adapt the curricula and instruction. By this, they will be able to modify instructional materials, change teaching procedures and alter the requirements of the learning task. Most parents are reluctant in educating their disabled children especially those with intellectual disabilities due to societal misconceptions hence, an affront to inclusion and education for all.

Social Interaction

Social development as advanced by Buckley, Bird and Sacks (2002) includes social interactive skills with children and adults, social understanding and empathy, friendships, play and leisure skills, personal and social independence, and socially appropriate behaviour. They further posit that social understanding, empathy and social interactive skills are strengths for children and adults with Down's syndrome, which can be built on throughout life to enhance their social inclusion and quality of life. The opportunity to establish friendships may be affected by social independence and by speech, language, and cognitive delay. Parents and teachers need to think about ways of increasing the friendship opportunities of children during primary school and teenage years. This notwithstanding does not mean forcing children to play together, but simply providing the opportunity for this to happen (Taylor, 2002).

The importance of friendships with both typically developing peers and peers with similar disabilities cannot be over-emphasised, as is the need to develop play, leisure and independence skills. Taylor (2002) put forward that teaching people through social interaction, that no one person is the same, and that human are different individuals but have to co-exist harmoniously is crucial. Most children and teenagers with Down's syndrome have age-appropriate social behaviour, but some children do develop difficult behaviours that cause family stress and affect social and educational inclusion (Buckley, Bird & Sacks, 2002). It is therefore important to try to identify the causes of the difficulties and provide antidotes to them.

The Social Learning Theory

The Social learning theorists believe that new behaviours are learnt through overt reinforcement or punishment or through observational learning. This implies that individuals learn through observing others' behaviour. For instance, if children observe positive, desired outcomes in behaviour, they are more likely to model, imitate, and adopt the behaviour themselves. It also suggests that the environment can have an effect on the way people behave. In this study, the researcher hopes to experiment how inclusion could be used to minimise if not eliminate the negative attitudes some children may have about people living with disabilities, such as the Down's syndrome. Through the study, regular pupils will have the opportunity to interact with them. The children holding negative thought about them and would not want to associate with them will learn from their peers who have no fears for them or are able to overcome it.

According to Wikipedia Encyclopaedia (2009), social learning theory was derived from the work of Gabriel Tarde (1843-1904) who proposed that social learning occurred through four main stages of imitation:

- I. close contact,
- II. imitation of superiors,
- III. understanding of concepts,
- IV. role model behaviour

These four stages consists of three parts namely; observing, imitating, and reinforcement. Observing is where an individual watches or views someone performing an act. Imitating is reproducing or emulating an observed behaviour, and reinforcement constitutes a stimulus that motivates an individual to perform a desired act.

Rotter (1954) in Wikipedia Encyclopaedia (2009) suggested that the effect of behaviour has an impact on the motivation of people to engage in that behaviour. People wish to avoid negative consequences, while desiring positive results or effects. This social learning theory suggests that environmental factors or stimuli influence behaviour and not psychological factors alone (Wikipedia Encyclopaedia, 2009). The importance of social interaction according to Dworetzky (1996) is stressed by learning theorists such as Albert Bandura and Lev Vygotsky.

According to Wikipedia Encyclopaedia (2009), Bandura developed on Rotter's idea, as well as earlier work by Miller and Dollard, and is related to social learning theories of Vygotsky and Lave. This theory incorporates aspects of

behavioural and cognitive learning. Behavioural learning assumes that people's environment or surroundings cause people to behave in certain ways. Cognitive learning presumes that psychological factors are important for influencing how one behaves. Social learning theorists believe that behaviour is influenced by both environmental and psychological factors. They also outline three requirements for people to learn and model behaviour. These include "Attention" where there is retention or remembrance of what one observed, "Reproduction" that is the ability to reproduce the behaviour and "Motivation" a good reason to want to adopt the behaviour.

Bandura (1977) a social learning theorist emphasised the importance of observing and modelling behaviours, attitudes, and emotional reactions of others. He stated that:

Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behaviour is learned observationally through modelling: from observing others, one forms an idea of how new behaviours are performed, and on later occasions, this coded information serves as a guide for action (Bandura, 1977, p.22).

Social learning theory explains human behaviour in terms of continuous reciprocal interaction between cognitive, behavioural, and environmental influences. According to Bandura (1977) the component processes underlying observational learning are:

- I. Attention; including modelled events (distinctiveness, affective valence, complexity, prevalence, functional value) and observer characteristics (sensory capacities, arousal level, perceptual set, past reinforcement),
- II. Retention; including symbolic coding, cognitive organization, symbolic rehearsal, and motor rehearsal,
- III. Motor Reproduction; including physical capabilities, self-observation of reproduction, accuracy of feedback, and
- IV. Motivation; including external, vicarious and self.

The social interactionists believe that conduct is the result of situated social interaction. This situation is the way in which individuals temporarily relate one activity to another. They attach labels to these events that help them to locate them spatially, or where they occurred. These are not the actual physical dimensions of time and space, but the social equivalents.

Vygotsky (1978) portrayed the child's development as inseparable from social and cultural activities. He believes that the development of memory, attention and reasoning involves learning to use the inventions of society such as language, mathematical systems and memory strategies. He believed in what he termed as Zone of Proximal Development (ZPD) and scaffolding. By ZPD, he meant that, children are able to perform difficult task under the guidance of an adult or a more-skilled child. In a direction where it is difficult to associate with persons with disabilities, children will need guidance to overcome it.

Scaffolding on the other hand is changing the level of support over the course of a teaching session in which a more-skilled individual adjusts to the

amount of guidance to fit the child's current performance. Vygotsky in his social cognition-learning model asserts that culture is the prime determinant of individual development.

Humans are the only species to have created culture, and every human child develops in the context of a culture. Therefore, a child's learning development is affected in ways large and small by the culture, including the culture of family environment in which he or she is enmeshed. Thus, all prejudices are carried over to the children by the society and so they grow with it. Taylor (2002) adds that if society were honest, then it will admit to holding many preconceptions. This can therefore be addressed by taking into consideration the cultural perspective in societies and the need to depart from inhuman deeds and thoughts.

Vygotsky (1978) asserts that culture makes two sorts of contributions to a child's intellectual development. That is, through culture, children acquire much of the content of their thinking (knowledge), and that the surrounding culture provides a child with the processes or means of their thinking, what he called the tools of intellectual adaptation. In short, according to the social cognition-learning model, culture teaches children both "what to think" and "how to think". As such, what ever transpires in a culture is carried over from generation to generation until a drastic revolution takes place. He goes on to point out that language is a primary form of interaction through which adults transmit to the child the rich body of knowledge that exists in the culture. Children therefore learn to use deprecating words for people with disabilities from the community.

Since much of what a child learns comes from the culture around him or her and much of the child's problem solving is mediated through an adult's help, it is wrong to focus on a child in isolation. Interactions with surrounding culture and social agents, such as parents and more competent peers, contribute significantly to a child's intellectual development. This then implies that to promote social interaction with people with Down's syndrome, the society must change the use of outdated and often misinterpreted stereotypes (Taylor, 2002) for the children to adapt.

Doolittle (1997) spell out that the social learning theory of Vygotsky can impact on learning by applying it in the school curriculum, instruction and assessment. These expound as:

- I. **Curriculum**—Since children learn much through interaction, curricula should be designed to emphasize interaction between learners and learning tasks.
- II. **Instruction**—With appropriate adult help, children can often perform tasks that they are incapable of completing on their own. Teachers should accept children with disabilities and handle them as all other children. By this, as a role model and a surrogate parent, children will learn to overcome the task of associating with children with Down's syndrome in school and transfer it into the community.
- III. **Assessment**—Assessment methods must take into account the zone of proximal development. Assessment methods must target both the level of actual development and the level of potential development so that children

with disabilities can also be achievers and not failures in school to avoid being ignored by peers.

Down's Syndrome and Social Interaction

The ability to understand the behaviour and emotions of oneself and others, and to manage one's own feelings and behaviour in socially appropriate ways are clearly very important for the quality of life of all children and adults. The impact of the birth of a child with Down's syndrome into a family has effects on the parent(s) and any other siblings, and more widely within any extended family (Hodapp, 2007). Undoubtedly, Oates, Bard and Harris (2007) establish that, there are numerous research questions unanswered, regarding the social and communicative abilities of infants, children and adults with Down's syndrome. It is widely acknowledged that the establishment of positive attachment relationships and communication with primary caregivers is an important outcome of social-emotional development in early childhood.

The theories of Bandura and Vygostky indicate that observation, imitation and modelling plays a key role in societies. Down syndrome online (2009) points out that, children with Down syndrome continue to show good understanding of the non-verbal cues in social situations and they show good ability to learn how to behave in social situations that are repeated, where they can model what is expected by copying other children. For example,

many children with Down syndrome are good at learning the routines for arriving at preschool, hanging coats on pegs, lining up, sitting at tables,

and sitting on the mat for story-time because these actions are repeated every day and they can imitate the other children (Down syndrome online, 2009, p.2).

Learning by imitation is strength and one that children with Down syndrome use to learn effectively from other children in many situations.

A great deal of social behaviour can be learned by watching the behaviour of others over time, in real life and from television 'soaps'. This can extend beyond classroom social behaviour to include practically useful behaviours in a range of social situations such as clubs, shops, cafeterias, buses and church (Down syndrome online, 2009). It can also include learning about behaviours in different relationships, such as boyfriend/girlfriend behaviours and adult social behaviours. This may explain why the social behaviour of many teenagers and young adults with Down's syndrome is often age-appropriate and competent, despite their language and cognitive delays. They learn by watching, imitating and then 'doing' - and their understanding increases by participation, practice and feedback rather than by explanation (Down syndrome online, 2009).

Children's relationships with others of their own age play an important part in development. Many small children find the early stages of playing with other children difficult. Piaget indicates that they are egocentric (Dworetzky, 1996). They do not want to share their toys with others or to take turns in an activity, but they learn to do so and move towards co-operative play with others. According to Down Syndrome Online (2009), very little research is available into

the ways; children with Down's syndrome develop relationship and co-operation with their age-mates.

Their delayed spoken language skills will affect their ability to play with other children and in preschool, they will mainly play alongside rather than with others. However, they will be learning about play and social behaviour from watching and from listening to the language of the other children, especially as children with Down's syndrome usually understand more than they can express. As they begin to enjoy pretend play, they may join in play in the home corner - cooking or making tea with another child - joining in with the activity despite limited expressive language (Down Syndrome Online, 2009).

In the view of Oates, Bard and Harris (2007), children who feel rejected may not develop socially amidst other developmental stages. Guralnick (2002) also hints that children with Down's syndrome typically have difficulties interacting with peers and with all other children with mild intellectual disabilities; they "...are at considerable risk of becoming socially isolated from their peers in school, home and community settings" (p.379). Attachment security and communication abilities are associated with key developmental achievements later in childhood, and indeed across the life span. The ways in which the primary caregiver(s), and other family members, respond to the challenges faced depends in part on their own psychological characteristics and in part on the specific profile of the individual child with Down's syndrome.

Oates, Bard and Harris (2007) further indicate that, the roles of emotional expression and sensitivity to others' emotions in the development of empathy, and

abilities to learn collaboratively are worthy of more attention in the special context of children with Down's syndrome. They further opine that children and adults with Down's syndrome are usually sociable and good at making friends within their own networks of family and friends with disabilities and without.

D'Haem (2008) indicates that, a friend is someone who: you feel comfortable telling your secrets, you go places and do things with, enjoys the same things as you do and notices when you are not feeling right. This is what children with Down's syndrome are not able to offer to their peers and so, as they reach teenage years, friendships in the wider community and the opportunities for active social lives become more difficult. After a decade of inclusion and structured school programmes to facilitate friendships, many parents report that peer relationships end after school hours (D'Haem, 2008).

According to Down's syndrome Education International (2008) understanding social behaviour and emotions is reported to typically be the strength for children and adults with Down's syndrome. Much of the information about how someone feels and what they may do is conveyed non - verbally and can be observed. However, limited ability to communicate can lead to frustration and misunderstanding, which may result in 'difficult' behaviour being the only way for a child to communicate. A child with Down's syndrome may therefore be more vulnerable to developing 'difficult' behaviour.

Another important influence on behaviour and social competence is the way parents and teachers set boundaries and manage behaviour. A child with delayed development may be treated as a younger child and not expected to

behave in age-appropriate ways (Down's Syndrome Education International, 2008). Research studies indicate that most children with Down's syndrome are socially sensitive and learn to behave well however a significant minority may be more difficult to manage. This difficult behaviour disrupts children's social lives and learning opportunities and causes significant family stress (Down's Syndrome Education International, 2008).

However, Channe (2004) observed that, this does not appear to be the case for an adult with Down's syndrome. As compared to adults with other forms of mental illnesses or disabilities, people with Down's syndrome appear to be quite involved in a social sense. Furthermore, social isolation is not always the case for children either, and as reported by Mundy, Sigman, Kasari and Yirmiya (1988) children with Down's syndrome do have strong willingness to interact socially. It has also been discovered that adults with Down's syndrome also have willingness to interact socially (Channe, 2004).

Summary of Literature Review

Down's syndrome is a genetic condition in which a person has 47 chromosomes instead of the usual 46. It results when a person inherits all or part of an extra copy of chromosome 21. The cause is yet unknown. There are three different types of Down's syndrome: standard trisomy 21, a translocation and mosaic Down's syndrome. The incidence of the disorder increases markedly in the offspring of women over the age of 35 years. Down's syndromes are notable for their appearance. They have broad flat face; short neck; up-slanted eyes; low-set

ears; small nose and enlarged tongue and lips; sloping under chin and many others.

