

A Comparison Study on the Perceptions of Public and Private primary School Teachers on the Learning Challenges of Children with Traumatic Brain Injuries

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Abstract: *Children born with complications or from mothers who had complicated pregnancies suffer brain injuries of different types and magnitudes ranging from a small caput succedaneum to cerebral palsy. One of the major parts that are subject to injuries is the brain due to high demand for oxygen. This ultimately affects the neurodevelopment which manifest in challenges with memory, mastery and learning. In Zimbabwe, children who succumb to birth trauma ultimately find their way into mainstream schools. The study sought to compare and evaluate the perceptions of Bulawayo's private and public primary school teachers towards learning challenges of children who suffered birth trauma. A qualitative case study was done because it facilitated exploration of phenomenon within its context, as well as its ability to permit the identification of longitudinal change. The population of children who succumbed to birth trauma and attending mainstream schools was followed up. Their teachers were also part of the study participants. Participants were purposively sampled. Major findings were that teachers were not aware that some of the pupils in their classes were victims of Traumatic Birth Injuries (TBI) and the children were struggling with their school work; most teaching in public schools was teacher-centred, while teachers in private schools attempted to cater for individual needs. Recommendations made include: need for proper assessment of children with a history of birth trauma to inform classification; ensuring that teacher training be revised to integrate inclusive curricular for every general teacher trained for primary and secondary schools; revisiting the teacher-pupil ratio; secondment of school psychologists at least in every district to ensure a reasonable psychologist-pupil ratio for proper assessment of children with behavioural needs; need for the Ministry of Primary and Secondary Education to train neuropsychologists and to provide psychological batteries for assessment of children with neuropsychological/behavioural problems in schools; and developing a comprehensive Monitoring and Evaluation framework for the children with TBI.*

Key words: *Traumatic Brain Injuries, Perceptions, Learning Challenges, Underperformance.*

I. Introduction

There are some non-genetic, non-environmental causes of academic underperformance, whereby in spite of the family tree, the environment and study material the child is presented with, s/he still performs below average. According to Fawcett (1995), there are pupils who show up in the classroom with surprising difficulty in reading, writing and conceptualising, especially pupils who are of average intelligence and have access to at least reasonable quality teaching. Some of these difficulties cannot be explained by psychological theories, personality traits, mental disability, and the effects of emotional trauma or physical disability. Un-giftedness in most children has been attributed to a lot of factors, some of which are environmental and natural. However, there are a lot of medical complications that are not brought to the fore during academic assessment of a child. What medicine calls 'mild' trauma, may be actually a 'moderate' hindrance to learning later in life.

1.1 Research Questions

- i. How do children with Traumatic Brain Injuries present?
- ii. What are the cognitive challenges of children with TBI?
- iii. How do teachers perceive the general performance of children with TBI?
- iv. What teaching methodologies were teachers employing to assist the children with learning needs resulting from TBI?

1.2 Review of Related Literature

Zimbabwe being a Middle Human Development country has only five central (government) maternity referral hospitals that are under equipped with human, material resources and delivery equipment. The under equipped hospitals limit the ability to diagnose, minimise or treat maternal and neonatal complications occurring before, during and after the birth process. Such complications require advanced technology which the researcher is not aware of its availability in the country's maternity hospitals as yet. Some complications impact on the wellbeing of children (brain development in particular) and affect the neurophysiological development and

neuropsychological function of a child (learning in particular) (Strellis, 2009). To that effect the affected children require psychological assessment for proper placement and assistance with learning needs. However, according to the Bulawayo Provincial Education Office (2010), there are two school psychologists covering the Bulawayo Metropolitan Province which has got well above 80 primary schools (including private schools) with a collective enrolment of more than 50 000 pupils. If 5 % of that population is made up of traumatised children or children with diverse psychological needs, then the psychologist/student ratio is 1:1250.

Medically known as birth asphyxia, TBI is sometimes referred to as Brain Insult by some medical writers. This is respiratory failure in a newborn a condition caused by inadequate intake of oxygen before, during, or just after birth (Woods and Rutterford, 2004). There are various causes of birth asphyxia ranging from pathological, physical, chemical and/or genetic. Woods and Rutterford (2004), state that, whatever the cause of asphyxia is, if the brain does not receive enough oxygen before, during or after birth, brain damage occurs. In support of the foregoing, Steinberg, Goodman and Kalish (2009) state that:

Around 850,000 of the world's under fives die each year, many babies are stillborn and many others develop devastating, lifelong disabilities – including aphasia, cerebral palsy, learning disabilities and epilepsy – because of a problem called birth asphyxia. Depending on the focal point/severity of the problem, some complications can go unnoticed and later show up in early childhood development when it may be difficult to diagnose; because many of the symptoms of “mild” to “moderate” traumatic brain injuries are subtle, and because the injury commonly avoids detection on our most sophisticated hospital imaging equipments, it is common for victims to go undiagnosed.

