

**TWO MODES OF THERAPY AND READING PERFORMANCE OF PUPILS WITH  
MILD INTELLECTUAL DISABILITY IN IBADAN METROPOLIS, NIGERIA**

**BY**

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**CERTIFICATION**

This is to certify that this thesis was carried out by **Udeme Samuel JACOB** with matriculation number **160139** in the Department of Special Education, Faculty of Education, University of Ibadan, Nigeria under my supervision.

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## **DEDICATION**

This thesis is dedicated to God Almighty and my beautiful wife Mojisola O. **JACOB-UDEME**

## ABSTRACT

Reports have shown that Pupils with Mild Intellectual Disability (PMID) are deficient in reading which account for their difficulty in comprehending text. Previous studies focused largely on personal factors influencing reading performance of PMID with less consideration for the use of therapeutic intervention such as pictorial illustration and music therapies. The study, therefore, was carried out to determine the effects of pictorial illustration and music therapies on reading performance of PMID in Ibadan metropolis, Nigeria. The moderating effects of parents' socioeconomic status and verbal ability were also examined.

David Kolb's Experiential learning theory was used, while the pretest-posttest control group quasi experimental design with a 3x3x3 factorial matrix was adopted. Three Local Government Areas (LGAs) were randomly selected from Ibadan metropolis. One special school (HizbulahiaGalib School for Handicapped, Agodi Gate; OluyoleChesire Home School, Ijokodo; and Basic Special School, Sharp Corner, Oke Ado) duly recognised and registered as school for PMID was purposively selected from each LGA. Participants were randomly assigned to Pictorial Illustration (18), Music Therapy (16) and control (17) groups. Treatment lasted eight weeks. Instruments used were Slosson Intelligence Test for Children ( $r = 0.86$ ), Reading Performance Test ( $r = 0.79$ ), Parental Socioeconomic Status Scale ( $r = 0.75$ ) and Verbal Ability Test ( $r = 0.88$ ). The data were analysed using Analysis of covariance and Scheffe post-hoc at 0.05 level of significance.

The participants' mean age was  $12.13 \pm 1.42$  years with an Intelligent Quotient range of 50 – 68. Treatment had a significant main effect on reading performance of PMID ( $F_{(2; 32)} = 12.92$ ; partial  $\eta^2 = 0.45$ ). Music therapy had the highest post-mean score on reading performance (49.44), followed by pictorial illustration (47.39) and the control (39.19) groups. Verbal ability had a significant main effect on the reading performance of PMID ( $F_{(2; 32)} = 7.57$ ; partial  $\eta^2 = 0.32$ ). Participants with high verbal ability had the highest mean score (51.50), followed by those with average verbal ability (48.68), while those with low verbal ability had the lowest (36.64). There was no significant main effect of parents' socioeconomic status on reading performance of PMID. There was a significant disordinal interaction effect of parents' socioeconomic status and verbal ability ( $F_{(2; 32)} = 3.57$ ; partial  $\eta^2 = 0.31$ ) on the reading performance in favour of PMID of high verbal ability from high parental socioeconomic status. There were no significant interaction effect of treatment and parental socioeconomic status, and treatment and verbal

ability on reading performance of PMID, and the three-way interaction effect was not significant on reading performance of PMID.

Pictorial illustration and music therapies were effective in enhancing the reading performance of pupils with mild intellectual disability, although music therapy was more effective. Teachers of pupils with mild intellectual disability should adopt both pictorial illustration and music therapy towards improving reading skills especially when teaching reading comprehension.

**Keywords:** Music therapy, Reading performance, Pictorial illustration, Pupil with intellectual disability

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Pupils with mild intellectual disability usually experience reading problem which result in having challenges with their academic. Such academic challenges include inability to generalise ideas, solve basic problem and interpret information in a way that it will be of benefit. These learners often find it hard, if not practically impossible in later years in effectively participating in decision making process and contributing positively to societal advancement. It is beyond doubt that developing good reading performance is required by every pupil to enable them interpret appropriately written text. Read (2000) opined that the development of vocabulary that is appropriate for an individual's age is a basic requirement for improved reading performance. Poor and inefficient readers have the tendency to read on without establishing any purpose for what they read. They also tend to develop bad reading habits such as regression, poor eye movement, vocalisation, sub-vocalisation, faulty head movement and word pointing which make comprehension difficult for them.

Pupils with intellectual disability most times read on passively and laboriously without thinking about the text interpretation. On the other hand, good and efficient reader handles written text with dexterity and confidence. This might be as a result of being focused all through the reading process (Brauger and Lewis, 2006; Keene, 2002). Four basic skills that are crucial when learning the use of language, for efficient communication includes: listening, speaking, reading and writing (Cyan, 2005). Reading deals with the skills primarily for extracting information from printed words and utilizing the information as expected (Otagburuagu and Chukwuma, 2002). The ability to effectively recognise words is significant to the process of reading while appropriate interpretation of words is relevant to comprehending text read.

The cornerstone of instruction for all pupils, including those with intellectual disability, according to Kliever and Landis (1999) is reading, because through reading the bedrock required for progress in the future and success in most areas of life is set. The ability to read accurately and effectively presents a formidable challenge to pupils with mild intellectual disability as a result of limited cognitive resources to understand, decode or recognise the printed materials and to respond appropriately to the information in a text. Reading is a language skill according to

Kreidler (2003), when acquired will provide such pupils with a medium of expression to get information from a text. Skills associated with listening and speaking often precede the development of reading performance in the acquisition of linguistic skills but this fact is often taken for granted in English language learning situations in Nigeria. Onuigbo (1990) asserted that ignorance of such fact is due to the erroneous belief that the linguistic skills already possess by learners as hearers and speakers of the language will automatically endow them with the ability to read with understanding of the language.

In most cases pupils, acquire listening skills without stress and at an early stage in life, they start speaking the mother tongue which might not likely be the case for pupils with mild intellectual disability who often labour to acquire language skills required for speaking and comprehending text read. This situation is not the same for learners of second language because previous knowledge affects understanding of the language. The more one knows, the more comprehension will take place, and the more that is comprehended, the more the ability to acquire new knowledge to be able to comprehend broader array of topics and texts (Bilal, Tariq, Masood, Nasim and Iqbal, 2013). Hampton (1999) asserted that reading performance enables an individual to extract information from written text and achieve the objectives of independent comprehension and fluency. Furthermore, reading performance deals with particular ability that a reader utilises to read the written language meaningfully. Understanding language through interpretation of written symbols as speech sounds is the act of reading (Offorma, 2009). It demands pronouncing the written or printed symbols.

It is an intricate process that deals with vigorous interaction and conciliation between the reader and the writer and requires the ability to decode that will result in comprehending the text. Learners' ability to identify and/or decode written words effortlessly and correctly is known as word recognition. It is also the ability to independently identify each word as written without the benefit of other words around the identified word for contextual interpretation (Andrew, 2010). Adeolle (2005) emphasised that reading performance is a fundamental requirement for all subject within the formal learning environment and therefore forms the foundation on which academic achievement pivots. The author added that most pupils with learning problem including those with intellectual disability are often neglected when it comes to teaching reading which in turn will them experience difficulty reading text and eventually lead to poor performance in schools.

Reading, according to Rubin (1991) is a process that allows the interaction with the information from the written text to combine with knowledge possessed by the reader which results in giving interpretation to the text. In other words, the background experience of the reader is crucial, as well as their emotions when reading so as to ensure the understanding of what they are reading. Furthermore, reading is seen as a punitive measure by pupils with mild intellectual disability who encounter challenges in developing their reading performance. Poor reading habits can lead to behavioural problems among pupils with mild intellectual disability such as physical aggression, destructive tendency, self-injury, stereotypes and inappropriate social vices (such as inappropriate sexual behaviour). Similarly, poor reading habits can make it difficult for them to keep pace with learning (Taylor, Everitt, Thorley, Schachar, Rutter and Wieselberg, 1986). Reading disability was reported by Adeolle (2005) to be a factor responsible for poor performance in school because individuals who experience difficulty when reading will also have challenges in getting meaning from print which is one of the fundamental ways of communicating in school.

Research findings support the benefit of adopting unique instructional techniques in solving poor reading performance (Lerner, 1997), such unique techniques include moulding and shaping (Eni-Olorunda, 1998), directed reading-thinking activity and collaborative strategic reading (Lazarus, 2009), individualised and audio-taped instructional strategy (Adediran, 2012), extensive reading and comparative moderate reading (Irogbe, 2012), discrete trial and incidental teaching strategies (Bamigoye, 2012) and collaborative strategic reading (Lazarus, 2013). Most initial instructional techniques used for enhancing reading performance involve studying phonics and supplementing sighted word techniques. Word recognition, in the opinion of Lerner (2006), consists of the ability to recognise and pronounce words, this according to Rubin (1991) is a crucial skill required for the development of reading performance. The twofold processes of word recognition are the identification for easy pronunciation and the attachment of meaning to the correctly pronounced word.

Active participations in meaningful activities will lead to the acquisition of emergent skills required for literacy development among learners but young learners with issues of speech delay may experience difficulty in developing such skills (Cook, 2004; Katims, 1991; van Kleeck 1990); because traditional emergent literacy instructional strategies may not be of benefit to such children (Snow, Burns and Griffen, 1998). Most pupils especially those with mild intellectual disability will require reading intervention strategies (Torgeson, Alexander, Wagner, Rashotte,

Voeller, and Conway, 2001), to overcome reading problems that include a systematic but explicit teaching of emergent literacy abilities before reading skills can be developed (Adams 2001; Katims, 1991; Lerner, Lowenthal and Egan, 2003). Reading requires that pupils correctly use all the visual, linguistic, decoding and phonetic ability in a way that it will ensure the ease of recognising specific words and get appropriate information from the text. Surprising, about 40% of school-aged pupils in Nigeria are struggling to read (Foluso, 2004), the percentage may be higher when it has to do with pupils with mild intellectual disability due to teachers' attitude towards developing reading among them.

Most pupils with mild intellectual disability who struggle to read, confront difficulties developing phonetic awareness and language processing (Deluxe, 2004), this can be associated with pupils learning styles which is usually not taken into consideration by the teacher like the visual, auditory and kinaesthetic learners. Generally, visual learners learn through the use of the sight like charts, graphs, and pictures. Learners that are auditory in nature learn by listening to the teacher speak and hearing others. Kinaesthetic learners learn by actively participating in instructional process. Pupils will usually use one or a combination of the learning styles when leaning. The teacher should be able to use strategies that will consider the difference in learners' style of that pupil with mild intellectual disability so that they can participate in knowledge acquisition actively.

The ability to read is the foundation that an individual requires to get much pleasure out of life and connected closely to efficiency in vocational choice. Reading provides support for acquisition of information and at the same eliminates ignorance because literacy and communication skills are improved (Emetaran, 1991). Consequently, it is important for all pupils including those with intellectual disability to develop mastery in recognition of some basic sight words. There is no scientific research in the view of Lyon (2000) that supports the assertion of the need of context or authentic text in developing skills to ensure effective decoding. A good strategy that can be adopted for readers who are beginners is the skill to decode letters to sound in an increasing but at the same accurate manner. Pupils who are prone to experiencing reading difficulty will require support to overcome the challenge throughout the process of education. Heath (2007) identified three reasons for poor reading which include but not limited to inappropriate instructional strategy, rapid pace of instruction for pupils to develop mastery of tasks presented and too many pupils in the classroom. Most parents are of the view that

developing pupils' reading performance is sole responsibility of teachers and not that of family members.

Teachers in most educational institutions will have to work twice harder if basic literacy skills are to be taught to a large number of pupils starting from the primary level up to secondary school. Heath (2007) opined that teachers should structure their teaching to aid remedial readers. The scholar asserted further that an inefficient pupil at reading also lags behind in a given content area without the help of dutiful and effective teacher, making progress will be very slow. The instructional method for teaching reading skills to pupils at primary level should be such that ensures that pupils in the learning environment, irrespective of intellectual capability should be functionally literate and acquire the ability to effectively interact with significant others. Individual with functional literacy skills read with understanding and application of acquired knowledge to solve challenges of life (Ekpo, 1999). The way learners think and learn has significantly been affected through access to various media of communication and technology, the World Wide Web but this might not be true of pupils with mild intellectual disability who lack functional literacy when comparison is done.

Pupils with mild intellectual disability usually think on different tasks at the same time, but show little patience with delaying gratification (Emelianova, 2013), resulting in the need to develop a unique way of transmitting information at school including teaching word recognition. The basic process of memorising vocabulary can be stressful and time consuming because of constant repetition of one word before reading skills can be developed. It is needful therefore, if the objective of learning is to be achieved to use different teaching methods that will involve the use of various sense organs known as multisensory approach. Cuaresma (2008) submitted that there is a need to teach using pupils learning style preferences but there might be a stray into a minefield if learners are classified as visual, auditory or kinaesthetic stereotypes without considering the use of two or more of the learning styles for a single learner. Coffield, Moseley, Hall and Ecclestone (2004) asserted that no sufficient evidence supports the effectiveness of the approach but learning must focus on development that ensures the use of multisensory approach.

Reading and learning will become easier if pupils with mild intellectual disability develop the skills to decode printed words and present mathematical situation or identify specific challenge in a way that it is not only meaningful to the person but also to those who are listening to them. Using representations, such as, drawings, shapes, mental images, concrete materials,



imagery and equations, in the opinion of Fennell and Rowan (2001) can help pupils including those with intellectual disability organise their thinking while trying different approaches. All pupils have special learning preferences or process and retain information differently. The use of different strategies for all learning styles will enable pupils to learn through their strongest modality because they can experience conceptual information through activities which is good for learning. Few teachers spend time helping pupils understand different types of visual information encounter during learning activities.

Teachers appear unwilling to do so when it comes to print literature (Kiefer, 1995). Instructional strategy that can help pupils with mild intellectual disability retain information more readily by combining both images and word illustration to communicate message is pictorial illustration. Picture illustration is a kind of small ecosystem that suggests the reciprocal relationship existing between the words and diagram and images in picture books (Lewis, 2001). Picture illustration communicates using two different symbols which is either iconic or conventional. Iconic signs, according to Nikolajeva and Scott (2006), are signifiers that signify similar qualities; the sign is a direct representation of what it signifies. There is no need for special information to understand the iconic representation.

Conventional representation has no direct correlation with the objects presented. Picture book according to Lewis (2001) is the correlation that exists between texts and diagram through which words are used to explain the information represented by the pictures. The pictures will usually attract attention to all the information presented in a text while ability to properly decode is left to the imagination of the pupil depending on the connection between the words and the pictures based on the level of intellectual disability. This combination of words and pictures makes picture illustration special. The use of pictures in texts may serve as beautification by making the book attractive (Levin, 1981), pictures also stimulate the interest of the reader in the story and repeats the information presented through text perhaps the aim is to make it unforgettable for the learner.

Picture illustration provides mental image of the described situation in the text to the reader and also translate the text into more meaningful detail for better comprehension. Picture illustration can sustain emotional reaction like pleasure, joy, positive behaviour with support in cognition through the stimulation of understanding, retaining and supplementing information (Levie and Lentz, 1982). Pupils can become dependent on pictures when it involves the read-

aloud situations due to concentrating more on pictures without focusing on the language elements in the stories (Beck and McKeown, 2001) which they are listening to. Picture book is an example of pictorial illustration that communicates in both words and images or diagrams. Pictures and words are frequently used by authors as a method of expressing complex but interesting thoughts to young learners (Wolfenbarger and Sipe, 2007).

Two extremes in word-picture dynamic, according to Nikolajeva and Scott (2006) are texts that are not connected with pictures and a picture book without text. In all the groups studied, it can be concluded that complaints were made if the pictures were not seen after each text had been read to them aloud. Pictorial illustrations will, in most cases, demonstrate the story that is required for developing comprehension skills of pupils with mild intellectual disability while reading. A strategy that can likely foster efficient reading performance among pupils with mild intellectual disability is music therapy and this in the observation of Register, Darrow, Standley and Swedberg (2007) has been identified as an alternative or supportive medium for the development of skills required for efficient reading. The similarities between music and the act of reading include phrase, reading and writing is from the left to right hand, rhythmic movement, enrich vocabulary, diction, and attention to facts (Diamantes, Young, and McBee, 2002).

The focus of most research is on the outcome of music therapy rather than the identification of a specific aspect of music that is closely related to each reading area and style of learning (Register et al, 2007; Register, 2001). Some aspect of music therapy that Palmieri (2008) identified includes using books that is based on songs, creating songbooks, singing in sequence, chanting the text in rhythmic way, and use rhymes. The benefit of music therapy on improving academic skills of pupils was investigated by Anvari, Trainor, Woodside, and Levy, (2002) and the findings of indicated that reading skills and phonological awareness of learners has significant correlation. The view of the scholars is that music therapy can be used to enhance practise and auditory perception development, which will in turn, influence pupils reading performance positively. The researchers reported high music perception or skills and enhanced reading performance are related during early school age.

Music therapy includes the act of singing folk songs that incorporate synchronised body contact, movement use of musical instruments and notational symbols. Gromko (2005) submission on some of the benefits of music therapy to skill development includes higher mean scores for phoneme-segmentation fluency for treatment group. Furthermore, Gromko reported

that the way music is taught, specifically spatially and with the method of representing sounds with symbol, revealed the relationship between music and improved learning but no explicit report of causal correlation between reading performance and music therapy. Butzlaff (2000) suggested that development of reading and music therapy has relationship that is significant without explaining the extent of the relationship because it is based primarily on assumption. Hansen and Bernstorff (2002) described music therapy as a good strategy that can be used for improving reading performance while various reading skills that can be supported using music therapy were listed as decoding skills, awareness of phonology, phonemic and orthographic performance, sighted words, and fluence reading.

Music components was compared with different aspects of reading across various reading skills by Hansen and Bernstorff (2002) who listed some elements of music as matching of pitch for awareness of phonological, phrases for awareness phonemic, and recognition of rhythm for sighted word recognition. A good point to start the development of specific intervention that will result in the improvement reading is to compare the correlation between reading text and reading music score. Collett (1991) outlined programme that are designed specifically for the combination of reading and arts. Participant experiences using music therapy was assessed and the result revealed that the relationship with learning was significant probably due to the fact that focus was specifically on the integration of music experiences in a multisensory approach. The process involved pupils listening to songs, write the perception they have about it, incorporate dance steps and props within the story of such songs, and actors as observed in the song. The conclusion of the author was that an opportunity for teamwork was created and the resulting effect was increased appreciation of arts, learning ability of pupils, self-esteem and desire to learn. Hetland (2000) investigated the correlation between the used of music intervention on enhancing spatial thinking by reviewing 15 studies. The finding from the review indicated that, the use of music therapy did not enhance spatial-temporal performance.

The correlation between the various teaching approach and performance in reading is positive based on the extant literature with music therapy likely having positive correlation with reading performance of learners through supporting the instructional approach that is used in the development of phonetic skills or teaching of language. Irrespective of the therapy adopted for the purpose of improving reading performance of pupils with mild intellectual disability factors such as linguistic competence, readability level, reading culture gender, verbal ability and

parental socio-economic status (SES) of pupils with mild intellectual disability should also be considered if the therapy is expected to be effective as research have shown that such factors are important elements in enhancing reading performance. Verbal ability involves the ability to comprehend texts through listening to and understanding teacher's explanations, and express correctly the same text.

Rubin (2001) having examined the benefits of curriculum language arts as foundation of reading comprehension averred that four reasons for basically using language are: reading, writing, speaking and listening while the connection between verbal skills and efficient reading performance using metacognitive skills like pictorial illustration and music therapy presentation is not known. The inadequacy observed in language range and control plays a major role in failure at all levels of educational pursuit because deficit generates continuous circle of difficulties that will be on the increase as educational task increases (Ayodele, 2005). Moreover, in countries like Nigeria that adopts different languages for instruction from the one used in the child's home environment (mother-tongue), the postulation might assume a different dimension. The performance of learners can be predicted using verbal ability in language skills (Richard and Rodger 1986), although there is minimal research report on impact of verbal ability on essay writing ability in English language.

Students learning another language according Abiodun and Folaranmi (2007) demonstrate different levels of ability in the particular language (competence). Elements of verbal ability test identified in Richard and Rodger (1986) are word power, arrangement of words leading to sentence formation, change and selection of words that is both logical and appropriate. Verbal ability entails skills required for understanding language and is of great benefit in oral reading (Gambari, Kutigi and Fagbemi, 2014), these skills reveals the level of relationship with pupils' grades. Cognitive domains such as numeracy and verbal ability with appropriate training according to Bakare (1990) can generally result in improved performance of aptitude when consideration of similarity of the brain is done which in turn will enhance performance in these areas.

A common characteristic in regular Nigerian learning environment is to find pupils of different levels of intelligent quotient (high, medium and low) put in the same classroom and given similar treatment as if they had everything in common (Gambari, Kutigi and Fagbemi, 2014). Parent's socio-economic status is a crucial factor in determining parents desire to provide

educational resources needed to learn and seems to have the most crucial influence on the outcomes of pupils' education (Vellymalay, 2012). SES of parents, according Memon, Joubish and Khurram (2010) measures variables like level of parents' education and type of parents' occupation, income of the family, area of residence, facilities that are physically available at home like electronic equipment, money spent as tuition in the provision of education, parents' involvement parents in their wards learning activities and relationship existing between teachers and parents. Parents' monthly income, level of educational attainment and health status of pupils with intellectual disability are relevant family conditions that are significant for the development of reading performance and social behaviour of pupils.