Ghanaian communities and individuals have some social misconceptions and negative attitude towards person with disabilities. These social misconceptions discouraged most non-disabled people in the country from associating with those who have Down's syndrome. The attitudes towards them have been: abhorrence, rejection, dislike, objects of scorn and a disgrace to family/families. Children with Down's syndrome do not develop emotionally, socially and intellectually as children without Down's syndrome. They have a mild-to-moderate intellectual disability that makes most of them trainable in self help skills. It was reviewed that, Down's syndrome may benefit from mainstreaming or inclusion provided some adaptations are made to the curriculum.

Inclusion can be defined as an approach that recognises the fact that every individual child is a unique learner and must have access to regular education regardless of their physical, intellectual, emotional, financial, linguistic or other differences. Children thus learn together in the same classroom notwithstanding their disabilities. This system of education considers the rights of the child and tries to develop an enabling society where every one belongs to one another devoid of discrimination. One of the key benefits of inclusion is the promotion of social interaction among persons with and without disabilities.

Individuals learn from one another and more especially through observation and imitation. These are the concepts of the social interactionists like

Bandura and Vygotsky. They are of the view that the child learns from what they see adults do and also what adults ask or guide them to do. To this direction, for effective social interaction to take place in a society where prejudices and discrimination against persons living with disabilities abound, there is the need to promote inclusive education for the children of today to overcome the negative attitudes and serve as models for the generation yet unborn.

Down's syndromes have the ability to understand social behaviour and emotions. Their speech and language difficulties however, could lead to frustration and difficult behaviour. Both children and adults Down's syndromes do have the willingness to interact socially and so can benefit from inclusion.

CHAPTER THREE

METHODOLOGY

This chapter describes the method employed in carrying out the study. It is divided into sub-sections comprising the research design, population, sampling, instruments, validity and reliability, pilot test of questionnaire, procedure adopted for the study and the data analysis procedures.

Research Design

A pre-test – post-test non-equivalent quasi-experimental research design was adopted for the study. The use of the non-equivalent group pre-test – post-test quasi-experimental research design became necessary, since the subjects and classes used did not require any random allocation, as they were already existing groups. According to McMillan and Schumacher (2001), non-equivalent group pre-test – post-test design is very prevalent and useful in education, as it is often impossible to assign subjects randomly. Kerlinger (1970) in Cohen, Manion and Morrison (2004) reaffirm the fact that quasi-experiment is a research design involving an experimental approach but where random assignment to treatment and comparison groups has not been used. They further argue that quasi experiment rises to prominence in social experimentation and a second-best choice to consider when it is not possible to randomise allocation.

In quasi-experiments, subjects are assigned into experimental and control groups. While the experimental group receives intervention, the control group does not. In an outline made available by Robson (2002, p. 140) in using the pre-test post-test non-equivalent quasi-experimental design, the following steps must be adopted:

- I. Set up an experimental group and a comparison group on some basis other than random assignment
- II. Give pre-tests to both groups
- III. The experimental group gets the ‘treatment’, the comparison group gets no special treatment
- IV. Give post-tests to both groups

Population

The target population involved all the 36 children in the Unit School set up for Children with Special Needs and peers without disabilities in the Methodist cluster of schools in the Cape Coast Metropolis whose total number on roll was 500 (Methodist Primary “A” = 113, Methodist Primary “B” = 227 and EJP Brown = 160). In terms of the choice of the study area, the research was restricted to the Cape Coast Methodist Primary Cluster of Schools although there are many basic schools in the Cape Coast Metropolis. It was the hope of the researcher that, because he was a teacher in the Unit school and very familiar with the school environment the experimented could be conducted with the schools.

Sample and Sampling procedure

In quasi-experiment just like true experiment, samples are required (Robson 2002). Since the study was quasi-experiment, the Cape Coast Methodist Cluster of schools was purposively selected. In purposive sampling, the researcher handpicks the cases to be included in the sample based on their judgement of their typicality or interest. Here, a sample is built up which enables the researcher to satisfy his/her specific needs in a project (Cohen, Manion & Morrison, 2004; Robson, 2002).

The researcher picked this cluster of schools because it had one of the 23 Unit schools for children with intellectual disabilities in Ghana located among them. The schools served the following purposes in the study: Methodist Primary 'A' (pilot testing of instrument for the study), Methodist Primary 'B' (experimental group), and E. J. P. Brown Methodist Primary (control group) with the Methodist Special Needs School providing the children with Down's syndrome.

The sample was made up of all the 4 children with Down's syndrome from the Special Needs School, and all the 56 pupils of the BS 4 class for the control and experimental classes. Each class had 28 pupils. Basic stage 4 (BS4) classes were selected purely on the basis of age appropriateness. Mitchell (2005) emphasised that the SEN Child in an inclusive environment is entitled to full membership and placement in regular, age-appropriate class. Considering the ages of the children with Down's syndrome, which ranged from 9 to 10 years, BS 4

was regarded as the most appropriate placement for the experiment since the average age for that class in Ghana is 9 years.

Research Instrument

The instrument for the experiment was questionnaire. The researcher employed observation to confirm the responses from the questionnaires. A closed-ended questionnaire was adapted from Eni-Olorunda and Ogunleke (2005) and Skarbrevik (2005) to solicit responses on social interaction as a pre-test and post-test for the study. Cohen, Manion and Morrison (2004) observed that the questionnaire tends to be more reliable since its anonymity encourages greater honesty than interview. Robson (2002) points out that though the questionnaire might have some demerits such as respondents not necessarily reporting their beliefs and attitude to portray them in good light, as well as data being affected by the respondents' knowledge; experience and motivation; it is a good instrument to be used. He specifies that they provide a relatively simple and straightforward approach to the study of attitudes, values, beliefs and motives. It may also be adapted to collect generalised information from any human population. He adds that, questionnaires also have high amounts of data standardisation. On this note the researcher opted to use a questionnaire to elicit response from the subjects for the study.

The questionnaire was in three sections. Section 'A' addressed the background of respondents. Section 'B' dealt with views they held about children with Down's syndrome on social interaction. The third part, Section C considered regular pupils feelings towards their peers with Down's syndrome. Four

colleagues, a research student, a teacher of the Unit School and the two teachers for the regular schools were engaged to assist the researcher during the administration of the instruments.

The researcher employed observation technique, employing an inter-rater or observer, to buttress the responses from the questionnaires. In the submission of Robson (2002), data from direct observation contrasts with, and can often usefully complement, information obtained by virtually any other technique. Cohen, Manion and Morrison (2004, p. 305) citing Patton (1990) point out that, “observational data are attractive as they afford the researcher the opportunity to gather ‘live’ data from ‘live’ situations. The researcher is giving the opportunity to look at what is taking place in situ rather than at second hand”. They add that, as with other data collection techniques, issues of validity and reliability beset observation. From these views, the researcher found it expedient in adopting it in support to the questionnaire.

An observation checklist was used as a guide. In the views of Alberto and Troutman (1990), to gather a reliable data through observation technique, a researcher must engage the services of a second observer. The class teacher for the experimental group served as the second observer to the researcher since he handles the class and was the best person to observe and assess changes that the introduction of the children with Down’s syndrome to his class might have had on his pupils. The two observation scores were compared and a coefficient of inter-observer reliability computed. This resulted in a Cronbach’s Alpha of .802.

Validity and Reliability

Quasi-experiment provides reasonable control over most sources of invalidity (McMillan & Schumacher, 2001) that has some threats that the researcher must check and control. Some of the threats to internal validity are; history, maturation, statistical regression, testing, instrumentation, selection and experimental mortality. McMillan and Schumacher further indicate that, in quasi-experiments, selection is the most serious threat to internal validity because the groups may differ in characteristics that affect the dependent variable. Since the classes for the study are about the same in characteristics, selection differences probably could not significantly account for the results. Furthermore, due to the time span for the experiment, six (6) weeks, maturation effects (growing more experienced, tired, bored), another threat, was also expected to have been controlled.

A Cronbach's alpha of .88 was arrived at when the questionnaire was pilot tested. Pallant (2001) citing Nunnally (1978) recommends a minimum level of .7 for internal consistency of the items that make up a scale to measure an attribute, indicating that the questionnaire was reliable.

Pilot-Test of Questionnaire

The researcher adopted the questionnaire for use after pilot testing, consultations with some of his colleagues and his supervisors were made. Pilot tests are done to ensure that questions in a questionnaire are understandable and unambiguous (Robson, 2002). This helps to throw up some of the inevitable problems of converting ones design into reality. On this note, all the 20 Basic

Stage 4 pupils from Methodist Primary ‘A’ School formed the group to pilot test the instrument for the study. Before the regular pupils responded to the questionnaire, children with Down’s syndrome were brought to the class for the pupil to make out the type of children the questionnaire was about. The pupils’ were taken through the questionnaire and made to respond to them.

Based on their responses, the researcher realised that pupils were not able to supply responses in their own words to the questions of Section ‘B’. For this reason, the questions in the section were developed into a four-point Likert scale. This read “Always”, “Sometimes”, “Never” and “Unknown”. The headings of Section C were also changed. The Likert scale with “Never”, “Sometimes”, “Often” and “Always” was redesigned to read “Always”, “Sometimes” and “Never”. This was for the reason that the difference between the interpretation for “often” and “sometimes” was not very clear and understandable for the respondents. The final questionnaire for the study was therefore developed and used for the pre-test and post-test of the study.

Procedure for Data Collection

Before the commencement of the study, the researcher applied for an introductory letter from the Department of Educational Foundations, University of Cape Coast (Appendix F) to seek for permission to undertake the study in the schools. This was received and attached to a permission letter that was forwarded to the Cape Coast Metropolitan Education Office. The Metropolitan Education Office granted the permission. Consent was also sought from parents of the children with Down’s syndrome to be used for the study. The form used for the

consent was adapted from Fraenkel and Wallen (1993). The researcher visited the homes of the children with Down's syndrome to interact with their parents before they signed the forms. He touched on the importance of the study, to promote inclusive education for the child to gain the benefits thereof. He considered ethical issues, to see to the welfare of the child and not to infringe on their rights and supposed risks associated to the experiments. One of these risks may include endangering oneself as he or she explores the new environment upon being granted freedom of movement in the school premises that is controlled in the Special school.

The researcher engaged four persons to help in the study. They were the class teachers of the control and experimental groups, a teacher from the Special school and a Master of philosophy Special Education student from the University of Cape Coast. They were briefed on 4th March 2009 on the research to be conducted that derived its source from inclusive education. The teachers questioned the effectiveness of the inclusion policy, especially considering children with intellectual disabilities, who may not be able to cope with academic work; the blind who may not see and regular class teachers not having much knowledge and skills to handle them in the regular class. The researcher explained that, they were not to be made whiz kids. Their right to education was to be considered as well as the promotion of social interaction that was the basis of the research. It was explained that students in Teacher Education Colleges and Universities offering education are aware of these issues as they are being prepared to meet the challenge.

The questionnaire was discussed during the orientation in the local dialect for even interpretation. The teacher for the experimental group as well as the researcher took part in administering the instrument and served as observers. The observation checklist was discussed with the class teacher for consistency on what to look out for.

All the 56 pupils from the regular classes making up of the experimental (28) and control (28) groups responded to the questionnaire. The research assistants read out the questions and explained them in the local dialect item by item for pupils to respond to them appropriately. By this, the respondents were free to make their independent and genuine choices as they understood what each question was about, responded to it before moving to the next question.

The researcher and class teacher observed the 28 pupils in the experimental group in and out of class especially during break times. They observed and took notes on the interaction among the pupils for the first week (base line data) of introducing the Down's syndrome and at the last week (post-observation). An observation checklist was used to collect the data. It contained items organised in a Likert scale with "Always", "Sometimes" and "Never". The items included how regular pupils behaved towards the children with Down's syndrome (looked frightened at them, bullied them, played with them, ate with them, borrowed items from them and so on).

Pre-testing of Instrument

A pre-test was conducted for the experimental and control groups on 12th March 2009. The questionnaire was read out to regular pupils, explaining it item by item in the local dialect (Fante) to help pupils who might not be able to comprehend what they read to give genuine responses. The items in the pre-test included pupils' knowledge of types of disability, views they had about children with Down's syndrome on social interaction (are they able to greet, share with others and accept criticisms?). It also considered their feelings towards them (play, converse, eat and learn with them) see appendix C. Each class had two Down's syndromes in their class to help them recognise the type of children being talked about. The questionnaires were collected immediately they completed.

The researcher informed the regular pupils in the experimental group on an experiment to be carried out. He told them they were going to be joined by four other pupils from the Special School for six weeks and so they should relax and learn with them. The pupils in the Special school were also informed that they will be going to the regular school to interact and study with them for six weeks. They were to report to their school each morning before going to their new class.

Intervention

The following were the intervention and post-test activities involved in the experiment during the six weeks period:

Week one

The children with Down's syndrome were put into the experimental class to familiarize and interact freely with their regular peers. The researcher and the class teacher observed and filled the observation checklist, some of the variables observed included; do they show signs of fear when in contact with them? Do they bully them, play with them, sit to eat together, borrow items from them, and embrace them (see Appendix J).

Week two

During this week, the researcher oriented the regular children on causes, strengths and challenges of children with Down's syndrome. This was done to erase misconceptions regular pupils had about children with Down's syndrome and Children with Disabilities (CWD's) in general as revealed by the pre-test.

Week three

The researcher led both children with and without Down's syndrome to interact socially through group activities. For instance, they participated in solving mathematical problems in groups, reading and telling stories from the class English reader (Bailey, 2008). Two stories read were the King's daughter (p. 28) and Ananse the wicked chief (p. 32). A pupil told the story of the cat and the mouse, where it ended that it is good for children to go to school. They also participated in cleaning of classrooms according to sections (Blue, Yellow, Red and Green). Each of the children with Down's syndrome was asked to join one of the sections, which they did. However, the participation of the children with

Down's syndrome in the activities was minimal in the academic work. They looked a bit active in the cleaning activities.

