

# **UNIVERSITY OF EDUCATION, WINNEBA**

**DEPARTMENT OF SPECIAL EDUCATION**

**SOCIAL INTERACTION BETWEEN PUPILS WITH HEARING IMPAIRMENT  
AND THEIR HEARING PEERS IN THE UNIVERSITY PRACTICE INCLUSIVE  
SCHOOL, WINNEBA**



**DONKOR, EBENEZER**

**OCTOBER, 2015**

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**B.ED SPECIAL EDUCATION (EDUCATION OF THE HEARING IMPAIRED)  
AND SOCIAL STUDIES**



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of the UNIVERSITY OF EDUCATION, WINNEBA**

**OCTOBER, 2015**

## DECLARATION

### CANDIDATE'S DECLARATION

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

Candidate's Name: Donkor, Ebenezer

Signature:.....

Date:.....



### SUPERVISOR'S DECLARATION

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

Supervisor's Name: Mawutor Avoke Professor of Education

Signature:.....

Date:.....

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## **DEDICATION**

To my wife Grace Ahuron and my children Nana Kwame Darko Donkor Kojo Arhin Donkor, Kobby Sesa Donkor and Maame Abena Ahurama Donkor not forgetting my dear mother madam Mary Ennison for their understanding, support and commitments during this study.



## ABSTRACT

The purpose of the study was to find out the social interaction pattern between pupils with hearing impairment and their hearing peers in the University Practice Inclusive School, Winneba. The study was qualitative which utilized a phenomenological design with interview and observation as the data collection procedures. A sample of 8 pupils comprising 5 pupils with hearing impairment and 3 with normal hearing were purposefully sampled. Data from the study was thematically analyzed based on the emerging themes. Findings from the study revealed among other things that the pupils with hearing impairment had interaction with their hearing peers both inside and outside the classroom. Additionally, there was a symbiotic relationship between the pupils with hearing impairment and their hearing peers. However, the hearing impaired pupils were battling with how to sustain interaction with their hearing peers as a result of their communication difficulties. The study recommended that regular counselling should be given to each group of Pupils in the UNIPRA Inclusive School to enhance the level of friendship between pupils with hearing impairment and their hearing peers.

Also, regular interaction should be encouraged between pupils with hearing impairment and their peers at the UNIPRA Inclusive School in order for the pupils with hearing impairment to continue enjoying the benefits such as getting vital information from friends initiating and sustaining interaction and turn taking.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

With the inclusion of students with disabilities into general education classes, the composition of classroom social networks can influence whether students with special needs make positive social gains or become entrenched in a social system that supports and maintains their problematic or deficient social characteristics. Social interaction with peers is an important component of the socialization of all young children and eventually becomes a major influence in their lives as they learn to adjust to people of diverse character. Peer interaction presents children with opportunities to develop and practice communication, such as initiating and maintaining conversations through questions and comments.

For young children, building relationships with peers is at the core of development, requiring the skills and knowledge necessary for interacting positively and successfully with peers. Peer interaction is viewed as the social exchange of some duration between/among individuals, which refers to dyadic behaviors in which the participants' actions are interdependent (Rubin, Bukowski & Parker, 2006), such as communication (non-linguistic and linguistic, positive and negative) and social play with peers (Antia & Kreimeyer, 2003). Researchers consistently stress the central importance of peer interaction to children's development and well-being. For example, positive peer interactions and relationships in early childhood play a crucial role on the quality of later relationships, social adjustment and successful

emotion regulation in the future (McElwain & Valling, 2005). The ability to interact effectively with peers is also beneficial to the cognitive development and school success (Ladd & Coleman, 1997).

Unfortunately, for children with hearing impairment and related disabilities, there are substantial problems in their abilities to establish relationships and develop friendships with their peers (Guralnick, 2010). The leading researcher in social competence of children with disabilities proposes that developing the abilities to interact with peers should be a primary goal of early intervention and early childhood programs (Guralnick, 2001).

Based on the interaction and experience of the researcher with children with hearing impairment, it is clear that children with hearing impairment in mainstream education often have few friends, have less interaction with hearing peers, and are more often rejected or neglected than their hearing peers. In addition, they may feel isolated and lonely.

Also, children with hearing impairment in the mainstream appear to be neglected by their peers (Nunes, Pretzlik & Olson, 2001) and experience more isolation and loneliness in school than do hearing children (Most, 2007). Therefore, it is important to pay great attention on fostering their positive peer interaction when educating and rehabilitating children with hearing impairment (Dao, 2004).

As the Ghana prepares to embrace all-inclusive education, more and more children with hearing impairment are placed in general schools, where they may face increasing difficulties in forming and sustaining positive relationships with their hearing peers in such hearing and oral environment. Their social interaction with peers is becoming a serious concern for educators

and parents. The main objective of this study therefore, is to examine the level of interaction between children with hearing impairment and their peers without disability at the University Practice Inclusive School, Winneba.

These children are educated in the mainstream settings where social integration is one of the major challenges for them. It appears that they often do not mingle with their hearing counterparts; regular teachers hardly send them and have less interaction with hearing peers during social gathering.

## **1.2 Statement of the problem**

Interaction by the researcher about relationship between children with hearing impairment and their hearing peers in the University Practice Inclusive School in Winneba appeared that pupils with hearing impairment who have been enrolled in this pilot program have difficulty in turns taking and mingling with their hearing peers.

Also, regular teachers do not send children with hearing impairment on errands during break time because they presume that it is unpleasant to send them. During social gatherings, children with hearing impairment group themselves at one place.

The children with hearing impairment in mainstream education setting also have few friends, have less interaction with hearing peers, and are more often rejected or neglected than their hearing peers. It was also obvious to the researcher that some of the pupils with hearing impairment seemed to have difficulties interacting with their hearing peers

In the classrooms, regular children hardly accept to be in the same group with them work during group in the nutshell social interaction is also a problem being face by children with hearing impairment in this school.

### **1.3 Purpose of the study**

The study attempted to find out how the children with hearing impairment interact with their hearing peers at the University Practice Inclusive School.

The study specifically sought to address the following:

1. Pattern of interaction that exist between children with hearing impairment and their non-disabled peers
2. The benefits children with hearing impairment get when they interact with their hearing peers
3. The challenges hearing impaired pupils encounter in interacting with their hearing peers
4. To find the coping strategies children with hearing impairment adopt when interacting with their hearing peers

### **1.4 Research questions**

The following research questions were raised to guide the study

1. What is the pattern of interaction between children with hearing impairment and their nondisabled peers?
2. What are the benefits children with hearing impairment get when they interact with their hearing peers?
3. What are the challenges hearing impaired pupils encounter in interacting with their hearing peers?

4. What are the coping strategies children with hearing impairment adopt when interacting with their hearing peers?

### **1.5 Significance of the study**

The result of this study will help reveal patterns of interactions, effects of interaction on pupils with hearing impairment and coping strategies pupils adopt when interacting with their colleagues at University Practice Inclusive School. This will enable pupils to effectively manage such relations in order to enhance cordial social interaction between pupils with hearing impairment and their nondisabled peers. Teachers and other stakeholders will understand how regular children perceive their disabled peers and design effective strategies to enhance interaction between pupils with hearing impairment and their nondisabled peers.

Teachers, special educators, policy makers and other significant personnel (Non-Governmental Organizations) working directly or indirectly with pupils with hearing impairment would be able to understand the perceptions of regular pupils toward pupils with hearing impairment and adopt effective strategies to facilitate their interaction in the mainstream schools.

Again, the results of the study will add vital information to the body of literature available in Ghana concerning interaction between pupils with hearing impairment and their hearing peers in inclusive educational settings. Lastly, it will generate new understanding that will be useful for future researchers.



## 1.6 Delimitations

This study is delimited to the pupils with hearing impairment at the University Practice Inclusive School JHS Winneba, their hearing peers and the teachers who teach them with particular interest on exploring the level of interaction existing between the hearing impaired pupils and their non-disabled peers.

## 1.7 Limitation

There was difficulty in conducting the interview for the sampled involved in the study as a result of interruptions in the school calendar. Even though this limitation was overcome at the long run, it affected the period of submission of the thesis.

## 1.8 Operational definition of terms

**Hearing impairment:** A hearing impairment is a hearing loss that prevents a person from totally receiving sounds through the ear. If the loss is mild, the person has difficulty hearing faint or distant speech. A person with this degree of hearing impairment may use a hearing aid to amplify sounds. If the hearing loss is severe, the person may not be able to distinguish any sounds.

**Interaction:** Whenever two or more people come together they tend to interact with one another. Interaction can literally be referred to as communication with somebody especially when one works, plays or spends time together with them. When one interacts with another, each has an effect on the other. As two people interact, each is continuously interpreting, her own and the others actions. Each person reacts to and interprets the

individual's act together sharing the constructions of what is going on. Also it is the ability to mingle with, make friends with, and be accepted by peers.

Pattern of interaction: pattern of interaction are the different ways learners can interact both inside and outside the class.

**Inclusive school:** Inclusive school is a type of school where children with and without disabilities are educated in the same classroom with necessary support given to those with disabilities.

### **1.8 Organization of the study**

The study consists of five chapters.

Chapter one provides the introduction of the study, background to the research problem, purpose of the study while chapter two is about the review of related literature of earlier studies conducted on the topic. In addition, chapter three discusses the methods and procedures, which were employed in executing the study and chapter four concerns with the presentation, analysis and discussion of the findings; with chapter five dealing with the summary, conclusions, recommendations and suggestion for further studies are discussed.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section reviewed related literature of earlier studies conducted on the interaction between children with hearing impairment and their hearing peers.

The related literature was reviewed from research articles, journal, and books.

The areas discussed were:

1. Social interaction patterns
2. Patterns of interaction in mainstream setting
3. The status of peer interaction of children with Hearing Impairment
4. Strategies for promoting interaction between children with hearing impairment and their hearing peers
5. Impact of hearing impairment on social life of deaf pupils
6. Importance of peer interactions to children with hearing impairment
7. Importance of peer interactions to regular children in mainstream setting
8. Challenges hearing impaired pupils encounter in interacting with their hearing peers
9. Coping strategies children with hearing impairment adopt when interacting with their hearing peers
10. Related empirical studies
11. Summary of the literature

#### **2.2 Social interaction patterns**

Alongside the communication and psychological difficulties that deaf children face, deaf children's social behavior has been found to be more withdrawn and less collaborative than that of their hearing peers (Wauters & Knoors, 2007). While there are mixed findings in assessing deaf children's peer acceptance (Stinson & Kluwin, 2003), deaf children have been found to feel more rejected and neglected than their hearing peers (Cappelli, Daniels, Durieux-Smith, McGrath, & Neuss, 1995; Wauters & Knoors, 2007). Research indicates that deaf children do not have as many close friendships with hearing peers (Wauters & Knoors, 2007) and these relationships are more sporadic (Lederberg, Rosenblatt, Vandell, & Chapin, 1987). Deaf children are also more likely to have a complete lack of friends in their mainstream class than their hearing peers (Nunes, Pretzlik, & Olson, 2001). Furthermore, compared with mothers of hearing teenagers, mothers of deaf adolescents have rated their children's friendships as higher in aggression and lower in warmth (Henggeler, Watson, & Whelan, 1990). However, this was not found in the children's self-reports.

It is also important to consider the attitudes and beliefs of hearing children regarding their deaf peers and what may mediate this. Most, Weisel, and Turkaspa (1999) compared hearing peers who had regular contact with deaf children in mainstream education compared with those who did not, according to their perceived personal qualities and the student's attitudes of deafness. Most et al (1999) again noted that the deaf student's speech intelligibility was associated with more positive perceived personal qualities by their hearing peers. Furthermore, the group that had contact with their deaf peers associated more positive qualities of those with poor speech intelligibility compared with

students who did not have this contact. Within this context of familiarity, Lewis (1995) found that peer acceptance of children with disabilities is affected by other children's understanding of a child's special needs. Stinson and Liu (1999) found that hearing peers had varying attitudes toward deafness, with negative attitudes centered on frustration, misinterpretation, communication breakdowns, fear, and lack of familiarity with deaf peers and an unwillingness to consider children who are "different." This demonstrates that it is necessary to consider both the impact of characteristics associated with the deaf child and the attitudes and characteristics of their hearing peers on peer interactions and relationships.

Skjørten (2001) sees interaction as the mutual attention that two or more people have toward each other or toward a third person or an object. The partner focuses on the same aim and they communicate verbally and or non-verbally. Eventually, they develop into an attachment and may develop feeling of empathy. The interaction is a two way process, both children with hearing impairment and their hearing peers influence each other, teachers influence learners by giving them instructions, directions, express their ideas, through various physical activities like during play, stimulate learner's participation on playing sessions, use of learners ideas to solve their problems, praise and encourage learners diagnose the feelings and attitudes expressed by learners or inferred from their behaviour or criticise behaviour of learners (Skjørten,2001).

Interaction can take place in many forms such as play, debates, discussions, learning and so forth. The findings of Arnold and Tremblay (1979) in Anita (1994) obtained when conducting a study examining the interaction between

children with hearing impairment and hearing peers in an integrated school. They observed how children initiated interaction and responded to it (Arnold et al, 1979; Antia, 1994).

Arnold et al (1979) cited Anitia (1994) again found that all children initiated interaction to peers in a way that was likely to obtain a positive response in order to continue with the interaction or to encourage the peer to initiate again at a later time.

Arnold et al (1979), Anitia (1994) concluded that children with hearing impairment and hearing children initiate equal numbers of interaction with peers. Therefore when we address inclusive education, our goal is to seek interaction between learners with 'differences'. Interaction between learners with differences brings about a society of inclusiveness (Arnold et al, 1979; Anitia, 1994).

Peer interaction is also accomplished through the use of Language and communication. Skjørten (2001) opines that communication means the exchange of interests, feelings, thought, opinions, or information by sets of codes formed as signals or symbols which all partners can understand and handle. Therefore in communication, each partner is expected to be alert to the needs of the other to ensure that the message is effectively conveyed and understood. Then some steps involved in communication are established include attentive, looking, or listening, being motivated and able to interpret the perceived information as well as being motivated to respond (Skjørten ,2001).

Also social interaction is a vital prerequisite for children in a learning set up (Awori, 2003). Awori (2003) further asserted that the attention that children

give each other is likely to facilitate the development of positive social relationships. Through social interactions, children learn to respect and encourage one another share experiences and knowledge about one another, and above all, they discover each other's potential (Skjorten 2001). For instance, they got to know each other's interests, abilities and difficulties.