The researcher think that if such injuries cannot be diagnosed with the sophisticated machines yet they have lifelong consequences, then it means some of the ‘mildly to moderately’ traumatised children/people are among the general populace. These could be misinterpreted for certain deficiencies, especially intellectual ability or classroom behaviours.

A number of studies have been carried out on intelligence development such as the theory of Multiple Intelligence by Gardner (1993) and Emotional Intelligence Theory by Goleman (1995). In some of the studies, intelligence has been portrayed to be a complicated scientific process whereas, in others, some researchers have tried to prove that learning is a simplified task that anyone can do (Caine and Caine, 1997). Some of the writers have indicated some elements that promote learning/academic performance such as nature and nurture. Medical researches have tried to prove that the medical complications (brain injury) can affect mental abilities and compromise academic performance (Steinberg et al, 2009). They state that, brain trauma can permanently damage the nervous system dependant on the type of injury and time which the injury occurred.

1.2.1 The Brain Hemispheres and Functions in Learning

Described as an organ of learning, the brain is divided into two hemispheres, called the left and the right hemisphere (Pacey, 2009). The two hemispheres have different functions in controlling our relationship with the world. Each specific section of the hemisphere has a specialised function in learning. Learning is an activity of the brain and as highlighted in the medical researches, injury to the brain can affect the functioning of the brain during learning. As indicated by Given (2002), Moster, Lie and Markestad (2002) and Marlow (2005) injuries to the brain can affect a lot of physiological functions such as visual memory, language, storage and retrieval of information which is key to reasonable learning.

Pacey (2009) illustrates that, efficient physical and mental operation, including learning depends on each part of the brain being in full communication with the other. This communication takes place along nerve cells or neurons which means when damaged, communication is interrupted. As noted, each part of the brain has a specific function which cannot be substituted or complemented by the other part. For example, the frontal lobe which is responsible for memory cannot alternatively function in special senses like sight and hearing if the occipital lobe is injured.

1.2.2 The Triune Brain activity in Learning

The triune brain philosophy denotes that, the knowledge of the types of brain parts and levels will better equip the teachers with the knowledge required to motivate pupils to learn. MacLean (1981) in Striedter (2005) states that, the Triune brain is translated as the 3 levels and 3 types of brain which are, the Brain Stem (Reptile Complex), Limbic Brain and the Neo-Complex Brain. The Brain Stem is based on physical survival and maintenance of the body. These are natural needs of the body that the brain automatically instructs the body to do. This part of the brain is very ritualistic and resistant to change. To motivate pupils toward success Patton (2008), states that it is important that teachers create a structure of learning that establishes an obvious pattern. By creating a pattern, pupils will know what to expect from class and be less stressed, because they will know what a new day will bring.

The limbic system attaches emotions to actions which allow the brain to reference memory based on a currently felt emotion. Since the limbic system attaches emotions to actions the brain stem is then affected. Kundu and Tutoo (2001) state that, to motivate pupils using the limbic system; the teacher should create a reward system for completed tasks. Pupils will then associate positive emotions with learning. The neo-cortex is the logical portion of the brain. This portion is responsible for language, both verbal and written and allows formal logical thinking for planning (Pacey, 2009). As motivation, the teacher creates obvious logic in his/her teaching methods. This will allow the pupils to understand the method and see how the method leads to the end result. The researcher opine that the children with TBI may require more time, more motivation and an enabling environment for such a brain activity which also requires a teacher who can promote and provoke the ability to learn.

II. Research Methodology and Design

The researcher employed the qualitative methodology to ascertain the perception of the teachers on the challenges confronting the learning ability of children with TBI. Gall, Gall and Borg (2003) note that, the strength of the qualitative research is its ability to provide complex descriptions. This methodology provides the perceptions and traits (human side of the issue) of the subjects under study. Often contradictory behaviours, beliefs, opinions, attitudes, emotions and relationship of individuals are easy to ascertain using this methodology.

2.1 Research Design

The case study approach was the ideal design to use within the qualitative methodology because it facilitated exploration of phenomena within their context using a variety of data sources (Tellis 1997). A case study is defined as an intensive analysis of an individual unit (for example, a person, group, or event) stressing developmental factors or evidence of change in relation to context, (Lamnek, 2005).

2.2 Population

For the purpose of this research, the accessible population of children born at Mpilo and United Bulawayo Hospitals' maternity centres with complications (with an Apgar Score of between 4 – 6) or from mothers who had complicated pregnancies or poor maternal health during pregnancy between 2000 and 2005 were used as the study participants. The school teachers for public and private primary school were also part of the population. A population is described by Adèr, Mellenbergh and Hand (2008) as the entire group of objects or individuals of a particular type under study.