Week four

The researcher gave the opportunity for the regular peers and the children with Down's syndrome to play games together. Some of the games were "ampe", football, singing and dancing in pairs by holding hands and in turns.

Additionally, the researcher on three occasions, during break-time, interacted with all the children at table to eat together.

Week five

Free interaction continued this week. The researcher and the class teacher observed and filled the observation checklist (post-observation, see Appendix J).

Week six

Post-testing of Instrument

Examination was to begin on the last week of the experiment for the regular school. As a result, the head teacher of the experimental class requested that the experiment be called off after the second day since she felt the children with Down's syndrome would disturb their peers. This called for the post-test to be conducted on 14th April 2009. The research assistants were invited to support in administering it as it was done during the pre-test. The same instrument used for the pre-test was used for the post-test to find out if the intervention had affected the regular pupils' views and feelings towards their peers with Down's syndrome. The experimental and control groups responded to the items. The control group had no specific intervention but stayed closer to the Special school

than the experimental group, which supposedly served as a placebo. The questionnaires were collected after completion to be coded for analysis.

Problems Encountered during the Intervention

- I. On one occasion, one of the children with Down's syndrome left for home while classes were going on. When asked why he went home, he could not express himself. This suggests that in an inclusive environment, special attention must be given to children with special needs.
- II. The other pupils of the Special school expressed willingness to join their colleagues to the regular school. This created some misunderstanding in the School as most of them tried to join the regular class whenever their colleagues left for the experimental class. It was rectified after encouraging them that a programme was being developed to have them all at the regular school.
- III. After the six weeks, the children with Down's syndrome did not want to go back to their special school, insisting daily to join their regular peers. They were also encouraged to have patience as their colleagues.

Data Analysis

The data received from the pre-test and post-test on the social interaction of the children before and after inclusion were coded. In finding out the perception pupils had for the Down's syndrome, as per the first research question, they responded from a four point Likert scale. These were analysed with the following responses and codes: "Always" (4), "Sometimes" (3), "Never" (2)

and “Unknown” (1). In finding out the feeling about their interaction with them (research question two), a three point Likert scale was used. These were analysed with the following responses and codes:, “Always” (3), “Sometimes” (2), and “Never” (1).

Frequencies, percentages, chi-square and t- test were adopted using computer analysis with version 12 of the Statistical Product and Service Solution (SPSS) software. Frequencies, percentages, chi-square were used to analyse research questions one and two. The chi-square was used to find out if responses to questions in a category were significant at an alpha level of 0.05. The paired two-group t-test was used to analyse the three hypotheses. It determined if there was any significant difference between the pre-test and post-test scores of the control group and the experimental group. The level of significance to education of 0.05 was adopted to analyse the chi-square and t-test since it was an educational study.

CHAPTER FOUR

RESULTS AND DISCUSSION

The purpose of the study was to examine the views children without disabilities held for children with Down's syndrome as far as their social interaction with them is concerned and also to ascertain the effects an intervention on social interaction between children with and without Down's syndrome would have on the perception and attitude of those without disabilities. The results were presented and discussed under the following sub heading: results and discussion of background data, research questions, and hypotheses testing. Omissions or wrongly ticked responses were eliminated from the analyses to give a true reflection of the actual responses received; hence, having different totals in tables. The background data and research questions were presented using simple percentages, frequencies and chi-square. Paired two-group t-test was also used to test the hypotheses. An alpha level of 0.05 was adopted.

Background Data

The researcher before delving into the focus of the study tried to consider the background of the respondents. This is presented in Figures 1 to 4 and covers the age of respondents, distribution of gender and pupils' knowledge of types of disability. There were 28 participants each for both the control and experimental group.

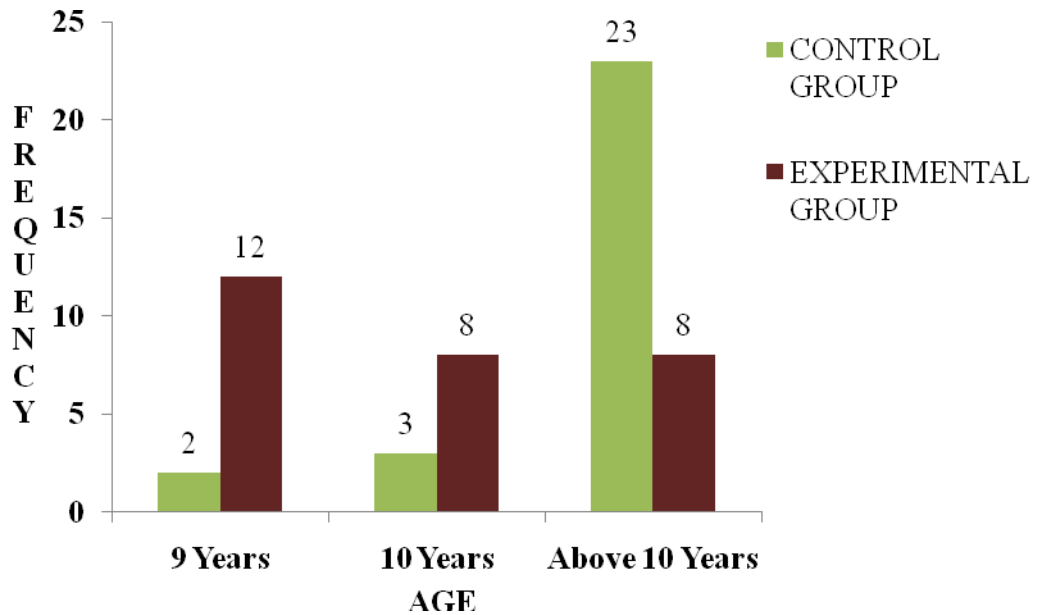


Figure 1: Age of Respondents

Age of respondents

In the control group, those aged 9 years were 2 (7.2%), while in the experimental class, there were 12(42.8%). However, there were 92.8% of the control and 57.2% of the experimental group, respectively, who were above 9 years old. In Ghana, the average age for a child in Basic Stage (BS) 4 is 9 years. What this meant was that it was only the 7.2% of the control and 42.8% of the experimental who fitted the average norm of the country. The researchers’ basis of including the children with Down’s syndrome in the class was to proceed on what Mitchell (2005) advanced that in an inclusive classroom every child must be placed in an age appropriate class. Shea and Bauer (1997) posit that, inclusion is the organization of a school so that all students who would usually be assigned to it are educated with their age-peers. It turned up that majority of the regular pupils

for the class were above the average age of 9 years. Could this mean that pupils in the locality did not commence school at the expected age or have some special needs to be addressed?

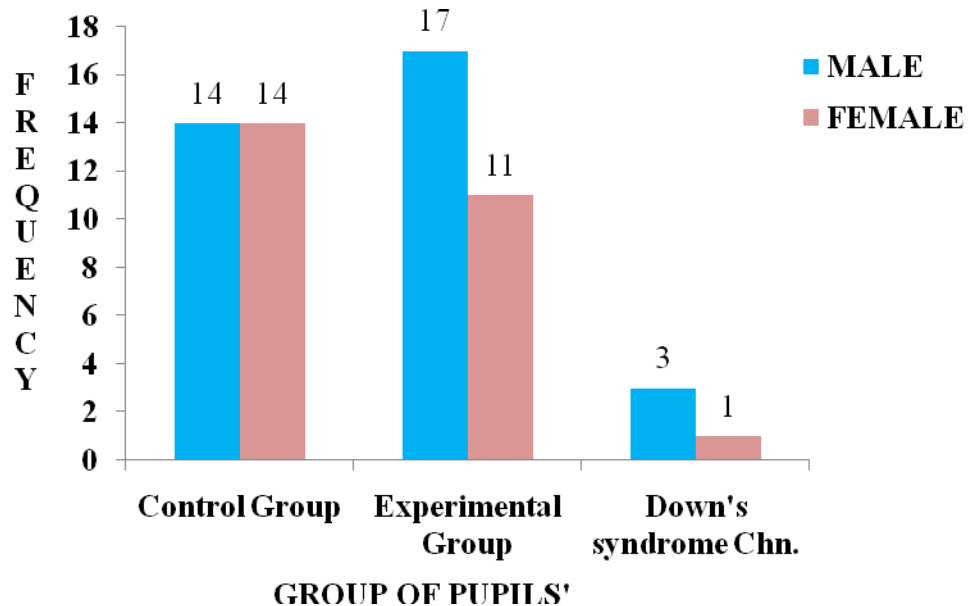


Figure 2: Distribution of Gender

Distribution of Gender

In the control group, the male and female research participants were 14 (50%) each, while in the experimental group, the male were 17 (61%) and female 11 (39%) as in Figure 2. The male pupils in the experimental group were more than their female counterparts. In the case of the children with Down's syndrome, in the experimental class, there were 3 (75%) males and 1 (25%) female. Though gender was not a major concern the researcher considered, it happened that the male pupils interacted much with the male Down's syndrome peers when they were in or out of class than their female counterparts.

Pupils' Knowledge of Types of Disability

The researcher was equally interested in pupils' knowledge about types of disabilities. The pre-test and post-test results are presented in figure 3 and 4 respectively.

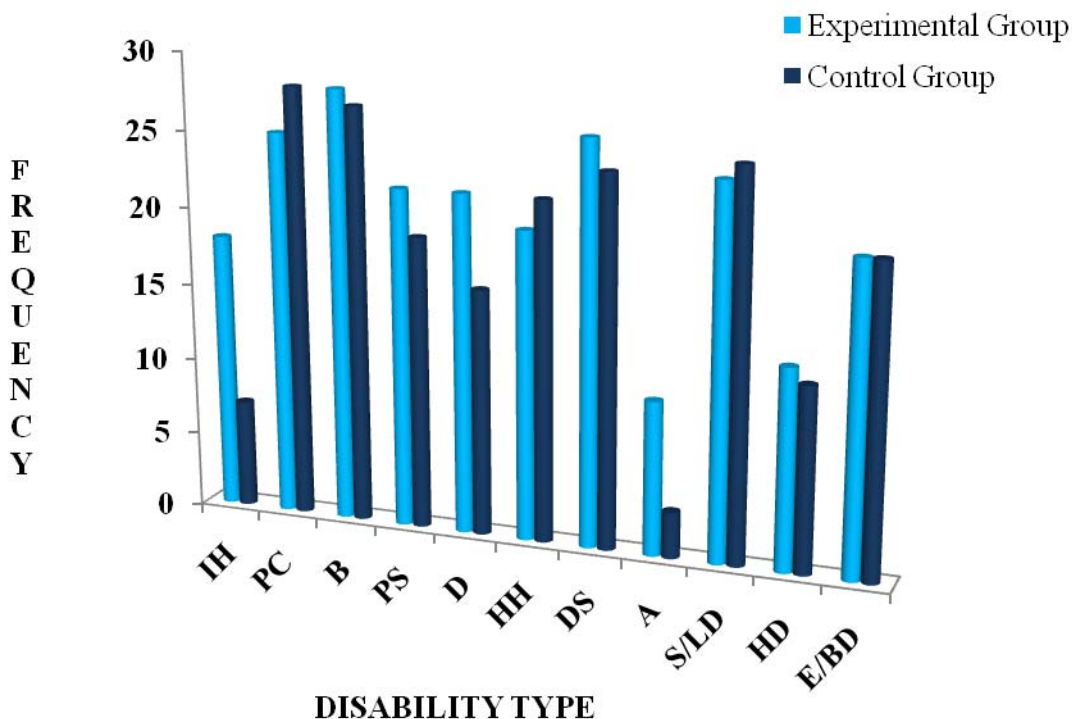


Figure 3: Pupils' Knowledge of Types of Disability (Pre-test)

KEY

- | | | |
|--|---|-------------------|
| IH – Intellectually Disabled | HH – Hard of Hearing | B – Blind |
| PC – Physically Challenged | HD – Health Disorders | A – Autism |
| DS – Down's syndrome | D – Deaf | |
| PS – Partially Sighted | S/LD –Speech and Language Disability | |
| E/BD –Emotional and Behaviour Disorders | | |

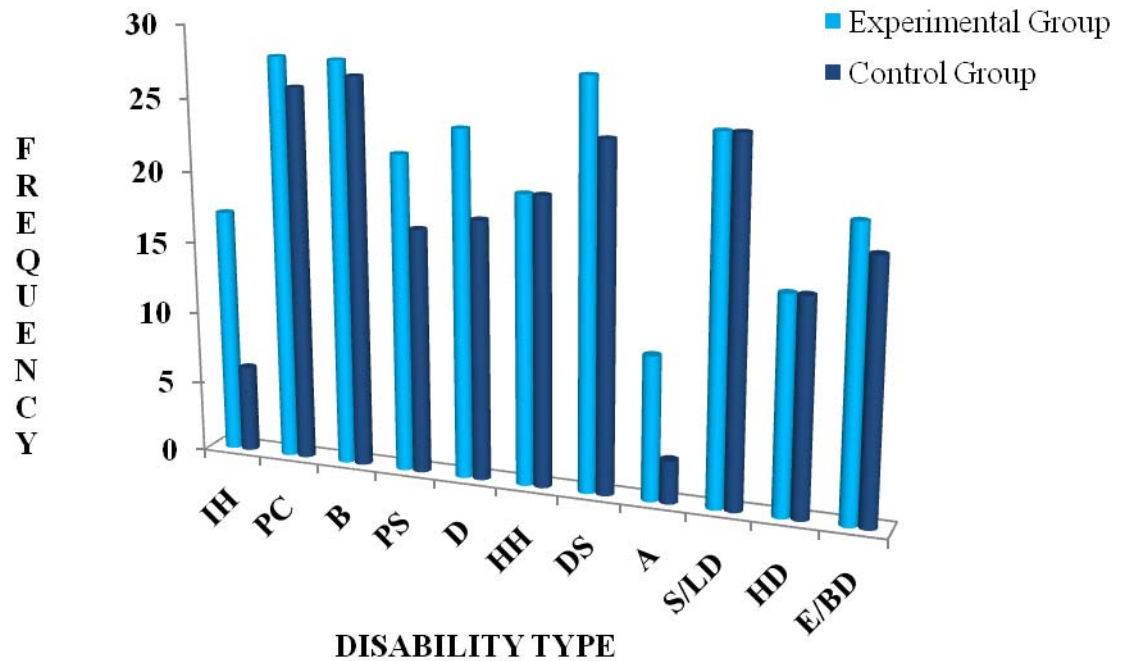


Figure 4: Pupils’ Knowledge of Types of Disability (Post-test)

The pre-test results at Figure 3 reveal that most of the pupils had knowledge about a number of disabilities with the exception of autism and health disorders. Pupils’ in both the control and experimental groups knew about the physically challenged, the blind and the Down’s syndrome. The experimental group had 26 pupils indicating that they had awareness about Down’s syndrome. At the post-test, as illustrated in Figure 4, all the 28 pupils’ of the experimental group indicated their awareness about them with autism remaining at the low side.