The hard of hearing with all the degrees of hearing loss, interact infrequently with their hearing peers and engage in less linguistic and more non-linguistic interaction than their hearing peers (Antia, 1982). Antia (1982) goes on to say that hard of hearing pupils have difficulties with specific aspects of interaction such as repairing communication behaviour. Caissie and Wilson (1995) contend that children with hearing impairment may have trouble with specific aspects of interaction such as repairing communication breakdowns and initiating play behaviour. Although most research on peer interaction has been conducted on students in pre-school or early elementary grades, self-reports of social activity with adolescent peers indicate that these patterns persist through high school and college (Stinson & Klunin, 1996; Stinson & Whitmire, 1992). Young and Kretschmer (1994) conducted a study to examine social interactions between children with hearing impairment and hearing peers. These authors concluded that the child with hearing impairment demonstrated successful accessing strategies such as tolerance which led to maintained social interaction with hearing children.

Marschark (1993) observed that children with hearing impairment who emerge from restrictive home environments are likely to experience interaction behaviour that differs from other children. He notes that restrictions in interpersonal interactions between a child with hearing

impairment and his or her parents are likely to have a negative influence on the child's socialization. Lederberg (1993) state that hearing impairment can cause a child to be less interested in interacting with peers whose communication is primarily through speech. However, Marschark, Lederberg and Kretschmer (1994) who conducted a study to examine social interaction between a child with hearing impairment and hearing peers, they concluded that the child with hearing impairment demonstrated successful accessing strategies which led to maintaining interaction with hearing peers. Nevertheless, from what is reported above, it is clear that children with hearing impairment can hinder the establishment of positive interaction which in turn influences possibilities for interaction and acceptance.

The findings from Awori (2003) indicate that if a child with hearing impairment perceives his or her socialization as inadequate and social ability as poor, effective interaction is not likely to take place. Hart and Gonzalez (1988) in Schimer (2001) reveal that children with hearing impairment often feel apprehensive about communicating with hearing peers and that the apprehension exhibits them and makes them feel that the interaction is less satisfactory. This finding reveals that children with hearing impairment are less able to express aggressiveness. Instead, they choose to be quiet or withdraw. Smith (1998) observes that children can learn to take turns, share and work cooperatively as part of their daily activities.

Eddowes and Ralph (1998) noted that interaction could be between two or more children and or adults or between a person and an object. Any of the interaction engaged in by people can contribute to their development and learning. Learners who are hard of hearing engage in activities with their



hearing peers, learn social interaction skills and improve their cognitive abilities. New roles can be practiced and they learn to share, cooperate and collaborate (Eddowes & Ralph, 1998) Hallahan and Kaufman (1991) opined that they also learn from each other to develop physical skills, promote imagination and gain sense of competence

### **2.3 Patterns of interaction in mainstream setting**

Some researchers have reported that young students with special needs engage in more cooperative play with typically developing peers than with classmates with special needs (Rogers, 2000). Other researchers have found the opposite to be true (Guralnick & Groom, 1998). On the other hand, typically developing school age students are more likely to interact with other typically developing classmates or those with mild impairments rather than classmates with moderate to severe impairments (Odom & McEvoy, 1998; Rogers, 2000). In many studies, play observations only occur on one or two occasions during the school year.

For every definition of friendship there is, arguably, a contending view. Hence, for Pahl (2000), friendship is a notoriously difficult concept to define. Allen (1996) asserts that there is no agreed set of socially acknowledged criteria as to what makes a friend. Perhaps this is because even the very understanding of what friendship might be, varies across cultural, philosophical and historical perspectives (French, 2007). Regular school provides another context within which to consider the social worlds and friendship experiences of people with disabilities. As Nakken and Pijl (2002) note, for parents, a concern about promoting social relationships is often the

first motive for sending students with special needs to regular schools. Moreover, Landesman-Dwyer and Berkson (2004) are clear that there are no theoretical constructs or social behaviour principles which would delineate the friendship patterns of people with disabilities from those operating within the general population. Generalizing this discussion to encompass a consideration of friendship in the context of disability, specifically auditory disability, Heslop (2005) asserts that people with deafness have difficulties having friends. She argues in terms of communication lack of effective mode of communicating is the key factor why sustaining friendships is difficult for people with hearing impairment. This implies that the same pattern applies to all and sundry irrespective of one's disability.

Grounded from the above, it is clear that pupils with hearing impairment in the inclusive setting have good relationship with their hearing peers and engage in similar activities with them both in and outside the classroom. It was also noted during observation that the pupils with hearing impairment interact with their hearing peers in activities both inside and outside the classroom.

This study is in line with Stinson and Klunin (1996) and Stinson and Whitmire (1992) who contend that although most research on peer interaction has been conducted on students in pre-school or early elementary grades, self-reports of social activity with adolescent peers indicate that these patterns persist through high school and college.

Besides, Cappelli et al (1995) contend that a critical part of the development of deaf children is their education, and through that, their social foundations are also built. During the primary-school development period, friendships are

formed through common interests, school activities and sports. For these friendships to form, an obvious requirement is communication. For deaf children unable to utilize effective communication methods with the people around them, the difficulty in acquiring new friendships typically leads to a decrease in self-esteem.

Another study by Young and Kretschmer (1994) conducted to examine social interactions between children with hearing impairment and hearing peers concluded that the child with hearing impairment demonstrated successful accessing strategies such as tolerance which led to maintained social interaction with hearing children. Some researchers have reported that young students with special needs engage in more cooperative play with typically developing peers than with classmates with special needs (Rogers, 2000).

However, the study is in sharp contrast with the work of Meisgeier (1991) who thinks that pupils with post lingual hearing impairment may fail to conform to the expectations of school and society. They may not look or act the same way as other pupils. For peers who have never come into contact with pupils with post lingual hearing impairment, except in school, these differences can create apprehension, distrust, and even hostility.

The study is also in consistence with Guralnick and Groom (1987) who asserted that young students with disabilities are likely to develop an unusual pattern of peer-related social behaviours that, if left unaltered, can lead to later difficulty with adjustment.

Again, it is in sharp contrast with the study of Howes, Farrell, Kaplan and Moss (2003) who stressed that the nature of persons with communication or

hearing impairment is inherently isolating and has considerable effects on the interaction with peers and teachers that make up the educational process.

## **2.4 The status of peer interaction of children with Hearing Impairment**

Social interaction with peers is an important component of the socialization of all young children and eventually becomes a major influence in their lives. Peer interaction presents children with opportunities to develop and practice communication, such as initiating and maintaining conversations through questions and comments

Brown, Remine, Prescott, and Rickards (2000) noted that a three-stage model of social interaction had been developed based on previous studies. Children spend time surveying the behaviors of others to orient their behaviors to those with whom they wish to interact. With regard to entry strategy, children think about and adopt an initiation strategy to gain interaction entry. With regard to maintenance strategy, children attempt to maintain their involvement in the social interaction (Brown et al, 2000). The behaviors at surveillance and entry stages were regarded to be the initiating interaction strategies by Brown and his colleagues (2000). In this review, peer interaction is considered to include mainly two stages: the first stage of initiating interaction and the second stage of maintaining interaction. The article by Brown et al, (2000) describes the status of hearing impaired children's peer interaction in the two stages.

### **2.4.1 Initiating Peer Interaction**

Initiating peer interaction is required before an interaction exchange which can be established. It is especially important, because it captures key skills that

provide children with access to further socialization opportunities (Cillessen & Bellmore, 2004). An initiation is defined as any clear and distinct act that is geared towards peer (a peer or peer group) and is not a part of an already existing interaction (Vandell & George, 1981). Initiation is successful if it elicits a response from the partner and a social interaction occurs. Children with normal hearing often utilize spoken language to initiate a social interaction, for example, calling out the targeted peer's name or say "hello" to the partner. But for the children with hearing impairment, there are difficulties in initiating social interaction by oral language or speech because of their deficiency in hearing and speech despite recent advances (Bat-Chava & Deignan, 2001).

With reference to the frequency of hearing impaired children's initiation behaviors, some researchers found their initiation interaction as often as their hearing peers in integrated preschools or kindergartens (Brown, Remine, Prescott & Rickards, 2000).

Deluzio and Girolametto (2011) indicated that there were no significant differences in frequency of initiation and ability to respond to others' initiations between children with severe to profound hearing loss and their matched hearing peers. Vandell and George (1981) found deaf preschoolers attempted to initiate interactions significantly more than their hearing counterparts.

In terms of initiation strategies used by children, both deaf and hearing preschoolers frequently used vocalizations, smiles, and object-related acts (Vandell & George, 1981). Successful initiation strategies used by hard-of-hearing children were similar to their hearing classmates, including nonverbal

entry, extending an invitation, offering an object, or producing a behavior similar to that in which other children were engaged (Weisel, Most & Efron, 2005). Additionally, children with hearing impairment could change various initiation strategies according to partner's hearing status. The deaf used more gestural and nonverbal strategies such as "touch" to initiate than did their hearing counterparts in integrated kindergartens (Duncan, 1999). Weisel, Most and Efron (2005) reported that deaf preschoolers preferred to use signing, direct entrance, heading turning in search of a partner when interacting with deaf peers, whereas with hearing peers they more often utilized moving closer, object-related social acts (for instance, pointing or showing an object), and neutral touch. Moreover, the deaf tended to use combined initiation strategies when interacting with deaf peers than they did with hearing peers, especially regarding vocalizations. Children with hearing impairment are probably to be the initiators with inappropriate signals which are impossible to be received, for instance, gestures or vocalizations to one's back (Vandell & George, 1981).

The deaf often wait and hover, use a behavior unrelated to ongoing activity, or disrupt the ongoing play to attempt to join in peer interaction (e.g., an non-play activity), leading to more failure in gaining peer play (Brown, Remine, Prescott & Rickards, 2000).

Studies consistently found that children with hearing impairment experienced greater difficulty in initiating social interactions and their initiation attempts were more likely to be refused or rejected by their hearing partners (Vandell & George, 1981; Bat-Chava & Deignan, 2001; Deluzio & Girolametto, 2011), especially when they attempted to enter a peer group. Knutson, Boyd, Reid,

Mayne and Fetrow, (1997) conducted a study using the peer entry paradigm and found that one third of participants with hearing impairment failed to enter a group situation where a dyad of hearing peers was already interacting. Also, Bat-Chava & Deignan, 2001; Martin, Bat-Chava, Lalwami, and Waltzman (2010) selected ten 5- to 6-year-old deaf children and six hearing children to investigate their interactions in a Peer Entry task. Deaf participants were assigned to interact with age- and gender-matched hearing children in two levels of difficulty interaction situations: Children were put in a pair condition where the deaf child interacted with one hearing peer for 30 min, and deaf children were again put in a private area where the deaf child entered a group of two hearing children who had already interacted together for 5 min, and all three children continued to interact for another 25 minutes. Results revealed that 80% of the deaf children in the sample experienced some degree of communication breakdown and the deaf children experienced significantly more difficulty in the three group interaction situation than in the two group condition. Their entry failure was more in larger settings (40% of deaf children failed entry in the in a group of three condition, comparing with 20% in the two group condition) and they had less appropriate response to peers when they joined in an “established” group of hearing peers. The results were line with the finding from Bat-Chava and Deignan (2001) that it was harder for children with hearing impairment to interact with two peers or more than in one-on-one situation.

#### **2.4.2 Maintaining Peer Interaction**

Utilizing skilled behaviors to maintain healthy relationships with others is another challenge for children with hearing impairment. Nunes, Pretzlik and

Olson (2001) reported that hearing impaired children had more difficulties in making friends and their relationships with peers, and appeared to proceed less smoothly than those of hearing children. The authors went on to say that the difficulty of deaf in peer relationships might result in their difficulty in maintaining peer interactions which provides opportunities for forming and keeping relationships with peers.

Deluzio and Girolametto (2011) indicated that there was no significant difference on the mean length of interaction between children with severe to profound hearing loss and children with normal hearing, concluding that the two groups of children did not differ on their ability to maintain interactions with their peers. However, other studies showed that children with hearing impairment had more difficulty in maintaining social interaction than their hearing peers (Antia & Dittillo, 1998; Duncan, 1999). Antia and Dittillo (1998) observed the social play of children with hearing impairment and hearing children during inside play in small group which was consisted of six to eight children, of whom at least two children were hearing impaired. Thus, the children with hearing impairment had access to both hearing impaired and hearing peers. The researchers found that children with hearing impairment engaged in significantly less associative or cooperative play than children with normal hearing: they engaged equally in non-play and social play, while hearing children engaged primarily in social play. In another study conducted by Duncan (1999), 11 children with hearing impairment and 11 hearing children in the preschool and kindergarten were enrolled in the same integrated program. Each child was videotaped during free play and during dyadic interaction with a partner of the opposite hearing status. Results



showed that when maintaining interaction, the children with hearing impairment used more minimally contingent responses and made fewer significant contributions than the hearing children

## **2.5 Influencing factors of peer interaction of children with hearing impairment**

There are several factors influencing peer interaction of children with hearing impairment. These among others include:

### **2.5.1 Language and Speech Ability**

Children with hearing impairment often have some degree of language and/or speech delay, which is a major factor affecting their interaction with hearing peers. Bat-Chava and Deignan (2001) noted that it was the delay in children with hearing impairment language and speech development that created great barriers for them in establishing and sustaining social relationships. In the study by Lederberg (1991), 29 children with hearing impairment were observed during out-door free play with peers. The children were divided into high, medium and low language ability levels. Results showed that children who had high language ability initiated significantly more interactions and spent significantly more time on playing, and also used significantly more linguistic communication with partners than those who had medium or low language ability. Hart, Fujiki, Brinton and Hart (2004) proposed that children with language impairment adapted to their linguistic difficulties by avoiding or withdrawing from interaction, thereby they had limited opportunities to practice interaction skills. Additionally, language and speech impairment is associated with deficits in social cognition or emotional competence that

might undermine social interaction. It could be reasonably inferred that because children with hearing impairment generally have poorer language and speech ability than hearing children, their opportunities in interaction with others are not sufficient to learn and practice social skills. Moreover, evidences also showed that children with hearing impairment had deficits in social cognition and emotional competence (Peterson & Siegal, 2000; Rieffe & Terwogt, 2006), thus resulting in less success in their interaction with peers.

### **2.5.2 Peers' Hearing Status and Familiarity**

For peers' hearing status, studies indicated that both children with hearing impairment and hearing children preferred to interact with peers with similar hearing status (Vandell & George, 1981; Rodriguez & Lana, 1996).

In the study conducted by Vandell and George (1981), dyadic free play of 16 deaf preschoolers and 16 hearing preschoolers were videotaped on 2 occasions (once with hearing partner and once with deaf partner) to assess their peer interaction. Results suggested that mean interaction duration and proportion of time spent in interaction were greater in "like" dyads (hearing child and hearing partner or deaf child and deaf partner) as opposed to "mixed" dyads. Deluzio and Girolametto (2011) reported that hearing playmates initiated interactions less often with the children with severe to profound hearing loss and ignored their initiations more often than those of other hearing children. These results were supported by the former studies, showing that both a higher quantity and quality of social interaction among deaf and hearing children appeared when they knew each other with the same hearing status (Rodriguez & Lana, 1996; Minnett, Clark & Wilson, 1994). It is conceivable that children with hearing impairment prefer to interact with peers who are also hearing

impaired. Additionally, they use different interaction strategies based on peers' hearing status (Duncan, 1999; Weisel, Most & Efron, 2005).