2.3 Sample and Sampling techniques

Due to the size of the study population, time limit, lack of funding and type of research design used; the researcher could not make use of the entire population. Therefore, 10 children with traumatic brain injuries from the two hospitals who were attending mainstream schools were purposively sampled to make reasonable inferences about the phenomenon under study. Their teachers were also sampled for the study. A sample of 20 participants was purposively selected. A sample is described as a proportion of the population that bears all the characteristics of the population (Makore-Rukuni, 2001). The sample comprised 6 girls and 4 boys who suffered injuries at birth or whose mothers had complicated pregnancies or deliveries and attending mainstream schools.

The children were selected from 2 hospitals, that is, 5 from each hospital. Focus was on children in grade 1 to 5 (during the time of identification). Only children who were within the 20 kilometres radius of Bulawayo were considered as the study participants.

2.4 Data Generation Instruments

2.4.1 The researcher as an instrument

The research took the form of interviews of teachers, lesson observations and document analysis for the children under study. The researcher assumed the role of interviewer during individual interviews and non-participant observer during lesson observations.

2.4.2 Interview guides

Gall et al., (1996) define an interview guide as a set of questions drawn to help elicit data during interviews. An interview guide was therefore designed which focused on participants' perceptions on the learning behaviours of children under study. This included children's motivation towards school, their performance and attitudes towards learning. In the interview guide, the researcher included the main themes that were likely to emerge in the discussions of the questions.

2.4.3 Data Generation Strategies

In-depth interviews with teachers were conducted. Document analysis and naturalist observations were done. The document analysis included children's school books, test books/papers, school registers (for school attendances) and the children individual school records.

The researcher also observed the children in their normal learning environments. This exercise involved sitting in a classroom during the children's lessons and observing their behaviour during lessons without interaction or interruption. To reduce the 'Hawthorne Effect', the researcher attended 5 lessons so that the participants would familiarise themselves with her and develop confidence so that their behaviour would not be altered by the presence of strangers as propounded by Stoner and Freeman (1992). The first 3 lessons were for familiarising with the children, the 4th lesson was for collecting data and the 5th lesson was for validating the data. The validation process was done immediately after the 4th lesson to avoid coming back at a later time when the pupils would have forgotten the researcher and the joining becomes a process again. The researcher was assessing the presence of the coded behaviour. The learning sessions for each child were spread over two weeks and the selection of days was in no order of priority for each school.

2.4.3.1 Data Processing

The approach involved an interim analysis, which refers to the cyclical process whereby data generated are analysed prior to additional data collection (Mafa, 2003). This approach was employed throughout the study. Use was made of memoing, which refers to reflective notes written by researchers recording ideas generated during data analysis (Johnson and Christensen, 2000). The data collected were constantly reviewed, categorised, labelled and analysed to form themes and patterns. This has the advantage of identifying issues that had not been included in the initial data collection procedures (Strauss and Corbin, 1990).

2.4.3.2 Segmenting

Segmenting involved breaking the data into meaningful and useful analytic units. This was done by carefully reading the transcribed data line by line, deriving the meaning behind the statements. Each segment was bracketed, that is, words, sentences and several sentences as a way of indicating their starting and ending points. The researcher took cognisance of the following questions:

- Is there a segment of this text that is useful for this research?
- Does it differ in any way from the text which precedes or succeeds it?
- Where does the segment begin and end?

2.4.3.3 Coding

According to Miles and Huberman (1982) in Johnson and Christensen (2000) codes are labels used for assigning units of meaning to the descriptive and inferential information compiled during a study. Coding is the process of marking these units of meaning with symbols, descriptive words or category names. Meanings of the discussions were drawn, coded and categorised into themes using grounded theory (Strauss and Corbin, 1990). The responses from interviews were analysed into concepts and related concepts were categorised into families. The sequence of events in the analysis of the findings were to look at the documents/transcripts or notes that were formulated during the interactive stages of the research. It involved looking for indicators of categories in the events and behaviour during interviews or observations. These were named and coded on the documents. The codes were compared to check for consistency and differences.

2.4.3.3.1 Compiling a master coding list

All category names developed, together with other symbolic codes, were placed on a master list. The codes on the master list were reapplied to new sections of the text each time appropriate sections were discovered. New categories and new codes were added to the new master list as the need arose.

2.4.3.3.2 Identification of Broad categories

Data from interview lesson observations and document analysis were then sorted into broad categories that addressed characteristics of children with TBI; cognitive challenges of children with TBI; how teachers perceived the performance of children with TBI; and teaching strategies that teachers were using.