Relatively, socioeconomic status of parents has significant impact on the level of involvement of parents in reading activities of pupils with mild intellectual disability when compared with other factors that might affect performance. However, the issue is how far a parent's socio-economic status is in the long run will inspire a child to improve reading performance. Parental involvement and academic performance of pupils has positive relationship irrespective of socio-economic levels (Al-Matalaka, 2014). The academic performance of pupils from low-income families usually does not commensurate with those from family with more privileges (Battle, 2002). School readiness is associated with parents' level of poverty, while lower risk is linked with higher test scores obtained by pupils (Klebanov, Brooks-Gunn, McCarton, and McCormick, 1998).

According to Stanovich (1986) the gap in the performance of pupils in mathematics and vocabulary become visible overtime, revealing that children whose parents are in the low SES level will demonstrate gap in their performance at school entry which will likely widen significantly over time and later lead to poor performance in other academic areas. The overlap existing between problem solving skills in mathematics and ability to decode text implies that delayed reading would impact other academic performance. The interaction of parents with their children is more important than any other factor that can influence their reading performance (Singh and Singh, 2014) besides, SES of parents is an aspect that researchers are interested because of the level of debate among educational professionals towards its contribution to pupils academic performance (Farooq, Chaudhry, Shafiq and Berhanu, 2011). The educational qualification of parents influence on pupils' academic performance which

includes reading is significantly positive this is because the parents are in the right position to mentor and provide materials that are required by the pupil to excel (Taiwo, 1993).

This position is buttressed by Musgrave (2000) who submitted that learners whose parents are educated would likely work harder in their studies so as to follow in the family steps. Musgrave further pointed to the fact that possession of above minimum level of educational qualification by parents will lead to developing positive attitude by the parents towards the education of their wards who will expect their children to demonstrate the abilities to engage in intellectual activities like reading of newspapers, magazines and journals for their own good. Additionally, such parents might likely have wide knowledge of vocabulary from which can be of benefit to their children who will use same for the development of their language fluency. Researchers have consistently established the background of learner have impact either positively or negatively on their reading performance. The economic challenge due parental low socio-economic status may interfere with parenting and in turn increase conflict in the family that ultimately result in increased level of depression among parents and the households.

Omoegun, (2007) revealed that the attitude exhibited towards reading by learners in relation to educational level of father and mother differed significantly and favour learners whose at least one parent completed secondary education and/or graduated from higher institution. Oni (2007) reported that the difference between the achievements of pupils with regards to high and low level of parents' social economic status is significant. Similarly, Keleş (2006) found out that income level of families influences pupils' attitudes towards reading. In a study carried out by Bas (2012) a significant difference was reported to exist in pupils' attitudes towards reading based parents' level of income. Expectedly, parents whose level of income is high can easily provide for the education of their unlike parents' low level of income. From the foregoing it is clear that reading performance of pupils with mild intellectual disability has correlation either positively or negatively with family socio-economic status.

The acquisition of good reading habit has also shown beneficial impact on learners' performance academically. Poor reading performance can result in the development of inappropriate behaviour towards prints and activities related to learning while on the long run there be issue of self-esteem (Fosudo, 2010). Based on the importance of reading to pupil academic achievement, this study, therefore, examined two modes of therapy (pictorial

illustration and music therapy) on the reading performance of pupils with mild intellectual disability in Ibadan, Nigeria.

## **1.2 Statement of the problem**

Efficient reading performance plays a crucial role in promoting better grasps of basic concepts in the academic settings. Thus, the ability to read remains an essential skill needed for achieving better academic performance in all academic endeavours. However, pupils with mild intellectual disability exhibit deficiency in this regard due to lack of prior knowledge and skill in a particular, most notably knowledge of letter, sensitivity of phonology, familiarity of the basic purpose and language ability. Consequently, the poor reading performance has a negative effect on their communication and social interaction. Reading difficulties among pupils with intellectual disability may become persistent if not remediated early using the right instructional strategies that will help develop better reading performance.

Previous studies had adopted different strategies such as shaping, modelling, individualised, audio-taped instructional strategy, extensive reading, comparative moderate reading, discrete trail, incidental teaching strategies and collaborative strategic reading in addressing reading disability but no attention has been given to pictorial illustration and music therapy that appear to be better strategy in improving reading performance of pupils with mild intellectual disability. The choice of appropriate instructional strategy without adequate consideration of factors that could moderate the effect of the strategy such as socioeconomic status of parent and verbal ability of pupils can limit the effectiveness of the selected strategy. Hence, this study investigated the effect of two modes of therapy (pictorial illustration and music therapy) on reading performance of pupils with mild intellectual disability.

## **1.3 Purpose of the study**

The study main purpose is to determine the effect of two modes of therapy (picture illustration strategy and music therapy) on reading performance of pupils with mild intellectual disability.

Specifically, the study determined:

The significant main effect of:

1. Treatment (pictorial illustration, music therapy and control) on reading performance of participants

2. parental socio-economic status on reading performance of participants
3. verbal ability on reading performance of participants

The interaction effect of:

4. treatments and parental socio-economic status on reading performance of participants
5. treatments and verbal ability on reading performance of participants
6. verbal ability and parental socio-economic status on reading performance of participants
7. treatments, parental socio-economic status and verbal ability on reading performance of participants

#### **1.4 Hypotheses**

The following hypotheses were tested at 0.05 level of significance:

There is no significant main effect of

Ho<sub>1</sub> treatment (pictorial illustration, music therapy and control) on reading performance of participants

Ho<sub>2</sub> parental socio-economic status on reading performance of participants

Ho<sub>3</sub> verbal ability on reading performance of participants

There is no interaction effect of

Ho<sub>4</sub> treatments and parental socio-economic status on reading performance of the participants

Ho<sub>5</sub> treatments and verbal ability on reading performance of the participants.

Ho<sub>6</sub> There is notwo-way interaction effect of verbal ability and parental socio-economic status on reading performance of participants

Ho<sub>7</sub> treatments, parental socio-economic status and verbal ability reading performance of participants

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

This study is significant in the sense that it would provide important and relevant information to teachers that will be useful in the adoption of appropriate therapies in teaching reading to pupils with mild intellectual disability with a view to improving their academic achievement. Moreover, the findings of this study could provide sound bases for formulating educational policy that would enhance reading ability of pupils with mild intellectual disability. Knowledge



will be contributed that will expand the body of literature on the development of reading performance among pupils with intellectual disability.

It would appeal to the sensibility of government, individuals and groups on the need to incorporate pictorial illustration and music therapy in the curriculum of pupils with mild intellectual disability as a way of fostering the development of effective reading performance among them. Similarly, the study would be useful to parents by sensitizing them to be alive to their responsibilities of ensuring the academic success of their children with mild intellectual disability. Furthermore, the study would be relevant to pupils with mild intellectual disability because it would help them to identify their areas of strength and weaknesses in reading task and encourage them to find ways to remedy the situation. Besides the outcome of the study would offer invaluable help to independent researcher

and interested professionals to wake and make informed decision about the steps to be taken in combating poor reading habit among pupils with mild intellectual disability.

The finding of the study would provide guidelines to teachers for the improvement of their instructional deliveries in the classrooms. Also, the study would serve as a reference point to scholars and researchers, and it will provide the needed intellectual platform for them to engage in more research to improve the reading performance of pupils with mild intellectual disability.

## **1.6 Scope of the study**

The study investigated two modes of therapy (pictorial illustration and music therapy) and reading performance of pupils with mild intellectual disability in Ibadan metropolis, Nigeria. Parental socio-economic status and verbal ability were considered as the moderating variables in the study.

## **1.7 Operational definition of terms**

Terms used in the study operational defined includes:

**Pupils with mild intellectually disability:** They are individuals with intelligent quotient ranging between 52 – 68 arising from incomplete mental development which will result having difficulty coping with general reading programme.

**Music therapy:** This involves the use of folk songs, rhymes, incorporated movement, body percussion and use of instruments as a strategy for the development of reading performance.

**Pictorial illustration:** This is the use of shapes and diagrams to represent expression, opinion or view for the purpose of developing reading performance.

**Parental socioeconomic status:** It is the combination of an individual's economic and social standing based on income, education, and occupation in relationship with others.

**Reading performance:** The scores of pupils with mild intellectual disability based on word recognition test administered to them.

**Verbal ability:** It refers to the understanding and using of concepts framed in words with the aim of evaluating the ability to think constructively.

**Word recognition:** This is an individual ability to decode printed words with or without little assistance from another person.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

This chapter deals with systematic review of relevant literature that was done conceptually, theoretically and empirically.

#### **2.1 Conceptual review**

##### **2.1.1 Concept of intellectual disability**

The term Intellectual Developmental Disorder (IDD) or Intellectual Disability (ID) was previously referred to as mental retardation (MR) (Tidy, 2013; Ansberry, 2010), is a neuro-developmental disorder with characteristics challenge to intellectual and adaptive functioning, generally known as intelligent quotient (IQ) score. This score may be as low as 70 which may due poor daily living skills. Intellectual Disabilities is a developmental disability that occurs during developmental period usually before age 18. Intellectual disability according to The Free Dictionary (2014) is defined as intellectual level at which an individual function that measures intelligence quotient through the use of standardised tests for which below average intelligence and significant limitations is indicated in the individual's daily living skills (adaptive functioning). This term intellectual disability is not just something or an individual character but a social invention that is the result of time-bound social value and ideology that will make assessment and management not only necessary but also desirable socially (Sarason, 1985), the condition is not a medical or mental disorder. Intellectual disability has one of the most debilitating socially associated stigmas. Individuals' with such condition are truly aware of this stigma who as a result of lack of social capability and physical attractiveness tends to respond with derogation to their peer group.

A major target of social abuse and discrimination in western societies are person with intellectual disability also known as the mentally retarded, cognitively disabled and developmentally disabled. The origin of intellectual disability is before age 18 and the condition is characterised by lifetime limitation both in intellectual functioning and adaptive behaviour that is exhibited as imaginative, social, and practical adaptive skills of an individual (AAMR Ad Hoc Committee on Terminology and Classification, 2002). Five unique factors that characterised persons with intellectual disability in the view of American Association on Intellectual

Disability and Developmental Disorder (AAIDD) (2013) relevant for proper understanding of the definition are:

1. Limitations in an individual's capacity to complete task should be based on the context of the community or environment with reference to the person age, peers and culture.
2. The cultural and linguistic difference must be considered in valid assessment considers as well as impact of diversity observed in communication, sensory, motor, and behavioural skills.
3. Limitations and strengths of individual often coexist side by side.
4. The development of areas that should be supported is crucial for the purpose of identifying limitations.
5. With the right personalised supports rendered over a long period so general improvement in life functioning of the individual with intellectual disability can be observed

Intellectual disabilities have been conceptualised, defined and diagnosed in different ways by a number of professionals, making it one of the concepts most difficult to understand and define. The reason for this is based on the professional defining the concept with the aim to suit a particular purpose. The professionals involved in providing services to persons with intellectual disability include sociologists, psychologists, educators, medical personnel among others who have all defined intellectual disabilities in one form or the other for the purpose of services provided to this group of individuals. The educationist view point is from the teaching/learning situation arising from the inability to understand concept, developmental psychologist sees it as lack of stimulation due to environmental factors that does not motivate positive attitude or disorder in the body genetic makeup while the physician views it as chemical imbalance in the body system.

Forced separation, community sanctioned prejudice and dehumanization, humiliation and public disgrace, forced, denial of fundamental human rights and even assisted suicide according to Dada, (2007) were prominently used to discriminate against persons with intellectual disability. The usual presenting symptoms in individuals with intellectual disability based on the submission of Child Study Centre, (2014) are handicapping conditions that affect the adaptive functioning and not just low IQ. Adaptive functioning skills is the effectiveness of strategy use by individuals to cope with the demand of life and the level of standards of an individual's independence expected of that person based on the peers' age group, background with reference

to socio-cultural and community setting. Factors that may influence adaptive functioning includes educational level, the motivation available, characteristics of the person, available opportunities for social interaction and vocational development as well as the disorder affecting mental wellbeing and medical conditions generally which will likely exist alongside mental retardation. Appropriate and early remedial effort are likely to result in improved adaption in an individual with intellectual disability. Intellectual Disability varies in severity and are classified as the mild, moderate, severe and profound depending on an individual level of functioning and IQ Score obtained (Daily, Ardinger and Holmes, 2000).

Pupils with mild mental retardation are also referred to as the educable mentally retarded who are about 85% of the total population of pupils with mental retardation (Roy, 2012). Mild intellectual disability with IQ range of between 50–69 may not be easily observed during early childhood, and the diagnosis may not take place until the child attain school age (Daily, Ardinger and Holmes, 2000), because children in this category often appear to be normal (Roy, 2012), although poor academic performance maybe obvious but it will take an assessment by a professional to differentiate mild intellectual disability from disability that is related to learning or disorder that affects emotion/behaviour. In the submission of Roy (2012) the below average intellectual ability to function effectively becomes visible when difficulties experienced with school tasks resulting in the need for diagnostic evaluation to determine factor responsible. People with educable or mild intellectual disability have the potential to develop reading and mathematics skills to approximately the level of regular learner of about age nine but not above twelve and with the provision of the right facilities for the education, mastery of essential schools skills and socially adaptive behaviour can usually be achieved (Carson, Butcher, Mineka and Hooley, 2008).

Pupils with mild intellectual disability according to Roy (2012) exhibit the ability to engage in similar physical activities other children of their age group enjoy and do not behave in patterns which deviate noticeably from their peers. The Child Study Centre, (2014) noted that as a pupil with EID as a group usually develop the right social and communication skills while in preschool which is between age 0-5 years, and have limited difficulty in their sensorimotor areas. Pupils in this group are usually able to go through academic rigour till about primary six making them develop some level of independent and will usually be able to live independently in some cases with little support from the community (The Free Dictionary, 2014). Although in school,

intermittent or limited supports are commonly provided for pupils with mild intellectual disability (Raver, 2010).

### **Characteristics of children with mild intellectual disability**

#### Academic Performance

Pupils with mild or educable intellectual disabilities most often lag behind significantly when compare to their regular peers in academic skills development. Thus, they might likely experience delay significantly in development of skills related to learning to read and learning basic mathematics. Cognitive development which includes mathematics skills, language development, short attention span, speech development is delayed and difficulties recalling previous learning could be 2-4 years behind that of their peers (Watson, 2004). Delay in the development of foundational ability related to reading and solving mathematics, combined with problem in acquisition of language skills will also lead to delay in areas of academic requiring the use of such skills (Rosenberg, Westling and McLeskey, 2008), such as writing, spelling and science.

#### Cognitive Performance

Pupils with intellectual disability also exhibit deficits in cognitive functioning and learning which includes difficulty in generalising what they have learnt, poor memory, slow learners, short attention span and lacks motivation that will influence acquisition of language and academic skills (Roseberg et al, 2008).

#### Attention

A major characteristic of efficient learner is ability to complete important features of given task like outlining the shape of geometry rather than the dimensions for instance colour or position on the page. Pupils with intellectual disability usually experience difficulty tackling the important features of a learning assignment but rather focus on tasks that are irrelevant and distracting. Students with EID have trouble with developing required attention to starting a task and sustaining the attention when working on a task without been motivated (Wenar and Kerig, 2006 cited in Roseberg et al, 2008).

## Memory

Pupils with mild intellectual disability usually have difficulty remembering/recalling information which might be due to their incomplete mental development and deficits in memory will result in a more severe cognitive impairment. In particular Bray, Fletcher, and Turner (1997) in Radhika (2014) asserted that research has found that pupils with intellectual disability experience difficulty retaining information in short-term memory. The teaching approaches must aimed at addressing to a large extent short-term memory deficits through the use of instructional method that will ensure that pupils can easily recall information stored in the short-term memory (like rehearsal, clustering information and using mnemonic devices) and/or focus on the content that relevant when teaching (Smith, Polloway, Patton, and Dowdy, 2004 in Roseberg et al, 2013).

Watson, (2004) identified other significant characteristic of persons with EID such as

- Impacted Social Relationships: Pupils with EID may exhibit behavioural problems, immaturity, and obsessive/compulsive behaviour that lack the understanding required for clues relating to verbal/non-verbal communication and most times difficulty associated with taking of turns or obeying rules.
- Adaptive Skill Limitations: This refers to the skills required to function effectively in everyday activities. Pupils with intellectual disability may be clumsy in the way they do things, expressed opinion and ideas through the use of simple language with short sentences, have minimal organisational skills and may have to be reminded about personal hygiene – washing of hands, brushing of teeth (life skills) among others.
- Low self-confidence: Pupils with mild intellectual disability are easily frustrated due to low self-confidence and will therefore require lots of opportunities that will help in the improvement of self-esteem. A lot of support will be needed if they are to learn something new and take on new challenges.
- Missing or Delayed Concrete to Abstract thought: This includes the ability to understand that difference exist between expressing opinion figuratively and literarily.

### **2.1.2 Reading disabilities**

There is a wide range of pupils with or without intellectual disability who experience reading difficulties making reading difficulties a continuum (Drummond, 2014). The term reading disability or dyslexia based on the assertion of National Institute of Neurological

Disorders and Stroke, (NINDS, 2014) is a subtype of disability associated difficulty to learn that will impair in particular the ability to develop reading ability. It is a condition that leads to experiencing difficulty reading as a result certain neurological factors such as developmental dyslexia, alexia (acquired dyslexia) and hyperlexia which is generally referred to as reading disability. Most individuals with reading disorders have challenges with phonemic (sound/symbol relationships) awareness development, the resulting implication is that they experience difficulty putting letters together to make meaningful words (Ricco, 2000). LD online (2010) explained how an individual with this “hidden handicapping condition is affected negatively, because the resulting problem includes low self-esteem, difficulty to excel and/or at work place, failure to excel at school, and difficulty cope at workplace. In the assertion of Drummond, (2014), there are pupils diagnosed who are experiencing reading-related challenges although most pupils with such conditions are not identified but will still require support to develop reading skills so as to overcome reading difficulty.

NINDS (2014) submitted that individuals with reading difficulty will usually read at the rate that is significantly lower than is expected despite possessing intelligence that can be describe as normal but there is variation in the signs of the disorder from one person to the other while attributes commonly exhibited by pupils with poor reading performance includes spelling difficulty, poor phonological processing (difficulty to manipulate sounds effectively) and/or rapid visual-verbal response. Difficulties processing word may be expressed as inability to spell and write correctly while difficulty in writing and solving mathematics independently are associated with level of reading performance (American Psychiatric Association, DSM-IV-TR, 2000). Reading difficulty can be a great challenge to the teachers ‘dexterity and emotion draining for both parents and pupils but as the pupils develop the ability reading, the less overwhelming things will seem (Drummond, 2014). The ability of the brain to understand its role in dyslexia has been pinpointed through research findings, although studies examining the profile of neurobiological of an individual with poor reading comprehension skills despite the intact word-level abilities has only been of interest lately to researchers (Brasher, 2013), but at the same time reading difficulty is not the repercussion of generalised delay in development or impairment in sensory impairment (Lundberg and Høien, 2001).

Pupils with mild intellectual disability experiencing reading difficulty are more than others irrespective of their ability and importance of awareness of such development is to enable



monitoring pupils in this group so that difficulties can be identified early. Pupils with intellectual disabilities whose parents have histories of reading disabilities based on the submission of Snow, Burns and Griffin (1998) may likely develop reading difficulty too; if diagnosis with impairment in specific language area or hearing ability is hampered; or acquired knowledge below expected level or skills related to literacy during pre-school years. Reading in the view of PBS Parents (2014) is associated with different level of challenges for almost all learners, but diagnosing reading disabilities among learners can be tasking. The characteristics of reading disability are challenges in identifying single words; initial problems associated with decoding or pronouncing out words; problems with sight words reading; difficulty with processing phonological like understanding that a meaningful sentence is made up of words while word comprises of syllables and individual sounds or phonemes; language difficulties in developing expressive or receptive skills; and comprehension difficulties.

Some identified factors leading to reading problems are deficits in vocabulary, inadequate knowledge relevant to the background information as presented in the text, customary knowledge of semantic and syntactic structures required for better understanding and prediction of the words at the same time, poor knowledge of the variation in writing style used by the author in the text, verbal reasoning ability that is inadequate, impaired memory and poor associated with remembering or recalling information previously encountered (The Library of Congress, 2005). Instructional strategies that will result in the improvement of reading performance among learners with mild intellectual disability should be adopted when teaching, although the development of skills to read efficiently is not a task that is easy because diagnosing students' experiencing difficulties can be a difficult task while task identification of the right techniques to remediate them requires creativity on the part of the teacher.

The understanding of theory of reading for effective teaching must be possessed by teachers who want to successfully develop reading performance among pupils with mild intellectual disability. PBS Parents (2014) submitted that factors responsible for reading disabilities among learners are unknown as with most learning disabilities. Pupils with normal or above-average language skills acquire reading skill in a relatively predictable way which is probably due to experiences and motivation they were exposed to during their early childhood which help to develop literacy skills; recognize that spoken words has internal structure, opportunities to learn letters will provide the required information about the nature of prints as

well as illustration on the different nature existing between language that is spoken or written; and attend school that will allow the use of reading instruction that is effective and provide opportunities to be involved in reading practice (Snow et al, 1998).