For example, deaf children use more visual and less object-based strategies when interacting with deaf playmates than interacting with hearing playmates (Lederberg, Ryan & Robbins, 1986).

For peers' familiarity, researchers argue that familiarity plays a great role in interaction between children with hearing impairment and hearing peers (Lederberg, Ryan & Robbins, 1986; Kreimeyer, Crooke, Drye, Egbert, & Klein, 2000; Antia, Reed & Shaw, 2011). Lederberg, Ryan and Robbins (1986) observed 14 deaf preschool children in dyadic play with familiar and unfamiliar peers. The authors reported that deaf children had more successful initiations with familiar than with unfamiliar hearing partners. Interestingly, hearing children used more visual communication with a familiar deaf peer than an unfamiliar deaf child. Apparently, hearing and children with hearing impairment who are familiar with one another may find nonlinguistic means of communication to partially overcome language and mode-of-communication barriers (Antia & Kreimeyer, 2003).

Antia, Reed, & Shaw (2011) stated that the positive effect of peer familiarity could be seen in the co-enrollment programme, which was beneficial for social interactions between children with hearing impairment with hearing peers. In the study by Kreimeyer et al. (2000), the social interactions of hearing impaired children who were co-enrolled in the intermediate classrooms were observed. Results showed that hearing impaired children' interactions with their hearing classmates increased rapidly after the co-enrollment intervention. The co-enrollment program contribute children with hearing impairment to

become more and more familiar with their hearing peers through participating together in all classroom activities, thus enhancing peer interaction between them (Kreimeyer et al., 2000).

### **2.5.3. Communication Mode**

Communication mode used by children with hearing impairment is another influencing variable to the peer interaction. In the inclusive settings, hearing children may not have learned sign language or may have only minimal sign language skills, so oral communication is thought to be key to interaction between children with hearing impairment and hearing peers. Bat-Chava and Deignan (2001) examined the oral language and social relationship of children with hearing impairment with cochlear implants in a general education classroom. Most parents reported that their children's oral communication improved after implant, and they became more willing and able to interact with hearing peers. Conversely, children whose oral communication was not improved after implantation were reported to have difficulties in social relationships with hearing peers. Hulsing, Luetke-Stahlman, Frome-Loeb, Nelson and Wegner, (1995) observed the peer interaction of three children with hearing impairment with matched hearing peers in the kindergarten. The authors found that one child who used oral communication had a similar number of interactions to that of hearing peers, while the other two children who used simultaneous communication had less frequent interactions than hearing children. Stinson and Whitmire (1992) investigated self-reported data on the preferred communication mode and social interaction from 64 hearing impaired adolescents. Those adolescents who preferred oral communication reported more interactions with hearing peers than those who preferred sign communication. Similarly, Stinson and Kluwin (1996) found that adolescents who rated themselves low in sign ability

reported a preference for interaction with hearing peers. Meanwhile, those who rated themselves high in signing skills reported interacting mostly with other hearing impaired peers.

## **2.6 Strategies for promoting interaction between children with hearing impairment and their hearing peers**

“With the inclusion of students with disabilities into general education classes, the composition of classroom social networks can influence whether students with special needs make positive social gains or become entrenched in a social system that supports and maintains their problematic or deficient social characteristics” (Farmer & Farmer, 1996 p. 432). The quotation from Farmer and Farmer reminds us of the need to address the vital issue of social acceptance of children with special needs when placed in a regular class.

Several intervention programs have been developed to increase positive interaction between children with hearing impairment and their peers, both with and without hearing impairment (Antia & Kreimeyer, 1997). Programs to help develop specific social skills have resulted in increased positive interaction among children with hearing impairment. Barton and Osborne (1998) increased physical sharing among preschoolers with hearing impairment through the use of teacher modeling and prompting of sharing during free play. Antia and Kreimeyer (1995) developed a teacher-mediated social skills intervention program for young children with hearing impairment, similar to interventions that have successfully increased interaction between other children with and without disabilities (Odom, Strain, Karger, & Smith, 1996).

The intervention required the teacher to design activities that would promote opportunities for interaction between peers (e.g., cooperative crafts activities, games, and role plays) and to model and prompt specific skills (greeting, sharing, assisting, and conversing) during these activities. The intervention was successful in increasing both linguistic and nonlinguistic positive peer interaction among preschool children with hearing impairment (Antia & Kreimeyer, 1997). The increases in peer interaction resulting from the intervention were found to generalize to free play (Kreimeyer & Antia, 1998) and were maintained for a short period after the gradual withdrawal of teacher models and prompts (Antia & Kreimeyer, 1998).

Teachers and adults can be very effective in promoting social interaction by encouraging children to play together and by praising them when they do. However, it is important to remember that too much adult attention may interfere with the children's interactions.

Buyse, Goldman & Skinner (2002) posed teachers and other adults also can promote interactions by teaching children specific ways to ask other children to play, to share toys, to take turns, to express affection and to help other children.

Assisting children to control their aggressive behavior encourages the formation of friendships. Planning small group activities that require cooperation and sharing motivates socially interactive behavior. For example, painting a mural or making soup as a group encourages children to learn to work together (Andrews & Lupart, 2000).

Teacher-mediated social skills programs have been conducted only within segregated groups of children with hearing impairment. Currently there is no data which indicate that such programs will be equally successful when Stinson and Foster (2000) proposed that socialization of deaf and hard-of-hearing students requires access to both formal and informal communications with peers and teachers, peer relationships, and participation in extracurricular activities conducted within integrated groups of children with and without hearing impairment. Stinson et al (2000) further opine that other kinds of intervention programs to increase interaction between children with hearing impairment and their peers without hearing impairment are few and have resulted in mixed success. Soderhan and Whiren (1995) were able to increase positive interaction between a 4-year-old child with moderate hearing impairment and his peers without hearing impairment in an integrated preschool setting, by reducing the frequency of adult-child interaction. Vandell, Anderson, Erhardt, and Wilson (1992) attempted to increase interactions among children with and without hearing impairment by engaging the children without hearing impairment in activities designed to provide them with knowledge about hearing loss, and practice in using appropriate communication when interacting with children with hearing impairment. They also paired children with and without hearing impairment for some activities. Post intervention measures indicated that the children with hearing impairment interacted less frequently and for shorter durations with the children without hearing impairment who received the intervention than with the children without hearing impairment who did not receive the intervention.

Another factor that influences social interactions between young children at play is the ratio of participants with disabilities to those without disabilities in an integrated play situation. According to Peterson and Haralick (1997), the interactions of preschoolers vary depending on that ratio. An integrated group of preschool children containing a larger number of children without disabilities proved to be the most effective situation for fostering social interactions. Moreover, while children without disabilities chose to play more frequently with other children without disabilities, non-disabled children participated in non-isolated play with their peers with disabilities for more than 50% of the sessions observed (Stinson et al, 2000).

### **2.6.1 Influencing attitudes**

Lack of previous experience with disabled children, and a lack of knowledge about disabilities, can lead children (and even teachers) to feel uncomfortable in the presence of a person with a disability. This, in turn, causes them to avoid contact where possible. Where a person with disability has a marked speech and social skills and acceptance 73 communication problems, has an unusual physical appearance and is poorly coordinated, the difficulties are greatest (Gow & Ward, 1991). Gow and Ward (1991) again noted that students with moderate intellectual disability and language problems are the most difficult to include successfully in regular classrooms. In extreme cases, ignorance concerning disability can result in quite damaging prejudice, hostility and rejection (Hickson 1990).

Fortunately, evidence is accumulating to show that attitudes can be significantly changed in teachers and in the peer group. Teachers and peers tend to become more accepting of children with disabilities when they better



understand the nature of the disability (Hickson 1990). Experience has shown that a combination of information about and direct contact with, disabled children provides the most powerful positive influence for attitude change in both teachers and in the peer group (McCoy 1995). It is also evident that attitude change tends to be along and gradual process.

Children's attitudes are likely to be influenced most when teachers work to build a climate of concern for others in the classroom (Salisbury, Gallucci, Palombaro, and Peck, 1995). This can be achieved in part by the teacher's own example, and also by the open discussion and resolution of problems that may arise from time to time. Facilitating and encouraging peer assistance and buddy systems in the classroom can also be useful.

### **2.6.2 Creating opportunities**

If social learning is to take place, it is essential that the socially deficient child has the opportunity to be truly involved in all group activities both inside and outside the classroom. If children with disabilities are to be socially integrated then Social skills and acceptance work situations and co-operative learning should be used frequently in preschool, primary and secondary settings (Slavin 1991; Honig and Wittmer 1996; Lowenthal 1996). Unfortunately, while grouping and activity methods are common in the early years of schooling they are rather less common in the middle school or upper primary school. Even less are they used in the later years when children are often faced with a rigorous academic curriculum and a fairly rigid time table (Lowenthal, 1996). Much of the work which has supported the value of co-operative learning and grouping within the classroom has been carried out by two brothers, Roger and David Johnson (Johnson, Johnson and Holubec 1990). Johnson et al

(1990) made two assumptions: that teachers create classroom environments where competition is not a dominant element; and that teachers use grouping strategies to encourage co-operation among students for at least part of each day. Regrettably both assumptions prove to be false when applied to certain classrooms. Some teachers still use too much competition among their children on a regular basis, and some make no use at all of co-operative group work. Some teachers keep the children in formal settings, all working on the same material for the same time regardless of individual differences, and may actively discourage any discussion and collaboration. The implications here are that if a teacher rarely, if ever, uses grouping as an organizational option, it is unlikely that much will be achieved in terms of social inclusion of students with special needs (Salisbury *et al.* 1995).

### **2.6.3 Organization for group work**

The success of collaborative group work depends on classroom organization, the nature of the tasks set for the students to work on and the composition of the working groups (Lyle, 1996). Too often group work begins to become chaotic because the tasks set are too vague or too complex, the students are not well versed in group-working skills and the room is not set up to facilitate easy access to resources. It is essential that all group work have a very clear structure which is understood by all. Careful planning is required if group work is to achieve the desired educational and social outcomes.

### **2.6.4 Peer-mediated model programs**

Hearing children prefer to interact with peers who have the same hearing status and may ignore or not willing to respond to the initiation of children

with hearing impairment (Deluzio & Girolametto, 2011). Deluzio et al (2011) further asserted that children with hearing impairment need greatly the support and scaffolding from their interactional partners. Therefore, instructing normally hearing children interaction strategies may benefit interaction between hearing and children with hearing impairment (Deluzio & Girolametto, 2011). Peer-mediated interventions emphasize the involvement of typically developing peers as socially competent facilitators to promote appropriate communicative and social behaviors and stress on training typically developing children. It is also important to generate many occasions for practice in order to make the acquired skills permanent and stable over time (Bruce & Hansson, 2011). According to the approaches organized by DiSalvo and Oswald (2002), there are three main aspects in peer-mediated interventions for children who have difficulty in communication: (1) manipulation of the situation, encouraging typical children to interact with target children, (2) peer instruction in social interaction strategies, teaching typical peer special social skill strategies to enhance social interaction with target children, (3) instruction of targeted child in initiation strategies, teaching them initiation skills to increases peer effectiveness. Researchers reported that peer-mediated training was greatly effective to improve communication skills in young children with communication problems (Bruce & Hansson, 2011); it might contribute to improve interaction between children hearing impairment and hearing peers.

### **2.6.5 Social skills training programs**

In order to improve hearing impaired children's social skills, intervention programmes have been developed with aiming at promoting observable

positive social skills, or social problem-solving thinking skills, or improving both. For example, the teacher-mediated social skills program which was developed by Antia and Kreimeyer (1994) centers on prompting hearing impaired young children's specific observable positive skills in integrated settings, such as greeting, sharing, assisting, and conversing. Another program developed by La Greca, Mesibov (1999) to increasing deaf children's thinking skills involved in social problem solving, emotional awareness, and behavioral adjustment. However, more programs combine promoting observable positive social skills and thinking skills. For instance, the social competence program developed by Suarez (2000) consisted of two parts. Suarez (2000) further explained that the first part is an interpersonal problem-solving training program, including 15 lessons which gradually and progressively developed the cognitive skills needed to avoid or solve interpersonal problems, and is taught to only deaf children in 20 1-hour sessions, twice a week. The author further stated that the second part is a social skills training program including six one-hour sessions and is taught to both deaf children and hearing children. This part is meant for training the social abilities which are selected to be socially valid, including (1) to apologize,(2) to negotiate with peers,(3) to avoid problems with others,(4) to face up to the group influence, and (5) to cooperate and share in group. Suarez (2000) indicated that this invention program succeeded in improving deaf children' social problem-solving skills, especially in making comprehensible the steps implied in the solution of interpersonal problems. This program also improved deaf children's assertive behaviors significantly as rated by their teachers and by themselves.

## **2.7 Importance of peer interactions to children with hearing impairment**

The opportunity for social interactions with others is very important for the development of all children especially those with hearing impairment. Through social interactions, children with hearing impairment begin to establish a sense of “self” and to learn what others expect of them. Although social interactions for very young children with hearing impairment primarily occur within the family, as children grow and develop, they become more and more interested in playing and interacting with other children (Sapon and Shevin, 2003).

Finke, McNaughton, and Drager (2009) opine that when playing with their hearing peers, children with hearing impairment learn appropriate social behaviors, such as sharing, cooperating, and respecting the property of others. These authors commented further that while interacting with their peers, young children learn communication, cognitive, and motor skills.

Most opportunities for social interactions among young children with hearing impairment generally occur during play (Finke et al, 2009). This opportunity to play with others is critical if a child is to develop appropriate social skills. Therefore, encouraging children with disabilities and nondisabled children to play together is an extremely important part of instruction in integrated pre-schools. The children must have the opportunity to play together if they are to become friends. These friendships will help the nondisabled child form positive, accepting attitudes toward persons who are disabled. In addition, the child who is disabled will have the opportunity to learn age-appropriate social skills.

Fisher (1999) contends that children who learn appropriate social skills often have a higher self-esteem and show a greater willingness to interact with their

environment as they grow. Opportunities for social interaction not only enhance development in the early years, but also may be important for the future of the young child who is disabled. The ability to interact competently with is a skill that is required throughout life and may affect future educational and vocational opportunities. Assisting young children who are disabled to learn through positive social interaction with nondisabled children may help them acquire skills from which they will benefit throughout their life. High school students without disabilities have expressed support for inclusive education and the contribution that students with disabilities make to overall school diversity (Fisher, 1999).