In spite of the fact that regular pupils had knowledge about children with Down’s syndrome, it appeared that they had some misconception about them. An observation made was that the regular peers laughed and left their seats for them when they were brought to the class. This probably is because in Ghana,

organisations set up for people with disabilities are mostly for the physically, hearing and the visually impaired. These are observable disabilities, as such gaining much awareness making them common to pupils. In line with the assertion of Vygotsky (1978), the child's development is inseparable from social and cultural activities, for this reason, culture carries over all prejudices and attitude towards persons with disabilities. Consequently, advocacy for the other conditions should be encouraged to avoid ignorance that calls for prejudices.

Results and Discussion of Research Questions

Research Question 1: In the context of social interaction, what views do children without disabilities hold for children with Down's syndrome?

In the first research question, the researcher was interested in finding out the views (perception) children without disabilities held for children with Down's syndrome as far as social interaction was concerned. The responses to questions based on this are presented in Tables 1, 2, 3 and 4.

Tables 1 and 3 look at the pre-test results on regular pupils' perception about the Down's syndrome, while Table 2 and 4 addresses the post-test results. Respondents were to express their opinion using a four-point Likert Scale: "Always" (A), "Sometimes" (S), "Never" (N) and "Unknown" (U). Frequencies (F), Percentages (%) and Chi-square (χ^2) were used to find out generally, respondents' perception on the statements, deduce from their responses whether they support or disapprove of the statements and whether there were statistically significant differences in their responses. "V" represents the value of the Chi-

square statistic with the degree of freedom represented by “df”. The label “p” in the table represents the calculated p-value of the chi-square.

Table 1

Perception about Children with Down’s Syndrome (Pre-test)

| PERCEPTION | A | | | S | | N | | U | | Chi-Square (χ^2) | | |
|--|---|----|------|----|------|---|------|----|------|-------------------------|----|--------|
| | G | F | % | F | % | F | % | F | % | V | df | p |
| 1. They can greet | E | 9 | 32.1 | 7 | 25.0 | 5 | 17.9 | 7 | 25.0 | 1.143 | 3 | .77 ** |
| | C | 11 | 44.0 | 12 | 48.0 | 0 | 0 | 2 | 8.0 | 11.714 | 3 | .01* |
| 2. They can express appreciation | E | 6 | 21.4 | 16 | 57.2 | 2 | 7.1 | 4 | 14.3 | 16.571 | 3 | .00* |
| | C | 11 | 47.8 | 5 | 21.7 | 4 | 17.4 | 3 | 13.1 | 7.000 | 4 | .14* |
| 3. They can offer help to others | E | 5 | 17.9 | 6 | 21.4 | 5 | 17.9 | 12 | 42.8 | 4.857 | 3 | .18* |
| | C | 7 | 29.2 | 6 | 25.0 | 5 | 20.8 | 6 | 25.0 | .929 | 4 | .92** |
| 4. They can share with others | E | 10 | 35.7 | 10 | 35.7 | 1 | 3.6 | 7 | 25.0 | 7.714 | 3 | .05* |
| | C | 5 | 17.9 | 8 | 28.6 | 3 | 10.7 | 1 | 42.8 | 6.571 | 3 | .09** |
| 5. They can cooperate in group activities | E | 6 | 22.2 | 13 | 48.2 | 1 | 3.7 | 7 | 25.9 | 17.714 | 4 | .00* |
| | C | 7 | 25.9 | 4 | 14.8 | 5 | 18.5 | 11 | 40.8 | 9.857 | 4 | .04* |
| 6. They can return borrowed items without prompt | E | 4 | 15.4 | 8 | 30.8 | 7 | 26.9 | 7 | 26.9 | 4.500 | 4 | .34** |
| | C | 3 | 12.0 | 7 | 28.0 | 2 | 8.0 | 13 | 52.0 | 14.857 | 4 | .01* |

G - Group, **E**- Experimental, **C**-Control, **p**<0.05 *-significant, **-not significant

Table 2

Perception about Children with Down's Syndrome (Post-test)

| PERCEPTION | G | A | | | S | | | N | | | U | | | Chi-Square (χ^2) | | |
|--|---|----|------|--|----|------|--|---|------|--|----|------|--|-------------------------|----|-------|
| | | F | % | | F | % | | F | % | | F | % | | V | df | p |
| 1. They can greet | E | 16 | 59.3 | | 9 | 33.3 | | 1 | 3.7 | | 1 | 3.7 | | 32.714 | 4 | .00* |
| | C | 8 | 28.6 | | 6 | 21.4 | | 7 | 25.0 | | 7 | 25.0 | | .286 | 3 | .96** |
| 2. They can express appreciation | E | 4 | 14.3 | | 15 | 53.5 | | 5 | 17.9 | | 4 | 14.3 | | 12.86 | 3 | .01* |
| | C | 7 | 25.0 | | 12 | 42.9 | | 7 | 25.0 | | 2 | 7.1 | | 7.143 | 3 | .07** |
| 3. They can offer help to others | E | 5 | 19.2 | | 9 | 34.7 | | 5 | 19.2 | | 7 | 26.9 | | 4.857 | 4 | .30** |
| | C | 5 | 17.8 | | 8 | 28.6 | | 4 | 14.3 | | 11 | 39.3 | | 4.286 | 3 | .23** |
| 4. They can share with others | E | 6 | 23.1 | | 10 | 38.5 | | 3 | 11.5 | | 7 | 26.9 | | 7.357 | 4 | .12** |
| | C | 7 | 25.0 | | 12 | 42.9 | | 6 | 21.4 | | 3 | 10.7 | | 6.000 | 3 | .11** |
| 5. They can cooperate in group activities | E | 10 | 38.4 | | 8 | 30.8 | | 4 | 15.4 | | 4 | 15.4 | | 7.714 | 4 | .10** |
| | C | 5 | 17.9 | | 14 | 50.0 | | 2 | 7.1 | | 7 | 25.0 | | 11.143 | 3 | .01* |
| 6. They can return borrowed items without prompt | E | 7 | 25.9 | | 7 | 25.9 | | 8 | 29.7 | | 5 | 18.5 | | 5.571 | 4 | .23** |
| | C | 3 | 11.2 | | 7 | 25.9 | | 8 | 29.6 | | 9 | 33.3 | | 8.429 | 4 | .08** |

G - Group, **E**- Experimental, **C**-Control, **p**<0.05 *-significant, **-not significant

Greeting and Showing Appreciation

According to Table 1 and 2 while the responses for “Always” and “Sometimes” of the control group in the pre-test and post-test reduced with respect to their views on the greeting habits of the children with Down's syndrome, those of the experimental group increased. For the experimental group,

those who responded “Always” and “Sometimes” put together in the pre-test was 16 (57.1%). This increased at the post-test to 25 (92.6%). In the chi-squared tests (see summary on Table 1 and 2) no significant statistical difference was found in the pre-test of the experimental group $\chi^2 (3, 28) = 1.143, p = .77$.

On the other hand significant statistical difference was found in the post-test $\chi^2 (4, 27) = 32.714, p = .00$. This may mean that the intervention had positive effect on the perception children without disabilities had in relation to the greeting habits of the children with Down’s syndrome.

Considering the speech and language difficulties of the children with Down’s syndrome as postulated by Down syndrome online (2009) that they have language and cognitive delays, regular pupils might not have heard them greet or respond to their greetings as expected. Respondents of the experimental group who indicated that the children with Down’s syndrome are able to greet “Always” and “Sometimes” probably did not only listen to them greet but also observed them as they usually did so with gestures or non-verbal cues (Down syndrome online, 2009). This also applies to their mode of expressing appreciation as in the post-test, 19 (67.8%) of the experimental group were of the view that the children with Down’s syndrome are able to show appreciation. There were significant differences at the pre-test and at the post-test. The results reveal that both verbal and non-verbal cues must be taken into consideration when dealing with children with Down’s syndrome to foster better interaction.

Helping and Cooperating in Group Activities

On the part of offering help to others when need be, the results show that, at the pre-test, the control groups' view for "Always" and "Sometimes" put together was in the majority but at the post-test, the view of the majority was that, they had no idea or felt the children with Down's syndrome could "Never" offer help to others.

On the part of the experimental group, the majority view 17 (60.7%) changed from "Never" and "Unknown" put together in the pre-test to a simple majority 14 (53.9%) for "Always" and "Sometimes" in the post-test. The intervention perhaps made the experimental group realise that the children with Down's syndromes occasionally helped in time of need. The results of the chi-square showed no statistically significant difference in both cases. It could be observed that at the pre-test, majority 19 (70.4%) perceived that the children with Down's syndrome could cooperate in group activities. This view changed a little after the intervention. The majority view reduced slightly to 18 (69.2%) who indicated that they could "Always" and "Sometimes" cooperate in group activities.

Perhaps, the reason for the reduction in this result may be due to the reason that the regular pupils were not helping themselves when needed and cooperating in group without quarrelling. The observation by the researcher showed that the children with Down's syndrome "sometimes" helped the regular peers to work. Giving this premise, there should be more group activities fused into schoolwork as well as in house chores for both groups of pupils to promote

cooperative learning. Down Syndrome Online (2009) stress that learning by imitation is strength and one that children with Down's syndrome use to learn effectively from other children in many situations. Again, Social Learning Theorists like Bandura and Vygotsky buttress this point by saying that, observation and imitation are salient elements in the way children learn.

Sharing with others and returning borrowed items without prompt

The data in Table 1 shows that at the pre-test, majority, 20 representing 71.4% of the experimental group, felt the children with Down's syndrome were capable of sharing with others. This perception changed after the intervention where this time the majority, though a decrease, had 16 respondents representing 61.6% indicating that children with Down's syndrome are able to share with others. Conceivably, the intervention added to the regular pupils' perception about their peers with Down's syndrome's ability to share with others. This depicts that, though they may behave as younger children in relation to their age, they are not egocentric as suggested by Piaget in Dworosky (1996).

The view from pupils about the willingness of the children with Down's syndrome to return borrowed items without prompt reveals that 14 (53.8%) of the pupils in the experimental group at the pre-test were of the view that they had no idea or felt the children with Down's syndrome could "Never" give borrowed objects or items back. This view changed to a simple minority after the intervention to 13 (48.2%) at the post-test with "Always" and "Sometimes" put together 14 (51.8%) this time indicating they can returned borrowed items. In the chi-squared test, there was no statistically significant difference of the

experimental group at the pre-test $\chi^2 (4, 28) = 4.50, p= .34$ and at the post-test $\chi^2 (4, 28) = 5.571, p= .23$. This could mean the children with Down's syndrome might not return borrowed items without prompt. The observation by the researcher and class teacher revealed that, the regular pupils did not borrow items from their Down's syndrome peers, but the children with Down's syndrome did so at ease.

Table 3

Perception about Children with Down's Syndrome (Pre-test) Continues

| PERCEPTION | G | A | | | S | | N | | U | | Chi-Square (χ^2) | | |
|---|---|----|------|--|----|------|---|------|----|------|-------------------------|----|-------|
| | | F | % | | F | % | F | % | F | % | V | df | p |
| 1. They can play with others | E | 10 | 38.5 | | 9 | 34.6 | 2 | 7.7 | 5 | 19.2 | 10.214 | 4 | .04* |
| | C | 7 | 25.9 | | 6 | 22.2 | 9 | 33.4 | 5 | 18.5 | 6.286 | 4 | .18** |
| 2. They can sing and dance with others | E | 9 | 36.0 | | 10 | 40.0 | 2 | 8.0 | 4 | 16.0 | 9.500 | 4 | .05* |
| | C | 8 | 28.6 | | 7 | 25.0 | 4 | 14.3 | 9 | 32.1 | 2.000 | 3 | .57** |
| 3. They can accept criticisms and suggestions | E | 7 | 26.9 | | 6 | 23.1 | 5 | 19.2 | 8 | 30.8 | 3.786 | 4 | .44** |
| | C | 1 | 3.7 | | 9 | 33.4 | 7 | 25.9 | 10 | 37.0 | 13.429 | 4 | .01* |
| 4. They can learn like all other children | E | 7 | 25.9 | | 13 | 48.2 | 7 | 25.9 | 0 | 0.00 | 10.286 | 3 | .02* |
| | C | 8 | 28.6 | | 14 | 50.0 | 6 | 21.4 | 0 | 0.00 | 3.714 | 2 | .16** |

G - Group, E- Experimental, C-Control, p<0.05 *-significant, **-not significant

Ability to play games, sing and dance with others

In trying to sum up Tables 3 and 4, 14 (51.9%) of the control group and 7 (26.9%) of the experimental group, respectively, had no idea or felt children with Down's syndrome "Never" had the ability to play games. In Cape Coast, during Basic Education school sports festivals, schools in the circuits compete among themselves. Unfortunately, the pupils in the school for the intellectually challenged are not invited to join their peers of the regular school in the competition. This perhaps contributed to the response of the participants (26.9% and 51.9%) that, they had no idea or felt the children with Down's syndrome "Never" had the ability to play games. However, the experimental group recorded 19 (73.1%) for "Always" and "Sometimes" put together at the pre-test which augmented to 22 (81.5%) after the intervention.