2.5 Study Participants Labelling

Due to the number of participants under study, the participants were labelled for easy follow up of their responses. The following labels were used:

- Bulawayo Private School Teacher 1 (BPr T1) and Bulawayo Private School Child 1 (BPr C1) up to 4;
- Bulawayo Public School Teacher 1 (BPc T1) and Bulawayo Public Child 1 (BPc C1) up to 6;

III. Findings and Discussion

3.1 Biodata of Teaching Personnel

Table 1: Biodata of the Teaching Personnel

Category	Total
Gender	
Male	3
Female	7
Professional Qualifications	
Diploma in Teaching	8
Diploma in Physical Education	1
First Degree	1
Teaching Experience	
0-5 years	1
6-10 years	8
10+ years	1

The composition of the interview group by gender gave a shadow representative of the ratio of males to females in primary teaching fraternity, whereby females were more than their male counterparts. The ratio of diploma to degree holders also depict the situation obtaining generally in the primary schools. There were more teachers with general teaching diploma and only one teacher with a diploma in Physical Education. There was also one teacher with a degree in Social Science. The academic qualifications that the participants had, also influenced the type of answers and gave credit to the information they gave. The teaching experiences of the participants also showed that the participants had been in the teaching field for appreciable periods to have borne the brunt of teaching pupils of different abilities, to be able to discuss issues competently and maturely. These highlighted biodata contributed to the credibility, validity and trustworthiness of findings. In view of the qualifications and experiences of the teachers, reasonable inferences were made about the situation in schools in relation to the learning environment of children with TBI.

3.2 The Characteristic of children with TBI

Without being informed, the teachers did not understand the behaviour of children with TBI. In some schools, children with traumatic brain injuries were classified as children with learning disabilities while some thought there had specific needs. The teachers from private schools had different opinions on the behaviours of children with TBI among their classes. From the assessment of their general behaviours in class, the private school teachers had bonded with the children as BPr T2 echoed:

She was and still is a well-mannered girl. ...hard working and she listens so attentively. She stammers a bit and gets agitated here and there but overall, she never gives me problems... she is so disciplined... she is a pleasure to teach...

However, teachers from public schools had different opinions, BPc T4 who taught grade 5 said, **“...He was a very quiet child. He was very reserved, I could say naïve. I would expect a boy of his age to be very naughty and a bit aggressive in his approach with some inquisitiveness...”** BPc T 2 indicated that he had observed some behavioural deviation from the child that she was teaching. She highlighted that she had spoken to the mother of the child concerning his learning behaviour and she gave an account of her concerns, **“... this term he is worse and he has become so forgetful and is always absent minded. I have spoken to his mother on several occasions and at times when I ask her to come for consultation, before I even talk to her, she starts crying...”**

It seemed with that scanty knowledge of the medical background, the teacher was not equipped to interact with the child from an informed position. In general, children from public schools as pointed out by all teachers had many disadvantages. One of the disadvantages was that children received minimal attention because of the high teacher-pupil ratio. All public school teachers had similar sentiments about the general classroom behaviours of the children during lessons. BPc T 6 who was teaching grade 5 remarked:

You would hardly know he is in class. He was a very quiet boy. If you don't pick him up he would not raise his hand up. He would look straight to the board or at you and look very puzzled. It would seem like he did not even hear what you are talking about...

During the lesson observation one of the pupils under study (BPc C 3) was jittery, moving up and down. He was disturbing other children, pulling them and rubbing the chalkboard. He would go back to his seat and behave in a very well-mannered way as if nothing happened, before he starts again. He was continuously getting frustrated because the teacher had taken more time than usual to deliver a lesson. He wanted to go and

play. Asked to hand in his book, he indicated that he did not write because he forgot the book at home. BPC C4 was 12 years 7 months and doing grade 6. He behaved maturely in class, very reserved and quite. However, his classmates had given him a nickname which referred to his lower performance. Every time they called him that name, he just smiled. His conforming behaviour showed signs of learned helplessness displayed by bullied children. This shows that the pupil had a behavioural problem as well.

As observed from their school books, test papers, general behaviour and learning behaviours, the pupils had symptoms similar to the characteristics of children with learning disabilities. The symptoms included:

- Hyperactivity;
- Perceptual Motor impairment;
- Coordination Deficit;
- Attention Disorders;
- Speech Disorders;
- Language Disorders;
- Poor Visual-Motor Coordination;
- Slowness in completion of takes;
- Easily confused by instruction;
- Difficult with abstract reasoning and problem solving;
- Lagging in developmental milestones;
- Overly destructible; or
- Difficult in tasks requiring sequencing.