Goldstein, English, Shafer and Kaczmarek, (1997) assert that the presence of students with disabilities provides a catalyst for learning opportunities and experiences that might not otherwise be part of the curriculum, especially relating to social justice, prejudice and equity.

Kochhar, West, and Taymans (2000) conclude that students with disabilities benefit because inclusion facilitates more appropriate social behavior because of higher expectations in the general education classroom; offers a wide circle of support, including social support from classmates without disabilities; and improves the ability of students and teachers to adapt to different teaching and learning styles.

The authors further contend that general education students also benefit from inclusion. Abecassis , Hartup, Haselager, Scholte and Van Lieshou (2002) affirmed that for these students, inclusion leads to greater acceptance of students with disabilities, facilitates understanding that students with disabilities are not always easily identified, and promotes better understanding

of the similarities among students with and without disabilities. Students with intellectual and other developmental disabilities in inclusive schools have a higher likelihood to be identified as a member of a social network by peers without disabilities (Abecassis , Hartup, Haselager, Scholte & Van Lieshou, 2002) Students with disabilities demonstrate high levels of social interaction in settings with typical peers. Social competence and communication skills improve when students with disabilities are educated in inclusive settings (Fisher & Meyer, 2002).

Students with disabilities who are educated in inclusive settings have demonstrated gains in areas of development such as level of engagement, involvement in integrated activities, affective demeanor, and social interaction (Kreimeyer, Crooke, Drye & Egbert Klein, 2000). Children need relationships and friendships to develop social skills. The social skills are necessary to develop social relations later on in their life (Gifford-Smith & Brownell, 2003).

Also, Kluwin, Stinson and Colarossi (2002) opine that interaction enhances friendships between and among children with diverse needs which helps them to get vital information both in and outside school. People of every age view friendships as a vital part of their lives.

Relationships and friendships with peers are related not only to social and behavioral development but also to children's academic achievement (Gifford-Smith & Brownell, 2003; Johnson, 2000). Children with more friends have fewer adjustment problems, have higher self-esteem, report less loneliness, enjoy wider peer acceptance, and display better school adjustment, positive

attitudes toward school, and better achievement (Gifford-Smith & Brownell, 2003). Diehl, Lemerise, Caverly, Ramsay, and Roberts (1998) found that peer acceptance and having friends significantly incremented the prediction of achievement scores over the contributions of race, gender, attitudes toward school, and age for Grade 1–3 children. Popular children with at least one friend had the best school adjustment.

Levels of peer acceptance may affect the opportunities to make friends (Gest et al, 2001) and friendships provide the context for social, emotional, and cognitive development. Children with mutual friends generally show more sociable and prosocial behaviors and have higher self-esteem (Hartup, 1996).

Hartup, (1996) further stated that students with mutual friends generally show more sociable and prosocial behaviours and have higher self-esteem. According to Van Lieshout, Verhoeven, Gürolu, Haselager, and Scholte (2004), the number of mutual friendships and antipathies is related to peer acceptance and social competence.

Gifford-Smith and Brownell (2003), and Johnson (2000) argue that relationships and friendships with peers are related not only to social and behavioural development but also to students' academic achievement. Students with more friends have fewer adjustment problems, higher self-esteem, and report less loneliness, enjoy wider peer acceptance, and display better school adjustment, positive attitudes toward school, and better achievement (Gifford-Smith and Brownell, 2003). The authors further asserted that students who are rejected by their peers are at risk of school failure or drop out.



## **2.8 Challenges hearing impaired pupils encounter in interacting with their hearing peers**

### **2.8.1 Social status relationship**

Cappelli, Daniels, Durieux-Smith, McGrath and Neuss, (1995) contend that a critical part of the development of deaf children is their education, and through that, their social foundations are also built. During the primary-school development period, friendships are formed through common interests, school activities and sports. For these friendships to form, an obvious requirement is communication. For deaf children unable to utilize effective communication methods with the people around them, the difficulty in acquiring new friendships typically leads to a decrease in self-esteem.

A great challenge in a relationship between a deaf child and a hearing child is overcoming the communication barrier. This, of course, varies with the individual traits and level of hearing loss that a child has, but deaf children with delayed language skills have more difficulty in maintaining an interaction with a hearing child. Nevertheless, all children are capable in using nonverbal communication modes, which is typically the preferred method in young children. They may gesture or point to objects, but this puts severe limitations on social interaction and pretend play (Lederberg, Ryan, & Robbins, 1996). Using gestures and pointing are usually limited to the room or the immediate environment. This dampens the variety of directions in which a conversation can go. Deaf children usually do not change the topic while interacting with a hearing peer (Lederberg et al., 1996). This puts control of the relationship in the hearing child's hands, and this imposition on the child usually results in frustration or boredom.

### 2.8.2 Attention skills difficulties

Olivia (2004) contends that daydreaming and doodling in class is a common confession of deaf high school students. The reason for not paying attention is not because they don't want to know what is going on around them, but rather because many teachers tend to talk while writing on the blackboard or other "unfair" but normal classroom occurrences. "My worst experience was with an eighth grade social studies teacher who would not give me a front seat because I had a last name beginning with T, I belonged in the back right corner, she said, and seating me in the front would ruin her beautiful alphabetical order. Insisting that I needed a front seat so that I could see the board and hear was to no avail." (Oliva, 2004, P. 43) "It's dumbfounding to remember just sitting in classes' day-dreaming, reading the homework, or just being off in a daze somewhere. When I actually tried to pay attention or understand what was going on around me I would quickly become overwhelmed, since it all sounded like "mumbo jumbo." I probably had the classic "eyes glazed over" look every single day." (Oliva, 2004, P.68)

In addition to this obstacle, the attention skills of hearing and deaf peers may differ. Deaf children may not display good attention skills as compared to hearing children. This is because they lack the audition component that is important in the development of attention. Because sound is not a major factor in deaf individuals' childhood, they usually develop more selective attention (Smith, Quittner, Miyamoto, & Osberger, 1998). This is another difference between deaf and hearing children. The latter may view the deaf children as abnormal, making interactions difficult.

### 2.8.3 Isolation

The progression towards integration has resulted in much anxiety on the deaf children's parts (Gjerdingen & Manning, 1991). Good academic results are generally seen in deaf children who are mainstreamed, but they also show higher degrees of isolation and psychological problems when compared with students who associate with other deaf peers (Vostanis, Hayes, Du Feu & Warren 1997; Stinson & Antia 1999). One study that focused on the social status of deaf students compared with hearing students discovered that a large number of deaf students were rejected by their hearing peers as compared to only a small number of hearing children who, like the deaf students, also became social misfits (Cappelli, Daniels, Durieux-Smith, McGrath & Neuss 1995).

Views with deaf adults about their past school experiences (Mertens, 1989) suggest that there is cause for concern for deaf children's social adaptation in mainstream schools. Deaf adults who attended special schools have more positive memories of their school days than those educated in mainstream schools. Pupils who experienced both types of school environment often report a strong preference for special schools (Gregory, Bishop, & Sheldon, 1995).

West Wood (2003) contends that there is actually a danger that the child with hearing impairment will be marginalized, ignored or even openly rejected by the peer group in their interaction with their hearing peers. However, Taffe and Smith (1993) said that this situation must not be allowed to occur since it is evident that poor peer relationships in early school life can have a lasting detrimental impact on social and personal competence in later years

Many children in general usually lack the social skills necessary for peer interaction. One major factor that has been identified in deaf children's social interactions is a repeated misunderstanding of how deaf children need to communicate with the people around them. Frequently hearing children mistake a request for information to be repeated as ineptitude or lack of interest as to what they were saying (Martin & Bat-Chava, 2003).

The biggest problem and root cause of the increase in isolation and anxiety is communication difficulties. A study by Martin and Bat-Chava showed that rather than being actively disliked; deaf children were neglected by the hearing students in terms of socialization (Martin & Bat-Chava, 2003).

## **2.9 Coping strategies children with hearing impairment adopt when interacting with their hearing peers**

### **2.9.1 Managing unpleasant behaviours**

People who are deaf have to make adjustments and develop coping strategies in the hearing world to protect their self-esteem. They need to counteract the hassles they face every day in a world that is full of communication challenges and, at times, prejudice and discrimination (Linderman, 1997). There are a number of coping strategies deaf people may adopt to manage their everyday lives and protect their self-esteem. These include withdrawal into a deaf community, covering, and developing bicultural skills.

Linderman (1997), who opines that withdrawal from society into a community of similar others can help to protect self-esteem, but at the same time it sets limits on those who adopt this strategy. It is assumed that those deaf

individuals who have primarily deaf friends and are highly involved in a Deaf community usually have higher self-esteem.

Besides, covering is a technique that allows deaf individuals to pass as hearing. Erving Goffman (1963) argues that covering leads to a lot of stress since these individuals constantly have to live with the fear of being disclosed and face the consequences. Coping strategies were researched to see what children could use to reduce the emotional impact of stressful situations. First they offer a distinction between two categories of coping, problem-focused and emotion-focused. Martin and Bat-Chava (2003) contend that Problem-focused coping is directed outwards while emotion-focused coping is the opposite, directed inwards. The authors further asserted that the main difference between the two is that problem-focused coping pertains to strategies used against the stressor itself, and emotion-focused coping focuses on controlling the emotions that are caused by the stressor. Their studies have shown that problem-focused coping appears to be the more successful of the two in reducing the negativity that can build up emotionally.

A study conducted found that the use of personal resources (i.e. family members), diversionary and emotional responses to lessen the impact, or a combination of both were the three most typical responses to social stresses found in deaf children. (Kluwin, Blennerhassett, & Sweet, 1990).

Also, a study by Charlson, Strong and Gold (1992) showed that children experienced the most comfort from being around deaf peers and using family members for emotional support. This study confirmed that deaf children benefit more from problem-focused coping and also supported the texts that

suggested contact with other deaf children may lessen the negativity of mainstreaming on their relations.

On the part of Bat-Chava (2000) he claims that deaf individuals who develop bicultural skills are able to function effectively in the dominant culture as well as in the culture of the minority group. They are often able to succeed professionally in the hearing world as well as identify with the deaf community and fight for social change. Those who are able to find a balance between their involvement in the deaf and the hearing world tend to have positive self-esteem (Carver & Scheier, 1994).

Much research centers on adolescents' coping with major life events and everyday hassles (reviewed in Compas, Connor-Smith, Saltzman, Thomsen & Wadsworth, 2001) and on how adolescents and children with hearing impairment manage the difficulties of the hearing impairment itself (Jambor & Elliott, 2005). However, according to resilience theory, the reality of coping with the unique challenges of hearing impairment may equip these adolescents with more efficient skills to tackle additional environmental stressors (Masten & Coatsworth, 1998).

### **2.9.2 Communication strategies**

Seiffge-Krenke and Stemmler (2003) contend that visual or gestural coping systems, which was used more by adolescents with hearing impairment especially those whose families include others with hearing losses in the study of Adolescents with Hearing Impairment: Coping with Environmental Stressors, was found related to higher adjustment (Folkman & Lazarus, 1985; Seiffge-Krenke & Stemmler, 2003).

Today more and more deaf people, especially the younger generations, adopt this strategy. They are proud of their cultural heritage, but they are also comfortable with pursuing their own individual interests in the majority society. These deaf individuals often have intelligible voices and are coming from a hearing family, which enables them to be more familiar with the norms and values of the majority society and to move comfortably back and forth between the two groups (Emerton, 1996).

Besides, Doyle and Dye (2002) put the following strategies across as some means by which the teacher in inclusive schools can rely upon to address the issue of teasing and help foster a supportive classroom for children with hearing impairment:

- Reinforce positive coping strategies (e.g. how to respond to teasing on the playground, what to say to an individual when they ask why the child wears hearing aids, etc.).
- Promote self-advocacy and activities that foster inclusion. A mainstreamed pupil may need more formal instruction on how to interact socially with his/her normally hearing peers.
- Support daily use of personal hearing aids, cochlear implants and other assistive listening devices prescribed for the student.
- Help the pupil understand his/her own hearing loss and provide an opportunity for the student to share information with the class about hearing loss, and how his/her hearing aids, cochlear implant and/or FM system works.
- Provide opportunities to meet other children with hearing impairment on a regular basis (pen pals, internet and family field trips).

- Make sure to review safety and emergency procedures directly with the children with hearing impairment. In the event of a fire or emergency situation, check all restrooms since many children with hearing impairment may not be able to hear the alarms.

## **2.10 Related empirical studies**

### **2.10.1 Social benefit of interaction**

Although the evidence of academic benefits is scarce, mounting evidence demonstrates the social benefit of co-enrollment programs for students who are children with hearing impairment. Researchers have reported on increases in positive social interaction between hearing and peers with hearing impairment students, friendships that cross the barrier of hearing status, as well as increases in positive self-esteem (Kluwin & Gonsler, 1994; Kreimeyer et al., 2000; Luckner, 1999). Luckner, (1999) examined a co enrollment classroom of 17 hearing and 7 hearing impaired kindergarteners. In tracking the frequency of interactions, the researchers found no statistically significant differences between students who were deaf and their hearing peers, implying that many of the barriers to communication had been breached.

Kreimeyer et al. (2000) reported on the social interaction of five Deaf students in an elementary multiage co enrollment classroom. The researchers documented the frequency of peer interaction within the classroom and lunchroom prior to and after the co enrollment program began.

Their data showed that for all five students, classroom and lunchroom interaction with hearing peers increased during the course of the school year.



Friendships between Deaf and hearing students have also been documented in co-enrollment classrooms. Luckner, (1999) obtained peer nomination data on the co-enrollment kindergartners at the beginning and end of the school year. They reported that at the beginning of the school year, social cliques were separated by hearing status, but at the end of the school to develop an intimate knowledge of their students' academic needs, social development, and friendship patterns (McClelland, 1994).

According to the state report card, the school had an enrollment of approximately 325 students and had consistently met state standards for adequate yearly progress. The school had a well-established co-enrollment program that had been in existence for more than 7 years. The two co-enrollment classrooms included a Grades K-1-2 combination and Grades 3-4-5 combination.

In both co-enrollment classrooms, students and teachers used sign language and spoken English; sign language fluency varied among teachers and students. On reasons that account for patterns of relationship between students with and without disabilities, studies conducted by Dattilo and Schliens (1994), Wehmeyer and Metzler (1995) on people with developmental disabilities reveal that people with hearing impairment engage in leisure activities less often than do people without disabilities, and that they often lack the skills essential for social interaction.

On the academic benefit, a qualitative study conducted by Biklen, Corrigan and Quick (1989) concerning the dynamics of interaction between regular primary school students and their peers with disabilities in an inclusive school setting found that interactions and relationships were interrelated forces that

influenced positive academic and social experiences. The study was conducted in an elementary school with 810 students, aged 9-11 years. The subjects were interviewed and observations were made of their relationships and interactions with peers without disabilities. Their teachers were interviewed to gather information about the nature of the school setting and teaching strategies that foster interactions.