Overall, majority of the regular pupils of the experimental group believed that the children with Down's syndrome had the ability to play with others. The results of the chi-square affirm this as there was significant difference at the pre-test $\chi^2 (4, 28) = 10.214, p = .04$ and at the post-test, $\chi^2 (4, 28) = 19.857, p = .00$. The observation revealed that the pupils played together during break time.

Table 4

Perception about Children with Down's Syndrome (Post-test) Continues

| PERCEPTION | G | A | | S | | N | | U | | Chi-Square (χ^2) | | |
|--|---|----|------|----|------|---|------|---|------|-------------------------|----|-------|
| | | F | % | F | % | F | % | F | % | V | df | p |
| 1. They can play with others | E | 13 | 48.2 | 9 | 33.3 | 4 | 14.8 | 1 | 3.7 | 19.857 | 4 | .00* |
| | C | 11 | 39.1 | 9 | 32.1 | 2 | 7.4 | 6 | 21.4 | 6.571 | 3 | .09** |
| 2.They can sing and dance with others | E | 14 | 51.9 | 7 | 25.9 | 0 | 0.00 | 6 | 22.2 | 12.286 | 3 | .01* |
| | C | 9 | 32.1 | 14 | 50.0 | 3 | 10.7 | 2 | 7.2 | 13.429 | 3 | .00* |
| 3.They can accept criticisms and suggestions | E | 6 | 21.4 | 11 | 39.3 | 6 | 21.4 | 5 | 17.9 | 3.143 | 3 | .37** |
| | C | 5 | 18.5 | 8 | 29.6 | 8 | 29.6 | 6 | 22.3 | 5.929 | 4 | .21** |
| 4.They can learn like all other children | E | 17 | 60.7 | 7 | 25.0 | 4 | 14.3 | 0 | 0.00 | 9.929 | 2 | .01* |
| | C | 7 | 25.0 | 12 | 42.9 | 9 | 32.1 | 0 | 0.00 | 1.357 | 2 | .51** |

Source – Field Data (April, 2009)

G - Group, **E**- Experimental, **C**-Control, **p**<0.05 *-significant, **-not significant

Perception about children with Down's syndrome and their ability to sing and dance with others according to Tables 3 and 4 reveal that 6 (22.2%) of the experimental group at the pre-test had no idea or felt the children with Down's syndrome "Never" sang with 5 (18.5%) selecting "Never" and "Unknown" at the post-test. While 19 (76.0%) of the experimental group opted for "Always" and "Sometimes" at the pre-test, the number increased to 21(77.8%) at the post-test. Considering the chi-square, it was statistically significant at the pre-test χ^2 (4, 28) = 9.50, p= .05 and at the post-test χ^2 (3, 28) = 12.286, p= .01. This possibly is an indication that the intervention had some influence on the perception the

respondents had about children with Down's syndrome considering their singing and dancing habit.

Vygotsky (1978) stresses that children develop language from what they experience in their cultural environment. On the part of children with Down's syndrome, they learn about play and social behaviour from watching and from listening to the language of the other children, especially as they usually understand more than they can express (Down syndrome online, 2009). The results of the study confirm this, as respondents' interaction with children with Down's syndrome improved, especially with their play skills. This therefore means that play among children with and without disabilities should be encouraged at school and at home.

Ability to accept criticisms and suggestions without becoming angry

The result of Table 3 shows that in the experimental group, there was a slip decision 13 (50%) on the ability of the children with Down's syndrome to accept criticism and suggestions without becoming angry. Their view at the post-test (Table 4) reveals that the majority, 17 (60.7%) could "Always" and "Sometimes" accept criticism. The intervention revealed the children with Down's syndrome had the ability to accept criticism even though it is not easy for some people to do so. Oates, Bard and Harris (2007) indicated that, the roles of emotional expression and sensitivity to others' emotions in the development of empathy, and abilities to learn collaboratively are worthy of more attention in the special context of children with Down's syndrome. In the view of Avoke (2004), some societies consider children with Down's syndrome to have outlived their

wits. However, the present study indicates that children with Down's syndrome can express their emotions. This means that society should respect the emotions, especially anger in children with Down's syndrome, since they may have good causes for that, as they are capable of responding to criticisms.

Learning ability of Children with Down's syndrome

The data in Tables 3 and 4 indicate respondents' view on the children with Down's syndromes ability to learn like all other children. At the pre-test, 6 (21.4%) of the control group and 7 (25.9%) of the experimental group indicated had no idea or felt that the children with Down's syndrome can "Never" learn like all other children.

Available literature on children with Down's syndrome (Avoke, 2004; Lewis & Kirmse, 2007 and MedicineNet Doctors, 2009) regards them as intellectually impaired, ranging from mild to moderate. This corresponds with the 21.4% and 25.9% of the respondents' perception at the pre-test that, they cannot learn. The percentage of the view that they could learn "Always" for the control group was 8(28.6%) at the pre-test which decreased at the post-test to 7 (25%). The experimental groups view changed from 7 (25.9%) to 17 (60.7%), a significant increase, indicating that the intervention enlightened the regular peers about the potentials the children with Down's syndrome had in learning.

From the results of the chi-square, there was significant difference in both the pre-test, $\chi^2 (3, 27) = 10.286$, $p = .02$ and the post-test, $\chi^2 (2, 28) = 9.929$, $p = .01$. Microsoft Encarta (2006) agrees that, children with Down's syndrome have a range of learning disabilities, but what people expect of them influence their

achievement. The response of the regular peers in this study provides evidence that when giving the opportunity the children with Down's syndrome can also achieve their worth.

Research Question 2: To what extent do regular pupils desire to become friends to children with Down's syndrome?

In the view of the researcher, it appears that in Ghana, due to some social misconceptions; most non-disabled children show signs of fear for those with Down's syndrome. This had led to a situation where some parents even discouraged their non-disabled wards from interacting with them. It is general knowledge that children make friends with peers easily. The researcher therefore wanted to find out if regular pupils' could transfer this relationship to children with Down's syndrome. For this reason, the researcher elicited regular pupils' views on friendship to, and their attitude towards children with Down's syndrome. Questions on these were in three (3) point Likert scale and was analysed with the following responses and codes: "Always" (3), "Sometimes" (2), and "Never" (1). Tables 5 and 6 address this aspect of the study.

Feeling all right to come close to a child with Down's Syndrome

Majority of the respondents indicated at the pre-test (Table 5 item 1) that they will "feel all right" in coming close to children with Down's syndrome, but 7 (25.9%) and 8 (30.8%) respondents of the experimental and control groups respectively, declined to that. Contrary to this, the inter-rater observation (Appendix J) shows that regular pupils most often avoided the children with Down's syndrome.

This authenticates the submission of Roberts (1983) in Deku and Gyimah (2003) that both individuals with and without disabilities feel a sense of discomfort and uneasiness in interacting, but non-disabled persons feel more uncomfortable in the presence of the disabled peers and tend to avoid interacting with them. Ocloo, et al (2002) add that, traditional believers in Ghana, see disability as a curse or punishment for offences committed. These might be some of the reasons, why some parents will not want their wards to interact with children with disabilities. This could probably be the basis for which 25.9% and 30.8% of the experimental and control groups respectively, indicated that they would “Never” feel all right coming close to their peers with Down’s syndrome.

At the post-test, almost the entire respondents of the experimental group 26 (92.9%) felt comfortable to interact with the children with Down’s syndrome (Item 1 of Table 6). The chi-square also revealed that there was significant difference at the pre-test and post-test. The observation revealed that, regular pupils sometimes felt reluctant coming close to, or embraces the children with Down’s syndrome as they use to do in welcoming themselves. In spite of the above, the regular pupils’ attitude showed a significant improvement.

Table 5

Attitude Towards Children with Down's Syndrome (Pre-test)

| ATTITUDE | G | Always | | Sometimes | | Never | | Chi-square (χ^2) | | |
|---|---|--------|------|-----------|------|-------|------|-------------------------|----|-------|
| | | F | % | F | % | F | % | V | df | p |
| 1. Feel alright to come close to a child with Down's syndrome | E | 5 | 18.5 | 15 | 55.6 | 7 | 25.9 | 14.857 | 3 | .00* |
| | C | 9 | 34.6 | 9 | 34.6 | 8 | 30.8 | 4.857 | 3 | .18** |
| 2. Play with the child with Down's syndrome | E | 8 | 28.6 | 16 | 57.1 | 4 | 14.3 | 8.000 | 2 | .02* |
| | C | 7 | 25.9 | 16 | 59.3 | 4 | 14.8 | 18.000 | 3 | .00* |
| 3. Converse with a child with Down's syndrome | E | 4 | 14.8 | 10 | 37.0 | 13 | 48.2 | 12.857 | 3 | .01* |
| | C | 2 | 7.1 | 16 | 57.2 | 10 | 35.7 | 10.571 | 2 | .01* |
| 4. To be friends with a child with Down's syndrome | E | 6 | 21.4 | 16 | 57.2 | 6 | 21.4 | 7.143 | 2 | .07* |
| | C | 7 | 26.9 | 12 | 46.2 | 7 | 26.9 | 7.143 | 3 | .07** |
| 5. To eat with a child with Down's syndrome | E | 1 | 3.6 | 9 | 32.1 | 18 | 64.3 | 15.500 | 2 | .00* |
| | C | 1 | 3.7 | 6 | 22.2 | 20 | 74.1 | 34.571 | 3 | .00* |
| 6. To work with a child with Down's syndrome | E | 10 | 35.7 | 8 | 28.6 | 10 | 35.7 | .286 | 2 | .97** |
| | C | 7 | 25.9 | 14 | 51.9 | 6 | 22.2 | 12.286 | 3 | .01* |

G - Group, **E**- Experimental, **C**-Control, **p**<0.05 *-significant, **-not significant

This notwithstanding, Rose and Shevlin (2004) are of view that children without Down's syndrome can make life uncomfortable for children with Down's syndrome through bullying, teasing and rejection. However, the outcome of the

study concluded that inclusive education promotes social interaction among children with and without Down's syndrome. This is in support of the argument raised by Demchak (2009) who indicated that inclusion leads to increased understanding and acceptance of diversity as the children without disabilities appreciates individual differences. Deiner (2005) also reiterated this. She contends that, with inclusive education children without disabilities will become aware of individual differences and learn to respect these differences.

Table 6

Attitude towards Children with Down's Syndrome (Post-test)

| ATTITUDE | G | Always | | Sometimes | | Never | | Chi-Square (χ^2) | | |
|---|---|--------|------|-----------|------|-------|------|-------------------------|----|-------|
| | | F | % | F | % | F | % | V | df | p |
| 1. Feel alright to come close to a child with Down's syndrome | E | 19 | 67.9 | 7 | 25.0 | 2 | 7.1 | 4.857 | 3 | .18** |
| | C | 9 | 32.1 | 15 | 53.6 | 4 | 14.3 | 6.500 | 2 | .04* |
| 2. Play with the child with Down's syndrome | E | 15 | 53.6 | 10 | 35.7 | 3 | 10.7 | 7.786 | 2 | .02* |
| | C | 11 | 40.7 | 13 | 48.2 | 3 | 11.1 | 14.857 | 3 | .00* |
| 3. Converse with a child with Down's syndrome | E | 13 | 46.4 | 10 | 35.7 | 5 | 17.9 | 3.500 | 2 | .17** |
| | C | 6 | 21.4 | 12 | 42.9 | 10 | 35.7 | 2.000 | 2 | .37** |
| 4. To be friends with a child with Down's syndrome | E | 9 | 33.3 | 14 | 51.9 | 4 | 14.8 | 14.000 | 3 | .00* |
| | C | 8 | 28.6 | 15 | 53.5 | 5 | 17.9 | 5.643 | 2 | .06** |
| 5. To eat with a child with Down's syndrome | E | 11 | 42.3 | 7 | 26.9 | 8 | 30.8 | 6.000 | 3 | .11** |
| | C | 1 | 3.6 | 11 | 39.3 | 16 | 57.1 | 12.500 | 2 | .00* |
| 6. To work with a child with Down's syndrome | E | 14 | 50.0 | 13 | 46.4 | 1 | 3.6 | 11.214 | 2 | .00* |
| | C | 11 | 39.3 | 8 | 28.6 | 9 | 32.1 | .500 | 2 | .78** |

G - Group, E- Experimental, C-Control, $p < 0.05$ *-significant, **-not significant

Eating with a child with Down's syndrome

The results at the pre-test reveal that, 20 (74.1%) and 18 (64.3%) of the control and experimental groups respectively, indicated that they will “Never” eat with the children with Down's syndrome (Table 5, item 5). It appears that the regular pupils had some prejudiced feelings about their peers with Down's syndrome thus, coming out with this result. It was observed that, the regular pupils chose to sit by their regular peers to eat. When the researcher inquired from some of the pupils, they just laughed without providing any reason. Could this mean that regular pupils felt Down's syndrome is contagious and so in eating with them they might be infected?

The researcher put in an intervention for pupils to interact by eating together. By the fifth week, the pupils were sometimes seen eating close to the children with Down's syndrome. The result of the post-test reveals that, the control group still had the majority not ready to eat with them. Nevertheless, the experimental group had 11 (42.3%) opting to eat with them “Always”. It is notable in Table 6 that, though almost the entire respondents of the experimental group 26 (92.9%) were willing to come close to the Down's syndromes, there were 8 (30.8%) respondents who still felt reluctant when it came to eating with them. The pre-test result of the chi-square at Table 5 shows a highly significant difference in eating with the Down's syndrome, $\chi^2(3, 28) = 15.50, p = .00$ while at the post-test, there was no significant difference, $\chi^2(3, 26) = 6.00, p = .11$.