An average of about 20 percentage of a school total population is likely to experience difficulty in developing efficient reading ability (Shaywitz, 2003), however the percentage that will receive professional services from specialist in the field of special education is about 4percent of school-age students (Drummond, 2014). Teachers, families, and specialists working in collaboration on children with poor reading performance must have goals that are challenging but at the same time achievable in developing reading and writing skills in an environment that is inclusive in nature (Division for Early Childhood (DEC) Task Force, 1993). Given the range within which pupils develop mastery of reading, even with exposure to good teaching methodology and print-rich environments, to achieve reading skills that is conventional for beginners (also known as early reading) a developmentally appropriate expectation for most pupils should be at least by age seven. There is tendency that the ratio of males to female likely to experience reading disorder is 4: 1; it is believed that the behaviour male will contribute to the teacher easily observing the disorder in male than among female learners (Shaywitz and Shaywitz, 2001).

### **2.1.3 Concept of reading**

Developing reading performance according to Agada (2008) is an art that involves inculcating required habits for effective reading and interest in others using environment favourable to reading and extensive reading activities which depends strictly on the technique. Theemphasizes of Agada is that benefits associated with developing good reading habit among learners is based on the view that academic excellence will easily be achieved. A process that enables reader to use information from printed text as building blocks during learning tasks that will also result in improved academic excellence while knowledge is stored in the readers' memory is known as comprehension. Constructing meaning is done through interaction of text and the reader that requires intentional and critical thinking (Bilal, 2013). It is an invaluable tool that is capable of empowering an individual to take appropriate step necessary for development and positive living. Reading is relevant for human existence because without the ability to read

man will never be able to harness positive living required for wellbeing; it is indeed the first button of academic garment.

Good reading routine provides a child's with information required for understanding the perspective of life, and affords the child the opportunity to explore personal talent even when learning about the individual and the society. Sandars (2007) opined that the creativity of an individual will blossom through the development of appropriate skills required for efficient reading. In the submission of Steve (2013), speaking, writing and reading will make a man that is ready, an exact man and a complete man respectively. Reading is all about comprehension because decoding printed words without comprehension is word barking, that is articulating the words correctly without understanding the meaning (Bilal, 2013) which shows that satisfaction is derived by engaging in a good reading culture. Other benefits according to Brad (2007) includes, mental stimulation, it keeps the brain active and engaged, builds self-esteem and determination, it spreads wisdom and knowledge, provides mental and physical relaxation, it acts as a communication tool, reading keeps an individual up-to-date, when one slips himself into reading, he transports himself to another realm thereby suspending anxiety.

Reading provides the possibility of opening oneself up to a magical world, which helps to become perfect. Reading is an indispensable part of children's life that should not be overlooked. Virtues of reading according to Chika (2009) includes providing for the welfare of an individual to progress socially, knowledge of information about the international community and the knowledge that ensures freedom from boredom among the would-be readers. The goal of reading should not be just for academic achievement but to help create opportunities to succeed at school and throughout an individual life time. Academic achievement as observed is tied to good reading culture which in essence means that a person with reading difficulty may not achieve as much as expected where not remediated, which will eventually lead to frustration and failure at school. Agada (2008) stated that reading facilitates learning process because it is an indispensable tool for learning and can be used effectively in the promotion of intellectual development in learners.

In the view of Sandars (2007) participation in activities in modern society can be achieved through improved reading performance because quality is added to life and provide access to heritage that are based on culture. The mind is moulded through reading, which can be observed in the ability to reason rationally and objectively in life. Most stakeholders in education

view development as synonymous to change but reading result in the growth and change at the same time. Odiba (2005) opined that development means that a genuine separation from traditions or perception associated with the disruption of static equilibrium. According to Ahmed (2012) reading is a veritable tool for national development that should not be overlooked. If any nation must experience development, the educational sector of that nation must be developed and which is only possible when the citizen of that nation cultivates the culture of reading. Educational development paves the way for national development. Reading ensures that learning activity is properly facilitated thereby expected academic resultmoral and product of appropriate skills. Issa, Aliyu, Akangbe, Adedeji (2012) stated that participation incontinuous reading will have considerable influence on the studying skills of an individual and subsequently reflect on academic achievement.

The development of relevant reading skills will lead to some benefitsdevelop abilityto reflect rationally thinking ability in the pupil including those with mild intellectual disability which in turn will enhance the ability to understand concepts taught with exceptional ease and develop an improve vocabulary, command on the language spoken and communication skills resulting in improvement of their writing skills. The environment of the reader is learnt by reading story books, newspapers and magazines that will provide the individual with wealth of experiences. When a child reads and studies regularly the chances of academic performance improves better because there is a better understanding of the questions and can better express idea in writing than those who do not have good reading routine. Igwe (2011) noted that the chances of excelling at school and in other endeavour will be enhanced by becoming a skilled reader. Students are able to make good academic achievements only when they are studious. Reading is an integral aspect of a good academic performance because it is expected that an individual must be studious, if the garment of education is to be worn, engages in continuous reading. There is no educational development without the art of good reading culture.

Reading comprehension is a complex term to define because it is influenced by many factors. The translation of written symbols or letters to meaningful words and sentences for the purpose of evaluation and use same for individual's benefits is a major characteristics of reading activity. The arrangement of character in sequence in a particular spatial order must be observed for the purpose of developing reading ability. An example is the flow from right to left when reading the English language while the flow is from left to right is used in Hebrews. The pattern

must be observed strictly and used consistently by the reader for meaning to be derived from the text (Encarta Premium, 2009).

Recognising the significant role of literacy skills to the development of the nation, the National Policy on Education (2004) prioritised the inculcation of an enduring literacy and numeracy skills in pupils irrespective of their ability. Therefore, teaching reading must be such that ensure that cognitive development of a child which will make them possess informed awareness of situations and events happening outside the child immediate environment through the ability to read about the happenings (Ikoh, 2004). The pupil is transformed through the possession of good reading ability into an articulate citizen who has found a way of overcoming poverty, hunger and diseases. Reading is essential to an individual existence in the complex system of social arrangement in every human society while pupils with mild intellectual disability can develop self-actualisation skills require extension reading performance , general knowledge and creativity (Gbenedio, 1986). Reading consists of the following components: phonemics awareness (recognising the fact that each word consist of sounds), phonics (this serves as link between sounds and letters in each word), vocabulary (the meaning of a word and pronunciation), fluency (the ability to read correctly at the right phase) and comprehension that the ability to understand the text read (Kamal, 2014).

#### **2.1.4 Component of reading instruction**

The problems associated with reading difficulty can be prevented by using instructional therapy that is both efficient and appropriate for learners age and learning styles during preschool and primary grades (Snow, Burns, and Griffin, 1998). Research has identified and replicated findings that points to at least four factors which can likely prevent the acquisition of appropriate skills for decoding texts among learners irrespective of their ability (Lyon 1997). The four factors are phoneme awareness deficits and inability to develop alphabetic principle, problem in acquiring reading comprehension skills and applying the skills while reading any given text, development and maintenance of motivation required when reading, and poor preparation on the part of the teacher. Based on literature review, Denton, Vaughn, and Fletcher, (2003) concluded that most children learn to read with little assistant from teachers while those who struggles will need instruction that is both direct and explicit. NRC (1998) submitted that before pupils can develop the ability to read properly they must be able to do four things which are: understand the

representation of sounds in prints and the application of this sound to reading; to develop fluency through regular reading practice; learn and use new vocabulary; and develop the skill of self-monitoring when reading so as to ensure that what is read is meaningful.

Instructional strategy that is explicit with aim of solving learning needs of readers struggling is critical because the rate at which a pupil will progress either in reading and writing, active contribution to the community development and function competently in school depend on the reading skills of such pupil. The child as the focus of any learning process is important but must also be supported by adult that are interested (for example teachers, parents, or educators) in the provision of scaffolding for the development of necessary skills and understanding required for improved reading performance (Mason and Sinha 1993; Riley 1996). Principle that supports effective reading performance is one that, ensures active participation of learners to get information based on social and physical experience in addition to knowledge transmitted culturally to develop personal understanding of an individual community of the learner (Bredenkamp and Copple 1997). Effective reading therapy provides different opportunities to read and write by presenting instruction in a way to ensure the development of skills and strategies that will support the skill for reading and writing through appropriate word identification, fluency, comprehension and spelling skills and self-monitoring for understanding of the text (Snow et al., 1998).

Efficient reading instruction is one that there are identify various factors that are relevant for developing important skills required for comprehension (Denton, 2014), one of such factors is teaching pupils word recognition strategies explicitly. Simply put, learners with intellectual disability can be taught what to do when faced with a new but difficult word. Research validate the use of early reading intervention strategy, where pupils were taught the use of a three-part strategy to when difficult words are in a text by looking for parts of the word already known, sounding it out, and checking the correctness (Denton and Hocker, 2006). According to NRC (1998) it is imperative for teachers to provide instruction explicitly on awareness of phonemic and integration of phonics with meaningful reading and writing opportunities that is connected to a text. The word integrated is purposefully used, rather than balancing because it is not adequate to only add components of the fragmented curriculum to balance each other. Teachers interested in development of effective reading skills will adapt the instruction strategies that will ensure that changes should be made to meet needs of each pupil in each learning situation. Initial

reading therapy that is appropriate will imply that: pupils are able to interpret the text presented easily and correctly, opportunities to frequently engage in intensive reading; expose pupils to spelling-sound relationship on a regular basis; learn the style use in writing alphabet and structure use in oral communication (NRC, 1998).

A pupil that is exposed to appropriate learning environment and literacy experiences during early childhood should be able to read easily by age 6 or 7 but few learn by age four while others at age five. Although some will probably individualised support depending on the level of difficulty associated with developing from age 8 or requires reading skills (IRA and NAEYC, 1998). During the first three years of learning how to read in the submission of Zygouris-Coe, (2001), the programme should be designed such that teach awareness of phonemic, phonics skills, development appropriate skills for spelling and orthographic and at the time skills required for fluency and automaticity is improved so that reading comprehension is effective. She further noted that the components of instruction for the improvement reading performance should be taught in a context that integrate opportunities to practise reading similar text especially for learners with reading disorder, but beneficial for all. Pupil who speaks little or no English before school age will likely have to learn in their mother's tongue so that reading skills can be developed (Snow, Burns, and Griffin 1998). The Application of theory to practice is critical step that must be for students reading skills to be developed appropriately.

Teachers face major challenge in identifying easy procedure for the presentation of explicit instruction to gain the attention of learners and sustain motivation during learning situation (University of the State of New York, 2009). The various learning needs of pupils with intellectual disability may be addressed through one or a combination of the following: differentiated teaching therapy, result from diagnostic assessments with the objectives of identifying strengths and weakness, grouping learners based on similarity of needs, that suit the learners based on identified needs. The implication is that teachers can implement therapy that will improve reading performance of learners depending on the learning environment or class size (Denton, 2014). Components of instruction required for effectively developing reading performance includes: the appreciation of the written words; basic knowledge of the text as printed and the writing style; knowledge of alphabet, sounds associated with each letter; awareness of phonology; spelling; and fluency while reading (United States Office of Education, 1998). The use of explicit therapy in teaching is required for the development of decoding skills,

fluency (modelling fluent reading as well as interpreting punctuation marks appropriately), meaning of vocabulary and strategies for learning word and comprehension can be of beneficial to pupils with reading challenges (Denton, 2014). Diagnosing information accurately; developing the concepts of print, ability to correctly identify letters by name and shape; having the knowledge that words spoken consist of sounds (awareness of phonemic) and is a connection exist between each letter and sounds; providing a comprehensive but systematic therapy on each sound or symbol (phonics); the instruction must be connected to demonstration of how text can be correctly decoded by the pupils taught easily (Zygouris-Coe, 2001) are some of the instructional strategies for successful early reading programme. Reading therapy adopted by the teacher in any learning situation should be such that enables the mastery of concept in a text, learn the principle of alphabet, acquisition of word recognition skill, development of phonemic awareness skill that will help sustain the interest of the learners in reading while barriers that will prevent efficient reading performance is eliminated (Adams, 1990; Snow et al., 1998).

### **2.1.5 Concept of phonological awareness**

The smallest units of sound in words are the phonemes. Cat for example consists of /c/ /a/ and /t/ which is 3 different phonemes (or three sounds). Although, there are four letters in the word fish, and also consist of three phonemes (or three sounds) even: /f/ /i/ /sh/ (NRP, 2001). The ability to exploit phonemes in words spoken is known as awareness of phonemic while phonological awareness deals with the knowledge of and access to phonology (sounds) in a particular language by detecting and manipulating the sound in a spoken language structure without relying on the meaning. The ability to easily recognize unit of sound irrespective how small it may sound in spoken word will help pupils identify the correlation between sounds and letters of the alphabetic code as represented in a given text (Lonigan, Anthony, Phillips, Purpura, Wilson, and McQueen, 2009).

However, it is also a skill involved in hearing and producing different sounds as words by segmenting the word to different components sound, combining the different sound to make one word, and identify words with similar or different sound (Learning Point Associate, 2004). Teachers 'must provide instruction that will enable pupils to learn the connections between the twenty-six (26) letters of the alphabets and the forty-four (44) English language sound (phonemes). A simple way to develop phonemic awareness is through interaction on frequent



basis with nursery rhymes, jingles, poetry and books that has words that can be used for rhymes and alliterations (University of the State of New York, 2009). Considering an inclusive term associated with the detection of speech sounds, phonological awareness that incorporate abilities required for matching, blending, segmenting, deleting, rhyming and manipulating sounds (Stanovich, 2000). A more complex phonological awareness is phonemic awareness that specifically addresses the skills require for attending to individual units of sounds and the sequence such sounds should be used in word formation.

Therefore, the development of phonological awareness leads directly to understanding and associating sounds to letter (Snow et al., 1998), while awareness of phonemic plays a crucial partin the way pupils learn to read text which is based on alphabets and is relevant in predicting the reading performance of pupils (Wagner, Torgesen, and Rashotte, 1994). The measurement of the development of phonemic awareness among pupils has helped in the identification of learners who will be able to read easily or likely experience challenges reading efficiently (Share, Jorm, Maclean and Matthews, 1984). Teaching pupils' phonemic awareness canlead to positive improvement in reading performance. Therefore, it is important that any teacher interested in the development of reading performance should have knowledge of phonemic awareness and teach it a proficient manner (Adams, Foorman, Lundberg, and Beeler, 1998).

Knowledge of phonemic awareness is more than knowing that the word "cat" has three different sounds but entails the knowledge in using different sounds in word formation such as "cat"and recognition of the sounds within the word (NRP, 2001). It is difficult to differentiate phonemes in speech because each sound slides into the other when spoken and the identification of phonemes in a particular word may have to depend on knowledge of the numbers of letter that is used to spell the word (Ehri, 1984), because phonological awareness correlates significantly with reading skills (Adams, 1990; Snow et al., 1998). Moreover, the skills to processphonology correctly are predictors of improved reading skills than general intelligence (Stanovich, 2000).

Early childhood language experiences influence the level of phonological awareness a child demonstrates when entering kindergarten (Snow et al., 1998). For some children, phonological awareness is a natural extension for playing with sounds, listening to stories and learning songs and rhymes (Goswami, 2002). Children will read with less stress when they are able to develop proficiency at identifying symbols and use same in writing, rhymes, or phonemes (Lonigan, Burgess, and Anthony, 2000), because an important predictor of early reading

performance is phonology awareness while deficit in any of the reading-related skills among pupils will result in experiencing difficulty in improving reading performance. Furthermore, the difference in the ability to process phonology is highly required (Wagner, Torgeson, Rashotte, and Hecht, 1997).

### **2.1.6 Reading fluency among pupils with mild intellectual disability**

Reading printed words quickly, accurately and with expression is an important aspect that is connected to fluency which is used as a bridge for linking word recognition skills with comprehension (Reading Rockets 2014). The impact of fluency can be observed during oral reading, the facial expression of the reader, intonation in the voice of the reader and pacing natural sound which is different from speaking. Fluent reader makes mistakes but the act of fluency can be developed through constant practice of reading, (NRP, 2001), because fluent reader concentrates on the text interpretation and make connections among the information in the text based on background knowledge (Reading Rockets, 2014). Paulsen and the IRIS Centre, (2004) asserted that fluency is not the same as comprehension because fluency focuses on the presentation of a passage while also enhancing comprehension of the text.

Pupils should practice reading with text that is reasonably easy for them aloud such as texts containing the words that are already known to them or can be decoded easily (Texas Education Agency, 2002). Fluency directly affect comprehension of the text and is connected because a reader that is not fluent will expend more effort trying to figure out the words, they have little knowledge of while leaving little effort to making meaning of the text (comprehension). A fluent reader consequently can focus on the meaning of the word and thus understand the text (LeMoine, 2003). Fluency involves automatic word identification, recognition of punctuation, inflection, and efficiency when reading text for proper understanding (Paulsen and the IRIS Center, 2004).

Fluency enables pupils to make progress from text decoding to sight-reading because it is based on higher word recognition skills as a result of spending less energy on breaking down each word while spending more time on comprehension of the text. Pupils who struggle to decode each word will experience difficulty focusing on specific reading strategies which will support the comprehension of the text (NPR, 2001), accuracy in word recognition focuses on recognising the words correctly at first attempt. Correctly identifying a word will help the reader

retrieved the meaning from stored vocabulary which then makes sense when combine with the other words as used in the sentence (The University of the State of New York, 2009). Automatic word recognition in the view of Logan (1997) is continuum starting with slow pace but struggling with the word identification among reader's just learning to read and progresses to the rapidly and effortless word identification among skilled reader. The skill is gradually developed among readers along this continuum and the proficiency build-up based on instruction and practice of reading.

### **2.1.7 Vocabulary among pupils with mild intellectual disability**

Vocabulary is the ability to recognise words and the meaning of such word. As Stahl (2005) described vocabulary knowledge as the information an individual possess about a word, this does not refer to the definition of the word only, but includes the application of the word to real life situation. Teaching vocabulary is not only about looking up for new words in a dictionary but entails using the words to form meaningful sentences (Diamond and Gutlohn, 2006). The knowledge possessed by an individual about meaning of a word in a passage is critical for comprehension of the text. The connection between reading comprehension and knowledge of vocabulary in the assertion of Baker, Simmons, and Kame'enui (1988) is strong and unequivocal. Although, evidence reveal that the correlation is basically reciprocal while the direction of causal relationship is not properly defined. Vocabulary instruction does improve reading comprehension (Stahl, 1999). The focus of vocabulary knowledge is word and interpretation which is the basic part of vocabulary that learners of language should know. It is a term used for the clarification of words based on their functional classification. However, such classification depends on the usage when communicating (Hatch and Brown, 1995).

The acquisition of vocabulary is either done through incidental learning, that is indirect exposure to the words or intentional learning utilizing explicit instructional strategy of words specifically to be learnt and word-learning strategies. Elements of efficient vocabulary programme in the opinion of Graves (2000) includes expansion of word knowledge through wide or extensive independent learning, enhanced comprehension containing those words and the provision of instruction in specific words, use of independent word-learning strategies, motivating but enhanced learning using words consciousness and word-play activities. However, it must be stated that teaching word meanings will not improve comprehension skills through

approaches used because vocabulary knowledge will over the course of a lifetime expands and deepens but is not something that can be fully mastered (Diamond and Gutlohn, 2006), as children learn and grow older the rate of vocabulary knowledge increases to commensurate with the age. Children probably store up about 50 words before they are able to produce the words and by the age of eighteen months, they would have attained vocabulary production of fifty words which is between two to three times better in comprehension (Waxman and Booth, 2000; Hulit and Howard, 2002).

The change from early stage of slow learning of vocabulary to a stage of fast learning pace is vocabulary spurt (Ganger and Brent, 2004). Development of vocabulary skills does not stop once a child can talk but will continue as the child learn new words and improves when the child starts reading (Loraine, 2008), before age five most children are involved in the acquisition of vocabulary that is words easily understood when people around them use such words and can be used in oral communication (Pikulski and Templeton, 2004). Receptive and expressive or productive vocabulary according to Loraine (2008); Hatch and Brown, (1995) are the two types of vocabulary. Word-rich environments must be built upon by teachers, because having pupils look up words and write definitions from the dictionary is not effective way to develop vocabulary skills (West Virginia Department of Education, 2014). The important role of vocabulary knowledge in acquisition of language is that without words to express different thoughts in a meaningful way, the art of communicating in a second language will be hampered (McCharty, 1990).

In the view of Wilkins (1982) without the knowledge of grammar only little information can be conveyed; without vocabulary knowledge nothing meaningful can be communicated. Students' ability to read, write, listen and also speak is determined by vocabulary knowledge. Vocabulary knowledge enables learners to comprehend the text and expand the idea based on a particular topic while writing, which shows is relevant in comprehending information transmitted orally by others and facilitates the ability to explain an idea orally. Coady and Huckin (1997) argued that vocabulary knowledge is critical to a typical language learner because it is the basic component of developing language skills, which are listening skills, writing, speaking ability and reading. Inadequate vocabulary skills will prevent a learner from mastering language skills because vocabulary knowledge is crucial in effective communication.

### **2.1.8 Concept of pictorial illustration**

Pictures and words both have unique characteristics that are used in transmitting information. The use of picturebooks for teaching, reading, to pupils is important due to the value that may likely be derived from it and his contribution to effectively develop reading, but it is also required for effective development of reading skills. Pictorial illustrations are connected with early reading stage and the major function is to enable learners have the understanding that prints have meaning before they can actually read text (Manning, 2004). Pictorial illustration or strategy refers to using imagery or pictures to represent an idea or any two-dimensional representation that use stimulus with one particular element that is not alphabet, numbers or arithmetic in nature (Lutz and Lutz, 1978). The assumption is that using pictorial illustration can efficiently control experiences by assisting in connecting the diagrams to actions. Fang (1996) asserted that the connection between image and the idea and/or place it represents is unique and that the more images is depended on for an information to be passed, the more relationship will be made to with environment.