The results showed that increased opportunities to form meaningful interactions indirectly enhanced the understanding and empathetic qualities of students without disabilities. The research indicated that the experience provided the opportunity to interact which in turn had a profound positive impact on students' character development. The participants in this study were also better at building supportive relationships and interactions with their peers with disabilities.

The study also revealed that students developed relationships and interactions with each other that were personal rather than stereotyped, interactive rather than one-sided, and caring rather than obligatory. Outcomes also suggested that school setting and teachers facilitated students of different abilities to learn to accept, appreciate and interact with each other.

## **2.10 Theoretical frame work of the study**

The main theory underpinning the study is social development theory by Lev Vygotsky 1978. The proponent of this social development theory opines that Social interaction plays a fundamental role in the process of cognitive development. The major theme of Lev Vygotsky's work is that social interaction plays a fundamental role in the development of cognition, which is

panacea for academic achievement. This implies that when children with hearing impairment interact with their hearing counterparts, it enables them in development of their entire personality

Lev Vygotsky felt social learning precedes development. He stated that every function in the child's cultural development appears twice: first, on the social level with hearing with and later, on the individual level; first, between people (inter psychological) and then inside the child (intra psychological) (Vygotsky, 1978). Although social interactions for very young children primarily occur within the family, as children grow and develop, they become more and more interested in playing and interacting with other children which help them to acquire vital skills such as turn taking and greetings from their hearing peers.

Lev Vygotsky also touched on More Knowledgeable Other (MKO). The MKO refers to anyone who has a better understanding or a higher ability level than the learner, with respect to a particular task, process, or concept. The MKO is normally thought of as being a teacher, coach, or older adult, but the MKO could also be peers, a younger person, or even computers (Vygotsky, 1978).

Besides, Vygotsky (1978) opines that the Zone of Proximal Development (ZPD), the ZPD is the distance between a student's ability to perform a task under adult guidance and/or with peer collaboration and the student's ability of solving the problem independently. According to Vygotsky, learning occurred in this zone.

Vygotsky focused on the connections between people and the sociocultural context in which they act and interact in shared experiences (Crawford, 1996).

According to Vygotsky, humans use tools that develop from a culture, such as speech and writing, to mediate their social environments. Initially children develop these tools to serve solely as social functions, ways to communicate needs. Vygotsky believed that the internalization of these tools led to higher thinking skills. The children must have the opportunity to play together if they are to become friends. This is because these friendships will help the nondisabled child form positive, accepting attitudes toward persons who are disabled. In addition, the child who is disabled will have the opportunity to learn age-appropriate social skills (Nunes, Pretzlik & Olson, 2001).

This theory puts the child at the centre of the activity making it possible for children with hearing impairment to benefit from an interaction. Since social interaction precedes development when individual with hearing impairment meaningfully interact with their hearing peers, it enables them to develop holistically. Research has shown that, compared to typical children, children with hearing impairment in the mainstream appear to be neglected by peers (Nunes, Pretzlik and oslon, 2001) and experience more isolation and loneliness in school (Most, 2007). which is, in fact, harmful to their self-image and academic performance. To the children with hearing impairment, research on interaction, consistently shows that children with hearing impairment educated in mainstream classrooms are less accepted than their classmates without special educational needs, and are more socially isolated (Freeman & Alkin, 2000).

Also, based on the interaction and experience of the researcher with children with hearing impairment, it is clear that children with hearing impairment in

mainstream education often have few friends, have less interaction with hearing peers, and are more often rejected or neglected than their hearing peers. In addition, they may feel isolated and lonely. For this reason, there is the need to promote social interaction and involve them in all activities in order to break the barrier of social isolation and promote positive relationships. Since the theory looks at the social relationship and learning, it is necessary to use it as a basis for understanding the interaction among children with hearing impairment and their nondisabled peers.

It is clear that when children are playing with others, children learn appropriate social behaviors, such as sharing, cooperating, and respecting the property of others. In addition, while interacting with their peers, young children learn communication, cognitive, and motor skills which is vital to their daily encounters in the larger society.

In essence, Vygotsky recognizes that learning always occurs and cannot be separated from a social context. Consequently, instructional strategies that promote the distribution of expert knowledge where students collaboratively work together to conduct research, share their results, and perform or produce a final project, help to create a collaborative community of learners. Knowledge construction occurs within Vygotsky's (1962) social context that involves student-student and expert-student collaboration on real world problems or tasks that build on each person's language, skills, and experience shaped by each individual's culture" (Vygotsky, 1978, p. 102).

## **2.11 Summary of the literature**

This chapter reviewed relevant related literature on the research topic, empirical literature and the theoretical framework. The chapter was discussed under the following subthemes: the social status of students with hearing impairment in inclusive schools.

Pattern of interaction between children with hearing impairment and their non-disabled peers, the Status of Peer Interaction of Children with Hearing Impairment, Strategies for promoting interaction between children with hearing impairment and their hearing peers benefits of interaction to the children with hearing impairment. The concept of hearing impairment and interaction were also highlighted.

Also, Impact of hearing impairment on social life of deaf pupils, challenges children with hearing encounter in interacting with their hearing peers, coping strategies children with hearing impairment adopt when interacting with their hearing peers. The theoretical framework was also discussed. There are few empirical studies that highlighted the interaction between children with hearing impairment and their hearing peers.

Even though literature has revealed a pattern of interaction between children with hearing impairment and their non-disabled peers, the status of peer interaction of children with hearing impairment, strategies for promoting interaction between children with hearing impairment and their hearing peers benefits of interaction to the children with hearing impairment among others which are relevant to this study, most of the studies were done outside Ghana. From the above literatures none of the studies mentioned has tried to look into the social interaction between children with hearing impairment and their hearing peers in the University practice inclusive school-Ghana. Therefore,

there is a need for further research on social interaction between children with hearing impairment and their hearing peers at the University Practice Inclusive School.



### **CHAPTER THREE**

## METHODOLOGY

### 3.1 Introduction

This section describes procedures and the methods used in conducting the study. It includes the research approach, the research design, the population, sample and sampling technique, instrumentation, procedure for data collection and data analysis. Besides, the validity and reliability issues have been discussed.

### 3.2 Research approach

The researcher employed a qualitative research methodology to gain insight into the social interaction between children with hearing impairment and their hearing peers at the University Practice South Inclusive School. Considering the nature of the target phenomenon (i.e., social interaction between pupils with hearing impairment and their hearing peers), the researcher followed the advice of Strauss and Corbin (1998) who explained that “qualitative methods can be used to obtain the intricate details about phenomena such as feelings, thought processes, and emotions that are difficult to extract or learn about through more conventional methods” (p. 11).

Salkind (2009) opined that qualitative research is a social or behavioral science research that explores the processes that underlie human behavior using such explanatory techniques as interviews, case studies and other relatively personal techniques and since the study is on social interaction, the researcher adopted this approach which is suitable for the study. In qualitative, the findings are always based on human experiences and stories which cannot be measured, counted or controlled (Cohen et al., 2007).



Besides, Crisp (2000) contend that in qualitative approach, the researcher relies on views of respondents ask broad or general questions and also collect data consisting largely of words from respondents and analyze them. It also refers to collection, analysis and interpretation of comprehensive narrative and visual data in order to gain insights into a particular phenomenon of interest (Springer, 2010).

Qualitative approaches also have the advantages of flexibility, in-depth analysis, and the potential to observe a variety of aspects of a social situation (Babbie, 1986). A qualitative researcher conducting a face-to-face interview can quickly adjust the interview schedule if the interviewee's responses suggest the need for additional probes or lines of inquiry in future interviews. Moreover, by developing and using questions on the spot, a qualitative researcher can gain a more in-depth understanding of the respondent's beliefs, attitudes, or situation. During the course of an interview or observation, a researcher is able to note changes in bodily expression, mood, voice intonation, and environmental factors that might influence the interviewee's responses. Such observational data can be of particular value when a respondent's body language runs counter to the verbal response given to an interview question.

The purpose of qualitative research is more *descriptive* than *predictive*. The goal is to understand, in depth, the viewpoint of a research participant. Qualitative data provides a rich, detailed picture to be built up about why people act in certain ways, and their feelings about these actions. Besides, qualitative research uses detailed descriptions from the perspective of the

research participants themselves as a means of examining specific issues and problems under study.

### **3.3 Research design**

The design for the study was a Phenomenological. Phenomenologists focus on describing what all participants have in common as they experience a phenomenon (e.g., grief is universally experienced). The basic purpose of phenomenology is to reduce individual experiences with a phenomenon to a description of the universal essence (a “grasp of the very nature of the thing,” van Manen, 1990, p. 177). In other words, a phenomenological research study tries to answer the question *'What is it like to experience such and such?'* An assumption underlying this philosophy is that there exists in every experience a true essence or structure. “Phenomenology asks for the very nature of a phenomenon, for that which makes a some - thing what it is — and without which it could not be what it is” (Van Manen, 1990 p.177). This study sought to find social interactions that exist between pupils with hearing impairment and their hearing peers.

### **3.4 Population**

The population for the study was made up of all the pupils and the teachers in the University Practice Inclusive JHS School, Winneba. The accessible population was (189) which is made up of (180) and (9) teachers.

### **3.5 Sample and sampling techniques**

The sample size for this study was 8. This consisted of (5) pupils with hearing impairment. The 5 pupils (out of a total of 16) with hearing impairment were purposefully chosen; that is according to how they socialize with their hearing peers in the school. These pupils were chosen because they possess unique characteristics which were of great interest to the researcher. Three (3) hearing peers who were in the same class with the pupils with hearing impairment were also purposively chosen to be part of the study. The hearing peers were selected purely on the basis that they were in the same class with the pupils with hearing impairment who always interact with the pupils with hearing impairment in one way or other.

### **3.6 Instrumentation**

The tools employed by the researcher to gather the necessary data for the study were observation and interview. The purposes of the researcher using these methods were to probe deeply and analyze intensively the life cycle of the selected case. It was possible for the researcher to enter into the respondents' personal world in order to gain a deeper and clearer understanding of their experiences, feelings and perspective through observation and interview.

#### **3.6.1 Observation**

Observation was used by the researcher to get the necessary data for the study. Observations provide an additional source of data for verifying the information obtained by other data collection methods. Observation draws on the direct evidence the witness has (Cohen, Manion, & Morison, 2000). In the cause of making observation it can either be participant based, where by the

researcher becomes part and parcel of the community he or she wants to study, or non-participant observation, where by the observer can be in the community targeted by only observing what is happening.

Specifically, the researcher used participant observation to gather information during class play time, worship, canteen time, learning and co-curricular activities. Sampled pupils were observed three times in each day for two weeks. During observation the researcher wrote down the exhibited behaviours interest to him. Interview was another method of data collection used in this study.

### **3.6.2 Interviews**

Data were collected via semi structured interviews; Face-to-face interviews occurred under a tree in the school premises and ranged in length from 20 to 30 minutes. The sampled groups involved in the study were interviewed to elicit responses for the study. Each pupil was given opportunity to respond to the questions raised for the study. Sign language was used to interview the respondents with hearing impairment. The service of a note taker was employed during the interview section. The interview took place during break time and free time. During interview, proceedings were recorded by the use of video recording and note taking. Each child was given equal opportunity to respond to the same questions. Also, interview for the hearing peers was done. The interview questions, which focused on interaction between children with hearing impairment and their hearing peers, are provided in the Appendix A. under each of the interview guide there were questions under each of the themes with probes and prompts to help obtain vital information from the respondents.

Cohen, Manion, and Morison (2000) regards an interview as an exchange of views between two people on a topic of mutual interest and emphasizes the social context of research data. It is a research instrument and involves the collection of data through verbal and non-verbal interaction between the interviewer and the interviewee. Gall, Gall and Borg (2007) stated that the advantage of interview is its adaptability; skilled interviewers make an effort to build trust and rapport with respondents thus making it possible to obtain necessary information that the individual probably would not reveal by any other data collection method and also can follow up a respondent's answers to obtain more information and clarify vague situations.

### **3.6.3 Piloting the instruments**

A pilot study is a standard scientific tool for 'soft' research, allowing scientists to conduct a preliminary analysis before committing to a full-blown study or experiment (Resnik, 2010). The purpose of pilot exercise is to get the bugs out of the instrument so that respondent in the main study will experience no difficulties in answering the questions during interview. It also enables the researcher to carry out a preliminary analysis to see whether the wording and format of questions will present any difficulties when the main data are analyzed. The instrument was piloted with five (5) respondents from primary section of the same school. The school was chosen for the pilot exercise because; the pupils there have similar characteristics just as the Junior High School. The pilot instrument was given to the primary section of the school to gather their views and responses. The pupils were selected because they are all in the similar mainstream. The responses from the participants were

considered before the actual conducting of the interview. The purpose of the pilot test was to ensure that the researcher gathers the relevant data for the research work.

### **3.7 Procedure for data collection**

#### **3.7.1 Access Issues**

A letter was sent to the head teacher's in the School where the study was conducted to seek permission to conduct the research in the setting. The pupils were informed before the interview was granted. The data gathered were kept confidential and the anonymity of the participants was protected.

Unstructured interview was conducted to elicit responses from the pupils. Interview guides was developed based on the themes of the research questions posed for the study. Each interview session lasted for about 15 minutes. Pupils with hearing impairment were interviewed through the use of Sign Language with the help of note taker.

#### **3.7.2 Ethical consideration**

Research ethics educates and monitors scientists conducting research to ensure a high ethical standard. Ethics are very paramount in research because, it guards against possible harmful effects of the research. Resnik (2010) contends that "respondents need to give informed consent to participate. This means that they must be fully informed about the research in which the

interview is going to be used. They must also be assured that their privacy and sensitivity will be protected and what is going to happen to their information after recording. Ethical norms promote the aims of research, such as knowledge, truth, and avoidance of error.

### **3.7.3 Interview**

The sampled group was interviewed to elicit response for the study. Each pupil was given opportunity to respond to the questions raised for the study. Sign language was used to interview the respondents with hearing impairment. The service of note taker was employed during the interview section. The interview took place during break time and free time. During interview, proceedings were recorded by the use of video recording and note taking. Each child was given equal opportunity to respond to the same questions. Also interview was conducted for the hearing peers who were involved in the study. Each interview section lasted for about 15 minutes.

### **3.7.4 Observation**

Observation was also carried out to enable the researcher gather more and adequate information on social interaction between children with hearing impairment and their hearing peers. Additionally, further observation was also conducted to enable the researcher to acquire deep knowledge about the pattern of interaction, and possible effects on social interaction between the children with hearing impairment and their hearing peers. In order to obtain

valid result, children were not informed about the intention of the researcher as far as the observational process was concerned.