Making friends with children with Down's syndrome

Referring to Table 6, the post-test results reveal that 4 (14.8%) of the experimental group “Never” wanted to be friends with children with Down's syndrome. This notwithstanding, a majority 23 (85.2%) indicated their preparedness to be friends with them “Always” and “Sometimes” put together. The chi-square results revealed a highly significant difference at the post-test $\chi^2(3, 27) = 14.00, p = .00$. This adds to the observation of Buckley and Sacks (1987) and Buckley, Bird, Sacks and Archer (2002) that, even though children with Down's syndrome are usually good at making friends, they do not have as many opportunities to go out and about in the community to engage in social and leisure activities. It therefore means that when children are given the opportunity to relate with children with Down's syndrome in the community and in school, it would gradually improve friendship among them.

Playing, Conversing and Working with a child with Down's syndrome

The results of Table 5 shows that 8 (28.6%) of the experimental group and 7 (25.9%) of the control group were willing to play “Always” with their peers with Down's syndrome. However, there were 4 (14.3%) at both groups who opted “Never” to play with them. After the intervention, the number of respondents in the experimental group who were willing to play with the children with Down's syndrome “Always” increased to 15 (53.6%). The inter-rater observation (Appendix J) attests to this. It reveals that regular pupils did not play with the children with Down's syndrome during the first week. By the fifth week, they were playing together with ease.

According to Down syndrome online (2009) the delayed spoken language skills of children with Down's syndrome, affect their ability to play with other children. They mainly play alongside rather than with others. However, they may join in play and an activity despite limited expressive language.

On their readiness to converse with them at the pre-test stage, 4 (14.8%) and 13 (48.2%) of the experimental group chose 'Always' and 'Never' respectively. However, at the post-test, 5 (17.9%) opted 'Never' to converse with them while 13 (46.4%) indicated they will 'Always' converse with children with Down's syndrome. The observation revealed that at both stages, the regular peers sometimes conversed with them.

The experimental group recorded 6 (22.2%) at the pre-test opting 'Never' to work with them but at the post-test, it reduced to 1 (3.6%). With those who choose to work with them 'Always', the experimental group had 10 (35.7%) at the pre-test which increased to 14 (50%) at the post-test. In all these areas, the chi-square results of the experimental group recorded significant differences at the post-test as shown in Table 6. The post-test recorded improvement in the respondents' attitude towards their peers with Down's syndrome. This might mean that the intervention brought about some change of attitude.

HYPOTHESES TESTING

Three hypotheses were formulated and tested at 5 percent significance level (i.e. $p < 0.05$) using paired samples t-test. The discussion was under the pre-test and post-test for the control and experimental groups. Tables 7 and 8 represent the pre-test results with the post-test results in Tables 9 and 10.

Hypothesis 1

The researcher tested for perception of the regular pupils' towards their peers with Down's syndrome. The first null hypothesis stated was (H_0): "There is no significant difference in the perception of regular pupils' who practise inclusion with children with Down's syndrome and their peers who do not". The corresponding alternate hypothesis was (H_A): "There is significant difference in the perception of regular pupils' who practise inclusion with children with Down's syndrome and their peers who do not".

Table 7

Paired Samples Statistics (Pre-test)

| Social Interaction | Mean | N | Std. Deviation | Std. Error Mean |
|---------------------------|-------------|----------|-----------------------|------------------------|
| Perception (Cont.) | 8.65 | 280 | 23.751 | 1.419 |
| Perception (Expt.) | 6.37 | 280 | 18.797 | 1.123 |
| Attitude (Cont.) | 4.20 | 168 | 14.868 | 1.147 |
| Attitude (Expt.) | 2.97 | 168 | 10.597 | .818 |
| Friendship (Cont.) | 5.91 | 140 | 19.482 | 1.503 |
| Friendship (Expt.) | 3.01 | 140 | 10.593 | .817 |

Table 8

Paired Samples t-Test (Pre-test)

| | | Paired Differences | | t | df | Sig. (2- | | | |
|---------------------------|----------|---------------------------|-----------------------|-------------------|--|-----------------|-------|-----|------|
| | | Mean | Std. Deviation | Mean | 95% Confidence Interval of the Difference | tailed) | | | |
| Social Interaction | | | | Error | Lower | Upper | | | |
| | | | | Difference | | | | | |
| Perception (Cont.) | - | 2.279 | 31.161 | 1.862 | -1.387 | 5.944 | 1.224 | 279 | .222 |
| Perception (Expt.) | | | | | | | | | |
| Attitude (Cont.)- | Attitude | 1.232 | 18.305 | 1.412 | -1.556 | 4.020 | -.872 | 167 | .384 |
| (Expt.) | | | | | | | | | |
| Friendship (Cont.) | - | 2.899 | 22.323 | 1.722 | -.501 | 6.299 | 1.683 | 167 | .094 |
| Friendship (Expt.) | | | | | | | | | |

A paired-samples t-test (Table 8) revealed that there was no significant differences in the regular peers perception at the control and experimental groups, $t(279) = -1.224, p = .22, p < .05$. This indicates that the mean “perception” of the experimental group at the pre-test ($M = 6.37$) was significantly lower than the mean of the control group ($M = 8.65$) as portrayed in Table 7. The researcher failed to reject the null hypothesis of no difference in favour of the alternative hypothesis since the probability was greater than .05 ($p > .05$).

The results of this study may mean that, people have various orientations towards persons with disabilities. Indeed, as the social learning theorist like Bandura and Vygotsky so rightly remarked, children learn from their environment and so leave with these cultural practises and beliefs. These may call for regular pupils’ also growing with such perception that, any child born with a disability is due to a curse or a punishment from the gods or ancestors for an offence committed as reported by Ocloo, et al (2002).

Lusthaus and Lusthaus (1996) put forward that, in the first part of the 20th century, people treated children and adults with intellectual disabilities as sub humans. On his part, Avoke (2004) indicates that, in some communities in Ghana the intellectually disabled due to their conditions are giving derogatory names. They regarded them as “toke toke” or “gyimigyimi”, “buulu”, “susudidivi” or “tagbmadetwo”, all implying one who is stupid or retarded. These inevitably might call for regular pupils’ having some misconceptions about their peers with Down’s syndrome.

Hypothesis 2

Secondly, the researcher tested the attitude of the regular pupils towards those with Down's syndrome. The exact null hypothesis stated and tested was (H_0): "There is no significant difference in the attitude of regular pupils' who practise inclusion with the Down's syndrome and their peers who do not". The corresponding alternate hypothesis was (H_A): "There is significant difference in the attitude of regular pupils' who practise inclusion with the Down's syndrome and their peers who do not".

A paired-samples t-test (Table 8) revealed that there was no significant differences in the regular peers attitude at the control and experimental groups, $t(167) = .872$, $p = .38$, $p < .05$. This indicates that the mean "attitude" of the experimental group at the pre-test ($M = 2.97$) was significantly lower than the mean of the control group ($M = 4.20$) as portrayed in Table 7. As the probability was greater than .05, the researcher failed to reject the null hypothesis of no difference in favour of the alternative hypothesis.

The result of the paired-samples t-test for the second hypothesis reveals that, non-disabled children behaved differently towards persons with disabilities. Like Ocloo et al (2002) asserted, until recently, a greater majority of Ghanaian communities and individuals have negative attitude towards person with disabilities. The attitudes towards them were hatred, rejection, dislike, objects of scorn and a disgrace to families. These social misconceptions discourage most non-disabled people in the country from associating with those who have Down's syndrome. The pre-test results of Table 5 attest to this as 64.3% of the

experimental and 74.1% of the control group will not want to “eat” with children with Down’s syndrome.

Hypothesis 3

The researcher tested for regular pupils’ wish to be friends of children with Down’s syndrome. The exact null hypothesis stated and tested was (H₀): “There is no significant difference in making friends to children with Down’s syndrome by regular pupils’ who practise inclusion and their peers who do not”. The corresponding alternate hypothesis was (H_A): “There is significant difference in making friends to children with Down’s syndrome by regular pupils’ who practise inclusion and their peers who do not”.

A paired-samples t-test (Table 8) revealed that there was no significant differences in friendship of the regular peers to their peers with Down’s syndrome at the control and experimental groups, $t(167) = 1.683$, $p = .09$, $p < .05$. This indicates that the mean “friendship” of the experimental group at the pre-test ($M = 3.01$) was significantly lower than the mean of the control group ($M = 5.91$) as portrayed in Table 7. Given that the probability was greater than .05, the researcher failed to reject the null hypothesis of no difference in favour of the alternative hypothesis.

Some regular pupils’ expressed their dislike to be “friends” with their peers with Down’s syndrome. The result at Table 5 shows that 21.4% and 26.9% of the experimental and control groups, respectively, did not want to be “friends” to children with Down’s syndrome. General knowledge shows that children make friends easily. This notwithstanding, Guralnick (2002) hints that children with

Down's syndrome typically have difficulties interacting with peers and with all other children with mild intellectual disabilities; this considerably risk them of becoming socially isolated from their peers in school, home and community settings. The results of the study might confirm this view as a good number of the regular pupils' turn down friendship to their peers with Down's syndrome. This affirms what Gadagbui and Essel (1997) indicated that cultural/social beliefs in Ghana promote unfriendly attitudes or lack of acceptance by able-bodied people towards those with disabilities.

Since the probability, for the three hypotheses tested were greater than the alpha level (.05), we fail to reject the null hypotheses of no difference in favour of the alternative hypotheses that if there should be any difference, it might be due to chance. In view of the fact that the respondents come from the same community, it is apparent that they all held similar observation, calling for no statistically significant differences. Kerlinger (1970) in Cohen, Manion and Morrison (2000) stress that, it is advisable to use samples from the same population or samples that are as alike as possible in a research experiment. Considering the pre-test results, it could be realised that the regular pupils', both at the control and experimental groups, had similar behavioural characteristics towards their peers with Down's syndrome.

According to Munoz (2006), potential challenges worthy of noting include existing negative attitudes and values towards persons with disabilities, where neglect, derogative names and discrimination against them is rampant. Rotter (1954) in Wikipedia Encyclopaedia (2009) suggested that the effect of behaviour

has an impact on the motivation of people to engage in that behaviour. People therefore wish to avoid negative consequences, while desiring positive results or effects.

Vygotsky (1978) calls attention to the fact that, the child’s development is inseparable from social and cultural activities. He adds that, culture carries over all prejudices and attitude towards persons with disabilities. The results of the pre-test affirm this as children come from the society and from their response, reflect exactly what goes on in their communities. Oates, Bard and Harris (2007), point out that, children who feel rejected may not develop socially amidst other developmental stages. Taylor (2002) advises that society must change the use of outdated and often misinterpreted stereotypes for children to adapt.

Table 9

Paired Samples Statistics (Post-test)

| | Mean | N | Std. Deviation | Std. Error Mean |
|--------------------|-------------|----------|-----------------------|----------------------------|
| Perception (Cont.) | 3.25 | 280 | 8.205 | .490 |
| Perception (Expt.) | 6.25 | 280 | 17.911 | 1.070 |
| Attitude (Cont.) | 1.94 | 168 | .748 | .058 |
| Attitude (Expt.) | 6.31 | 168 | 19.399 | 1.147 |
| Friendship (Cont.) | 2.57 | 168 | 7.521 | .580 |
| Friendship (Expt.) | 5.14 | 168 | 16.505 | 1.273 |

Table 10

Paired Samples t-Test (Post-test)

| Social Interaction | Paired Differences | | Std. Error Mean | 95% Confidence Interval of the Difference | | t | df | Sig. (2-tailed) |
|---|---------------------------|-----------------------|------------------------|--|--------------|----------|-----------|------------------------|
| | Mean | Std. Deviation | | Lower | Upper | | | |
| Perception (Cont.) - Perception (Expt.) | -3.004 | 18.019 | 1.077 | -5.123 | -.884 | -2.789 | 279 | .006 |
| Attitude (Cont.) - Attitude (Expt.) | -4.369 | 19.369 | 1.494 | -7.319 | -1.419 | -2.924 | 167 | .004 |
| Friendship (Cont.) - Friendship (Expt.) | -2.565 | 18.266 | 1.409 | -5.348 | .217 | -1.820 | 139 | .070 |

The post-test results found in Tables 9 and 10 show that there were statistically significant differences in the experimental group and the control group. This could be established in the “perception” and “attitude” of regular pupils. However, in the area of “friendship”, there was still no statistically significant difference as compared to the pre-test results of Tables 7 and 8.

A paired-samples t-test (Table 10) revealed that there was significant differences in the regular peers perception at the control and experimental groups, $t(279) = -2.789$, $p = .01$, $p < .05$. This indicates that the mean perception of the experimental group at the post-test ($M = 6.25$) was significantly higher than the mean of the control group ($M = 3.25$) as portrayed in Table 9. The result as portrayed in Table 10 provides evidence to reject the null hypothesis. Thus, there is difference in “perception” between regular pupils’ who practised inclusion and those who did not.

Furthermore, a paired-samples t-test (Table 10) revealed that there was significant differences in the regular peers “attitude” at the control and experimental groups, $t(167) = -2.924$, $p = .01$, $p < .05$. This indicates that the mean “attitude” of the experimental group at the post-test ($M = 6.31$) was significantly higher than the mean of the control group ($M = 1.94$) as depicted in Table 9. This indicates that there is ample evidence to reject the null hypothesis. Thus, there is difference in “attitude” between regular pupils’ who practised inclusion and those who did not.