While Wolfrum and Klaffk (n d) noted that a picture is as valuable as thousands of words because the utilization of images and illustration can be efficiently used to facilitate learning in different life circumstances. The benefits of using pictures in learning situations to the develop reading skills among learners is great because it creates a mental scaffold to the learner for the purpose of improving language and literacy (Fang, 1996). The function of pictorial illustrations is to give further explanation to the text (Heins, 1987), that is the reason picture storybooks are often seen as “twice-told tales” because it uses images and oral words as medium to tell a story. Furthermore, images in storybooks may be used beyond this role by providing additional information that enables the learner to constructs meaning through linking the text with the image. The combination of concrete-pictorial-abstract strategy to teaching is an important method of enhancing the chances of pupils with different learning approaches to systematically develop reading skills (Gujarat, 2013). Things that have been seen or imagine are represented using pictures or images. The use of picture books for teaching children and adolescent is a unique genre’ because they are grouped by virtue of format not the content (Galda and Cullinan, 2006).

Picture books contain illustration or imagery that are as relevant as the text in providing meaning to the reader. Pictorial illustration according to the submission of Fletcherv and Reese (2004) presents information to pupils with mild intellectual disability using series of vocabulary

that are likely to be beyond the level of the experience they encounter on daily basis. The study of a result in immediate identification of the connection because less processes is required for decoding visual information than the written text (Paivio, 1991). Visual learning helps the development in understanding of concepts that are abstract to learners (Arnheim, 1993). Pictures may help in the establishment of the setting in the story, the character involved is defined or developed, the plot is extended or developed, varying viewpoint is provided, contribute to the coherence in the text, and reinforcement of the text. Benefits that pictures provide in the assertion of Fang (1996) includes motivating the learners, promotion of creativity, provides a mental scaffold, fostering appreciation of aesthetic, and promote the language and literacy of learners. Goodman Maras and Birdseye (1994) noted that the use of pictorial illustrations has been altered so that pupils can be forced do a basal format. Thus, pictorial illustration is described as both as a form of art and a genre of literature and the argument is against such alteration while advocating for the use of pictorial illustration in the format originally presented.

The perception of an individual idea or assumption can be likely enriched by using visual examples because an excellent perceptual thinking is the result of this understanding. There is a gap which the reader must be filled at the centre of reading experience, particularly as pronounced, in pictorial illustrated books (Arizpe and Styles, 2003). The processes that present the ability to fill these visual literacy gaps to pupils with mild intellectual disability are fundamentally the same with the one that can be found in literature with good quality and function the same way good writing function by incorporating elements of literary settings, plots, characterization, theme, and styles into the story that is written (Galda and Cullinan, 2006). Pictorial illustrations can be used in different ways to facilitate comprehension, enhance the processing of semantic through the provision of organisation and connections with the components of text, linking words and sentences together (Tarquin and Walker, 1999) and enabling learning by ensuring that abstract information are made to be more imaginable. According to Walsh (2003) picture reading is not only different from the process of text reading, but can also be complex process like reading words.

The use of illustrations as tools for reading provides a good medium to individuals involved in emergent literacy evolution so incorporating picture reading to teaching activities into learners reading process has a lot of benefits. Such as the development of basic ability for identifying and observing information in details, development of skills required to make

important interpretation and prediction that will enhance development of skills for making affective and evaluative comments on the text read. Some benefits of using pictorial illustration in the view of Peeck (1993) in facilitating learning activities includes increased motivation, improved attention span, depth of processing, decreased interference/decay, clarification of the content of the text, distinctive encoding, dual-coding theory, processing the support for the type of information usually extracted from the particular text. The effect of pictorial illustration on remembering and understanding text material can be explained by using the link between visual and verbal information represented in the imagery (Mayer, Steinhoff, Bower, and Mars, 1995). Illustrations depict information that cannot be explained using situations related to real life such as simultaneously looking at the interiors and exteriors of an object, and comparative classifications (Mayer, Bove, Bryman, Mars and Tapangco, 1996).

In fact, the opinion held by Herman and Witkin (1977) is that the ability to access and recognise new information in the environment is more prominent among some people while, others are influenced by the inner world. The first group are classified as field-dependence, and the second are learners that are field-independent. Reading performance of students can be deeply analysed by classifying students into field-dependence, field-mix and field-independence.

### **2.1.9 Concept of music therapy**

Music therapy can be used for stimulating and engaging the interest of pupils with intellectual disability socially, naturally, and developmentally appropriate because it is one of the important requirements providing a motivating environment. Music therapy when use for the purpose of teaching will stimulate memory, increase attention span, enable language skills development, improve psychomotor abilities, skills for communication and social interaction and also improvement in the achievements of reading performance (Du Sautoy, 2004, Henriksson-Macaulay, 2014). Using music therapy as instructional strategy is a special tool that aid teaching/ learning process but certain improvement will be made by focusing majorly on early years of holistic development but not only the literacy and numeracy objectives (Awopetu, 2016). Music has hidden pedagogical potentials when used for teaching activities other than the use for recreation and pleasure.

There is different learning/teaching therapy that can be adopted for developing reading skills among pupils with intellectual disability but most of them are visual/ spatial in nature

example includes coloured books, shape of different sizes or textures, tools for manipulation, materials for art, books or toys for play which are perceived through sight. However, the first experience children have as infant is through the sense of hearing or feeling (Meltzoff, Kuhl, Movellan, and Sejnowski, 2009). The sense of hearing in particular provides opportunities to listen to speech sounds and also be involved in musical activities. For example, singing, dancing, musical concert, choreography, dramatization and playing musical instrument, among others that can efficiently be utilized to develop interest in learning and to stimulate complete development. Music therapy should be viewed as a special way a child can be developed holistically in different aspects such as acquisition of language abilities, interpersonal skills, communication skills and specifically reading performance.

Music therapy that focus on all aspect of language skills development will result in effective learning while the role of adult to foster language skills development must be considered. This includes facilitating a conversation in a meaningful manner between the child and adult, providing opportunities for language experiences and interacting with text materials. Musical therapy will also enhance language development among pupils because an opportunity for healthy dialogue between an adult and children is provided. Music therapy as a stimulating tool should not be viewed only for learning purpose because it is more complex, the effect on the human spirit, emotions, culture and expression should be considered (Awopetu, 2016). A good example is

Jack and Jill went up the Hill  
To fetch a pail of water  
Jack fell down and broke his crown  
And Jill came tumbling after

As pupils progress from preschool, they learn identification, description and creation of patterns that can be used for representation of ideas (VanDerHeyden, Broussard, Snyder, George, Lafleur, and Williams, 2011) through music. For example:

Solomon Grundy,  
Born on a Monday,  
Christened on Tuesday,  
Married on Wednesday,



Took ill on Thursday,  
Grew worse on Friday,  
Died on Saturday,  
Buried on Sunday,  
That was the tale,  
Of Solomon Grundy

Learners in the view of Zentner and Eerola (2010) develop the ability to be actively involved while listening to musical sounds that are steady than just listening to oral instructions. An example is the song below that can be sang and demonstrated using body movements for the description of tea pot. Pupils with mild intellectual disability would learn the use of representation combine with non-verbal expressions by doing this:

I am a tea pot Short and stout  
This is my handle,  
This is my mouth  
When the water boils,  
You hear me shout:  
“Pick me up and Pour me out!”

#### **2.1.10 Concept of verbal ability**

The process of language acquisition evolves during early childhood without awareness of the input an individual makes to contribute to the development. Language development in Chomsky (1957) theory of generative grammar is the process that enables individual to develop and learn language skills during childhood and supported by an inborn Language Acquisition Device (LAD), which is typically refers to as the first or primary language of an individual. He further explained that language development usually occurs during the first 10 years or less, and there are various areas of language development at different time; Chomsky’s theory also reveals that once a particular area is passed without developing language, an individual will simply lose the ability to properly do that later. There are different areas of spoken language that can be developed, like grammar that is guided by rules that govern the arrangement of words expression in specific language. Phonology deals with the use of sound to make up words language and, is also important for language development.

Comprehension and fluency is required in writing a text because they are part of the basic component of success in many fields of profession. An important stage that is of concern in the development of language skills is first three years of life because it the period for development and maturity of the brain. These skills can be developed easily in a world that is rich with sounds, sight and consistent exposure to speech and language of others. Receptive language skills deal with having the cognizance of the speech that is produced by others which gradually starts developing at about six months. On the other hand, the expressive language skills which is oral word production that moves speedily as soon as it starts at a year and few months old, with “vocabulary effusion” recognition of ‘some word’ appearing around the second year. Vocabulary effusion is connected closely to a person’s ability to recapitulate words spoken and enable the speedily acquisition of ability in the person’s pronunciation (Gathercole, 2006: Masur, 1995)

Problem in communication in oral motor function is known as language impairment. This delay and disorder ranges between simple substitutions of sound to lack of ability to understand the language and use the same; oral-motor mechanism is used for speech and language. Speech or language disorder according to Individuals with Disability Education Act (IDEA, 2001) like oral motor disorders, language defect and voice impairment are disorder that can adversely affects the reading performance of an individual. Communication delay occurs as a result of noticeably lagging behind in speech and/or language skills acquisition when compare to an individual peer. The expressive skill (understanding) of the child is not as effective as the receptive (understanding) (NICHCY, 2000) in most cases. Somefun, Lesi, Danfulani and Olusanya (2006) described communication disorders as a public health issue concern because it affects early childhood development which result to restricting vocational attainment and eventually undermine the economic growth of the society. A person’s verbal ability generally indicates the level of intelligence and the development guaranteed to a large extent the attainment of organisational objectives (Ogunsola, 2011).

Some people developed more extensively the skills to approach verbal interpretation and solve verbal test than other people based on inborn talents and inclination. Verbal ability is an important factor required for learning English. Oladunjoye (2003) asserted that verbal ability is a process of communication that is utilised for expressions of the thought and idea either in oral or written form. According to Bell and Perfetti (1994), verbal ability is a measure of intelligence that has its principal components in reasoning and problem-solving skills. It focuses on the

development of cognitive structure necessary for logical reasoning. Verbal abilities show the difference in basic academic skills, oral communication skills, writing and reading. These skills are partly inborn skills and partly acquired skills. The verbal skill of individual is not dependent on educational level or grammatical knowledge attained but is a reflection of verbal fluency and comprehension of language to the extent of the individual personal conquest.

### **Mechanism of verbal ability development**

The ability to process language is related to human trait, because animals communicate through the use of sounds and body movement which is not the same thing as speaking. None of the body movements tends to use combinatorial law system of the human language that includes symbols in an unending group of combinations but each has a unique interpretation. The best way to know about other peoples' thoughts (Fletcher and Garman, 1979) is through the use of language. Something is revealed about language whenever something is spoken, although, learning a particular language can be successfully done in few years and without formal instruction all things being equal.

The mind consists of the sensorimotor ability with some simple rules of acquiring information, guiding the changes in a person's repertoire behaviour gradually. Language is learnt but thinking is a form of verbal behaviour, because the first manifestation of verbal behaviour "thought" that can be externally observed (Fodor, 1979). As a matter of fact, the shape of the tract in human beings has undergone modification due to evolution to enable effective speech production. The larynxes are lower in the throats while the vocal tract is shaped like a right-angle curve which makes two modifiable resonant cavities that are independent of each other (the mouth and pharynx/throat) that defines the big two-dimensional range of vowel sounds (Lieberman, 1984). Speech production motor control relies basically on the brain while speech syllables are arranged with the assistance of the cerebellum into fast, smooth and rhythmically organised words and utterances that are longer (Ackermann, 2008).

### **Process and development of verbal language ability**

Language development runs through a continuum with no gaps with several factors contributing to the development. Children transit from one stage to another with great overlaps. Language development in the opinion of Bowen (1998) is both innate and learnt based on interaction of children with other people in their environment but acquisition of language occurs slowly through interaction of children with others in their environment. The activities a child is engages in will help determine the path for language development which is vital in the first five years of life. New York University Child Study Center (2010) listed areas of language acquisition abilities that influence other areas of development as follows.

### **First year milestones**

The foundation for development of language is during infant stage and then continues as the individual make progress from simple cooing to complex conversation. The development of language skills among children is astounding. A child of about one month old can make respond to voices and sounds while at about three months old the child should be able to coo as reaction to pleasant sound, then at four months old the child is able turn in the direction of the source of the sound. At this level pointing at and reaching out to indicate needs, the use of facial expression to indicate emotions and the imitations of parent's actions/speech patterns is developed

### **Two-to-three-year milestones**

#### **At 2 years, the child**

Develops the use of simple sentences, ability to refer to self by name, be able to form noun-verb sentences by combining words together (I want cookie, See a car), listen to simple and short stories and identify the characters in the story, be able to ask some simple questions like “what is this?” or “where is my...?”, identify the body parts, clothing items and common objects, obey two-steps simple commands, comprehend the opposites terms. The child at this stage is expected to also have the spoken vocabulary develop to about 300 words and use the word ‘no’ that indicates a shift in the sense of self in relationship with others and the need for independence.

#### **By 3 years the child**

New York University Child Study Center (2010) submitted that by age 3 there development of about 50,000 words and skills needed for communication in the society, participate in group conversations, answer questions of who, where, and when, add lots of new words daily, use 3-4 words in making sentences, use words to express observations, ideas, and understand concept of simple time like yesterday, lunchtime, tonight. Others include match and identify colours, know name and addresses, recite rhymes for nursery learners and singing. Tell a story but the illustration may not be correct, ask questions frequently, m, n, p, b, t, d, w, without challenge and may count but may still not understand quantity.

#### **Four- and five-year milestones**

##### **By 4, the child**

The child at age 4 should be able to link sentences, relay simple events and experience with others, recite short bible verse, rhyme, sing songs with assistant and audible when speaking, argue using words, joke about things and use language not accepted, form sentences using about five words and dramatized simple stories. The child may be able to respond to simple question during conversation, provide correct information, ask the why, when, how and where questions, understand effects of important words for example because, do three unrelated commands, develop comparatives skills like big, bigger and the biggest listens to stories with some misinterpretation of facts and understand events sequencing.

##### **By 5, the child**

The child at this age goes a step further to refine those skills acquire at age 4 and below, develop repertoire of language and shows more difference in oral speech, develop the use of more precise word with complex grammar and uses plurals tense appropriately and express ideas using varied tone. Development proceeds at faster pace when compared to any other phase of life before age five years. The skills that will allow for efficient use of language for quick communication among children is developed at this stage and become competent in interpersonal relationship. However, children with developmental delay in speech and language milestones show common signs of potential speech and language delay as outlined by Schwartz and Miller, (1996) thus:

#### **Prevalence of language delay or impairment in early childhood**

The total number of children with language disorder varies across age group but the appropriate working proportion is about 7% for 6 years old pupils without other disabilities while the estimate will increase to about 10% when children who are experiencing borderline nonverbal ability problem are included. The addition of 1-2% can be made when pupils with other disabilities like: intellectual disability, hearing loss, Autism Spectrum Disorder and Fragile x Syndrome is considered (Rice, 2008). The incidence of speech/language impairments is 3-4 times common in boys than girls (Toppo and Shapiro, 2000). Literature is scarce on the incidence and prevalence of language impairments in Nigeria; generally, between 10% and 15% of school-age children have disabilities that make them require some form of Special Education (Mba, 1995).

Law (2000) averred that estimated prevalence typically ranges from 2% to 8% with an overall average prevalence of about 5.95%. Speech/language impairments in boys is higher than girls based on report from most studies. The male ratio to female varied between .98:1 and 2.30:1. In United States, between 6 and 8 million individuals have some forms of language impairments (Law, 2000). Center for Disease Control (CDC) in the US in 2007 found the rate of Autism to have increased. They summarized 2:6 per 1000 for children three to ten years of age (from 1 in 500 to 1 in 3-4 times higher in males than in females (NIMH, 2007). In Canada, approximately one in 165 children has an Autism Spectrum Disorder (Fombonne, 2003). Autism screening questionnaire in United Arab Emirates revealed 58% of 100,000 children reported to have Autistic characteristics; the clinical interview however, the prevalence rate is reported as 29% of 100,000 children for a DSM – IV were diagnosed with Pervasive Developmental Disorder (PDD) (Eapen, Mabrouk, Zoubeidi and Yunis, 2007).

### **2.1.11 Concept of parental socio-economic status**

Socio-economic status is used to illustrate or suggest society worth, or how it should likely value a parent. The term connotes the class of an individual in the social hierarchy, structure of the society, and often an individual life chances in terms of the combination of social and economic standing. In other words, parental socio-economic status in the submission of Oakes (n.d) is an indication of collective desire of resources such as materials, money, networks of friendship, healthcare, leisure time, or educational opportunities available at the disposal of an individual. Having access to such resources will ensure that an individual or group of persons

will be able to make progress in the society. Social hierarchy is intuitively recognized by almost everybody in the community. Parental socio-economic status is usually determined by using the interaction between access to education, income, and occupation, but mostly conceptualised as the position an individual or group belongs to in the society in relationship to others.

Parental socio-economic status, as noted by Saifi and Mehmood (2011), measures the combination of the economic earning and the position a person occupies in the society when compare to other members of the same community based on factors like income, educational level and type of occupation of the person. During social interactions different indicators are specifically used in order to convey SES of an individual with respect to other members of community. The common indicators are professional qualifications, fashion taste, hairstyles, automobiles, the type of accommodation, resident and others. Although, social animals such as wolves, whales and monkeys tend to appreciate and recognise the existent of social hierarchies and their position in the hierarchy (Sapolsky 2005). Sophistication levels of the hierarchy may imply simple description as a pecking order that is base totally on physical achievement most time the male at the top.

The interest of most scholars in SES is due to the fact that it serves the purpose for measuring the health status of individuals in the society that is indicated against some meritocratic ideal. Meritocratic ideal informally state that no matter the birth right or inherited endowments of an individual there may be an increase in their SES through personal effort, including the development of their inherited endowments but not limited to that alone (Bowles, Gintis and Wright 1998). A society without the capacities is usually referred to as a less healthy or probably underdeveloped while the meritocratic and egalitarian stratification class is based on birth (luck) or racial discrimination, gender, religious ideology and ethnic background as against progress socially (Arrow, Bowles and Durlauf 2000). Scholars seem to be interested in parental socio-economic status so as to overlook the long-established effect on different aspects of well-being and life outcomes.

Socio-economic status according to Memon Joubish and Khurram (2010) is measured by factors like educational attainment and parents occupation, income of the family, area of resident, facilities that are physically available in the house, electronic facilities that the child have access to, cost of education for each child, parents' participation in learning tasks of their wards and degree of teachers-parents interaction. Development of socioeconomic as a measure combines

social and economic changes in a particular society which embraces transformation that take place in the social sphere especially with reference to economic situation (Ewetan and Urhie, 2014). The development of socio-economic therefore refer to processes that are brought about by variables that are both exogenic and endogenic which can influence the cause and direction of development experience in the society. The indicators for measuring socio-economic development are gross domestic product (GDP), life expectancy, level of education and occupation. Change in insignificant variables like personal value, freedom to associate and be associated with, personal security and safety and liberty from fear of been harmed physically and engagement in civil society are also considered.

## **2.2 Theoretical review**

### **2.2.1 Theories of reading**

Emerging from years of various researches both in psychology and education the interactive reading model asserts that the bottom-up and top-down processes are simultaneously active. The theory of reading model illustrates the relationship existing between the eyes and mind of an individual while a reading printed text for the purpose of comprehension (Davies, 1995). Reading theories has shifted and transited at various times (The British Council, 2006). It has change from the traditional perception that focuses on the role of printed text on important knowledge of background information with addition to the actual printed pages and the ultimate culmination in metacognitive view that is in used now. Reading according to the submission of The British Council (2006) is described as readers' ability to control and manipulate a particular type of information which in turn will ensure comprehension.

#### **1. The Traditional Bottom- up View**

This reading approach is the reflection of behavioural psychologist in the 1950s, who submitted that learning is as a result of "habit formation, due to repeated connection of stimulus with response" while learning language is attributed to the "response system acquire by human being based on the process known as automatic conditioning," that enables "reinforcement of language pattern while others may not be reinforced," and "only pattern rewarded by individuals using such language will be sustained" (Omaggio, 1993). In the traditional view of reading Dole, Duffy, Roehler, and Pearson (1991) opined that readers who are novice will acquire sets of



hierarchically ordered sub-skills that will eventually result in the development of comprehension skills. Readers, who perfect these skills, will be viewed as professionals because of the ability to comprehend the text. Reading based on that view is a linear process that enables' readers to easily decode word for word in the text, link the words to form phrase or sentence that is meaningful (Gray and Rogers, cited in Kucer 1987). The inactive recipient of information that is embedded in any text is the reader due to interaction. It is responsible of the reader to therefore reproduce meaning as derived from the text.