All these symptoms are present in children with brain injuries, learning disabilities as well as children with ADHD as highlighted by Steven et al., (2009) and Logsdon (2010). Therefore, the researchers views children with TBI as part of children that form a part of children with learning disabilities.

3.3 The cognitive challenges of children with TBI

The impact of TBI on the children's academic performance was apparent in the children's reports and assignments books. The comments from the head master on BPr C2's report showed that the child was putting so much effort however; she struggled with all the subjects. The comments, "**Monica is a fine young lady who sets a good standard of behaviour for the school. Her application is admirable and she is working hard to fulfill her potential.**" The teacher also put the following comments on the overall performance of the pupil:

English: Monica has improved a lot in her work. She is determined and she puts a lot of effort into any given work. She tries so hard to overcome the challenges.

Mathematics: She struggles with numbers. She mixes concepts and she has a hard time solving problems. She never gives up because she is focused, she keeps trying.

Content: She could have done better in science. Her books are up-to date. She is a lovely and well behaved girl.

Her average mark was 64 % compared to the class average of 84 %. A brief overview of the performance of children from public schools revealed the following achievements from the class work:

Table 2: Pupils Classwork (In no order of priority)

Child Identity and Age	Grade	Subject	Marks
Child 1: 12 years	6	Content	6/26, 3/10, 3/13, 3/6, 2/16, 6/10, 10/10
Child 2: 11 years	4	English	0/10, 1/8, 2/4, 8/44, 10/38, 19/30
Child 3: 12 years	5	Maths	5/38, 2/8
Child 4: 9 years	3	English	3/10, 3/20, 2/15, 1/10
Child 5: 11 years	5	English	4/10, 5/10 good, 7/20, 11%

According to the information in Table 2, one of the pupils scored as low as 0/10 in English, while of the pupil's best score was 19/30 and another 5/10, which the teacher awarded a good. From the table, child 3 had her Maths exercise book reviewed and her scores were below average. However, child 1 had his content book reviewed and his marks were fluctuating. The teacher therefore, attributed the marks to the topics. He highlighted that there were some topics that the child liked especially those that touched on issues and the environment that the child was familiar with. Child 2 was born with an Apgar score of 4; he had a cord around the neck and stayed in hospital only for 1 night. He was in grade 4 and the following paragraph is an extra from his English book. The pupils were instructed to write a letter to their best friend. The teacher had given the class the salutation for the letter and conclusion for the letter. The instruction was ; pupils should write the body of the letter:

Dear Thulani

I am writing this letter telling you about my journey. gEtwessgurukaekusne Gagavugezazahie woiei. WNganboei weinele Egahadagedassdnen. Lo ma udolaGofekaeaba to 220 koku. Mnaubomototowoieiywanonwo. My amieneeneneninienwananwo. My maitamenarononmmanceriouoooo. My aaneiwnonemvvenenininnnnBnepi nzz. My maneleila geienteinimenienime. My mnenin inainienelileingipannaino. My manchwene ninen sienabaenopindna

Your Friend Xolisani

The teacher gave him 3 out of 20. Asked where the 3 marks came from' the teacher highlighted that he rewarded the child for effort. He indicated that such children use more effort to reason and more energy to bring out facts than those without learning disabilities who find learning an easy task. He remarked:

It takes a lot of effort for this child to come to school everyday, sit in class and write for such a length without understanding what he is writing about. The courage to keep writing, the will to go on and hand in his books is an effort. When we call out books, he also comes smiling and looking out for a mark. ... The effort is greater than the ability.

In general all children with TBI performed lower than their counter parts. Their marks either set below average or below a quarter. They had challenges with learning, mastery and memory. This affected the way they conceptualised and used information that was stored in their brains.

3.4 The teachers' perceptions on the general performance of children with TBI

Teachers from public schools had different views about the children's underperformance. Some were blaming it on the distance, lack of parental involvement and at times to the large classes. BPc T3 seemed to be blaming the child's performance on everything else but self, as she remarked, "... **He stays very far and comes to school very late. His homework is never done. His mother works night shift so really no one helps him. ... I am not quite sure of his background...**"

The teacher seemed annoyed and unconcerned with the pupil's social challenges and thought the pupil did not deserve to be in that school. The researchers also wondered how the learning environment contributed to the child's performance. In general, all teachers acknowledged that the children under investigation were performing either below or slightly above average. Teachers from private schools had a different view; they acknowledged the efforts that the children were putting though they also pointed out that their lack of training in Special Education Needs was hindering their ability to deal with the affected children. BPr T1 highlighted that the child worked with vigilance and so much effort as she referred to one of her pupils under study:

She works with all her might. Her major challenge was phonics, syllables and letter - sound recognition... Her vocabulary needed a lot of attention. ..With Maths, she got all mixed up in problem sums and mechanical. ... She is always in the bottom 10.