On the other hand, a paired-samples t-test (Table 10) revealed that there was no significant difference in friendship of the regular peers to children with

Down's syndrome in the post-test at the control and experimental groups, $t(167) = -1.820$, $p = .07$, $p < .05$. This notwithstanding, the mean friendship of the experimental group at the pre-test ($M = 5.14$) was higher than the mean of the control group ($M = 2.57$) as represented in Table 9. Since $p > 0.05$, there is ample evidence to fail to reject the null hypothesis. Thus, accepting the null hypothesis that, "there is no difference in "friendship" between regular pupils' who practised inclusion and those who did not".

The researcher deduced from the results that, though pupils were enlightened about the strengths and shortcomings of the Down's syndrome as well as interacting with them, some of the regular pupils still had some reservation for their peers with Down's syndrome. This confirms what Ocloo et al (2002) indicated that, although the feelings towards persons with disabilities are now enhanced, there are still traces of negative attitude towards them.

At the pre-test level, there was no statistically significant difference in social interaction of regular pupils who practised inclusion with the children with Down's syndrome and their peers who did not. The response of the regular peers in relation to their "perception", "attitude" and readiness to make "friends" with the children with Down's syndrome attest to this (see Table 8).

After the intervention, the perception and attitude of regular pupils who practised inclusion with the Down's syndrome peers changed as compared to their peers who did not practise inclusion with the children with Down's syndrome. The result of the post-test in Table 10 confirms this. It was also observed that there was much improvement in the way regular pupils interacted with their peers

with Down's syndrome. However, the willingness of the regular pupils' to be friends with the children with Down's syndrome remained the same as revealed from their response in the post-test. One could infer from this that the willingness to be a friend to a Down's syndrome is an individual interest, which an intervention (inclusion) might affect slightly. The assertion Buckley, Bird and Sacks (2002) made that, the opportunity to establish friendships may be affected by social independence and by speech, language, and cognitive delay is confirmed here, as this is a characteristic of children with Down's syndrome.

In the view of Taylor (2002), adults should not force friendship unto children, but simply providing the opportunity for this to happen. The results of the study contradict with the submission of Demchak (2009) who opine that, inclusion promotes friendships among children as they play, learn, and do all other things together. The experiment involved play, learning together and other things but the promotion of friendship was not statistically significant.

In testing for the effects of social inclusion of children with Down's syndrome on their peers without disabilities, the results attest to the submissions that inclusion promotes social interaction. Tomko (1996) submits that, it is being a part of what everyone else is. It is also a means of welcoming and embracing everyone as a member who belongs. The three variables adapted to measure social inclusion were, "perception", "attitude" and "friendship". As discussed earlier, the intervention (inclusion) had a positive influence (over 75%) on the regular pupils. In two of the areas (perception and attitude), there were statistically significant differences recorded between the experimental group and

the control group. Even though the third area (friendship) did not record statistically significant difference between the groups in the hypothesis testing, it still made some impact as revealed in Table 5 and 6. At the pre-test, 21.4% of the experimental group opted to make “friends” with the Down’s syndrome “Always”. This number appreciated to 33.3% in the post-test.

Considering the results of the study, inclusive education, appears to be a major approach for enhancing social interaction. This is in consistent with what was indicated by Soodak and Erwin (2000). They identified that schools are important places for children to develop friendships and learn social skills. This is a place where children with and without disabilities learn with and from each other. On the other hand, a study by Lewis and Kirmse (2007) revealed that majority of children can rather be taught to contribute usefully in the home or in a sheltered working or living environment after they are grown. Obviously, the benefits of inclusive classrooms reach beyond academics. For instance, NAEYC Resources (2009) reported that, an environment that encourages young children's social and emotional development would stimulate all aspects of their learning.

The Disabled People's International (1981) in Open University (2003) also believes that the 'cure' to the problem of disability lies in changing society unlike medically based cures. As the youth of today are expected to be the future leaders, inclusive education can help to enlighten them about persons with disabilities. Seeing what the study revealed, regular pupils’ who would not want to interact with children with Down’s syndrome had a change of perception and attitude towards them after the intervention. Inclusive education is therefore expected to

lead to increased inclusion in future environments; both in the community and in other educational institutions where no one will be discriminated (Demchak, 2009).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to examine the views children without disabilities held for children with Down's syndrome as far as their social interaction with them was concerned. It also tried to ascertain the effects an intervention on social interaction between children with and without Down's syndrome would have on the attitude and perception of those without disabilities. This chapter provides a summary, draw conclusions and make recommendations based on the findings of the study.

Summary

The study was a pre-test - post-test non-equivalent quasi-experimental research which examined and tested the effects of inclusion on social interaction between children without disabilities and their peers with Down's syndrome in Cape Coast. The researcher used the entire fifty-six Basic Stage 4 pupils' in the schools for the study with 4 children with Down's syndrome as subjects for the study. Twenty-eight pupils from Methodist Primary 'B' and twenty-eight pupils from E. J. P. Brown Methodist Primary served as the experimental and control groups, respectively. Coincidentally the classes had the same number of pupils that called for no sampling.

These participants were purposively selected because they were part of a cluster of schools having a Special school sited among them. They were also expected to be in stage 4 of regular school according to the age appropriateness indicated by Mitchell (2005). The researcher adopted the use of questionnaire to solicit views and feelings of the regular pupils on their perception and willingness to interact with their Down's syndrome peers. This was administered as a pre-test and the same questionnaire used for the post-test. The experiment lasted for six (6) weeks. During the intervention, there were discussions on the causes of Down's syndrome, their strengths and shortcomings as well as some group activities in and out of class to help the children to interact.

The study was guided by the following research questions and null hypotheses:

1. What views do children without disabilities hold for children with Down's syndrome in the context of social interaction?
2. To what extent do regular pupils desire to become friends to children with Down's syndrome?

H_{O1}: There is no significant difference existing in the perception of regular pupils' who practise inclusion with the Down's syndrome and their peers who do not.

H_{O2}: There is no significant difference existing in the attitude of regular pupils' who practise inclusion with the Down's syndrome and their peers who do not.

H₀₃: There is no significant difference existing in making friends to children with Down's syndrome by regular pupils' who practise inclusion with them and their peers who do not.

Major Findings

The study revealed some findings that were classified as "major" and "other findings". The major findings centred on the research questions and hypotheses. The following were the major findings:

- I. It came out of the results that those regular pupils had some knowledge about the causes of Down's syndrome. They indicated that the causes include: punishment for wrong doings by parents, parents mocking people who had disabilities and the activities of witches especially to children they regarded as beautiful or handsome.
- II. It was also reported that, the children with Down's syndrome are able to: greet, express appreciation, offer help, share with others, cooperate in group activities, play, sing and dance, accept criticisms and learn like all other children.
- III. Social interaction between pupils' with and without Down's syndrome can help change the perception and attitude of pupils' without Down's syndrome towards their Down's syndrome peers'.
- VI. The study also revealed that, social interaction between pupils with and without Down's syndrome does not significantly affect the willingness of regular pupils' to be friends to children with Down's syndrome.

Other Findings from Observation

However, the experiment tried to assess how inclusion could improve the social interaction between regular pupils and their peers with Down's syndrome, with much attention on the regular pupils, some other findings observed were:

- I. The children with Down's syndrome were attracted to the regular classroom as such requested to be there always.
- II. The regular pupils addressed the new pupils with their disability instead of their names. For instance "the children with Down's syndrome are coming".

Conclusions

Based on the findings from the research, it is obvious that regular pupils before the intervention had different behavioural characteristics towards children with Down's syndrome and would not want to interact so much with them. After the intervention (inclusion), regular pupils' who practised inclusion were better able to accept 'these children' than their peers who did not practise inclusion especially in their "perception" and "attitude" and not on "friendship".

The study affirmed the fact that inclusive education has positive effects on social interaction between regular pupils and children with Down's syndrome. Even though there was effective change in pupils' "perception" and "attitude" towards their peers with Down's syndrome, the same thing cannot be said about their "friendship" with peers with Down's syndrome. The findings were consistent with the social learning theory, which indicates that children learn by observation, imitation, participation, and scaffolding. Basically, children are able

to perform difficult task under the guidance of an adult. During the study, it was observed that the regular pupils after watching the researcher and some school children who are familiar with children with Down's syndrome interacting with them in various ways, they were also motivated to do likewise no matter the fear or difficulty they had. As a result, there were statistically significant differences in regular pupils "perception" and "attitude" towards children with Down's syndrome. Nonetheless, the null hypothesis on "friendship" was not rejected. Thus, inclusion can help overcome discriminatory attitudes and promote social interaction towards persons with Down's syndrome in Ghana if implemented. There should be some caution in generalising the results of this study, since its scope was limited to Cape Coast and the Aboom Methodist cluster of schools which is a negligible proportion of schools in the country.

Recommendations

Children with Down's syndrome and other disabilities can be found and live in almost every community, as other children without disabilities. The quasi-experiment conducted revealed that it is possible to develop social interaction between children with and without Down's syndrome. For this reason, the researcher recommends that:

- I. Parents, teachers, guardians and caretakers must endeavour to use verbal and non-verbal cues when communicating and interacting with children with Down's syndrome.

- II. Parents should make it a point not to discriminate between children with and without Down's syndrome, rather, they should instil the desire to share, learn and play with each other in their children.
- III. In order to enhance effective social interaction among children with and without Down's syndrome, teachers in particular should give more group-oriented activities in the classroom situation. This will lessen associated phobias children without Down's syndrome have for their peers with Down's syndrome.
- IV. The Special Education Division should ensure that units established for children with intellectual disabilities, which include children with Down's syndrome, should encourage social interaction with the pupils' of the regular schools by going for break to play and eat together.
- V. The teachers of the unit school should liaise with those in the regular school so that the children with and without disabilities do some grounds work and have assembly together at least twice in a week in the regular school.
- VI. Organising joint programmes like sports, games and cultural activities for children with and without Down's syndrome together should be encouraged in schools by educational authorities and other stake holders interested in the well being and development of children with Down's syndrome. This might help identify and develop potentials in them.

- VII. Names of people with disabilities should be used by leaders and the elderly when talking about them to children rather than the use of the condition or disability they have.
- VIII. In an inclusive classroom, teachers' should give children with special needs particular attention and make the class very lively to catch the attention of all the special children to prevent aimless movements and absenteeism.

Suggestions for Further Studies

This study focused on the social interaction between regular pupils and their peers with Down's syndrome in a cluster of schools in Cape Coast. It was limited to social interaction of the children with Down's syndromes, as such may not be generalised to the various categories of disabilities. Replication of this study, by including the Down's syndrome in other special schools to their neighbourhood schools, could be experimented to find out its effectiveness. One other area not considered in this study and could be addressed is the academic achievement pupils with Down's syndrome could make in an inclusive environment in Ghana.

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APPENDICES

APPENDIX A

Pilot Questionnaire

UNIVERSITY OF CAPE COAST

FACULTY OF EDUCATION

DEPARTMENT OF EDUCATIONAL FOUNDATIONS

Dear pupil,

The researcher is a Master of Philosophy (M.Phil) student of University of Cape Coast (UCC) researching on the topic EFFECTS OF SOCIAL INCLUSION OF CHILDREN WITH DOWN'S SYNDROME ON PEERS WITHOUT DISABILITIES IN GHANA. This is a pilot instrument, and you have been selected to participate in it so the researcher can identify the weaknesses of the instrument. He is aware that you are young and have school work to do, but your participation can assist in refining the instrument for the main data collection. It is not a test so feel free to provide genuine responses and comments where necessary. Thank you.

SECTION A: BACKGROUND INFORMATION

Please tick (√) in the space you find appropriate to you. Thank you very much in anticipation of your co-operation.

1. Age
- | | |
|----------------|--------------------------|
| 8 years | <input type="checkbox"/> |
| 9 years | <input type="checkbox"/> |
| 10 years | <input type="checkbox"/> |
| Above 10 years | <input type="checkbox"/> |
2. Gender
- | | | | |
|------|--------------------------|--------|--------------------------|
| Male | <input type="checkbox"/> | Female | <input type="checkbox"/> |
|------|--------------------------|--------|--------------------------|

SECTION B: VIEWS OF CHILDREN ON THE CHILD WITH DOWN'S SYNDROME

1. What do you know about children with Down's syndrome as far as their social interaction is concerned?

.....

2. What do you think are the causes of Down's syndrome?

.....

SECTION C: CHILDRENS VIEWS ON DOWN'S SYNDROME

1. Indicate by ticking (√) the space that suits your feelings about children with Down's syndrome

| | | NEVER | SOMETIMES | OFTEN | ALWAYS |
|-----|--|--------------|------------------|--------------|---------------|
| I | I feel alright when a child with Down's syndrome comes close to me | | | | |
| II | I will play with a child with Down's syndrome | | | | |
| III | I will converse with a child with Down's syndrome | | | | |

| | | NEVER | SOMETIMES | OFTEN | ALWAYS |
|----------|--|--------------|------------------|--------------|---------------|
| IV | I will want to be a friend to a child with Down's syndrome | | | | |
| V | I will eat with a Down's syndrome child | | | | |
| VI | I will work with a Down's syndrome child in group activities | | | | |
| VI I | I will want to be in the same class with a Down's syndrome child | | | | |
| VI II | I will want to help a Down's syndrome child to learn in class | | | | |
| IX | I will obey/follow instructions of a Down's syndrome | | | | |
| X | The child with Down's syndrome can learn like all other children | | | | |

2. Which one would you prefer?

Children with Down's syndrome should have their separate schools

All children, no matter their disabilities, should school together

Children with Down's syndrome should not be in school at all

APPENDIX B

Reliability Statistics

Reliability Statistics on Pilot Test of Instrument

| Cronbach's Alpha Based | | |
|------------------------|-----------------------|------------|
| Cronbach's Alpha | on Standardized Items | N of Items |
| .884 | .873 | 17 |

1. Reliability Statistics on Researcher and Class Teacher's Observation

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .802 | 15 |

APPENDIX C

Main Questionnaire

UNIVERSITY OF CAPE COAST

FACULTY OF EDUCATION

DEPARTMENT OF EDUCATIONAL FOUNDATIONS

QUESTIONNAIRE FOR REGULAR PUPIL'S ON SOCIAL INTERACTION
AMONG PUPIL'S WITH DOWN'S SYNDROME AND PEERS WITHOUT
DISABILITIES

Dear pupil,

The researcher is a Master of Philosophy (M.Phil) student of University of Cape Coast (UCC) researching on the topic EFFECTS OF SOCIAL INCLUSION OF CHILDREN WITH DOWN'S SYNDROME ON PEERS WITHOUT DISABILITIES IN GHANA. You have been selected to participate in it so the researcher can use it for his work. He is aware that you are young and have school work to do, but your participation can assist in making his work effective and to be successful. It is not a test so feel free to provide genuine responses. Thank you.