Reading as submitted in Nunan (1991) is about decoding the arrangement of sequence of symbols that are written in the aural which are equivalents with the intension of making sense from a text otherwise known as the 'bottom-up' process of reading. In this model of reading Stanovich, (1980) noted that information flows in sequence which will change the input and transmit it to a new stage without any form of feedback or the possibility of previous stages been influenced by later stages of the process. This view McCarthy (n.d) described as the 'outside-in' process which implies that true interpretation can be found and is assimilated as the reader interpret the text. One of the reasons for attacking this model of reading is due to it being described as not sufficient and faulty because it depends on the nature of the language use, specifically the structure of the sentence. There is a possibility to accept this rejection based on the reality of over dependence on structure in this model but it is appropriate to note that the knowledge of linguistic features is crucial for comprehending text.

## 2. The Cognitive View (top-down processing)

This is learning and human development approach that basically focuses on the mental and internal factors that is contrary to environmental or external factors (Heo, Han, Koch and Aydin, 2011). Cognitive or top-down processing approach as described by Smith (1994) changed the conception of the way reading skills is developed among students. A conflicting view to top-down model is the bottom-up while the psycholinguistic and top-down model are in exact agreement (Nunan, 1991). There is dissatisfaction among Behaviourist because the cognitive theory presents the innate ability of learners language which in turn have significant influence on the learning English as Second Language or English as Foreign Language (ESL/EFL) as explained by psycholinguists that the internal representations of foreign language is developed within in the mind of the learner (Omaggio, 1993).

The emphasis of cognitive perception of is the connecting nature of reading and constructive comprehension. Dole, Duffy, Roehler and Pearson, (1991) asserted that apart from the knowledge brought to fore during the process of reading, a set of flexible strategy that can be adapted easily is used to derive meaning and monitor on-going interaction with text. A balanced method to teach reading should combine text-based and discussion strategy in a way that will ensure the reciprocal and interactive nature of the process (Snow and Sweet 2003). Thinking as asserted by Heo, Han, Koch and Aydin, (2011) is the successful adaptation of assimilation and adjustment to the environment that leads to the organisation of the mental idea or diagrammatic representation.

### 3. Schema Theory

This theory explains the possible influence of gender differences on comprehension of text. It is the foundation of cognition that is adopted for the interpretation of any data related to sensory, retrieving information stored from the memory, systematic arrangement of set goals and sub goals, assigning resources and indicating the process the system flow through (Rumelhart, 1977). Each schema has various components connected in hierarchically order to represent the correlation among the components linked to the particular schema (Anderson and Pearson, 1984; Carrell, 1991). Schemes in opinion of Smith, (1994) is a broad depiction of more general structures or format that occurs due to human to human experience an example is an individual inclusive scheme of computer that will enable the person make meaning of the computer that has not been seen previously. Rumelhart (1977) opined that schemata explains the interaction between learners background knowledge with the reading activities and describes the important of learners' knowledge and previous experience in decoding a text.

The capacity to effectively use learners' background knowledge plays an important part on the attempt to comprehend a text (Parlindungan, 2013). Schemata that are incomplete do not provide sufficient perception of the information in the text leading to experiencing problem in processing and comprehending the text (Rumelhart, 1977). Anderson (1994) noted that research has shown that remembering information in a particular text is usually influence by the learners' schema which describe that a message is comprehended by a reader when the reader has the capacity to recall a representation that provides adequate knowledge of objects and situations as illustrated. Anderson (1994) asserted further that readers may find text incomprehensible when

identifying appropriate schema is difficult. Sometimes the learners may not have important schema to the text, or require assistance to activate the significant schema that will enable comprehension of the text. Comprehending a text implies that learner has discovered a mental 'home' for the encoded information or the reader has been able to modify the existing mental home so that the new information can be accommodated (Anderson and Pearson, 1988).

Reading enables learners to sample text by making guesses, assert or reject the text, make new hypotheses and others because the focus of reading in this situation is the reader rather than the text. There has been great impact on understanding reading due to research findings which has further led to identifying many types of schemata like the formal and content schemata that will enable the reader to predict the situations and interpret correctly while the meaning is also inferred from a wider context (Parlindungan, 2013). Formal schema also known as textual schema deals with organisational and rhetorical forms of written texts (Singhal, 1998); like reading a text, a letter to the production crew, or an essay on scientific development could be an imaginary work and each genre will have various organisational structures.

Knowledge of structures can assist in the improvement reading performance, because it provides learners the basis for predicting what the passage should look like (Smith 1994) and includes understanding the structure of the language, vocabulary, grammar and level of sundry formality/register (Singhal, 1998). A content schema is the information in the text while an individual adequate knowledge of the text content will lead to the development of effective and efficient style of reading. The school and cultural environment plays an important part providing learners knowledge based on formal schemata (Singhal, 1998). Schemata have no physical relationship and are not noticeable but are deduced to exist and are known as the hypothetical contrives (Wadsworth, 1996). Widdowson, (1983); Cook, (1989) emphasized a cognitive nature of schema that enable learners to relate new information with already stored information. It includes everyday knowledge to specialised knowledge, language structure knowledge, and knowledge of text with the form the text take when referring to category and arrangement. Readers from different cultural and language backgrounds have various schemas, but the more information learners store, the more that will be constructed, depicted and connected to the store (Singhal, 1998).

#### 4. The Metacognitive View

Metacognitive monitoring is the appraisal of or analysis of on-going specific cognitive task, while the metacognitive control deals with the regulation of on-going cognitive pursuit (Dunlosky and Metcalfe, 2009). Argument that reading is bottom-up (language-based) undertaking or top-down (knowledge-based) undertaking no longer subsists while accepting the effect of previous knowledge either of first language (L1) and second language (L2) among learners is not difficult (Block, 1992). The idea of reading and meta-cognition requires reflection on a particular text before the individual starts reading (Parlindungan, 2013). Readers that are strategic in nature will sample the text so that right assumption is made, confirm or reject the guess while reading new conjectural statements are made but also perform other tasks at different level of reading; the levels can be grouped into three such as before, while and after reading the text (Parlindungan, (2013).

Reading text on comprehension is described as an exercise and outcome of the schemes depicted in the text connected to previous knowledge and experiences of the reader and the mental presentation based on memory of the text (Kintsch, 1998). Metacognition is also linked with the level of self-esteem (Borkowski, 1992; Borkowski, Day, Saenz, Dietmeyer, Estrada and Groteluschen, 1992) but different areas of motivation and efficiency is used for interpretation. Speculations and prototypes of metacognition indicate that the use of knowledge about an individual's own cognitive undertakings and the dictate of these undertakings are greatly affected by the one's motivations, goals, understanding of skill, characterisations, and belief with the context too like perception relating to social and cultural view (Borkowski, Carr and Pressley, 1987).

The following are attempts made by strategic readers while reading according to Klein, Peterson, and Simington (1991):

- i. Determine the justification for reading the text before reading,
- ii. Pinpoint the structure or genre of the text that is to be read,
- iii. Reflect on the similarity in nature and attributes of arrangement or group of the text. For example, topic sentence should be detected with the information that supports circumstances for logical conclusion,
- iv. Project the writer's justification for writing the text (while reading it),
- v. Select, scrutinize or read in detail,

- vi. Make sustained forecast of what is likely to happen next based on the information that has earlier been acquired, prior knowledge, and conclusion obtained from the stage that is proceeded.

### **2.2.2 David Kolb's learning style (1982)**

David Kolb experiential learning is derived from experience based on the application of learning theory which is rooted on the proposition that a particular learning style is formed by the interaction between individuals and the environment. The model identified two interconnected methods important for the understanding of the information: (1) definite experience and theoretical conceptualisation. (2) Cognitive observation and active testing. The appropriate model of learning will involve the application of the four approaches based on response to situational demands. The four approaches of definite experience, theoretical conceptualisation, cognitive observation and active testing must be adopted for effective learning. An attempt by an individual to use the four approaches will lead to the development of strength in the experience of grasping and transforming approach. The result of the learning style is the combination of the individual's preferred approach, which are the converger, diverger, assimilator and accommodator.

Kolb stated that converger is identified by the abstract conceptualisation and active experimentation which is effective for making practical application of ideas and the use of deductive reasoning that will be used for resolving challenges. Diverger deals with concrete experience and reflective observation but is imaginative in nature and good for developing the ideas that will result in seeing things from different perspectives. The assimilator can be differentiated by the use of abstract conceptualisation and reflective observation that is capable of creating theoretic guide through an inductive reasoning. Experience that are concrete and active is used by accommodators which is efficient at ensuring that readers are engaged actively with the world, and actually participating in the action rather than merely reading about the text. A person may likely show preference for one of the four various styles identified, depending on the learning approaches via the experiential model of learning theory. The relevance of Kolb's (1982) learning style model to this study is that it gives useful information about learning style as a concept of interest in this study.

Teachers can use both Kolb's (1984) learning stages and cycle in evaluating critically the learning provision that is generally available to learners and for the development of learning opportunities that appropriate to learners. Teachers should ensure that tasks are organised and performed in such a way that learners have the opportunities to participate in a way that personal learning needs are taken care of. Moreover, individuals can be assisted to learn more efficiently through the identification of learning styles that is less preferred which is then strengthened through the application of the experiential learning cycle. The ideal thing to do is design activities and material that will be of benefits to the abilities of the learners during the different stages of experiential learning cycle while the students are taken through the whole process in stages. The application of experiential learning style as a teaching method imply that games, and assistive devices is used for the creation of conducive learning situations, so that learners can personally perform task individually, more clearly understand the actual construction and operation, and then transfer into memory.

In the submission of Kolb (1984) different people usually prefer a particular learning style which is influenced by various factors such as social interaction, experiences relating to education, or the basic cognitive structure of a person. Anything that influences preferred style, The preferred learning style is primarily as a result of two pairs of factors, or two separate 'choices' a person make, that is presented by Kolb as lines of axis, each with 'conflicting' modes at either end: Two continuum that is presented by Kolb are the east-west axis is referred to as Processing Continuum (the way a task is approached), and the north-south axis is known as Perception Continuum (response emotionally, or the way an individual think or feel about something). The assumption of Kolb is both variables cannot be performed by a learner at the same time on a single axis (such as thinking and feeling). The product of these two choice decisions is based on the preferred learning of an individual.

## **2.3 Empirical review**

### **2.3.1 Pictorial illustration and reading performance of pupils with mild intellectual disability**

David (1998) conducted a study on the benefit of incorporating representational pictures into news item and found that the advantage of recalling the text/picture condition correlated with text-only condition and was significant. Barudin and Hourcade (1990) found that the strategies were significant when compared to control condition. The effect of learners-drawn pictures to represent the main ideas of a text was examined by Rich and Blake (1994) who reported that information in the story was remembered for longer time by pupils without having to read the story again. Arizpe and Styles, (2003) discovered that when significant amount of time is given to learners to analyse and discuss picture books the benefit of engaging in such activity can be “outstanding” and interesting to the learners. Bower and Spaulding (2000) submitted that using pictures in combination with verbal face to face explanation in an appropriate sequence, can be effective in communicating new idea that will improve the performance of learners.

Arundale (2005) reported that when teaching is connected to the sequence of photographs, pupils were observed to be able to retain most of the content taught and also reveals that learner in experimental group were able to remember different experiences they encounter during the projects and perform better when compared with those in the control group who did not linked photographs sequencing with oral teaching. Adeosun (1986) opined that greater parts of the lesson content were retained and recall by pupils who were exposed to pictures when contrast with learners who were taught without using pictures. John and Litcher (2000) concluded that after using multi-racial pictures to teach pupils for four months, attitudes towards people from other races change and further concluded that the important of providing opportunity for narratives and information that were not provided in the comprehension text alone to young readers; learners cognitive abilities was improved through the strategic development of ‘reading’ pictures; leaners’ depth of understanding the story is develop as a result of reading the same books again; development of higher cognitive levels of ‘visible thinking’ was evident because pupils were able to discuss the books read with others; and connections were made between words and images indicating a reading performance was improved on.

Based on the report of Hibbing and Rankin-Erickson (2003) it was concluded that pictorial illustrations combine with texts and picture books result in the improvement of comprehension skills among struggling readers. Rubman and Waters (2000) reported that children that were engaged in constructing mental pictures of the story while reading a passage on their own were found to be better at been able to detect discrepancies inserted in the stories (like inconsistencies that is either before the text information or knowledge that is common) and were also able to increase the ability to recall story through constructing of picture in the learners when compared to learners who werenot involved in the task of picture reconstruction. Levie and Lentz (1982) found significant evidence based on the meta-analysis of 155 experiments that compare learning of texts with pictorial illustration to texts not illustrated, that the illustrations can assist better in learning of text materials. The use of instructional aids that include pictorial illustration can enable pupils with insufficient verbal ability to express their ideas effectively (Gambrell and Jawitz, 1993; Horng, 1981).

Kozma, (1987) Mayer (1993); Mayer (2001) found that an increased occurred in the retention and recalling abilities of learners based on information stored as images and verbal forms, this phenomenon is explained by averring that learners easily linked previous knowledge and experiences to extract meaning from the illustration in the text. McDaniel and Waddill (1994) concluded that pictures enable learners to develop their extraction abilities when information is presented, detailed and relational information using picture. David (1998) averred that the primary purpose of using a representational picture in a story is to make the story more meaningful by providing the appropriate framework that will be used to test the connection between the news story and the role of pictures in facilitating learning. A study to determine the influence of text length on students in Iranian University was conducted by Mehrpour and Riazi (2004). The participants were randomly exposed to two texts. A group received the original text while a shortened version of the text was presented to the other group. Data collected was tested using a two-way ANOVA and the result revealed that text length effect on reading comprehension was not statistically significant.

Klinger (2000) submitted that because pictures are more complicated and unique than the words that label them, more time and attention is required in the selection of appropriate picture. Pictures are looked at for a longer time before identification, thus it making it more memorable when compared to words. Comprehension skills of children was measured by Brookshire,



Scharff and Moses (2002) by asking questions relating to the text that which required them to recall specific information about the story. They found that more questions were answered correctly by learners who had seen the text with pictures and concluded that comprehension skills were improved through the use of illustrations. The findings of Free (2004) based on a study that used pictures and words to improve reading comprehension was reading comprehension was influenced significantly through text pictures. Pike (2008) also studied the children inferential comprehension using pictures. Seventy-three (73) pupils from grades two to six were participants selected for the study. The result indicated that inferencing ability was both facilitated and intruded through the use of pictures.

Students in the Junior middle school were adopted as participants in an experimental study by Zhang Hongyi (2010) who investigated the effect of illustrations and presentation mode on students' cognitive load with variation in cognitive styles. The results revealed: (1) that participants in the field-independent has lower cognitive load when compared to learners in field-dependence which implies that score obtained from reading based field-dependence was higher than that of field dependence. (2) the effects of explainable illustration and descriptive illustration outperform than others. Illustrations and reading text were taken into consideration by Carney (2002) which led to the submission the reading ability and performance of students on most of results that text-dependent cognitive was enhanced through the use of specific illustrations. Moreover, he asserted different illustrations with special functions, would not work in the same way. Illustration in the view of Angeli and Valanides (2004) has both positive and useful strategy of enhancing written language comprehension when the impact of illustration is considered on the cognitive styles of readers. An individual understanding in the process of decoding text is enhanced when pictorial illustration is combined with textual explanations, and the cognitive styles will determine the effectiveness of illustration.

### **2.3.2 Music therapy and reading performance of pupils with mild intellectual disability**

The correlation between music therapy and reading performance appears to vary in literature just as the approaches. A comprehensive review of literature was conducted by Butzlaff (2000) who examined the effect of music therapy on reading performance. The report of Butzlaff was based on 6 experimental and 25 correlational studies which shows that reading performance and music experience have significant correlation, although causal factor was not determined and

no significant effect was reported from the six experimental studies. While an investigation by Tsang and Conrad (2011) that examined the correlation between readiness to read and music therapy revealed that the relationship existing between perception of pitch and readiness to read was significant among learners without musical training. Learners that have received some form of lesson in music was the focus of the study. Seventy students were examined on reading and cognitive skills (verbal ability, identification of words, and skills related to phonology) as well as musical perception (melody, rhythm, and timbre). The integration of music in the assertion of Sze and Yu (2004) provides learners with concrete and hands-on experiences which is crucial for the learner to develop the ability required for reasoning, thinking, problem solving, analysing, evaluating and enhanced creativity. The styles of learning different from one student to the other and one of the styles can be fulfilled by using music therapy.

Moreover, research has shown that similar cognitive processes is required for listening and comprehension skills and the implication is that there is no competition in task of listening and reading (Anderson and Fuller, 2010). Forgeard, Schlaug, Norton, Rosam, and Ivengar (2008) investigated the relationship between music and phonological skills by comparing learners who do not require special instructional technique and learners with reading difficulty also refer to as dyslexia. Learners in the first experimental group were 32 (learner with training in musical instrument) and a control group of 12 (learners who do not have training in the use of musical instrument), data was measured at baseline after 31 months. The hypothesis was that there will not be significant change in the experience of learners in experimental group in phonological skills with the baseline score and posttest result indicating that the correlation was significant. This hypothesis was confirmed by the result; the report indicated that processing of pitch and phonological skills had significant relationship which was stronger among students with prior musical instrument training. Another study investigated a group of about 10 students over a period of 14 months, using Language Proficiency Battery developed by Woodcock for data collection. Result revealed that music auditory skills and reading performance has correlation that is positively significant among students who had prior musical experience.

A research conducted by Forgeard, Schlaug, Norton, Rosam, and Ivengar (2008) using 31 learners with dyslexia revealed that music discrimination skills had significant effect on awareness of phonemic that can result in improved reading performance; however, music discrimination skills did not influence reading performance directly. While a study compared 5

students with dyslexia and 10 students with regular reading skills (grouped as control and treatment). The score obtained by student with regular reading skills was higher when compare to the score obtained by students with dyslexia. The result also indicated that learners with prior training in music performance was better when compared to the control group. While the result of composite effect revealed that musical training is crucial for the development of skills related to language acquisition among learners and specific music intervention will likely lead to remediating challenges connected to dyslexia among students. Some of the benefits of using music therapy includes the development of early encoding skills of sound that will lead to enhancing reading performance of pupils (Tallal and Gaab, 2006; Patel and Iverson, 2007) and improved ability to discriminate transforming sounds (Gaab, Gaser, Zaehle, Tallal, Kim, Lakshminarayanan, Archie and Glover, 2005) which in turn affects the cortical processing of an individual linguistic patterns of modulation (Magne, Schon and Besson, 2006). The possession of musical skills by individuals will result in developing predicting ability required for recognising and producing the elusive phonetic difference in second language (Slevc and Miyake, 2006) that also enhance the skills to elaborate affective speech rhythm (Thompson Schellenberg, and Husain, 2004).

Register et al (2007) investigated the effect of music intervention on reading curriculum that focused on 33 pupils in second grade who were divided into two groups consisting of 17 experimental and 16 control). Nine pupils in the second grade were diagnosed with specific reading disorder and were included in the treatment group. Intervention was provided to the treatment group 3 times per week for 4 weeks totalling twelve sessions. The aspects of reading performance that were target includes word recognition, skill to decode and comprehend text. A balanced of sensory, listening to music, making and recording music were used on designing the treatment session while the normal curriculum for reading was maintained by the control group and the assessments on pre/post-test were completed by all the learners. Students with learning disabilities performance improved from pre to post-test measurement while the ability to decode words was significantly influenced in both groups. The scores obtained in comprehension also increased but not at a level that is significant. The studyemphaseswere on the design of specific music task on the improvement of related skills in reading.

Short-term music therapy of about 20 days in the finding of Moreno, Friesen, and Bialystok (2011) resulted in significant improvement in awareness of rhyme and mapping words

that are not familiar to symbols when compare to training in art. The study consisted of 60 pupils participating in a summer camp experience whose age range was between 4 and 6. Participants were exposed to 2 hours a day music or art training for the 20-day camp. Two training intervention were designed onthe subject related to listening to music and visual art. Evaluation of participants was done basedon skills taught at the at the end of the treatments. Pitch processing correlates with reading performance among learners who are four- and five-year olds (Lamb and Gregory, 1993). In a study by Douglas and Willats (1994) it was reported rhythm processing correlate with eight-year-olds pupils' reading and spelling skills. Furthermore, in a study by Butzlaff (2000) that examine the correlation between learning musicand reading, the result showed that songs and musical activities had positive and significant effect on children's vocabulary where the size of  $r = .17$ .

The findings of Duffy and Fuller (2001) based on eight-week of music therapy as an intervention on enhancing social skills of pupils with disability revealed that in terms of taking turn, imitating others and vocalisation there was significant improvement. A study by Perry (2003) reported that the communication skills level and elements of musical interaction had direct link among pupils with severe and multiple disabilities. While Kim, Wigram and Gold (2008) concluded that the effect of music therapy was significant on the attention of preschool children with autism. According to the finding of Aldridge (1995) and Schumacher Calvet-Cruppa (1999) music therapy can be adopted in facilitating significant development of speech and effective communication, particularly among pupils with autism. The development of verbal memory is necessary for improvement of reading performance of pupils (Brady, 1991), and poor verbal memory is linked to reading difficulty of pupils (Ackerman and Dykman, 1993; Cornwall, 1992; Scarborough, 1998).