As stated by Bannet (2004), relative strengths and weakness in cognitive functioning become visible when the children have to acquire specific scholastic abilities in school. At different ages, children are expected to have mastered certain skills; however, due to the interferences with mental abilities caused by brain trauma, children had different inabilities. On contrary, BPc T 1 was failing to understand how a boy in her class could not copy and reproduce what she taught as she explained:

... With this boy (showing the researcher his book), he is 10 and is supposed to be in grade 5, but he is in my class (grade 3). When he writes everything is a mirror. He invents words and writes the other way round like this (demonstrating on a scrap paper). At times he can't write words even when copying from the board; he leaves vowels especially days and months...

Some teachers had lots of reasons for failing to manage the situation in their classes. The other teacher from the public school who said he had the largest class explained:

I have a class complement of 49 children. I do not have qualifications in special needs; therefore for me to be able to diagnose children with learning problems is a challenge. Secondly it's a challenge to differentiate general misbehaviour and medical challenges. Right now the children who cannot perform very well for instance, I cannot assess them and make a conclusive decision about their learning versus my teaching strategies.

However, teachers from private schools had different views and assumptions on the performance of the children. Due to the teacher-pupil relationship which was influenced by the teacher-pupil ratio, BPr T3 seemed to know the child in-depth as she explained:

He has problems with his English; I think he is afraid of making mistakes. He approaches his work with so much fear, especially fear of the new things... I spoke to his parents and his mother gave us a bit of his medical background and we are working from there... I realised what he wanted, he did not want to be pushed. If he decides he had heard enough for the day he will not learn. He did not want to be saturated..... He wrote slowly but surely. He wanted work to be chunked into smaller doable things.... He could not read and his word recognition was below average.... He was extremely quiet in class... He did not want anyone to touch his things. He would get very angry and when he gets to that point it's difficult to unlock him. He would just switch off.

Some of the teachers from private schools had time to scrutinise and learn each child's behaviour. They had an understanding of what the child wanted and how best to help him/her. Due to the relation between this particular teacher and the parent, the child's medical background was also known by the teacher and she had used that as a basis for assessing the child's learning behaviour and monitoring prognosis.

One of the major challenges for the public school teachers was their inability to identify the challenge (learning disability in class) and give specific attention as alluded by one of them:

Without special needs training, you cannot handle children with learning problems. You fight with the parents especially if they don't think there is anything wrong with their children. Personally I find it emotionally draining because you want to teach and see a difference.

This statement was supported by BPc T5 who said:

They delay your progress, they give you a very low average class mark ... and you are always fighting with the parents and the school head. ... They give you double work where you have to divide instruction into simplified and specific. You have to divide your attention. ...I tell you it's so taxing....

On the contrary, private school teachers thought it was a blessing in disguise to have a child with a disability in their class as BPr T4 spoke about a pupil who had speech and hearing impairment in her class:

Sometimes you forget to simplify instruction and to use signs for them to lip read and follow. But I tell you it's a pleasure to teach them... You find the whole class trying to engage with the child and competing to give her signs.

Overall, teachers from private and public schools had conflicting perceptions about the presence and general performances of children with TBI. Teachers from private schools felt it gave them the opportunity to revive their teaching skills and develop other skills, they felt it improved their lesson delivery methods, ability to sharpen their assessment skills and practice patience. They felt the presence of a child with learning challenges also assisted them in developing skills that they never possessed. On the contrary teachers from public schools were not in favour of having a child with learning needs in the main stream classes, they highlighted that the children delayed their progress and forced them to have divided attention all the time and that reduced their speed of teaching.

3.5 Teaching methodologies that teachers employed to assist children with learning needs

Teachers from public schools indicated that they had in many occasions been instructed to drill the children for examinations because all other methods of teaching did not work. They attributed the low pass rates to the sizes of classes that the teachers had and the poor environment that did not aid learning. They indicated that examinations time is a tight scheduled time as they forsake sports, other classes and drill the senior grades.

The teachers had the courage to tell the truth about the strategies they were using. They acknowledged that the strategies did not benefit the affected children that much. BPc T5 remarked, "...Aaah, I am just drilling them. There is group work and demonstration but it's just marathon..." When the researchers asked if the children benefitted from his way of teaching, he was able to acknowledge the weakness of his strategies as he remarked about the child with TBI in his class, "... He was usually left behind though sometimes he benefited and was a bit more cheerful during group work. At times you concentrate on able children because of time management..."

BPC T3 shared the same sentiments when she said:

...To be quite honest she does not benefit a single thing, but maybe I can also say on group work she gets lost and especially when peers do the work. You know at times it is such a challenge to delay the whole class because of maybe 2 or 3 pupils who cannot do better regardless of effort..."