Observation was carried out in different circumstances such as in the classroom and outside during worship canteen, play time tidying up of the compound to gather more information on how children with hearing impairment interact with their hearing peers during break time, social gathering, play time and group work. Observation was also carried out to ascertain the pattern of interaction between children with hearing impairment and their hearing peers. The researcher included findings and interpretations in the recordings from the observation to help in data analyses.

### **3.7.5 Actual Observation**

Classroom observations were conducted by the researcher during regular school hours. The researcher observed each child at different times on the same phenomenon and recorded the results. The observations were undertaken in one-hour lessons while the researcher asked the type of lesson and seating arrangement of the students, with special focus involving the pupils with hearing impairment. During observation note taking was used to record the expected behaviors.

The observations took place both in the morning and the afternoon lessons and the researcher was in the classroom during those periods, in order to obtain fair result. The researcher also observed the pupils outside the classroom during practical lesson, sporting time grounds work canteen time, and assemblies. The observation enabled the researcher to judge the climate of the school. The classroom observations captured pupils' spontaneous expressive behaviour during structured and unstructured



activities. This allowed the researcher to observe pupils' behavior such as initiating interaction, sustaining interaction and turn taking. Also, the coping strategies they adopt when interacting with their hearing peers. Besides, their access to academic facilities and the quality of interactions they had with hearing peers and teachers were also observed.

Inter-observer reliability was also conducted in order to ensure that accurate result was obtained for the study. With this similar items were given to another teacher to observe the children in the same environment with the same observational guide. This was to ensure that the observational obtained result was varied and reliable. The researcher taught the other observer the expected behaviors to look out for when they persistently occur.



### **3.7.6 Post Observation Conference**

The post observation conference enabled the researcher to reflect on the activities and for the researchers to share the data collected. The feedback focused on the strengths and potential areas for improvement of the statements raised in the observational guide as discussed during the pre-observation conference.

## **3.8 Data Analyses**

In analyzing qualitative data, it requires understanding on how to make sense out of text and images. Thematic approach was used to analyze the data collected. That is data for the study was analyzed based on each theme drawn from the research question raised. The researcher formulated coding categories

into manageable units of sentences or phrases, according to the research questions. All the information collected from different participants through the interview and observation methods were coded to identify themes and patterns. Verbatim expressions of the pupils were also used where necessary. The transcription and translation of the data was carried out immediately after the data collection.



## CHAPTER FOUR

## **ANALYSIS AND DISCUSSION OF RESULTS/FINDINGS**

### **4.1 Introduction**

This chapter presents the analysis and discussion of findings of the study which aimed at investigating the social interaction between pupils with hearing impairment and their hearing peers.

The research questions were used as a guide for the analysis of the data.

The data were analyzed to reflect the following themes:

1. Pattern of interaction between children with hearing impairment and their nondisabled peers.
2. Benefits children with hearing impairment get when they interact with their hearing peers.
3. Challenges hearing impaired pupils encounter in interacting with their hearing peers.
4. Coping strategies children with hearing impairment adopt when interacting with their hearing peers.

These are variables of social interaction of pupils in the mainstream setting.

### **4.2 THEME 1: Pattern of interaction between children with hearing impairment and their hearing peers**

#### 4.2.1 Social interaction

Social interaction emerged as a sub theme under the interaction between children with hearing impairment and their hearing peers.

Views of one pupil is worthwhile

*“Interaction between me and my hearing friends occurs in the classroom during group work and practical assignment. Also, it occurs outside the classroom during play time, worship and tidying up of the school compound. Interaction also occur during buying, worship time, during morning and afternoon assembly”. (Pupil 1)*

Another pupil with hearing impairment also intimated that:

*“There is collaboration between me and the hearing peers. I interact with the hearing peers through participation in activities such as group work during practical lesson grounds work worship canteen and sporting activities” (Pupil 2.)*

One pupil also commented

*“I work together with the hearing peers in classroom during group assignment. Also when work is given me and I don't understand I contact some of them for help. I also learn and playing together with my friends who are hearing. During worship and cleaning of the compound too, I interact with them” (Pupil 3).*

From the above it is clear that pupils with hearing impairment interact with their hearing peers in the inclusive school. It was also noted during observation that the pupils with hearing impairment interact with their hearing peers in activities such as playing games, learning, tidying up the environment, assembly and worship which occur both inside and outside the classroom.

This finding is in line with Stinson and Klunin (1996); Stinson and Whitmire (1992) who contend that although most research on peer interaction has been conducted on students in pre-school or early elementary grades, self-reports of social activity with adolescent peers indicate that social interaction patterns exist between pupils with hearing impairment and their hearing colleagues which persist through high school and college.

Besides, Cappelli et al (1995) contend that a critical part of the development of deaf children is their education, and through that, their social foundations are also built. During the primary-school development period, friendships are formed through common interests, school activities and sports.

Another study by Young and Kretschmer (1994) conducted to examine social interactions between children with hearing impairment and hearing peers concluded that the child with hearing impairment demonstrated successful accessing strategies such as tolerance which led to maintained social interaction with hearing children.

However, the study is in sharp contrast with the work of Meisgeier (1991) who thinks that pupils with post lingual hearing impairment may fail to conform to the expectations of school and society. They may not look or act the same way as other pupils. For peers who have never come into contact

with pupils with post lingual hearing impairment, except in school, these differences can create apprehension, distrust, and even hostility.

The finding is also inconsistent with Guralnick and Groom (1987) and Parker and Asher (1987), who asserted that young students with disabilities are likely to develop an unusual pattern of peer-related social behaviours that, if left unaltered, can lead to later difficulty with adjustment.

The findings is in line with social development theory by Vygotsky (1978) who asserted that although social interactions for very young children primarily occur within the family, as children grow and develop, they become more and more interested in playing and interacting with other children which help them to acquire vital skills such as turn taking and greetings from their hearing peers.

#### **4.2.2 Relationship**

Another sub theme that emerged from the responses of the pupils is relationship that exists between pupils with hearing impairment and their hearing peers.

It was also the case that the relationship between the pupils with hearing impairment and the other pupils was good. One pupil commented as follows:

*“The relationship between me and the pupils with hearing impairment is fine but I have difficulty with the sign language”* (Comments from Pupil A).

The view of one pupil is noteworthy here:

*“The relationship that exists between us is fine. I interact with them when their interpreter is not there.”* (Comments from Pupil B).

*“There is good relationship between me and the pupils with hearing impairment.”* (Comments from pupil C)

It was evident from the comments of pupils that the cordiality between both groups of pupils was good. This was despite that some of the other pupils could not communicate using the Sign Language. The co-existence between the children with hearing impairment and their hearing peers can also be attributed to the fact that they have been in the same school for so long and therefore, they have learnt how to co-exist among one another. This finding is consistent with Goldstein, English, Shafer, and Kaczmarek, (1997) who assert that the presence of students with disabilities provides a catalyst for learning opportunities and experiences that might not otherwise be part of the curriculum, especially relating to social justice, prejudice and equity.

#### **4.2.3 Summary**

The data presented and analyzed in this section indicates that pupils with hearing impairment in regular school can interact with their hearing peers in different situations. They interact in the activities such as tidying up of the school compound, learning, worship and during sport and games canteen time. The findings also indicated that there is cordial relation between pupils with hearing impairment and their hearing peers.

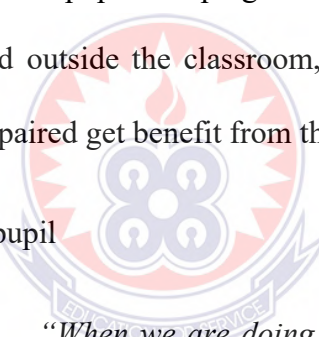
#### **4.3 THEME 2: Benefits children with hearing impairment get when they interact with their hearing peers**

Interaction is very significant in the life of pupils with hearing impairment because relationship help to meet their emotional needs, love and it shows belongingness. The following sub-themes were derived: peer support, Initiating interaction and turn-taking sustaining interaction and these are discussed in this section.

##### **4.3.1 Peer support for pupils with hearing impairment**

Peer support involves pupils helping one another. It occurs during their activities inside and outside the classroom, when interacting together pupils who are hearing impaired get benefit from their hearing peers.

In the view of one pupil



*“When we are doing exercise and I don’t have pen or book my friends who are hearing impaired give me some to use and replace it the next day. If I don’t understand assignment they help me. Also they help me to get vital information in an absence of interpreter”.*

Another intimated that

*“The hearing pupils help me when I find something difficult during learning. The hearing pupils help me to receive information in the school when announcement is given. They*



*help me to learn new words in both English language and Ghanaian language”.*

One also remarked:

*“I get gift from them, I also get writing materials which make me feel Ok. The hearing friends help me to get information which is important to me. Some also interpret for us during worship and assembly when our interpreter is not around”.*

Based on the assertion made by the respondents on the kind of support pupils with hearing impairment gain from their hearing peers, it is obvious that pupils with hearing impairment in the mainstream setting get some form of support from their hearing peers during interaction with them. The various kinds of support the pupils with hearing impairment get from their hearing friends include getting stationeries, learning support, and also obtaining vital information.

From the above analysis, it is clear that the hearing peers understand the difficulties of the pupils with hearing impairment and try their best to help them feel at home. This is in conformity with Finke, McNaughton, and Drager (2009) who opine that when children with hearing impairment are playing with their hearing peers, children with hearing impairment learn appropriate social behaviors, such as sharing, co-operating, and respecting the property of others. In addition, while interacting with their peers, young children learn communication, cognitive, and motor skills.

Gifford-Smith and Brownell, (2003); Johnson (2000) shared similar sentiment when they said that relationships and friendships with peers are related not only to social and behavioral development but also it enhances children's academic achievement

Children with more friends have fewer adjustment problems, have higher self-esteem, report less loneliness, enjoy wider peer acceptance, and display better school adjustment, positive attitudes toward school, and better achievement (Gifford-Smith & Brownell, 2003).

Again, Wentzel, Barry, and Caldwell (2004) found that middle school students with mutual friends showed higher academic achievement than students who were friendless. Moreso, Diehl, Lemerise, Caverly, Ramsay, and Roberts (1998) found that peer acceptance and having friends significantly incremented the prediction of achievement scores over the contributions of race, gender, attitudes toward school, and age for Grade 1–3 children. Popular children with at least one friend had the best school adjustment.

For their part, Gifford-Smith and Brownell (2003), and Johnson (2000) argue that relationships and friendships with peers are related not only to social and behavioural development but also to students' academic achievement. Lastly, Children's interactions with others begin early in life and play a significant role in the child's social, cognitive, and development (Rodriguez & Lana, 1996).

The finding is also in line with the social interaction theory by Lev Vygotsky (1978) who opines that Social interaction plays a fundamental role in the

process of cognitive development. He further asserted that social interaction plays a fundamental role in the development of cognition, which is panacea for academic achievement.

#### 4.3.2 Peer support for hearing pupils

In the view of one pupil

*“Sometime if I need pen and other writing materials they give me I have also learned how to sign from my peers who are hearing impaired”* (comment from pupil A)

Another remarked

*“At times I let them teach me alphabet in sign language oh I feel happy interacting with my peers who have hearing impairment”* (comment from pupil B)

Third pupil commented

*“If I’m not there and they learned something when I come they give me their notes for me to copy I am also trying to learn the sign language”* (comment from pupil C)

From the comments of the pupils, they get support such as learning sign language and writing materials from their peers who are hearing impaired when they also learn sign language from their hearing impaired friends, it is obvious that not only the pupils with hearing impairment get some form of

assistance during interaction but their hearing peers also get some form of assistance those who have hearing impairment.

In addition to the outcomes from the interview, observation was also conducted by the researcher which confirmed the revelation the regular pupils made. During observation, the researcher saw that the regular pupils who have been with the pupils with hearing impairment for long period can communicate with them in sign language. It can be deduced that there is symbiotic relationship between children with hearing impairment and their hearing peers. That is both pupils with and those without hearing impairment received some form of assistant during their interaction with their peers. The findings conformed with Goldstein, English, Shafer and Kaczmarek, (1997) who assert that the presence of students with disabilities provides a catalyst for learning opportunities and experiences that might not otherwise be part of the curriculum, especially relating to social justice, prejudice and equity.

#### **4.3.3 Turn-taking**

The comment of participant is worth noting

*“I have learnt how to wait for a friend to finish one activity before it comes to my turn. When my friend is talking I wait for him to finish before I come in”* (comment from pupils

1)

Yet another participant, her view as:

*“I have learned from hearing peers how to walk. When I go to buy something I wait in the queue for those who were there before me to finish before I buy” (pupil 4).*

However, one of the respondents shared this view

*“I don’t know waiting for a friend in a queue because most seniors who are hearing peers do the same when they come and juniors are there; they jump the queue and buy. Also if they want to urinate, and juniors are there, they ask them to leave”*

Another pupil stated:

*“I wait from a friend to finished buying before I also buy. I have also learned how to wait for a friend to finish urinating before I also enter the place because when you do things any how you will be punished”.*

Also, it was observed that they don’t rush when they go to the canteen. They wait for their turn before they buy. Thus from the comments above it can be deduced that the pupils with hearing impairment in the mainstream setting have learnt the skills of turn taking from their regular friends during interaction. The views of the pupils is in line with Smith (1998) who observed that children can learn to take turns, share and work cooperatively as part of their daily activities. The ability to engage in conversational turn taking allows children to engage in the basic human need and right to be full and active

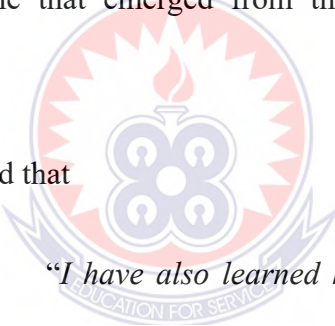
participants in their classrooms and communities (DeLuzio & Girolametto, 2011; Mashford-Scott & Church, 2011).

All children need a range of opportunities to interact with others to learn conversational turn taking (Bond & Wasik, 2009). Children who are typically developing learn turn taking naturally through everyday interactions with other children and adults. Besides, Brown, Odom, McConnell and Rathel, (2008) assert that children with disabilities often need direct support and instruction to learn how to take turns during conversations.

#### 4.3.4 Initiating interaction

Another sub theme that emerged from the pupils' responses is initiating interaction

One pupil intimated that



*“I have also learned how to live with other people by asking question through demonstration.”* (Comment from pupil 1).

Another pupil said that

*“In order for me to initiate interaction, they teach me some of the ways I can move with them”* (pupil 2).

A third pupil commented

*“I have learnt how to initiate interaction from my hearing peers”.*  
(Comment from pupil 4)

View of another pupil is worth noting

*“If I need something I just ask by pointing to the particular object or demonstrating what I want.”* (comment from pupil 5).

All the hearing pupils involved in the study also confirmed what the pupils with hearing impairment said.