In the finding of Overy (2003) music therapy was reported to have significant effect on both phonological and spelling skills of learners which also enable learners to develop musical abilities. Participation in musical activities is an effective experience for developing the listening skills (Hirt-Mannheimer, 1995; Wolf, 1992), for the mainstream and regular classrooms (Hum pal and Wolf, 2003). Music lessons have the potential of providing good multisensory learning environment for children with dyslexic (Overy, 2003). Music intervention is promoted as a tool for enhancing vocabulary acquisition and comprehension of pupils (Fountas & Pinnell, 1999; Page, 1995; Smith, 2000; Wiggins, 2007). Adediran (2012) reported based a study conducted on

pupils with intellectual disability that treatments (individualised and audio-taped instructional strategy) had significant main effect on English language comprehension of pupils with mild intellectual. The result of the study further revealed that individualised instructional strategy was more effective and the reason was because the strategy allows the active engagement of the pupils while the teacher also put into consideration the varied problems, needs and behaviour of the pupils. The finding of Gromko (2005) revealed that participating in music therapy resulted in the improvement of phonemic awareness among pupils.

The ability to recall information in the submission of Stalinski and Schellenberg (2012), is enhanced by positive moods while the reduced ability to recall is associated with negative moods. Therefore, students tend to easily recall information that has been read previously when they are in positive mood easily as compared to when they are reading in a negative mood. The ability to create atmosphere that will ensure that students learn with positive mood is possessed by teachers by playing familiar music to students while reading.

### **2.3.3 Verbal ability and reading performance of pupils with mild intellectual disability**

Ijiga (2014) concluded base on a study conducted to determine the effect of video modes presentation as a metacognitive strategy on comprehension skills of students in secondary school in North Central, Nigeria that verbal ability had significant main effect and that the two way interaction effect of verbal ability and video mode presentation was significant in improving the reading performance of senior secondary school students. The implication is that possession of high verbal ability will lead to better reading comprehension. Berninger (2006) reported that the level of reliability, rate of reading word and text speculated and produced comprehension ability and verbal ability that is high also determined the reading comprehension. Berninger (2006) found an improvement among the treatment group was significant than the control group as a result of receiving integrated verbal aptitude instruction supplemented to the general reading programme. Development of Vocabulary and verbal reasoning is important in aiding reading comprehension achievement as reveals in the two studies.

Idogo (2011) investigated the significant of main effect verbal skills on academic performance of pupils. The result revealed that performance of learners with high verbal skills was better when compared to pupils with average and low ability across the three treatment groups, it therefore shows that pupil's achievement in reading text correlates with verbal ability.

The result confirms the assertion that pupil's verbal ability in reading is a display of the pupil's experience and exposure to the usage of the language. However, better short-term memory from the result of Bladdeley (2008) was found for some items that are verbal related were presented through the auditory mode rather than the visual mode. Tasks that involve the use of short-term memory, auditory presentation were performed better than visual presentation (Penney, 2005). Jiboku, (1990) had a contrary result. His study though on senior secondary students – showed no verbal ability had no significant effect on learners' comprehension skills. It should be noted that Jiboku (1998) made use of two levels of verbal ability – high and low.

The observation of Bell and Perfitti (1994) revealed that there is correlation in the verbal ability, gender and language performance of pupils. The findings of Olaboopo (1999) indicated that interaction effect of treatment and verbal ability on English composition of pupils was significant. On the contrary, Iyagba (1994) reported that students' attitude with varying ability was significantly different but found that the performance of learners was not significantly different. The performance of girls' of between ages 9-14 years was found to be significantly better than boys of the same age in reading and the superiority in verbal ability of female was evident in populations with dyslexic and results were consistent with findings from different countries (Wagemaker, 1996). The dynamic link between reading development and IQ over time will account for difference in the performance of pupils (Ferrer Shaywitz, Holahan, Marchione and Shaywitz, 2010), the difference in dynamics reinforces the inconsistency observed in the scores of pupils. Sifarian (1992) revealed that there is the presence of a median correlation between ability and proficiency in individual's foreign language development.

The effect of intelligence on students' performance of EST (English for Science and Technology) in reading comprehension was investigated by Salahi (1998) who reported that the finding revealed intelligence and achievement in reading comprehension had weak significant relationship. Szilvia (2007) reported that intelligence is not closely linked with motivation in language learning. The level of intelligence was reported by Papalia and Olds (1988) to correlate significantly with grades of students obtained in courses that are verbal in nature such as English and History. Results from a study by Sasaki (1993) revealed that general cognitive factor in second language proficiency accounted for 42% while factors that were not related to general cognitive ability accounted for 58% variance. Genesee (1976) concluded that there is correlation between intelligence and skills in reading and using French as second language, but no

correlation between productive and grades in interpersonal communication was reported. Fahim and Pishghadam (2007) submitted that low-level of IQ and achievement in foreign language had significant correlation. According to Ferrerand McArdle, (2004) a strong connection was found between cognitive ability development and changes during childhood and adolescence in academic performance such as quantitative abilities.

#### **2.3.4 Parental socio-economic status and reading performance of pupils with mild intellectual disability**

Learners initial reading skills correlates significantly with literacy environment at home, books owned by the family, and the level of distressed faced by parents (Aikens and Barbarin, 2008). Parents in low-SES may have difficulties providing resources like books, computers, or arrange for private tutors that will make the learning environment motivating (Orr, 2003) for their children. A study conducted on the percentage of parents the read to their children daily concluded that a smaller number of parents in the lowest-income quintile when compared with parents the highest-income quintile read to their children (Coley, 2002). Moreover, students from low-SES groups who are enrolled in programme and encouraged by the support from adult, level of effort towards academics was improved significantly (Kaylor and Flores, 2008). Children who are at economic disadvantage will acquire skills in language proficiency slowly, show difficulty in letter recognition and sensitivity in phonology and are at risk of experiencing challenges with reading comprehension (Whitehurst and Lonigan, 1998).

The adverse consequence of economic disadvantage on early development of language and achievement cognitively for children is significant (Hart and Risley, 1995) because it was reported that pupils between the ages of 3- to 5-years old living in families earning low-income will difficulty developing vocabularies ability and experience significant delay in language skills than their peers who are assumed to be from privilege background. The home Literacy and language environment at home which includes oral language and skills related to coding information have significant relation on reading performance of students (Evan, Shaw, and Bell, 2000). Findings indicates that pattern parent-child book reading nonregulars it should be (Yarosz and Barnett, 2001) and books that available at home for the child are few (Raikes et al., 2006). Literacy-related activities at home have been reported to have significant relationship on young children's language development and literacy skill programme (Rodriguez et al., 2009). Studies

of the language use in home environment reveals that development of language and literacy generally among children depend largely on the language parents use in the house.

Family factors, for instance the literacy environment in the home, involvement of parent in school related activities and role of parent has significant contribution to predicting the initial reading disparities of pupils in kindergarten (Aikens and Barbarin, 2008). Furthermore, participating in activities related to literacy by parents, quality of relationship between mother and child, and access to relevant learning materials will ultimately result in 27% of development of language and acquisition of cognitive skills of children at 3 years (Rodriguez et al., 2009). The socioeconomic status makes the most significant difference on development of early literacy and language of learners. Thus, it is still the most explored factor. Reading to these children by their parent is less likely to be done regularly due to constrain of economic factor and the need to provide for the family (Federal Interagency Forum on Child and Family Statistics, 2005; Lee and Burkam, 2002; Whitehurst and Lonigan, 1998). The effects of previous performance when compare to poverty were stronger on junior high and senior high school learners based on prior study of youths in America (Brookhart, 1997). In the submission of Ajila and Olutola (2000), the parents' serves as the first agents of socialisation in a child's life so the home has effect on an individual. The reason for this is due to family background and environment of the learner affects the response to life challenges and levels of achievement. Although, the various experiences that an individual acquire is through the school, yet individual experiences and interaction with parents at home play important role in the development of the child's personality and making the child valuable member of the society. In the opinion of Ichado (1998) the home environment of learner can have significant impact on the academic achievement of the learner in any learning situation including the school. Children whose parents provide the opportunities to develop academically at home will likely perform better integration of the family, school and community (Ferguson, 1995).

Based on a study that investigated the relationship between home environment with the development of language and literacy of children, Evans, Shaw and Bell (2000) noted that the results indicated that the frequency of tasks that involved working with letters such as learning letter names and sounds and printing letters that predict knowledge of letter names, letter sounds, and phonological sensitivity after controlling for parents' education and child's ability. In the assertion of Eze (2004) academic performance of students significantly influenced by parents'

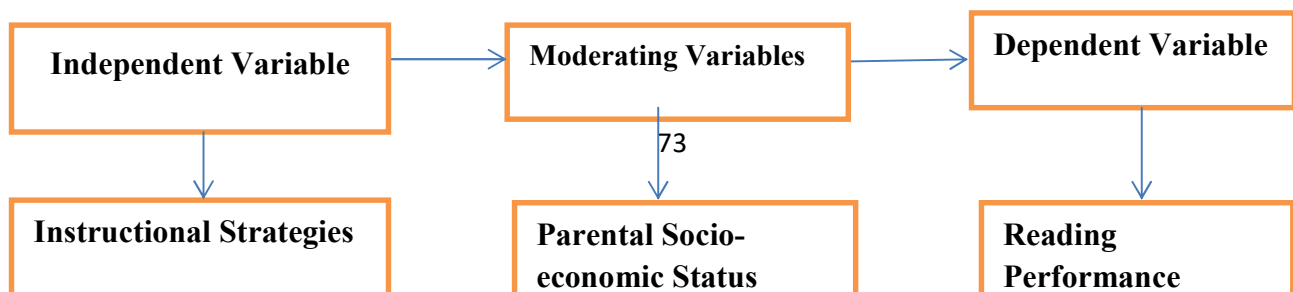


socioeconomic status. He noted further that low socioeconomic status makes it difficult for learners from such home to favourably compete with peers from high socioeconomic background under same learning condition.

## 2.4 Conceptual model for the study

The conceptual model on which this study is based is shown in figure 2.1. The model explains the construct on which the study is to be carried. The variables and the flows chat of the interaction are depicted. The independent variable that was manipulated in the study is instructional strategy at two levels. These are: pictorial illustration and music therapy learning strategies. The moderating variables are verbal ability (high, average and low) and parental socio-economic status (high, middle and low). The dependent variables are the outcome of the manipulation of independent variable against the moderating variables.

Figure 2.1 Conceptual Model for the Study



**Stimulus****Organism****Response**

The conceptual model represents the stimulus–organism–response model where the stimulus the independent variable is the instructional strategies at three levels namely pictorial illustration strategies, music therapy and conventional method. The organism factor is the moderating variables that consist of verbal ability (high, average and low) and parental socio-economic status (high, middle and low). The response or dependent variable is the result or outcome of the study indicated as reading performance.

**CHAPTER THREE  
METHODOLOGY**

This chapter deals with the research design, selection of participants, instrumentation, treatment package, procedures for the data collection and methods used analysis of data.

### **3.1 Research design**

The study adopted the pretest-posttest control group quasi experimental design with a 3 x 3 x 3 factorial matrix. Treatment was considered at three levels (Pictorial illustration, Music therapy and Conventional method). This was crossed with parental socio-economic status and verbal ability of pupils with mild intellectual disability at three levels of each.

Table 3.1: **3 x 3 x 3 Factorial Design**

<b>Treatment</b>	<b>Parental Socio-economic Status</b>
------------------	---------------------------------------

Group	High			Middle			Low		
	Verbal Ability								
	High	Average	Low	High	Average	Low	High	Average	Low
<b>Pictorial illustration</b>	3	1	-	-	5	-	-	-	7
<b>Music Therapy</b>	2	1	-	2	2	5	2	1	2
<b>Conventional Strategy</b>	1	-	1	2	7	-	1	-	6

The design is represented thus:

Experimental Group 1 (E1): O<sub>1</sub> X<sub>1</sub> O<sub>4</sub>

Experimental Group 2 (E2): O<sub>2</sub> X<sub>2</sub> O<sub>5</sub>

Control Group 3 (E3): O<sub>3</sub> O<sub>6</sub>

O<sub>1</sub> O<sub>2</sub> and O<sub>3</sub> represents pretest scores of experimental group 1, 2 and the control group respectively.

O<sub>4</sub> O<sub>5</sub> and O<sub>6</sub> represents posttest scores of experimental group 1, 2 and the control group respectively.

X<sub>1</sub> represents the treatments for experimental group (Pictorial illustration)

X<sub>2</sub> represents the treatment for the experimental group 2 (Music therapy)

X<sub>3</sub> represents conventional strategy

### **3.2 Participants**

The participants for the study were pupils with mild intellectual disability in special schools in Ibadan metropolis. Three Local Government Areas (LGAs) were randomly selected from Ibadan metropolis. One special school (HizbulahiaGalib School for Handicapped, Agodi Gate; Children, Oluyole Cheshire Home School, Ijokodo; and Basic Special School, Sharp Corner, Oke Ado) with PMID was purposively selected from each LGAs. Participants were randomly assigned to Pictorial Illustration (18), Music Therapy (16) and control (17) groups. Treatment lasted eight weeks. The sample for the study comprised fifty pupils with mild intellectual disability that have spent two years in a school setting of the three selected special schools in Ibadan metropolis. Parents of the pupils selected for the study were the respondent of the parental socio-economic status.

### **3.3 Criteria for inclusion**

The criteria for selection of participants were based on the following: -

1. Participants must be classified as pupils with mild intellectual disability, as identified by Slosson Intelligence Test (SIT) and must have intelligent quotient of between 50-68
2. Participants should be able to recite and identify the first fifteen letters of the alphabet appreciably
3. Participants should be able to identify some simple words.

### **3.4 Instrumentation**

The following instruments were used for data collection in this study: -

1. Slosson Intelligence Test for Children and Adult
2. Pictorial Illustration Instructional Package
3. Music Therapy Instructional Package
4. Reading Performance Test (RPT)
5. Parental Socio-economic Status Scale
6. Verbal Ability Test

### **3.4.1 Slosson Intelligence Test for Children and Adult**

Slosson Intelligent Test (SIT) was developed and validated in 1961 by Slosson. It was constructed and organised for assessment of general intelligence. Although S.I.T is an assessment scale is developed for foreign used, but it has been adapted and validated to suit the culture in Africa. Certain words and items for instance has been changed to suit participants the culture without the content that was validated been altered. Oyundoyin (2004); Ayodele (2010) and Agboola (2012) having used the test found it useful and suitable for Africa use. Slosson used the 1960 revision of Stanford Binet (SB) Intelligence Test to build his test and established its validity. The coefficients for concurrently validity were calculated separately for the different age level and this ranged from 0.90 to 0.98. The conclusion of Slosson was that the criterion SB correlated with SIT, just as the SB correlates with itself. Adediran (2011) reported that the instrument yielded a high content validity and a test-retest validity of 0.86.

### **3.4.2 Pictorial illustration instructional guide (PIIG) on reading**

The pictorial illustration instructional guide (PIIG) on reading is a structure design by the researcher. The guide is a step by step procedure which will be followed to implement the treatment package for the experimental group 1 (pictorial illustration instructional group). The guide is designed to reflect four phases (introduction, content and explanations, evaluation and assignment) of implementation (Appendix II)

### **3.4.3 Music therapy instructional guide (MTIG) on reading**

This treatment package, music therapy instructional package on reading was developed by the researcher. The guide is a step by step procedure which will be followed to implement the treatment package for the experimental group 2 (music therapy instructional group). The guide is designed to reflect four phases (introduction, content and explanations, evaluation and assignment) of implementation in Appendix III.

**Table 3.2: Table of Specification for Reading Performance Test**

<b>Topics</b>	<b>Knowledge</b>	<b>Comprehension</b>	<b>Total</b>
<b>Word Recognition</b>	8	3	<b>11</b>
<b>Phonological Awareness</b>	5	2	<b>7</b>
<b>Vocabulary</b>	5	3	<b>8</b>
<b>Reading Fluency</b>	4	-	<b>4</b>
<b>Total</b>	<b>22</b>	<b>8</b>	<b>30</b>



#### **3.4.4 Reading performance test**

This instrument was developed by the researcher for the purpose measuring the reading performance of pupils with mild intellectual disability. Pupils' syllabus for English language and also their English textbooks was used as a guide. The test was be divided into four sections; A, B, C, D. and E. Section A was based on personal data as age, gender, etc. Section B items solicited information on reading performance of the participants drawn as sample for the study while C comprised ten questions that requested participants to choose one word that matched the picture in each of the questions.

'Girl', this word should correspond with the picture, nothing else. Section D comprised of 10 pictures reading activities. The pupil study the picture in front of each sentence and choose the correct word in the bracket to complete the sentence. The aim was to measure pupils' ability in word recognition. Section C and D attracted two marks each for any correct response, and for a wrong response, the pupils were scored zero (0).

Part E which also comprised ten simple sentences that tested pupils' ability in oral reading. Pupils who were able to read each of the sentences correctly without any mistake were scored two marks. Pupils who attempted to read about half of the sentence was scored one while those who were unable to read anything in the sentence will be scored zero.

The face and content validity of the reading performance test was ensured by designing the research instrument based on the purpose of the study while the reliability was determined by subjecting it to pilot testing on pupils with mild intellectual disability that were not initial participants in the main study. Data collected were analysed using Cronbach Alpha reliability coefficient with the result of 0.79.

**3.4.5 Verbal ability test (VAT):** The researcher culled questions from the already normalised verbal ability text book for primary one pupil used in the country. For the test to be useful for this study, the researcher pilot tested the instrument on some pupils who were not part of the participants for the main study. The reliability coefficient was determined using the test-retest which was 0.88 and found reliable for the study.

### 3.4.6 Parental socio-economic scale

This scale classifies parents of participants in the study into high, middle, and low SES. The scale was adopted for the study from the one designed by Salami (2000) to determine the socio-economic status of parents through their occupation, level of education, residence and types of appliances in the house. Composite scales are usually used for measuring SES, which has a combination of variables such as social and economic and this scale has 12 items. Items 1 – 4 are on the pupils’ bio-data. Items 5 – 12 are based on parents’ occupation, educational qualification, residence and types of electrical appliances at home.

The scoring pattern for the scale is:

Parent occupation	1-10 points
Educational level	1-14 points
Parent’s residence	1-6 points
Type of house	1-3 points
Equipment in the house	1-17 points

The maximum score is 60 and this gives an indication based on three socio-economic status levels. These are:

0-15 points	-	Low socio-economic status
16-40 points	-	Middle socio-economic status
41-60 points	-	High socio-economic status

This scale was validated by Salami (2004) and Adekanmi (2010) while the reliability of the scale was determined using test-retest which yielded 0.73. Moreover, revalidation of the instrument yielded a coefficient of 0.75. It was also revalidated by the researcher and found to be 0.70 which implies that, the instrument is reliable and appropriate for the study.

### 3.5 Data collection

The researcher used four research assistants who served as resource teachers for the eight weeks treatment exercise in the selected schools for the data collection.

In order to collect data for the study, there were three phases.

Phase one was the administration of reading performance as pretest given after screening of participants have been done. The administration of treatment was done in the Phase 2 for a

period of eight (8) weeks for the experimental groups, while pupils in the control groups were taught using the conventional method. Phase three was the posttest after the treatment.

Week 1: Screening and Pretest

Week 2: My grandfather's clock

Week 3: Pawpaw is a type of fruit

Week 4: Twinkle, Twinkle, little star

Week 5: Jack and Jill

Week 6: one, two buckle my shoe

Week 7: My grandfather's clock and Pawpaw is a type of fruit

Week 8: Twinkle, Twinkle, little star and One, two buckle my shoe

Week 9: Jack and Jill

Week 10: Posttest

### **3.6 Methods of data analysis**

The data collected was analysed using Analysis of Covariance (ANCOVA) to test the significant difference among several mean scores in the data. ANCOVA was used because it has the capacity of reducing the effect of extraneous variables in the pretest and posttest measures. Furthermore, Scheffe post hoc was used to determine the source(s) of significant main effect obtained. The seven null hypotheses were tested at 0.05 level of significant.

## CHAPTER FOUR

### RESULTS

This chapter presents the results based on the seven null hypotheses tested in the study.

#### 4.1 Presentation of results

HO<sub>1</sub> There is no significant main effect of treatment on reading performance of pupils with mild intellectual disability

**Table 4.1: Summary of ANCOVA showing the main and interaction effects of treatment, parental socio-economic status and verbal ability on reading performance of participants**

#### Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	4362.83 <sup>a</sup>	17	256.64	10.70	.00	.85
Intercept	52337.24	1	52337.24	2181.03	.00	.99
<b><u>Main Effect</u></b>						
Treatment	619.88	2	309.94	12.92	.00	.45
SES	26.62	2	13.31	.56	.58	.03
VA	363.43	2	181.71	7.57	.00	.32
<b><u>2-Way Interaction</u></b>						
Treatment * VA	83.32	3	27.78	1.16	.34	.10
Treatment * SES	46.54	3	15.52	.65	.59	.06
SES * VA	342.56	4	85.64	3.57	.02	.31
<b><u>3- Way Interaction</u></b>						
Treatment * SES * VA	.00	0	.	.	.	.00
Error	767.89	32	23.10			
Total	94004.00	50				
Corrected Total	5130.72	49				

. R<sup>2</sup> = .85 (Adjusted R<sup>2</sup> = .77)

Table 4.1 shows that there was significant main effect of treatment (pictorial illustration and music therapy) on reading performance of pupils with mild intellectual disability ( $F_{(2, 32)} = 12.92$ ,  $p < .05$ ). The null hypothesis was therefore rejected. Table 4.2 indicates the mean scores of participants according to the treatments.