3.4.1 Teacher's perceptions on the effects of their teaching strategies

Teachers had mixed views on the effects of their teaching strategies. Some of the teachers from public schools felt they were not qualified to teach children with disabilities neither were they able to diagnose them and were not even interested to try. BPC T4 remarked, **"...Aah I am very sure, they are quite a number of such children in the whole school, actually in my class I have got 2 and just last week I was talking to the Headmistress about them."** Asked what he was talking to the headmistress about, he went on to explain, **"... I was asking her to recommend something, I wanted her to invite the parents so that we could discuss other options and may be, discuss the learning environment of their children..."** His opinion was to place the children in a class with other children having the same problems. He was convinced that in the whole school they could amount to almost 20 and he felt they could benefit from a curriculum tailor-made to their level of ability.

Public school teachers acknowledged that the strategies they were employing to deliver lessons did not benefit the children under study. BP T2 remarked, **"... Aah, he does not benefit at all, actually I don't mark him against his peers. He just does what he can. I have asked his mother to assist him with homework. But I think she is also overwhelmed..."** This was supported by BP T 5 who also acknowledged the weakness of her teaching strategies, **"... At times you concentrate on able children because of time management..."** BPC T1 was teaching the last class and she expressed her concern on time management as an essential element if covering the syllabus was to happen, **"... but I guess you have no choice, either you move on and leave these 2 or 3 who can't follow or delay the whole class"**.

Private school teachers had different opinions. They felt it was a pleasure and a blessing in disguise to have a child with specific needs in class. BPr T3 remarked, **"... It teaches me to be patience, thorough and be able to simplify instruction..."**

IV. Conclusion

The teachers who were teaching children with TBI were aware of the learning challenges the children had. However, they were not aware that the children had medical histories that impacted on their learning abilities. Teachers from both private and public schools were also not aware that the behaviour and performance levels of certain pupils, was a result of TBI. The public schools teachers had very large classes and they could not abide by the required standards of teaching. They used methodologies that were convenient to their tight teaching schedules. They mentioned that they had the knowledge of the required strategies; they could not follow the requirements because they wanted to cover the syllabus, drill children for test, maintain their class average at a reasonable level, impress the school head and get appreciation from the parents. The teachers had a lot of competing masters for their teaching ways and outputs and hence each teacher had to choose what was convenient for her/him and ultimately for her/his master.

Teachers from private schools however had enough time to explore and to comprehensively deliver lessons because of the size of their classes, resources and extra time for the children to attend remediation. It can also be concluded that pupils in private schools, regardless of their medical condition, experienced better learning than pupils in public schools.

V. Recommendations

Considering that the teachers are fairly aware of the challenges children with TBI are facing and they have limited capacity and skill to deal with them, that situations possess ideal and realistic fora where both have to be synchronised. Hence the researcher recommends the following:

- There is need for proper assessment of children with TBI for classification;
- Teacher training (both in-service and pre-service) should be revised to integrate inclusive curricular for every general teacher trained for primary and secondary schools;
- There is need for improved teaching conditions for the teachers;
- There has to be standard and reasonable class sizes (teacher-pupil ratio) to avoid unmanageable classes for a single teacher which can be achieved by increasing personnel in the education sector;
- There is need to lobby the Ministry of Primary and Secondary Education for secondment of school psychologists at least in every district for proper assessment of children with behavioural needs;

- There is need for the Ministry of Primary and Secondary Education to train neuropsychologists and to provide psychological batteries for assessment of children with neuropsychological/behavioural problems in schools;
- Further research and an in–depth analysis on the subject with a larger sample so as to utilise the quantitative methodologies is hence recommended; and
- There is need to develop a comprehensive Monitoring and Evaluation framework for the children with TBI.