.....

E. K. LARBI MANTEY

A. BACKGROUND INFORMATION

Please tick (√) in the space you find appropriate to you. Thank you very much in anticipation of your co-operation.

1. Age
- | | |
|----------------|--------------------------|
| 8 years | <input type="checkbox"/> |
| 9 years | <input type="checkbox"/> |
| 10 years | <input type="checkbox"/> |
| Above 10 years | <input type="checkbox"/> |

2. Gender
- | | |
|--------|--------------------------|
| Male | <input type="checkbox"/> |
| Female | <input type="checkbox"/> |

3. Which of the following types of people with disability have you seen before?

Tick as many as may apply.

- | | |
|---|--------------------------|
| a. Intellectually handicapped (one who cannot think, understand or reason well) | <input type="checkbox"/> |
| b. Physically challenged (one who cannot use hands/legs effectively) | <input type="checkbox"/> |
| c. Blind (one who cannot see at all) | <input type="checkbox"/> |
| d. Partially sighted (one who sees a little) | <input type="checkbox"/> |
| e. Deaf (one who does not hear at all) | <input type="checkbox"/> |
| f. Hard of Hearing (one who can hear a little or only when one shouts) | <input type="checkbox"/> |
| g. Down's syndrome (people with short stubby features, round face and look alike though not family members) | <input type="checkbox"/> |
| h. Autistic (not able to communicate, interact and maintain normal eye contact with other people) | <input type="checkbox"/> |

- i. Speech and language disorders (cannot talk/speak well)
- j. Health disorders (have sickle cell and others)
- k. Emotional and Behaviour difficulties (cannot sit down quietly, disturbs)

B. VIEWS OF CHILDREN ON SOCIAL INTERACTION

Indicate your views about children with Down’s syndrome as far as their social interaction is concerned by ticking (√) the space that suits your view. Do not tick more than one (1) space for each point.

| | VIEWS | ALWAYS | SOMETIMES | NEVER | UNKNOWN |
|-----|---|---------------|------------------|--------------|----------------|
| I | They are able to greet. | | | | |
| II | They can express their appreciation by saying “thank you”. | | | | |
| III | They can offer help others where there is the need. | | | | |
| IV | They can share with others. | | | | |
| V | They can express mood when happy, sad, angry or frightened. | | | | |
| | | | | | |

| | VIEWS | ALWAYS | SOMETIMES | NEVER | UNKNOWN |
|------|--|---------------|------------------|--------------|----------------|
| VI | They can cooperate in a group without quarrelling. | | | | |
| VII | They can play games with others. | | | | |
| VIII | They can give borrowed objects/items back with without prompt. | | | | |
| IX | They can sing and dance with others. | | | | |
| X | They can accept criticisms and suggestions without becoming angry. | | | | |

C. FEELING TOWARDS THE DOWN'S SYNDROME CHILD

Indicate by ticking (√) the space that suits your feelings about children with Down's syndrome. Do not tick more than one (1) for each point.

| | FEELING | ALWAYS | SOMETIMES | NEVER |
|-----|--|---------------|------------------|--------------|
| I | I feel alright when a child with Down's syndrome comes close to me | | | |
| II | I will play with a child with Down's syndrome | | | |
| III | I will converse with a child with Down's syndrome | | | |

| | FEELINGS | ALWAYS | SOMETIMES | NEVER |
|------|--|---------------|------------------|--------------|
| IV | I will want to be a friend to a child with Down's syndrome | | | |
| V | I will eat with a Down's syndrome child | | | |
| VI | I will work with a Down's syndrome child in group activities | | | |
| VII | I will want to be in the same class with a Down's syndrome child | | | |
| VIII | I will want to help a Down's syndrome child to learn in class | | | |
| IX | I will obey/follow instructions of a Down's syndrome | | | |
| X | The child with Down's syndrome can learn like all other children | | | |

2. Which one would you prefer?

Children with Down's syndrome should have their separate schools

All children, no matter their disabilities, should school together

Children with Down's syndrome should not be in school at all

APPENDIX D

Observation Check List

Please tick (√) the space you find appropriate to you on the relationship between the regular pupils and those with Down's syndrome as far as their social interaction is concerned.

| | OBSERVATION | NEVER | SOMETIMES | ALWAYS |
|---|---|--------------|------------------|---------------|
| 1 | Regular pupils look frightened when they come into contact with Children with Down's syndrome | | | |
| 2 | They play with children with Down's syndrome. | | | |
| 3 | Regular pupils converse with those with Down's syndrome. | | | |
| 4 | They sit together to eat. | | | |
| 5 | They work together with them in group activities. | | | |
| 6 | They behave normally, being in the same class with the Down's syndrome. | | | |
| 7 | They help them to learn in class. | | | |
| 8 | They move together particularly when they close from school. | | | |

| | OBSERVATION | NEVER | SOMETIMES | ALWAYS |
|----|--|--------------|------------------|---------------|
| 9 | Regular pupils bully their Down's syndrome peers | | | |
| 10 | They look down on the children with Down's syndrome. | | | |
| 11 | Regular pupils share their items with those with Down's syndrome. | | | |
| 12 | The regular pupils borrow items from their Down's syndrome peers. | | | |
| 13 | They sing and dance together. | | | |
| 14 | Regular pupils greet their Dow's syndrome peers when they meet. | | | |
| 15 | They embrace the children with Down's syndrome as they do to themselves when they meet each morning. | | | |

APPENDIX E

Sample of Consent Form signed by a Parent

AUTHORIZATION FOR A MINOR TO SERVE AS A SUBJECT IN RESEARCH

I authorize the service of Joseph Bright ABADOO-BREW
(Name of Minor)

as a subject in the research investigating how inclusion can promote social interaction among regular school children and those with special educational needs.

The nature and general purpose of the research procedures and the known risks have been explained to me. I understand that J.B. ABADOO-BREW
(Name of Minor)

will be in the study for six (6) weeks and may terminate his/her service in this research at any time he/she so desires.

I understand that it is not possible to identify all potential risks in an experimental procedure, and I believe that reasonable safeguards have been taken to minimize both the known and the potential but unknown risks.

I agree further to indemnify and hold harmless University of Cape Coast (UCC) and her agents and employees from any and all liability, actions or causes of actions that may accrue to the subject minor as a result of his/her activities for which this consent is granted.

Witness [Signature]

Signed [Signature]
Parent/Guardian

Date 18-03-09

APPENDIX F

Application for Introductory Letter

P. O. Box 298
UCC Post Office,
Cape Coast
14th January, 2009

THE HEAD OF DEPARTMENT
DEPARTMENT OF EDUCATIONAL FOUNDATIONS
CAPE COAST

Dear Sir,

APPLICATION FOR INTRODUCTORY LETTER

EMMANUEL KWAME LARBI MANTEY-ED/SDP/07/0004

I wish to apply for an introductory letter from your outfit to enable me to request for permission to perform my research work in the Cape Coast Methodist cluster of schools. I am a Master of Philosophy Special Education student who has successfully defended my thesis proposal.

I am about to commence my research and needs permission from the Cape Coast Metropolitan Director and the Head teachers of the schools to be involved in the research work.

Hope to hear favourably from you.

Yours faithfully,

Emmanuel K. Larbi Mantey

APPENDIX G

Introductory letter from Department of Educational Foundations University
of Cape Coast

UNIVERSITY OF CAPE COAST
CAPE COAST, GHANA
FACULTY OF EDUCATION
DEPARTMENT OF EDUCATIONAL FOUNDATIONS

Telephones: 042-32404 & 32480/3 Direct: 36033
TELEX: 2552, UCC, GH
Telegrams & Cables: University, Cape Coast



University Post Office
Cape Coast, Ghana

Our Ref.:
Your Ref.:

THESIS WORK

LETTER OF INTRODUCTION

We introduce to you Mr./Mrs./Miss. Emmanuel K. Harbi Monte..... a student
from University of Cape Coast, Department of Educational Foundations. He/She is
pursuing a Master of Philosophy (M.Phil) degree in Special Education
As part of his/her requirements, he/she is expected to work on a thesis entitled:
Effects of Social Inclusion of Down's Syndrome
on peers without disabilities in Cape Coast.

He/She has opted to make a study at your institution/establishment for the thesis. We
would be most grateful if you could afford him the opportunity to make the study.

Any information provided will be treated as strictly confidential.

Thank you.


Dr. (DR. Y.K.A. ETSEY)
HEAD

DEPARTMENT OF EDUCATIONAL FOUNDATIONS
UNIVERSITY OF CAPE COAST

APPENDIX H

Application for Permission to Undertake a Research Experiment

P. O. Box UC 298,
Cape Coast.
16th January, 2009.

THE METROPOLITAN DIRECTOR
G. E. S.
CAPE COAST

THROUGH

THE HEAD OF DEPARTMENT
DEPARTMENT OF EDUCATIONAL FOUNDATIONS
UNIVERSITY OF CAPE COAST
CAPE COAST

Dear Sir

APPLICATION FOR PERMISSION TO UNDERTAKE A RESEARCH EXPERIMENT

I wish to apply for permission to undertake an experiment on inclusive education in the Aboom Methodist Primary cluster of schools. I am a Master of Philosophy (M.phil) Level 600 student in University of Cape Coast offering Special Education. As part of the requirements for the award of the degree, I have chosen to experiment inclusive education for six (6) weeks in the Basic Stage four (BS 4) classes of the schools. Methodist Primary 'A' will be used for a pilot study, Methodist Primary 'B' will serve as the experimental group whilst E. J. P. Brown Methodist Primary will be the control group. Pupils with Down's syndrome from the Methodist Special Needs School will be selected and included in the regular school to experiment if inclusion can improve the social interaction among the regular pupils' and their peers with Special Educational Needs (SEN).

The government of Ghana, a signatory to the United Nations' Salamanca Principle and Framework on Inclusive Education of 1994, is to implementing inclusion on pilot bases with children with visual and hearing impairment. I wish to experiment it using children with mental retardation, specifically with the Down's syndrome, to add to knowledge.

I will be grateful if permission is granted me to undertake the study in the schools.

Yours faithfully,

.....
Emmanuel K. Larbi Mantey

Cc

The Head Teacher, Methodist Primary 'A', Cape Coast
The Head Teacher, Methodist Primary 'B', Cape Coast
The Head Teacher, E. J. P. Brown Meth. Primary, Cape Coast
The Head Teacher, Methodist Special Needs Sch., Cape Coast

APPENDIX I

Reply on Permission from the Metropolitan Education Office, Cape Coast

GHANA EDUCATION SERVICE

In case of reply the Number and date of this Letter should be quoted

Tel. 042-32514/33405 Fax 042-32199

My Ref. No.GES/MD/

Your Ref: No.



REPUBLIC OF GHANA

METROPOLITAN EDUCATION OFFICE P. O. BOX 164 CAPE COAST

22nd January 09

PERMISSION-MR.EMMANUEL K. LARBI MANTEY

I wish to inform you that, the bearer of this note, whose name appears above is a Master of Philosophy (M.phil) student of the University of Cape Coast (UCC).

As part of his degree, he is working on "Effects of Social Inclusion of Down's Syndrome On Peers Without Disabilities In Cape Coast "

Permission has been granted him to do his pilot study in the cluster of Methodist School including the Special Needs ~~School~~ school in the Aboom Circuit.

I count on your usual co-operation.

J.K. ZAGBE
J.K. ZAGBE DIRECTOR OF EDUCATION & ADM.
A/D (FIN & ADM) METROPOLITAN EDUCATION OFFICE
CAPE COAST

PP: METRO DIRECTOR OF EDUCATION
CAPE COAST

THE HEADTEACHER
METH.PRY 'A' SCHOOL
CAPE COAST

THE HEADTEACHER
METH. PRY 'B' SCHOOL
CAPE COAST

THE HEADTEACHER
E.J.P. BROWN PRY SCHOOL
CAPE COAST

cc)-
The Headtescher
Meth. Special needs School
Cape Coast.

APPENDIX J

Inter-Rater Observation Summary

| OBSERVATION | FREQUENCY | |
|---|----------------------------|-----------------------------|
| | Pre Observation | Post Observation |
| Regular pupils look frightened when they come into contact with the Down's syndrome | Always | Sometimes |
| Regular pupils bully their Down's syndrome peers | Sometimes | Never |
| They look down on the children with Down's syndrome | Always | Sometimes |
| They play with children with Down's syndrome | Never | Always |
| Regular pupils converse with those with Down's syndrome | Sometimes | Sometimes |
| They sit together to eat | Never | Sometimes |
| They work together with them in group activities | Sometimes | Sometimes |
| They behave normally being in the same class with the Down's syndrome | Sometimes | Sometimes |
| They help them to learn in class | Sometimes | Always |
| They move together particularly when they close from school | Never | Sometimes |
| Regular pupils share their items with those with Down's syndrome | Sometimes | Always |
| The regular pupils borrow items from those with Down's syndrome | Never | Never |
| They sing and dance together | Sometimes | Always |
| Regular pupils greet their Down's syndrome peers when they meet | Sometimes | Always |
| They embrace the children with Down's syndrome when they meet | Never | Sometimes |