Table 4.2 reveals the mean scores of participants in the Treatment Groups with Music Therapy group having the highest mean score of 49.44, followed by Pictorial Illustration group with a mean score of 47.39 and lastly Conventional strategy with a mean score of 39.19. The highest Std Error was for control group at 1.70, followed by pictorial illustration at 1.59 while the lowest was for music therapy at 1.31. The highest upper bound was that of music therapy at 52.11, followed by pictorial illustration at 50.62 and the lowest was 42.65 which is the control group. The implication of this is that, participants in the two experimental groups (pictorial illustration and music therapy) benefitted significantly from the intervention provided when compare to the control group.

Scheffe post hoc was computed for the purpose of clarifying the marginal difference between the 3 treatment and the result is shown in Table 4.3

**Table 4.3: Scheffe post-hoc pairwise significant difference on reading performance of pupils with mild intellectual disability**

(I) Treatment	(J) Treatment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pictorial Illustration	Music Therapy	-5.49*	1.71	.10	-9.78	-1.19
Pictorial Illustration	Control	7.22*	1.71	.00	2.92	11.52
Music Therapy	Pictorial Illustration	5.49*	1.71	.10	1.198	9.78
Music Therapy	Control	12.71*	1.68	.00	8.47	16.94
Control	Pictorial Illustration	-7.22*	1.71	.00	-11.52	-2.92
Control	Music Therapy	-12.71*	1.68	.00	-16.94	-8.47

\*. The mean difference is significant at the .05 level of significance.

Table 4.3 indicates that there were significant differences between Reading Performance of Pupils with Mild Intellectual Disability in the Pictorial Illustration and control group as well as the Music Therapy and Control group. A close observation of Table 4.3 shows that the Std Error was 1.71 and 1.68. The highest upper bound was 16.94 for music therapy/control group while the lowest upper bound was -8.47 for control/music therapy. The lowest mean difference was -12.72 for control/music therapy and the highest mean difference was 12.71 for music therapy/control.

**H<sub>02</sub>** There is no significant main effect of parental socio-economic status (PSES) on reading performance of pupils with mild intellectual disability

Table 4.1 shows that there was insignificant main effect of Parental Socio-economic Status on Reading Performance of Pupils with Mild Intellectual Disability ( $F_{(2, 32)} = .56, p < .05$ ). The null hypothesis was therefore not rejected. The implication of this is that, pupils from high, middle and low socio-economic family benefitted equally from the treatment. The intervention provided helped in ensuring that pupils with mild intellectual disability irrespective of their parental socio-economic status or class were engaged actively in the teaching-learning process, thereby improving their reading performance.



**Table 4.4 Estimated marginal mean scores from the analysis of the effect of parental socio-economic status on reading performance of pupils with mild intellectual disability**

Socio-economic Status	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Low	42.22 <sup>a</sup>	1.49	39.19	45.24
Middle Class	46.27 <sup>a</sup>	1.30	43.63	48.91
High	48.60 <sup>a</sup>	1.92	44.69	52.51

Table 4.4 illustrates the mean score based on parental socio-economic status of participants. Pupils with mild intellectual disability from high socio-economic status had the highest mean obtained of 48.60, followed by the middle socio-economic status with 46.27 while the lowest was pupils with mild intellectual disability from low socio-economic status with a mean score of 42.22. The highest upper bound was 52.51 obtained by pupils with mild intellectual disability from high socio-economic status, followed by middle class socio-economic status at 48.91 while the lowest was the low socio-economic status at 45.24. The table further reveals that the Std Error for pupils with mild intellectual disability from high socio-economic status was the highest at 1.92 followed by the low socio-economic status at 1.49 while the least mean score was obtained in middle class socio-economic status at 1.30.

**H<sub>03</sub>** There is no significant main effect of Verbal Ability on reading performance of Pupils with Mild intellectual disability

Table 4.1 reveals that verbal ability had significant main effect on reading performance of pupils with mild intellectual disability ( $F_{(2, 32)} = 7.57, p > .05$ ). The mean square was 181.71, the sum of squares was 363.426 while the partial Eta squared was 0.32 for verbal ability. The null hypothesis was not accepted because verbal ability plays a crucial in the development and improvement of reading performance of participants. The magnitude of the main scores of the participants is hereby presented in Table 4.5

**Table 4.5 Estimated marginal mean scores of the effect of verbal ability on reading performance of pupils with mild intellectual disability**

Verbal Ability	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Low	36.64 <sup>a</sup>	1.43	33.73	39.54
Average	48.68 <sup>a</sup>	1.65	45.32	52.05
High	51.00 <sup>a</sup>	1.51	47.92	54.08

Table 4.5 reveals the mean scores on the effect of verbal ability. The highest mean score was obtained by pupils with mild intellectual disability with high verbal ability at 51.00, followed by average verbal ability with a mean score of 48.68 while low verbal ability had the lowest mean score of 36.64.

Scheffe Post hoc analysis was computed for clarifying the margin of differences between the verbal ability as shown on table 4.6

**Table 4.6: Scheffe post-hoc pairwise significant difference on reading performance of pupils with mild intellectual disability**

(I) Verbal Ability	(J) Verbal Ability	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Low	Average	-10.78*	1.63	.00	-14.88	-6.69
	High	-18.48*	1.73	.00	-22.84	-14.12
Average	Low	10.78*	1.63	.00	6.69	14.88
	High	-7.70*	1.829	.00	-12.31	-3.09
High	Low	18.48*	1.73	.00	14.12	22.84
	Average	7.70*	1.83	.00	3.09	12.31

Table 4.6 presents the post hoc result based on the main effect of verbal ability. The Std Error shows that the highest was 1.83 followed by 1.73 and the least was 1.63. The significant level was  $p > .05$  which reveals that based on verbal ability that there were significant differences in the reading performance of participants. This means that verbal ability contributed significantly to reading performance.

**H<sub>04</sub>** There is no significant interaction effects of Treatment and SES on Reading Performance of Pupils with Mild intellectual disability

Table 4.1 indicates that there was no interaction effect of treatment and SES on Reading Performance of Pupils with Mild Intellectual Disability ( $F_{(2, 32)} = .647, p > .05$ ). The implication of this is that, the null hypothesis was not rejected.



**Table 4.7 Estimated marginal mean scores from the analysis of the effect of treatment and socio-economic status on reading performance of pupils with mild intellectual disability**

Socio-economic Status	Treatment	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Low	Pictorial Illustration	33.14 <sup>a</sup>	1.85	29.37	36.91
	Music Therapy	47.67	2.31	42.96	52.37
	Control	38.58 <sup>a</sup>	2.65	33.19	43.97
Middle	Pictorial Illustration	51.70 <sup>a</sup>	2.68	46.24	57.17
	Music Therapy	49.50	1.70	46.04	52.96
	Control	36.00 <sup>a</sup>	2.62	30.67	41.33
High	Pictorial Illustration	53.00 <sup>a</sup>	2.83	47.24	58.76
	Music Therapy	52.00 <sup>a</sup>	3.00	45.89	58.11
	Control	43.00 <sup>a</sup>	3.46	35.94	50.06

a. Based on modified population marginal mean.

Table 4.7 shows the various mean score from the interaction effect of treatment and socio-economic status although the interaction was not significant. The highest mean score was obtained in middle socio-economic class/pictorial illustration at 53.00 while the lowest was 33.14 for low socio-economic status/pictorial illustration. Middle socio-economic status/pictorial illustration, high socio-economic status/pictorial illustration and middle socio-economic status/music therapy interaction effect were above 50.00

**H<sub>05</sub>** There is no significant two-way interaction effects of Treatment and Verbal Ability on Reading Performance of Pupils with Mild intellectual disability

Table 4.1 indicates that there was no interaction effect of treatment and verbal ability on reading performance of pupils with mild intellectual disability ( $F_{(2, 32)} = 1.157, p > .05$ ). The null hypothesis was therefore not rejected. This implies that of treatment and verbal ability did not interact to result in critical development and improvement of reading performance of participants.

**Table 4.8 Estimated marginal mean scores of the interaction effect of treatments and verbal ability on reading performance of pupils with mild intellectual disability**

Treatment	Verbal Ability	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Pictorial Illustration	Low	33.14 <sup>a</sup>	1.85	29.37	36.91
	Average	47.40 <sup>a</sup>	2.19	42.94	51.86
	High	54.50 <sup>a</sup>	2.83	48.74	60.26
Music Therapy	Low	37.75 <sup>a</sup>	2.12	33.43	42.07
	Average	52.67	2.58	47.41	57.93
	High	54.00	1.89	50.16	57.84
Control	Low	37.06	2.40	32.16	41.95
	Average	38.00 <sup>a</sup>	1.85	34.23	41.77
	High	43.00 <sup>a</sup>	3.46	35.94	50.06

Table 4.7 presents the interaction effects of treatment and verbal ability although the interaction was not significant. The interaction means scores of 54.50, 52.67 and 43.00 were obtained by pupils with mild intellectual disability in pictorial illustration/high verbal ability, music therapy/high verbal ability and control/high verbal ability respectively. The lowest mean score was obtained by pupils with mild intellectual disability in pictorial illustration/low verbal ability at 33.14. This means that high verbal ability interacted with the treatment to yield high mean score but the interaction was not significant.

**H<sub>06</sub>** There is no significant two interaction effects of Parental socio-economic Status (PSES) and Verbal Ability on Reading Performance of Pupils with Mild intellectual disability

Table 4.1 reveals that there was interaction effects of parental socio-economic status and verbal ability on reading performance of pupils with mild intellectual disability ( $F_{(2, 32)} = 3.569$ ,  $p < .05$ ). The null hypothesis was therefore rejected.

**Table 4.9 Estimated marginal mean scores from the analysis of the effect of socio-economic status and verbal ability on reading performance of pupils with mild intellectual disability**

Socio-economic Status	Verbal Ability	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Low	Low	32.77	1.47	29.78	35.76
	Average	52.00 <sup>a</sup>	4.90	42.02	61.98
	High	51.50 <sup>a</sup>	3.00	45.39	57.61
Middle Class	Low	36.25 <sup>a</sup>	2.74	30.67	41.83
	Average	46.47	1.50	43.41	49.52
	High	56.00 <sup>a</sup>	2.83	50.24	61.76
High	Low	49.00 <sup>a</sup>	4.90	39.02	58.98
	Average	52.00 <sup>a</sup>	4.90	42.02	61.98
	High	47.33	2.21	42.83	51.84

Table 4.7 shows the mean score based on analysis of the interaction effects of parental socio-economic status and verbal ability in the study. The mean score for the interaction between pupils with mild intellectual with high verbal ability and middle status was the highest at 56.00 followed by high verbal high verbal ability and high SES of 47.33 while the lowest interaction mean score was low verbal ability and pupils with mild intellectual disability from parents with low socio-economic status at 36.25. The implication is that parental socio-economic status and verbal ability interaction effect on reading performance of participants was significant.



**H<sub>07</sub>** There is no significant three-way interaction effects of treatment, parental socio-economic status and Verbal Ability on Reading Performance of Pupils with Mild intellectual disability

Table 4.1 reveals that treatment, parental socioeconomic status and verbal ability interaction effect on reading performance of pupils with mild intellectual disability ( $F_{(2, 32)} =$ ,  $p < .05$ ) was not significant. Therefore, the null hypothesis was accepted.

**Table 4.10 Estimated marginal mean scores from the analysis of the effects of treatment, parental socio-economic status and verbal ability on reading performance of pupils with mild intellectual disability**

**Parental socio-economic status \* treatment \* verbal ability**

Socio-economic Status	Treatment	Verbal Ability	Mean	Std. Error	95% Confidence Interval		
					Lower Bound	Upper Bound	
Low	Pictorial Illustration	Low	33.14	1.85	29.37	36.91	
		Average	.a	.	.	.	
		High	.a	.	.	.	
	Music Therapy	Low	37.00	3.46	29.94	44.06	
		Average	52.00	4.90	42.02	61.98	
		High	54.00	3.46	46.94	61.06	
	Control	Low	28.17	2.00	24.09	32.24	
		Average	.a	.	.	.	
		High	49.00	4.90	39.02	58.98	
	Middle	Pictorial Illustration	Low	.a	.	.	.
			Average	47.40	2.19	42.94	51.86
			High	56.00	4.90	46.02	65.98
Music Therapy		Low	38.50	2.45	33.51	43.49	
		Average	54.00	3.46	46.94	61.06	
		High	56.00	2.83	50.24	61.76	
Control		Low	34.00	4.90	24.02	43.98	
		Average	38.00	1.85	34.23	41.77	
		High	.a	.	.	.	
High		Pictorial Illustration	Low	.a	.	.	.
			Average	.a	.	.	.
			High	53.00	2.83	47.24	58.76
	Music Therapy	Low	.a	.	.	.	
		Average	52.00	4.899	42.02	61.98	
		High	52.00	3.46	44.94	59.06	
	Control	Low	49.00	4.90	39.02	58.98	
		Average	.a	.	.	.	
		High	37.00	4.90	27.02	46.98	

Table 4.10 shows the mean score from the analysis of the interaction effects of treatment, parental socio-economic status and verbal ability in the study. Some level of interaction (such as low PSES/pictorial illustration/average verbal ability, low PSES/pictorial illustration/high verbal ability, low PSES/control/average verbal ability, low PSES/pictorial illustration/ low verbal ability, middle PSES/control/high verbal ability, middle PSES/control/average verbal ability, middle PSES/control/high verbal ability, middle PSES/pictorial illustration/low verbal ability and high PSES/music therapy/average verbal ability,, were not significant hence the corresponding population marginal mean is not estimated depicted by “a” in the table while the level combination that were significant marginal mean were estimated and represented by values.

## **4.2 Summary of Findings**

The findings of this study are summarized as follows:

1. Treatment had significant main effect on reading performance of pupils with mild intellectual disability.
2. Parental socioeconomic status had no significant main effect on reading performance of pupils with mild intellectual disability.
3. Verbal ability had significant main effect on reading performance of pupils with mild intellectual disability.
4. Treatment and parental socio-economic status had no significant interaction effect of on reading performance of pupils with intellectual disability.
5. There was not significant interaction effect of treatment and verbal on reading performance of pupils with mild intellectual disability.
6. There was significant two-way interaction effect of verbal ability and parental socio-economic status on reading performance of pupils with mild intellectual disability.
7. Treatment, parental socio-economic status and verbal ability had three-way interaction effect on reading performance pupils with mild intellectual disability was not significant.

### **4.3 Discussion of findings**

#### **4.3.1 Main effect of treatment on reading performance of participants**

The result indicated that treatment had significant main effect on the reading performance of participants which implies that null hypothesis was not accepted. The highest estimated marginal mean was obtained by participants in music therapy group., followed by those in pictorial illustration group while participants in the control group had the lower means score The Scheffe post hoc analysis also showed significant between Pictorial Illustration and Control group as well as Music Therapy and Control group. The high performance recorded by participants that Music therapy treatment was used can be attributed to the facts that the therapy allows active learning through demonstration by the participants during the process of teaching-learning. The finding is in support of Register, et al (2007) that reported that there was improvement in the ability of learners to decode words which was reflected in the scores obtained from reading comprehension but not at a level that is significant. These finding indicated that music therapy provided the initial support required for improved reading performance. This active learning process enhance the effective participation of the pupils while characteristics that could hamper learning was taking care of such as poor attention, inability to learn abstractly affirming the conclusion of Register, et al (2007) that music activities has impact on developing skills that are related specifically to elements of music and/or reading.

The result also affirms the assertion of Douglas and Willats (1994) that there is correlation between processing rhythm (though not pitch) and skills associate with reading and spelling although children's vocabulary has improved greatly through participation in singing and musical activities (Galicia-Moyeda, Contreras-Gomez and Pena-Flores, 2006). The findings revealed a statically significant difference on reading performance of participants in the treatments group (pictorial illustration and music therapy) when compare with the control group. The effectiveness of the two strategies corroborates previous studies where pictorial illustration and music therapy were used in teaching-learning process. Such as David (1998) who reported that the ability of recalling text/picture condition was relative to text-only condition and was significant. Arundale (2005) reported that the ability to recall the content of an instruction easily by learner taught orally withsequential used of photograph was observed. It also reveals experimental group had better performance and recall easily different experience they encountered during learning when compare to the control group who did not linked sequence of photographs to oral teaching.

The result also reveals a statically difference between the groups and collaborates the finding of McDaniel and Waddill (1994) that recalling textually presented information was enhanced through the use of pictures, item specific (detailed) information in particular and relational information which led to the conclusion that readers provided with necessary comprehension skills such as pictures assisted in the extraction of important information which under ordinary circumstances are not effectively encoded. The result also shows that music therapy significantly enhanced reading performance of pupils with mid intellectual disability. This is in line with the research work of Friesen, and Bialystok (2011) who found that music training for about 20 days translated to significant improvement in awareness of rhyme and mapping of words that are not familiar to symbols when compare to training related to art. Tsang and Conrad (2011) found pitch perception and reading readiness had correlation for children who had not prior training in music. Specific areas of reading such as verbal ability, word recognition, and skills related to phonology were improved using music therapy. Furthermore, having investigated the correlation between learning music and reading Butzlaff (2000) reported that the effect size was both positive and significant where  $r = .17$  in a meta-analysis. In the assertion of Forgeard, Schlaug, Norton, Rosam, and Ivengar (2008) a relationship exists between pitch processing and phonological skills while the relationship for children with previous training in music was stronger. According Douglas and Willats (1994) skills associated with rhythm (though not pitch) processing of eight-year-old learners had correlation that is significant with skills required for reading and spelling.

The effect of music therapy on reading performance of this present study is that finding is in line with previous report of Gourgey, (1998); Hughes, Robbins, McKensie and Roob, (1990) that revealed that use of music therapy resulted in the development of skills required for effective communication skills, self-confidence improvement that result in the harmonization of interpersonal relationships among learners experiencing difficulties with integration. The brain ability to encode sounds is sharpened through music therapy which will lead to improved academic performance (Tallal and Gaab, 2006; Patel and Iverson, 2007) perception and production of subtle phonetic contrasts among students acquisition of second language (Slevc and Miyake, 2006), and interprets speech rhythms effectively (Thompson et al. 2004).

### **4.3.2 Main Effect of Parental Socio-economic Status on Reading Performance of Participants**

The result shows that parental socio-economic status had no significant main effect on reading performance of participants. The finding is not consistent with assertion on the initial reading competence of children by Aikens and Barbarin, (2008) which correlate the literacy environment in the home, number of books owned by the parents, and parent distress as significant. It is also consistent the findings from the study of Coley (2002) that a smaller number of parents in the lowest-income quintile when compared with parents the highest-income quintile read to their children. Moreover, Whitehurst and Lonigan, (1998) submitted that the effect of parental socioeconomic status on reading performance and academic performance of learners includes children from economically disadvantaged home development of language skills relatively slow when compare to the high and average, delay is exhibited in letter recognition and phonological insensitivity, and are at risk of developing reading disorder.

The findings also disagree with report of Evans (2004), Lee and Burham (2002), Vernon-Feagans, Hammer, Miccio, and Manlove (2002; Whitehurst and Lonigan (1998) that learners from household with low-SES background exposure to books is far less to that of high and average. Submission of Ajila and Olutola (2000) that the home has effect on individual because the parents play the role of first socialising the child in life based on the fact that family and condition the child is brought up will affect the disposition of the pupil in the face of life challenges and the level at which the child will performance due to the fact as a result of experiences of parents and the individual's experiences that play an important part in personality developing of the child and what the child will become in life. Thus, Ichado (1998) conclusion that the performance of learners can be influenced significantly by the school environment which is agreement with the findings. Children who are given opportunities to develop academically at home will like exhibit better behaviour required for family, school and community integration (Ferguson, 1995).

This finding is consistent with the result from Evans, Shaw and Bell (2000) who revealed that the frequency of learning task that require working with letters for instant learning the names of letters, sounds and writing letters that predict knowledge of letter names, sounds, and sensitivity of phonology after parents' education and the ability of the child is controlled. In the assertion of Eze (2004) that parents' socioeconomic status affects academic achievement of

students while making a favourable competition between learners from low and high socio-economic background difficult under the same learning environment.

### **4.3.3 Main Effect of Verbal Ability on Reading Performance of Participants**

The null hypothesis stated that there will be no significant main effect of verbal ability on reading performance of pupils with mid intellectual disability, results on 4.1 revealed that there was significant main effect of verbal ability on reading performance of participants. Therefore, the null hypothesis was not accepted. The findings are consistent with Berninger (2006) who found that accuracy, rate of word identification and reading text predicted comprehension skills while comprehension skills was also predicted by verbal ability. Furthermore, it was reported by Berninger, (2006) that the use of general reading strategy for the treatment group resulted in significant improvement when compare to control group. Development of vocabulary and verbal reasoning was supported based on result from the two studies as a crucial aspect required for improved reading comprehension.

The finding also agrees with the conclusion of Idogo (2011) who investigated verbal ability significant main effect on academic achievement of pupils in reading comprehension. The result showed that high verbal ability pupils achieved better than the average and low ability pupils across the three treatment groups, it therefore points to the fact that pupil's achievement in reading comprehension is dependent on their verbal ability. The result confirms the assertion that pupil's verbal ability in reading is a display of the pupil's experience and exposure to the usage of the language. Olabopo (1999) concluded that treatment and verbal ability had significant interaction effect on scores variation of learners in English composition.