References

- [1]. Adèr, Mellenbergh and Hand (2008) Advising on research methods: Proceedings of the 2007. Available from: <http://www.jvank.nl/ARMPdocs/>. (Accessed 13 October 2012)
- [2]. Caine, G. and Caine, R. (1997). Natural, Joyful and Meaningful Learning: The Voice of Adventure Education n31. Available from: <http://www.cainelearning.com/file/cainepublications.pdf>. (Accessed 25 May 2010).
- [3]. Dell' Anna E, Calzolari S, Molinari M, Iuvone L. and Calimici R. (1999). Neonatal anoxia induced transitory hyperactivity, permanent spatial memory deficits and CA1 cell density reduction in developing rats. *Behav. Brain Res.* 1991; 45:125–134. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/1789921>. (Accessed 2 March 2011).
- [4]. Fawcett, A. (1995). *Case Studies and Some Recent Research: Dyslexia and Stress*. London: Whurr Publishers
- [5]. Gall, J. P. Gall, M. and Borg, W. B. (2003). *Educational Research: An Introduction (7th edn.)* Boston: Allyn and Bacon.
- [6]. Gardner, H. (1993). *Multiple Intelligence: The Theory in Practice*. New York: Basic Books
- [7]. Given, B. K. (2002). *Teaching to the Brain's Natural Learning System*. Alexandria, VA: Association for Supervision and Curriculum Development. Available from: <http://www.giftedresources.com/downloads/reading.pdf>. (Accessed 7 June 2010).
- [8]. Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam Books.
- [9]. Hassen, E. Nestvold, K. and Anderson, V. (2006). Neuro-psychological Problems after Paediatric Stroke. Available from: <http://www.medscape.com/viewarticle/726189>. (Accessed 4 April 2010).
- [10]. Johnson, B. and Christensen, L. (2000) *Educational Research: Qualitative and Quantitative Approaches*. Boston: Allen and Bon
- [11]. Kundu, C. L. and Tutoo, D. N. (2001). *Educational Psychology*. New Delhi: Sterling Lannek, S. (2005). *Qualitative Sozialforschung*. Available from: http://books.google.co.zw/books/about/Qualitative_Sozialforschung.html?id=KT_kQQAAACAAJ&redir_esc=yLehrbuch. (Accessed 17 July 2011)
- [12]. Mafa, O. (2003). *Optimising Mixed Ability Grouping for Effective Instruction at Junior Secondary School Level in Botswana*. Unpublished Doctoral Thesis, University of Botswana.
- [13]. Makore-Rukuni, M. N. (2001) *Introduction to Research Methods*. Harare: Mazongororo Paper Convertors.
- [14]. Marlow, N., Ross, A.S., Rands, C. E and Draper E. (2005). Neuro-cognitive Outcome Following Neonatal Encephalopathy. Available from: <http://www.iospress.metapress.com/index/00g48318v121q2.pdf>. (Accessed 18 October 2010).
- [15]. Moster, D., Lie, R. T., and Markestad, T. (2008). Long-term Medical and Social Consequences of pre-term. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/18635431>. (Accessed 3 March 2011).
- [16]. Pacey, L. K. (2009). Natural Mind Power. Available from: <http://naturalmindpower.blogspot.com/search?updated-min=2009-01-01T00%3A00%3A00-08%3A00&updated-max=2010-01-01T00%3A00%3A00-08%3A00&max-results=50>. (Accessed 18 June 2010).
- [17]. Patton, M. Q. (2008) *Qualitative Research & Evaluation Methods*. Sage Publications Inc. Thousand Oaks: California
- [18]. Short EJ, Klein NK, Lewis BA, Fulton S, Eisengart S, Kercsmar C, Baley J and Singer LT (2003). Cognitive and academic consequences of broncho-pulmonary dysplasia and very low birth weight: 8-year-old outcomes. Available from: <http://etd.ohiolink.edu/send-pdf.cgi/Johnson%20Courtney%20Elizabeth.pdf?case1243003763>. (Accessed 17 December 2011).
- [19]. Sternberg, B. D., Goodman, D. and Kalish, R.W. (2009). *Brian Injuries: Chicago Brain Attomey*. Available from: <http://www.chicagopersonalinjury-lawyerblog.com>. (Accessed 19 May 2010).
- [20]. Stoner, J. and Freeman, A. R. (1992). *Management (5th edn.)*. New Delhi: Prentice Hall-India
- [21]. Strauss, A. L. and Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. London: Sage Publications.
- [22]. Strellis, G. E. (2009). *Memory Loss Research: Impact of TBI cases and Treatment*. Available from: <http://www.chicagopersonalinjurylawyersblog.com/traumatic-brain-injury/>. (Accessed 23 January 2010).
- [23]. Strieder, G. (2006). *Principles of Brain Evolution*. Sunderland, MA: Sinauer,
- [24]. Tellis, W. (1997) *Application of a Case Study Methodology: The Qualitative Report*. 3 (3) September 1997. Available from: <http://www.nova.edu/ssss/OR/OR3-3/tellis.2.html>. (Accessed 17 March 2010).
- [25]. Volpe, D. (2008). *Neurology of the Newborn (5th edn.)*. United States: Sanders by Imprint of Else.
- [26]. Wood, R. L and Rutterford, N. A. (2004). Relationships Between Measured Cognitive Ability and Reported Psychosocial Activity After Bilateral Frontal Lobe Injury: An 18-Year Follow-Up Neuropsychological Rehabilitation 14 ;(3): 329-350 Available from: <http://www.ueapsychology.net/publications-pg72.html>. (Accessed 17 July 2011).