*“When they need something they either demonstrate, point fingers or use gestures. No they can’t talk for too long”* (the comment from the hearing peers).

From the above revelation, pupils with hearing impairment initiate interaction using gestures, pointing fingers and demonstrations during interaction. From how the pupils with hearing impairment initiate interaction with their hearing peers, despite their difficulty in communicating with their hearing colleagues, they have devised their own means of initiating interaction with their regular counterparts since they have been on the compound with their hearing counterparts long time, they have learnt from their friends on how to initiate interaction. The finding is in line with the findings from other studies which found that there were no significant differences in frequency of initiation and ability to respond to others’ initiations between children with severe to profound hearing loss and their matched hearing peers (Deluzio and Girolametto, 2011). Besides, Vandell and George (1981) found deaf preschoolers attempt at initiating interactions significantly more than their hearing counterparts.

Besides, Vygotsky (1978) said that the Zone of Proximal Development (ZPD), the ZPD is the distance between a student's ability to perform a task under adult guidance and/or with peer collaboration and the student's ability of solving the problem independently. According to Vygotsky, learning occurred in this zone.

Also, Weisel, Most and Efron (2005) concluded that successful initiation strategies used by hard-of-hearing children were similar to their hearing classmates, including nonverbal entry, extending an invitation, offering an object, or producing a behavior similar to that in which other children were engaged. In terms of initiation strategies used by children, both deaf and hearing preschoolers frequently used vocalizations, smiles, and object-related acts (Vandell & George, 1981). They went on to say that in terms of initiation strategies used by children, both deaf and hearing preschoolers frequently used vocalizations, smiles, and object-related acts.

Additionally, Duncan (1999) stated that children with hearing impairment could change various initiation strategies according to partner's hearing status. They used more gestural and nonverbal strategies such as "touch" to initiate than did their hearing counterparts in integrated kindergartens.

#### **4.3.5 Sustaining interaction**

One remarked that:

*"I haven't learned how to sustain interaction when interacting with my hearing peer because I don't converse with them"* (comment from pupil1).



Again, another pupil noted that:

*“I tried to use demonstration and other body language to help me sustain my interaction with my hearing peers”* (comment from pupil 2).

Another respondent supported the above respondents

*“No I can’t sustain interaction because of my problem. I also don’t like talking to the hearing peers because they like gossiping about me”* (comment from pupil 4).

A comment from another pupil is noteworthy

*“I have difficulty sustaining interaction with hearing friends but when it becomes necessary I use demonstration and gestures”.*

From the pupils’ comment above they have difficulty sustaining interaction. It could be deduced that even though pupils with hearing impairment have difficulty communicating with their hearing peers, they have devised their own means of sustaining interaction with their other colleagues

The finding is consistent with Marschark and Lederberg, Kretschmer (1994) who conducted a study to examine social interaction between a child with hearing impairment and hearing peers. The authors concluded that the child

with hearing impairment demonstrated successful accessing strategies which led to maintaining interaction with hearing peers.

Deluzio and Girolametto (2011) indicated that there was no significant difference on the mean length of interaction between children with severe to profound hearing loss and children with normal hearing, concluding that the two groups of children did not differ on their ability to maintain interactions with their peers. A study conducted by Duncan (1999), the results showed that when maintaining interaction, the children with hearing impairment used more minimally contingent responses and made fewer significant contributions than the hearing children.

Also, Vygotsky (1978) contends that the Zone of Proximal Development (ZPD), the ZPD is the distance between a student's ability to perform a task under adult guidance and/or with peer collaboration and the student's ability of solving the problem independently. According to Vygotsky, learning occurred in this zone.

#### **4.3.6 Summary**

The data presented and analyzed in this section showed that pupils with hearing impairment in mainstream setting get some form of support from their hearing peers during interaction with them likewise their hearing peers. It was observed that pupils with hearing impairment have learnt turn taking from their hearing peers.

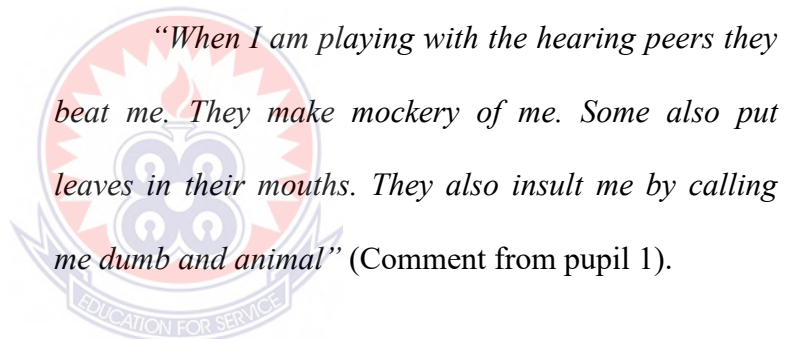
Also, pupils with hearing impairment initiate interaction with their hearing peers, despite their difficulty in communicating with their hearing colleagues.

It could be deduced that even though pupils with hearing impairment have difficulty communicating with their hearing peers, they have devised their own means of sustaining interaction with their other colleagues

#### **4.4 THEME 3: Challenges hearing impaired pupils encounter when interacting with their hearing peers**

##### **4.4.1 Unpleasant statement and bullying**

One student remarked:



Another pupil also stated

*“The hearing pupils don’t respect those of us who are hearing impaired. Some also put leaves in their mouths. They insult me a lot. Some also pull my ears and make mockery of me”* (Comment from pupil 2).

The comment of another pupil is noteworthy

*“The hearing peers always disturb me but when they do that I beat them. They also insult me when interacting with me. They call me “muum” the hearing pupils are also wicked”* (Comment from pupil 3).

There is another interestingly revelation made by another respondent

*“When we are in the classroom and worship they make a lot of noise which disturb me. Some of them also insult me when I mingle with them. Also when doing group work they don’t give me recognition”* (Comment from pupil 4).

The complaints raised by the pupils with hearing impairment about the unpleasant experiences they encounter during interaction with their hearing hearing peers were confirmed by the observation made by the researcher when during break time a pupil with hearing impairment was asked to wash the plate she had eaten from by her hearing colleague. This is an example of poor attitudes towards them during their encounter with their hearing peers. The findings agree with Cappelli, Daniels, Durieux-Smith, McGrath, and Neuss, (1995), Wauters and Knoors (2007), who noted that deaf students feel rejected and neglected by their hearing friends.

Besides, one study that focused on the social status of deaf students compared with hearing students discovered that a large number of deaf students were rejected by their hearing peers as compared to only a small number of hearing children who, like the deaf students, also became social misfits (Cappelli, Daniels, Durieux-Smith, McGrath & Neuss 1995).

Liben (1978) cited by Stika (1989) posed that Deaf children are more likely than their hearing peers to experience social deficits during interaction.

The findings is not in line with the theory under pinning the study by Lev Vygotsky's (1978) who said that social interaction plays a fundamental role in the development of cognition, which is panacea for academic achievement.

#### **4.4.2 Pattern of friendship /Category of friendship**

Pattern of friendship also emerged as one of sub themes under the challenges pupils with hearing impairment face when interacting with their hearing peers.

One pupil commented:

*I scarcely play with the hearing pupils in the school, all my friends are deaf* (Pupil 1).

Another pupil stated that:

*"I don't normally play with the hearing pupils in the school, all my friends are deaf"* (Pupil 2).

Another pupil remarked that:

*"All my friends are deaf; more of the time I like playing with the peers with hearing impairment"*.

The hearing pupils who are in the same class with the pupils with hearing impairment noted as follows:

*"I have both friends who are hearing and only few are hearing impaired"* (comment from pupil A)

*All my friends are hearing pupils. Oh I have difficulty communicating with them so like being in the company of hearing group* (comment from pupil B)

*I always play with the hearing pupils in the school, all my friends are hearing* (comment from pupil C)

It can be deduced from the responses of the pupils that children with hearing impairment have few friends than their hearing peers and most of their friends are pupils with hearing impairment. The types of friends pupils with hearing impairment have was also confirmed by the observation made by the researcher where pupils with hearing impairment were seen grouped together during social gathering and during tidying up of the school compound. During break time children with hearing impairment were mostly seen playing together.

From the above, it is clear that the findings on the pattern of friendship is in line with the research by Wauters and Knoors which indicates that deaf children do not have as many close friendships with hearing peers (Wauters & Knoors, 2007) and these relationships are more sporadic (Lederberg, Rosenblat, Vandell, & Chapin, 1987). Nunes, Pretzlik, and Olson (2001) said that deaf children are also more likely to have a complete lack of friends in their mainstream class than their hearing peers.

#### **4.4.3 Initiating interaction**

Regarding initiating interaction one pupil commented that:

*“I haven’t learnt how to initiate conversation with my hearing peers but if they ask me first, I respond through nodding or demonstration”* (comment from pupil 1).

Another pupil stated that:

*“It is not easy to initiate interaction with my friends because I can’t talk but I try to cope with it”* (pupil 2).

Third pupil shared similar view:

*“Staring conversation with peers who are hearing is not easy but if I need something from them I try the way they will understand it. Some time I use gestures”* (Pupil 3).

It can be deduced from the comments made by the pupils that in spite of their difficulty in communication with their hearing colleagues; they have devised their own means of interacting with their friends. Observation made by the researcher also confirmed the response the respondents gave on how the children with hearing impairment initiate interaction with their hearing peers. Even though they have difficulty initiating interaction, they have devised some means which help them to initiate interaction easily with their friends

This finding is coherent with the findings from a previous study which found that there were no significant differences in frequency of initiation and ability to respond to others’ initiations between children with severe to profound hearing loss and their matched hearing peers (Deluzio & Girolametto, 2011). Interestingly, Vandell and George (1981) even found deaf preschoolers

attempted to initiate interactions significantly more than their hearing counterparts.

With reference to the frequency of hearing impaired children's initiation behaviors, some researchers found their initiation interaction as often as their hearing peers in integrated preschools or kindergartens (Brown, Remine, Prescott & Rickards, 2000).

Also, Weisel, Most and Efron (2005) concluded that successful initiation strategies used by hard-of-hearing children were similar to their hearing classmates, including nonverbal entry, extending an invitation, offering an object, or producing a behavior similar to that in which other children were engaged. In terms of initiation strategies used by children, both deaf and hearing preschoolers frequently used vocalizations, smiles, and object-related acts (Vandell & George, 1981). The authors went on to say that in terms of initiation strategies used by children, both deaf and hearing preschoolers frequently used vocalizations, smiles, and object-related acts.

Additionally, Duncan (1999) contends that children with hearing impairment could change various initiation strategies according to partner's hearing status. The authors further stated that they used more gestural and nonverbal strategies such as "touch" to initiate than did their hearing counterparts in integrated kindergartens.

#### **4.4.4 Sustaining interaction**

Regarding sustaining interaction one remarked that:

*"I can't sustain interaction with my hearing peers because I can't talk with the hearing peers for long time".*



Again, another pupil noted that:

*“I have problem when it comes to sustaining interaction because sometimes I feel tired gazing at them”* (comment from pupil 2).

From the views expressed by the pupils on how pupils with hearing impairment sustain interaction that they have difficulty sustaining interaction with their hearing peers. The inability of the pupils with hearing impairment to sustain interaction with their hearing peers may due to their communication difficulties.

All the pupils with hearing impairment who were interviewed on how they sustain interaction they expressed that they have difficulty when it comes to sustaining interaction with their peers. The views of the pupils with hearing impairment confirmed the observation and responses expressed by the hearing pupils on the theme how pupils with hearing impairment sustain interaction.

From the above analysis it is clear that the findings on how pupils with hearing impairment sustain interaction is in line with the study by Nunes, Pretzlik and Olson (2001) who reported that hearing impaired children had more difficulties in making friends and their relationships with peers, and appeared to proceed less smoothly than those of hearing children. They went on to say that their difficulty in peer relationships might be relevant to their difficulty in maintaining peer interactions which provides opportunities for forming and keeping relationships with peers.

According to Caissie and Wilson (1995) children with hearing impairment may have trouble with specific aspects of interaction such as repairing communication breakdowns and initiating play behaviour.

Deluzio and Girolametto (2011) indicated that there was no significant difference on the mean length of interaction between children with severe to profound hearing loss and children with normal hearing, concluding that the two groups of children did not differ on their ability to maintain interactions with their peers. However, other studies showed that children with hearing impairment had more difficulty in maintaining social interaction than their hearing peers (Antia & Dittillo, 1998; Duncan, 1999).

However, the finding is inconsistent with Marschark and Lederberg, Kretschmer (1994) who conducted a study to examine social interaction between a child with hearing impairment and hearing peers. They concluded that the child with hearing impairment demonstrated successful accessing strategies which led to maintaining interaction with hearing peers. Also the children with hearing impairment have difficulties with specific aspects of interaction such as repairing communication behaviour.

#### **4.4.5 Summary**

It is clear from the findings that in some situations, it was difficult for the pupils with hearing impairment to clearly understand what was said or to get the message across to others, especially in communication. They also faced some challenges with regard to unpleasant comment they received from their regular peers. Sustaining interaction is another challenge exhibited by the pupils with hearing impairment in this section.

#### **4.5 THEME 4: Coping strategies children with hearing impairment adopt when interacting with their hearing peers**

##### **4.5.1 Coping strategies**

The emerging sub-theme coping strategies are discussed below.

One of the participants stated:

*“If I am with hearing group and I don’t feel comfortable, I leave to the group and find something to do on my own. Sometime I don’t join the group if I see that they are not my friends” (pupil 1).*

Similarly, another pupil stated:

*“I sometimes become angry and beat them. If it continues I inform my teachers and mother. I stop and join the deaf groups” (pupil 2)*

An interestingly comment from another pupil

*“When the hearing peers show some behavior which I don’t like I show an equal unpleasant response them. Also if the group is disturbing me I leave them” (pupil 3)*

Another pupil stated:

*“I leave to the place and sit at where I will feel comfortable. Sometime I don’t respond. Also I join the group of people who can communicate with me” (pupil 5)*

From the above comment on how pupils with hearing impairment cope with unpleasant attitudes during interaction, it is obvious that they withdraw from the group if the group is hostile to them and join group familiar to them. It can be deduced from the comments expressed by the pupils that pupils with hearing impairment have devised their own unique ways of coping with unpleasant situation when interacting with their hearing peers

Observations carried out by the researcher on how the children with hearing impairment manage unpleasant attitude from their hearing friends include withdrawal, joining group familiar to them.

During observation pupils with hearing impairment were seen moving together and being in similar group with their friends with hearing impairment when they got hurt from their hearing peers.

The finding on how pupils with hearing impairment cope with unpleasant attitudes is in agreement with Linderman (1997), who opines that withdrawal from society; into a community of similar others can help to protect self-esteem. Besides, Erving Goffman (1963) stated covering is a technique that allows deaf individuals to pass as hearing.

Coping strategies were researched to see what children could use to reduce the emotional impact of stressful situations. First they offer a distinction between two categories of coping, problem-focused and emotion-focused. Martin and Bat-Chava (2003) Problem-focused coping is directed outwards while

emotion-focused coping is the opposite, directed inwards (Folkman & Lazarus, 1988). The main difference between the two is that problem-focused coping pertains to strategies used against the stressor itself, and emotion-focused coping focuses on controlling the emotions that are caused by the stressor. Their studies have shown that problem-focused coping appears to be the more successful of the two in reducing the negativity that can build up emotionally.

A study conducted by Kluwin, Blennerhassett, and Sweet (1990) found that the use of personal resources (i.e. family members), diversionary and emotional responses to lessen the impact, or a combination of both were the three most typical responses to social stresses found in deaf children.

Also, study by Charlson, Strong and Gold (1992) showed that children experienced the most comfort from being around deaf peers and using family members for emotional support. This study confirmed that deaf children benefit more from problem-focused coping and also supported the texts that suggested contact with other deaf children may lessen the negativity of mainstreaming on their relations.

On the part of Bat-Chava (2000) he claims that deaf individuals who develop bicultural skills are able to function effectively in the dominant culture as well as in the culture of the minority group. They are often able to succeed professionally in the hearing world as well as identify with the deaf community and fight for social change. Brubaker (1994) asserted that those who are able to find a balance between their involvement in the deaf and the hearing world tend to have positive self-esteem.

#### 4.5.2 Communication strategies

Another area discussed is communication strategies.

One respondent commented that

*“I use lip reading when interacting with my friends who are hearing. Also, I use demonstration and gestures. Sometime I write for them”* (comment from pupil 1).

Another pupil asserted:

*“Sometimes I call those who can sign to sign for me. I also use gestures and other language. Sometimes, I write for them to read”* (comment from pupil 2).

Another pupil has this to say

*“I call someone who can sign to come in and help. I also speech read them when I am interacting with the friends who are hearing. Sometime I demonstrate my ideas to them”*

The comment from another pupil is noteworthy:

*“I use sign language when I am interacting with my friends some understand others do not. Those who understand Sign language help those who do not understand”* (comment from pupil 4).

Judging from the above, it is the case that pupils with hearing impairment in the University Practice Inclusive School encounter some challenges during their interaction with their hearing peers, they have devised some possible means of communicating with their colleagues. The strategies they use to communicate with their friends include lip reading, gestures, writing and demonstrations. It can be deduced from the comments made by the pupils with hearing impairment on how they communicate with their friends in the mainstream that even though they have challenges communicating with their hearing peers, they have devised some strategies in order to make their interaction with their peers possible.

The views of the pupils are consistent with the theoretical framework Lev Vygotsky (1978) who opines that humans use tools that develop from a culture, such as speech and writing, to mediate their social environments. Initially children develop these tools to serve solely as social functions, ways to communicate needs. Vygotsky believed that the internalization of these tools led to higher thinking skills. The children must have the opportunity to play together if they are to become friends (Vygotsky, 1978).

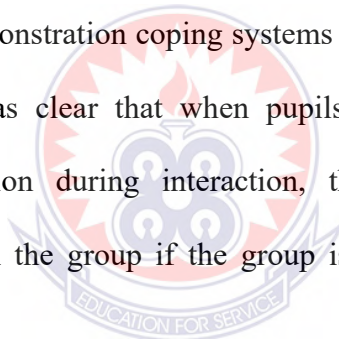
Also, visual or gestural coping systems, which was used more by adolescents with hearing impairment especially those whose families include others with hearing losses in the study of *Adolescents with Hearing Impairment: Coping with Environmental Stressors*, was found related to higher adjustment (Folkman & Lazarus, 1985; Seiffge-Krenke, 1993; Seiffge-Krenke & Stemmler, 2003).

Also, Emerton (1996) stresses that; today more and more deaf people, especially the younger generations, adopt this strategy. They are proud of their

cultural heritage, but they are also comfortable with pursuing their own individual interests in the majority society. These deaf individuals often have intelligible voices and are coming from a hearing family, which enables them to be more familiar with the norms and values of the majority society and to move comfortably back and forth between the two groups.

#### **4.5.3 Summary**

The data presented and analyzed in this section shows that pupils with hearing impairment in mainstream setting adopt diverse strategies during their interaction with their hearing peers. Among the strategies they employ during communication include, using visual or gestural, writing, speech reading sign language and demonstration coping systems were used during interaction with their peers. It was clear that when pupils with hearing impairment meet unpleasant situations during interaction, they employ strategies such as withdrawing from the group if the group is hostile to them and joining groups familiar to them.





## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary, conclusions, recommendations and suggestions for further studies based on the findings from the study.

#### 5.2 Summary

The study explored the social interaction between pupils with hearing impairment and their hearing peers in the University Practice Inclusive School, Winneba. Based on this, the study specifically sought to find out:

- The pattern of interaction that exist between children with hearing impairment and their non-disable peers
- The benefits children with hearing impairment get when they interact with their hearing peers
- The challenges hearing impaired pupils encounter in interacting with their hearing peers
- To find the coping strategies children with hearing impairment adopt when interacting with their hearing peers

The study was a qualitative research that employed phenomenological as a design. The population of interest was pupils with hearing impairment and their hearing peers at University Practice Inclusive School. Data were` collected using semi-structured interview and observation from a sample of

eight (8) respondents, comprising five (5) pupils with hearing impairment and three (3) hearing pupils who were purposively sampled. The data was analyzed thematically and the findings were observed:

- Pupils with hearing impairment interacted with their hearing peers both inside and outside the classroom such as learning, playing and during grounds work. Pupils with hearing impairment had few friends compared to their hearing counterparts. The relationship between the pupils with hearing impairment and their hearing peers was cordial.
- The hearing impaired pupils received numerous assistance from their hearing peers such as getting vital information passed on from teachers. The regular peers sometimes interpreted for the hearing impaired when their resource teachers were not around. Through the regular interaction, pupils with hearing impairment learnt how to initiate conversation, take turn and sustain conversation despite their communication difficulties.
- Children with hearing impairment encountered challenges such as bullying and insults when interacting with their hearing peers. These also included peers making unpleasant remarks / statements and mockery of them. Additionally, the hearing impaired were not given the needed recognition in their relationship with their hearing peers especially during group work.
- The pupils with hearing impairment in the mainstream setting adopted a number of ways for coping with their peers during interaction. These included withdrawing from a place that they found uncomfortable and sat at a different location they felt comfortable. They also joined the deaf group or a group which was familiar to them. They also adopted lip reading skills, gestures, demonstration and writing in order to make their communication less

cumbersome with their peers during interaction. It was also evident that sign language was sometime used during communication with their peers in mainstream setting.

### **5.3 Conclusions**

**Based on the findings, the study concluded on the pattern of interaction that pupils with hearing impairment in regular school can interact with their hearing peers in different** situations both inside and outside the classroom.

They interact in the activities such as tidying up of the school compound, learning, worship and during sport and games canteen time.

Additionally, pupils with hearing impairment have benefited from their interaction with their peers during interaction. These include turn taking and initiating conversation. Besides, pupils with hearing impairment get vital information from their hearing peers. However, they are battling with sustaining conversation with their peers. They also experienced unpleasant attitudes and rejection from their hearing colleagues. In order for the Pupils with hearing impairment to cope with their colleagues, they adopted several managerial strategies such as writing, demonstration, speech reading, sign language and other body language in order to cope with their peers when interacting.

The researcher wish to conclude that the school authorities should try as much as possible to maintain the existing relationship between pupils with hearing impairment and their hearing peers if not to improve on it. They should also try to organize regular talks and sensitization programmes to help maintain co-existence between all categories of children in the school.

#### **5.4 Recommendations**

The following recommendations were made in the light of the findings of the study:

- School authorities should give regular counselling to both pupils with hearing impairment and their hearing peers at the UNIPRA Inclusive School to enhance the level of friendship between pupils with hearing impairment and their hearing peers.
- School authorities should endeavor to sustain the regular interaction between pupils with hearing impairment and their peers at the UNIPRA Inclusive School in order for the pupils with hearing impairment to continue enjoying the benefits such as getting vital information from friends initiating and sustaining interaction and turn taking.
- School authorities must sensitize the hearing pupils at the UNIPRA Inclusive school on disability issues to reorient their negative attitudes towards pupils with hearing impairment so as to minimize the level of bullying and insult pupils with hearing impairment received from their peers.
- School authorities should teach the pupils with hearing impairment effective lip reading and other manual language skills in order to make their conversation with their peers less cumbersome.

#### **5.5 Suggestions for further research**

The following area is suggested for further research: Approaches for facilitating social interaction between pupils with hearing impairment and their hearing peers in the mainstream setting.

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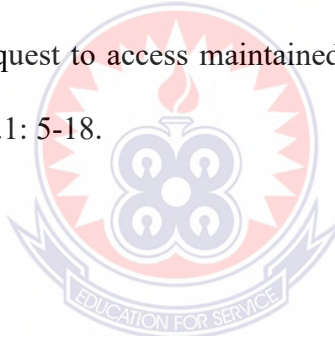
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## **Appendix A:**

### **Semi-structured interview guide for pupils with hearing impairment at the unipra south inclusive school on social interaction between children with hearing impairment and their hearing peers in the university practice inclusive school, Winneba.**

This interview is aimed at collecting information from pupils with hearing impairment on how they interact with their hearing peers at the Unipra South Inclusive School, Winneba.

#### **Interaction Patterns engaged in by the pupils**

How would you describe the nature of interaction that exists between you and the hearing peers in the school?

#### **Prompts:**

- a. How does your participation in activities occur in school with your hearing peer?
- b. How often do you play with your regular peers?
- c. How do you work together with the hearing in classroom?
- d. How do you interact with your regular peers? What are some of the things you do in common with your hearing peers?

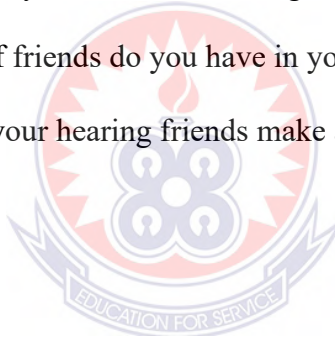
#### **Benefits of interaction**

1. What kind of assistance do you get from your hearing peers when you interact with them?

- a. In what way do they offer help to you?
  - b. How do you feel when interacting with your regular peers?
2. What good things have you learnt from your peers who are hearing?
    - a. initiating interaction
    - b. Sustaining interaction

### **Challenges of interaction**

1. What are some of the problems you face in interacting with their regular peers?
  - a. What challenges do you face in initiating interaction?
  - b. What challenges do you face in sustaining interaction?
2. What categories of friends do you have in your school?
  - a. What remarks do your hearing friends make about you?



### **Coping strategies**

1. What are the managerial strategies you adopt when interacting with their hearing peers?
  - a. How do you manage unpleasant attitudes exhibited by your regular peers during interaction?
  - b. How do you communicate when you find yourself in typical hearing environment?
2. When you are with hearing group and they do not make you feel comfortable what do you do?

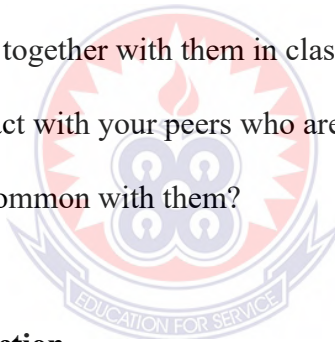
## **INTERVIEW GUIDE FOR HEARING PUPILS**

### **Interaction Patterns engaged in by the pupils**

How would you describe the nature of interaction that exists between you and the hearing peers in the school?

#### **Prompts:**

- a. How does your participation in activities occur in school with your hearing impaired peers?
- b. How often do you play with your friends who have hearing impairment?
- c. How do you work together with them in classroom?
- d. How do you interact with your peers who are deaf? What are some of the things you do in common with them?



### **Benefits of interaction**

3. What kind of assistance do you get from your hearing peers when you interact with them?
- c. In what way do they offer help to you?
- d. How do you feel when interacting with your regular peers?

### **Challenges of interaction**

1. What are some of the problems you face in interacting with their regular peers?
2. What categories of friends do you have in your school?



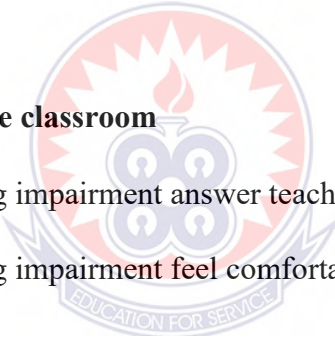
### **Coping strategies**

1. What are the managerial strategies you adopt when interacting with their hearing peers?
2. How do you communicate when you find yourself in typical hearing environment?

### **Observation guide (field note)**

#### **Appendix B:**

##### **Observation in the classroom**

- 
- Pupils with hearing impairment answer teachers' questions in the classroom
  - Pupils with hearing impairment feel comfortable sitting beside their hearing peers
  - Pupils with hearing impairment participate in the group discussion with hearing peers
  - Pupils with hearing impairment initiate interaction the with hearing peers
  - Pupils with hearing impairment sustain interaction the with hearing peers

##### **Observation outside the classroom**

- Pupils with hearing impairment play with peers with their hearing peers
- Pupils with hearing impairment participate in grounds work
- Pupils with hearing impairment socialize with their hearing friends

- Pupils with hearing impairment Prefer participating in group activities with hearing peers
- Pupils with hearing impairment feels happy playing with their peers with hearing impairment.



## APPENDIX C

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

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August 17,

2015.

University Practice South Inclusive School  
P. O. Box 129  
Winneba.



Dear Sir/Madam,

#### **LETTER OF INTRODUCTION**

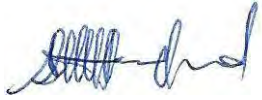
I write to introduce to you Ebenezer Donkor – an M. Phil student at the Department of Special Education of the University of Education, Winneba.

He is currently working on his thesis: “Social interaction between pupils with hearing impairment and their hearing peers in the University Practice Inclusive School, Winneba.

He would need your assistance to collect data from your school. I would therefore, be grateful if you could provide him with the necessary assistance.

Thank you for time and cooperation.

Yours faithfully,



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





## APPENDIX C

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

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August 17, 2015.

University Practice South Inclusive School  
P. O. Box 129  
Winneba.

Dear Sir/Madam,

#### LETTER OF INTRODUCTION

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He is currently working on his thesis: “Social interaction between pupils with hearing impairment and their hearing peers in the University Practice Inclusive School, Winneba.

He would need your assistance to collect data from your school. I would therefore, be grateful if you could provide him with the necessary assistance.

Thank you for time and cooperation.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Samuel Hayford', is written over a faint watermark of the University of Education, Winneba logo.

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