The estimated marginal means shown in Table 4.5 also indicated that the highest mean score was recorded among pupils with high verbal ability while the lowest mean score was obtained by learners with low verbal ability. The indicated that verbal ability contributed to the development of reading performance of pupils with mild intellectual disability. The finding aligns with the work of Ferrer and McArdle, (2004) who submitted that the correlation between developing cognitive skills and changes in academic performance (two examples of such are knowledge of academic and quantitative skills) is significant during childhood and adolescence. Their interconnections is described as joint sequence of development where one level of variable is related positively to changes to other variables. The result on the other hand contradicts the assertion of Iyagba (1994) who reported the difference in students' performance in composition

achievement based on various verbal ability was no significant while a significant difference was found in students' attitude belonging to various ability groups.

#### **4.3.4 Two Way Interaction Effect of Treatment and Parental Socio-economic Status on Reading Performance of Participants**

The null hypothesis stated that there will be no significant interaction effect of treatment and parental socio-economic status on reading performance of pupils with mild intellectual disability. Results as presented in Table 4.1 indicated that statistically interaction effect of treatment and parental socio-economic status on reading performance of participants was not significant which implies that the null hypothesis was accepted. The finding of this study negates the opinion of Aikens and Barbarin (2008) that learners initial reading skills is predicted by literacy environment at home, access to books, and distressed level of parents. Ajila and Olutola (2000) submitted that an individual is influenced by the home because the parents are the first agents of socialization in the life of an individual. The reason is due to the relationship with member of the child immediate family and condition of training at home will affect the attitude of the child situation life and the achievement level the child can attain. Ferguson (1995) Children provided with adequate opportunities for developing skills required for learning at home are likely to integrate better in the family, school and community.

The result is not consistent with Arizpe and Styles, (2003) who discovered that when significant amount of time is given to learners to analyse and discuss picture books the benefit of engaging in such activity can be "outstanding" and interesting to the learners. Bower and Spaulding (2000) submitted that using pictures in combination with verbal face to face explanation in an appropriate sequence, can be effective in communicating new idea that will improve the performance of learners.

#### **4.3.5 Two Way Interaction Effect of Treatment and Verbal Ability Status on Reading Performance of Participants**

The null hypothesis stated that there will be no interaction effect of treatment and verbal ability on reading performance of pupils with mid intellectual disability. The result in 4.1 showed that the interaction effect of treatment and verbal ability did not significantly have effect on reading performance of participants. The null hypothesis was accepted. This negates the findings of Barudin and Hourcade (1990) who found that all three procedures had a significant effect



compared to the control condition. Arizpe and Styles, (2003) reported that result on performance of learners can be outstanding when children are allowed to have enough time to analyse and discuss picture in books.

The finding also does not collaborate the report of Ijiga (2014) who concluded that the verbal ability on students' reading comprehension performance was significant. The finding also revealed reading skills of students was significantly influenced by the interaction effect verbal reasoning and video modelling. The implication is that the reading comprehension of students with high verbal ability performance was better, and that the treatments used in the study were more efficient for learners with high verbal ability. It is not in alignment with the findings of Berninger (2006) that supported the development of vocabulary development and verbal ability as crucial for the improvement of reading comprehension. The findings are inconsistent with Olabopo (1999) that submitted that the interaction effects of treatment and verbal reasoning on scores obtained by students in English composition was significant.

#### **4.3.6 Two Way Interaction Effect of Parental Socio-economic Status and Verbal Ability Status on Reading Performance of Participants**

The result presented in Table 4.1 revealed that the interaction effect of parental socio-economic status and verbal ability on reading performance of participants was significant. The null hypothesis was therefore rejected. The findings corroborate report of Idogo (2011) that pupils with high verbal ability achieved better than the average and low ability pupils across three treatment groups, it therefore points to the fact that pupil's including those with intellectual disability achievement in reading comprehension is dependent on their verbal ability. The findings confirm the assertion that pupil's with intellectual disability verbal ability in reading is a display of the pupil's experience and exposure to the usage of the language.

The result of this finding is in agreement with a report that states that initial reading performance of children correlates with the literacy environment at home, number of books available, and parent distress (Aikens and Barbarin, 2008). Learners whose parents provide them with ample opportunities to improve their academic skills will likely integrate easily into the family, school and community life (Ferguson, 1995). The findings are contrary to the conclusion of Jiboku, (1990) that there was no significant effect of verbal ability on student's achievement in reading comprehension.

#### **4.3.7 Two Way Interaction Effect of Treatment, Parental Socio-economic Status and Verbal Ability Status on Reading Performance of Participants**

Findings in Table 4.1 indicated that there was no statistically significant interaction effect of treatment, parental socio-economic status and verbal ability on reading performance of participants. Therefore, the null hypothesis was accepted. The finding negates the report of Arundale (2005) that the performance of students in the experimental group was better because recalling previously acquired experiences was easy. It is also inconsistent with the submission of Hibbing and Rankin-Erickson (2003) who noted pictorial illustration that includes the use of text enable struggling learners to improve their comprehension skills. The result on the contrary is in alignment with Iyagba (1994) who found that learners' performance with different level verbal ability and composition had no significant differences but students' attitude in belonging to various ability groups was discovered to have significant difference.

Berninger, (2006) it was reported that using general reading programme for the treatment group resulted in significant improvement when compare to control group. Vocabulary development and verbal ability was supported based on result from the two studies as a crucial aspect required for improved reading comprehension achievement. Evans, Shaw and Bell (2000) the results indicated that the frequency of tasks that involved working with letters such as learning the names of each letter, sounds and writing letters predicted knowledge of letter names, sounds, and sensitivity to phonological when factors such parents' education and child's ability were controlled.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

The summary of the research, conclusion and recommendations is presented in this chapter based on the findings of the study. The chapter also includes limitation of the study, contribution to knowledge and suggestion for further studies.

#### 5.1 Summary

The study investigated pictorial illustration, music therapy and reading performance of pupils with mild intellectual disability. The effect of instruction using two different strategies on reading performance of participants was investigated while the moderating effect of parental socio-economic status and verbal ability was also determined. The study was carried out using quasi-experimental research design of pretest-posttest control group of 3 x 3 x 3 factorial matrix. Fifty participants were selected for the study using multi-stage sampling procedures. The participants were assigned to three groups (two experimental and one control groups). This study was borne out of the need to empirically investigate on effective instructional strategies to be used in improving reading performance of pupils with mild intellectual disability. Data generated via pre-treatment score and post-treatment using both self-developed and standardized scales. Data were analysed using inferential statistics.

Seven hypotheses were formulated and tested. Three of the hypotheses were accepted, while four were rejected. The findings revealed that pictorial illustration and music therapy enhanced reading performance of the participants. Verbal ability significantly had significant main effect on reading performance. The moderating effect of parental socioeconomic status was insignificant on reading performance. Parental socioeconomic status and verbal ability had significant interaction effect on reading performance of participants. Furthermore, treatment and parental socioeconomic status, treatment and verbal ability as well as treatment, parental socioeconomic status and verbal ability interaction effect were not significant on reading performance of participants.

The implication of this is that, treatment enhanced reading performance but treatment did not interact with the two moderating variables (parental socio-economic status and verbal ability of pupils with mild intellectual disability) in a 2-way or 3-way to significantly have effect on the reading performance of pupils with mild intellectual disability. It also implies that the two

moderating variables interaction were significant to have effect on the reading performance of participants.

## **5.2 Conclusion**

The study focused on reading performance of pupils with mild intellectual disability in Ibadan metropolis, Nigeria. Parental socio-economic status (at three levels – high, middle and low) and verbal ability (at three levels – high, average and low) were the moderating variables considered in the study. Participants in this study were assigned to three groups; two experimental groups (exposed to pictorial illustration and music therapy) and a control group. Relevant data were collected and analysed. Based on the findings of this study, it was concluded that both pictorial illustration and music therapy were effective in enhancing reading performance of participants.

Finding from this study established that the treatment effectively enhanced reading performance of the participants; music therapy enhanced reading performance of participants more when compared to pictorial illustration. Verbal ability as a moderating variable enhanced reading performance of participants while parental socioeconomic background did not moderate the effect. The interaction between treatment and parental socioeconomic level, treatment and verbal ability as well as treatment, parental socioeconomic status and verbal ability had insignificant effect on the reading performance of pupils with mild intellectual disability but the interaction between parental socio-economic status and verbal ability had significant effect on the dependent variable.

## **5.3 Educational implications of the findings**

The results of this study have several educational implications. This study has proven that pictorial illustration and music therapy are effective strategies for enhancing reading performance of participants which imply that reading performance can be effectively enhanced using the strategies among participants. Special educators should endeavour to utilise these strategies in providing instruction to pupils with mild intellectual disability to enhance their reading performance.

Parental socio-economic status had no significant main effect on reading performance. This implies that irrespective of parental socio-economic status (high, middle and low) will not

interfere in the reading performance. The knowledge of this will hopefully assist educators in appreciating the non-interference of socio-economic on the reading performance of pupils with mild intellectual disability. On the other hand, verbal ability had significant main effect on reading performance of participants.

Furthermore, treatment, parental socio-economic status and verbal ability interaction was not significant on reading performance. In essence, when utilising pictorial illustration and music Therapy strategies on reading performance for pupils with mild intellectual disability, it is important that the educator ensure that all materials and experiences are adequately provided. This experience should be such that all pupils with mild intellectual can benefit from irrespective of parental socio-economic status and verbal ability.

#### **5.4 Recommendations**

The following were the recommendations made based on the findings of the study and the conclusion drawn thereof:

1. Educators should regularly work on enhancing reading performance of pupils with mild intellectual disability using pictorial illustration and music therapy since the result reveals that treatment had significant main effect on reading performance of pupils with mild intellectual disability.
2. The two strategies should be incorporated in development of reading performance of pupils with mild intellectual disability.
3. Educators should not just sing for singing sake but find a way of using it to improve reading performance.
4. Curriculum planners should equip themselves with information provided in this study when planning curriculum, especially in the area of reading performance. This will help curtail the use of teaching strategies that are ineffective for the development reading performance.
5. There is need to consider how verbal ability can be used positively because high verbal had significant effect on the reading performance of participants.
6. Parents and teachers of pupils with mild intellectual disability should source for educational songs and pictorial illustration books that can be used in enhancing reading

performance of pupils with mild intellectual disability for the purpose of developing their reading performance.

### **5.5 Contributions to knowledge**

This study has made the following contributions to knowledge:

1. Pictorial illustration and music therapy enhanced reading performance of pupils with mild intellectual disability.
2. Music therapy was more effective in enhancing reading performance of pupils with mild intellectual disability when compared with pictorial illustration
3. Parental socio-economic status of pupils with mild intellectual disability did not contribute to their reading performance through the use of pictorial illustration and music therapy in teaching –learning process.
4. Verbal ability contributed to reading performance of pupils with mild intellectual disability.
5. Moreover, the interaction of parental socio-economic status and verbal ability on reading performance was significant as revealed in the findings

### **5.6 Limitations of the study**

This study was limited in scope to only pupils with mild intellectual disability in Ibadan metropolis, Nigeria. More data would have been retrieved if a wider scope was used for the study. Also, the nature of the children requires that the teacher takes time to explain the need for them to participate in each lesson before each treatment package can be carried out. Despite these limitations, the outcome of this study would still be valid.

### **5.7 Suggestion for further studies**

The areas for further studies which were based on the findings and limitations of this study;

1. A study of this nature can be replicated using either time series or longitudinal research design
2. Using pictorial illustration and music therapy in teaching-learning process of other subjects, this study can be carried out.

3. Based on the objectives reading performance, additional moderating variables can also be derived, such as, self-esteem, school type and age.
4. Exploring other treatment packages such as video modelling, play-way, rebus approach and hippotherapy can also be done to ascertain their effectiveness in enhancing reading performance of pupils with mild intellectual disability
5. The study could be extended to other states or geopolitical zone within the country (Nigeria).

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## APPENDIX I

### **Slosson intelligence test-question**

Begin testing the items by the subject's age. Continue until a basal often (10) correct responses are obtained. If necessary, begin at a lower level than indicated and or proceed backwards until ten (10) correct responses are obtained. Continue testing upward until ten (10) incorrect responses are obtained. At that point discontinue testing. Items marked \* refers to back of the score sheet.

Begin age four.

#### Must pass both

1. a. SHOW ME YOUR TONGUE  
Correctly indicates
- b. SHOW ME YOUR NECK  
Correctly indicates

#### Must pass both

2. a. SHOW ME YOUR ARM  
Correctly indicates
- b. SHOW ME YOUR KNEEL  
Correctly indicates

#### Must pass one set of set numbers

3. SAY THIS NUMBER. SAY 8, NOW SAY THESE NUMBERS WHEN I FINISH 5 5. If failure, say. Say these numbers when I finish 2 6  
*Say the numbers slowly, about one second apart; do not group the numbers in any way.*  
Must repeat one series correctly
4. FINSH WHAT I SAY: A HAT GOES ON YOUR HEAD. SHOE GOES ON YOUR \_\_\_\_\_  
Score one: Feet; foot  
Score zero: Legs; toes
5. HOW MANY APPLES AM I DRAWING?  
*Draw two circles to look like apples*  
Two

6. FINISH WHAT I SAY: FIRE IS HOT. ICE IS \_\_\_\_\_  
Score one: Cold; cool  
Score zero: Snow; freezing; white; clear
7. HOW MANY APPLES AM I DRAWING?  
*Draw three circles to look like apples*  
Three
8. WHAT IS A DOOR?  
We go in and out of it; it is made of wood and we go through it; it has hinges and we open and close it; it is there (correctly points)
- Must pass both
9. a. PUT THE PENCIL ON TOP OF THE BOOK  
Correctly perform  
b. PUT THE PENCIL UNDER THE BOOK  
Correctly perform
10. SAY THIS SENTENCE EXACTLY AS I SAY IT. LISTEN CAREFULLY AS I CANNOT REPEAT IT. SAY “BABY SLEEPS.” NOW SAY “BABY SLEEPS IN A LITTLE BED.”  
Score one only if every word is repeated, even if some words are not correctly spoken, pronounced due to immature speech.
11. HOW MANY LEGS DOES A PERSON HAVE?  
Two
12. PUT THE PAPER INSIDE THE BOOK  
Correctly perform
13. WHAT IS A KNIFE?  
Cut with it; cut (meat, wood) with it; it is made of metal, long, sharp, it is long and has a point; mother uses it in the kitchen to cut food.  
*Any sensible response to indicate cut. Also credit any answer indicating other meanings such as “Knifed through the water (boat went through the water).”*
- Must pass both
14. *Show two squares; one smaller*  
a. WHICH SQUARE IS SMALLER?  
Correctly indicates

- b. WHICH SQUARE IS LARGER?  
Correctly indicates

Begin age five.

15. WHICH IS BIGGER A CAT OR A MOUSE?  
Car, kitty, kitten.
- Must pass both
16. SAY THESE NUMBERS JUST THE WAY I SAY THEM WHEN I FINISH 8 4 1  
*If failure say: Say these numbers when I finish 7 3 5*  
*Say the numbers slowly, about one second apart; do not group the numbers in any way.*  
Must repeat one series correctly
- \*17. HOW MANY APPLES AM I DRAWING?  
*Draw five circles to look like apples*  
Five
18. WHAT IS A WINDOW?  
It in the house and we look through it; it is made of glass and we look through (out of) it; it is there (correctly points).  
*Any sensible response describing window*
19. WHY DO WE TAKE BATH?  
To keep clean; to be clean, to clean ourselves; cause I'm dirty; to get clean; to clear my body; to keep well; to look pretty; because mother wants me to be clear  
*Any sensible response referring to keeping oneself clean*
20. WHY DO WE HAVE CLOCKS?  
To tell time; to get up by; to know when to go to school (bed, eat, etc.)  
*Any sensible response referring to telling time*
21. WHAT IS A FLOOR?  
It is under us; it is there (correctly points); what we walk on; it is made of wood (concrete, etc.) and it is under us  
*Any sensible response describing floor*
22. SAY THIS SENTENCE EXACTLY AS I SAY IT. LISTEN CAREFULLY AS I CANNOT REPEAT IT. SAY "I HAVE FUN." "I HAVE FUN PLAYING WITH MY FRIENDS."

Every word must be repeated correctly even though speech may be a bit immature

23. HOW MANY APPLES AM I DRAWING?

Draw six circles to look like apples

Six

24. WHAT NUMBER COMES AFTER EIGHT

Nine

25. FINISH WHAT I SAY; MILK IS WHITE, BUTTER IS \_\_\_\_\_

Yellow, yellowish

Must pass both

26. a. SHOW ME YOUR HEEL

Correctly indicates

- b. SHOW ME YOUR THUMB

Correctly indicates

27. WHAT IS AN AIRPLANE?

It is an engine, wings and flies, it takes people (freight, packages) in the air, it is made of metal, has an engine (motor) and flies.

*Any sensible response describing an airplane*

28. WHAT SHOULD YOU DO IF CAME HOME AND FOUND SOMEONE THAT ROBBED YOUR HOUSE

Call the police (sheriff, cops, state patrol, FBI, etc.), call mother (father) and tell them what happened

*Any sensible response referring to getting someone with authority to come to the home*

29. WHAT ANIMAL GIVES US EGGS TO EAT?

Score one: Chicken; hen; duck; goose; turkey

Score zero: Rooster; bird(s)

Begin age six

Must pass both

30. SAY THESE NUMBERS JUST THE WAY I SAY THEM WHEN I FINISH 2 9 5

3. *If failure, say.* Say these numbers when I finish 4 7 3 6

*Say the numbers slowly, about one second apart; do not group the numbers in any way.*



Must repeat one series correctly

31. WHY DO PEOPLE WEAR HEAVY CLOTHES IN THE WINTER?  
They keep heat in better; they are warmer; they hold (retain) heat; lightweight clothes would let in cold or not retain heat.  
*Any sensible answer explaining why people wear heavy clothes in the winter*
32. SAY THIS SENTENCE EXACTLY AS I SAY IT. LISTEN CAREFULLY AS I CANNOT REPEAT IT. SAY “I GO.” NOW SAY, “I GO TO THE STORE TO BUY BREAD, BUTTER AND MILK.”  
Must repeat sentence exactly and in correctly order
33. WHAT IS A CAR?  
Automobile; it has four wheels; an engine and runs on the roads; we ride in it to go places on roads; a form of transportation on roads (highways); a vehicle. *Any sensible response describing a car.*  
Score zero: We ride in it (no indication on roads), it has an engine; it goes places
34. IF I CUT AN APPLE IN HALF, HOW MANY PIECES DO I HAVE?  
Two
35. FINISH WHAT I SAY: A CARROT IS A VEGETABLE; AN APPLE IS A \_\_\_\_\_  
Fruit
36. FINISH WHAT I SAY: A LEMON IS SOUR, SUGAR IS \_\_\_\_\_  
Score one: Sweet, sweetish  
Score zero: Good
37. WHY DOES A CAR HAVE AN ENGINE?  
To make it go; to pull (push) it; so, it can move; to give power so it can move (go)  
  
Must pass both
38. WHAT SHOULD YOU SAY AND DO IF YOU BROKE SOMETHING THAT BELONGS TO YOUR FRIEND?  
The examinee must correctly state what to SAY and DO.  
*If only one concept is given ask for the other.*  
Say: I am sorry; I did not mean to do it  
*Any sensible response indicating the individual is sorry and the act was unintentional*

Do; I will fix (repair) it; I will buy (or get) you another one; I will give you money for it.

*Any sensible response indicating replacement, repayment or repair*

39. WHAT IS A FOREST MADE OF

Trees; woods; pine trees; woodland; a place with trees; birds and animals, etc.

*Concept of trees must be included in the response*

Score zero: Bushes

40. Must pass one set.

SAY SOME NUMBERS BACKWARDS FOR EXAMPLE, IF I SAY 1 2 3. YOU WOULD SAY 3 2 1. NOW SAY THESE NUMBERS BACKWARDS WHEN I FINISH SAYING THEM. 2 7 *If failure say, Say these numbers backwards 3 3.*

*Say the numbers slowly, about one second apart; do not group the numbers in any way.*

Must repeat one series backwards

Must pass both

41. a. HOW IS CRAYON DIFFERENT FROM A PENCIL?

One is coloured and the other is black (red blue); one is big and the other is little; one is made of wax and the other of lead; etc.

b. HOW ARE A CRAYON AND A PENCIL THE SAME OR ALIKE?

They both write (draw); both make marks; you can picture with both.

*Any sensible response showing the similarities between a pencil and a crayon*

*If the examinee responds by giving another difference, say; "Yes, that's how they are different, but can you tell me how they are the same or alike?"*

42. WHAT IS A HERO? WHAT WOULD YOU DO TO A HERO?

Do something great; win a victory; save a person from drowning; fight and win over an enemy; a great person; someone you look up to.

Must pass both

43, a. WHAT NUMBER COMES RIGHT BEFORE 12?

Eleven

b. WHAT NUMBER COMES JUST AFTER 12?

Thirteen

Must pass both

44. a. HOW IS MILK DIFFERENT FROM WATER?  
Milk is white and water is clear; milk comes from cows and water from tap (well, spring, river, stream, etc.); they taste differently, etc.
- b. IN WHAT WAY IS MILK AND WATER THE SAME OR ALIKE?  
You can drink; they are liquid; both are wet; etc.  
*If the individual responds: We need them to live, say: "Tell me another reason, how they are the same.*  
*If the examinee gives another difference, say: "Yes, that's how they are different but can you tell me how they are the same or alike."*

Begin age seven

45. WHY DO WE LOCK UP PRISONERS IN JAILS?  
To punish them for doing wrong; to protect us; to keep them from doing crimes again; to rehabilitate them; to get revenge  
*Any sensible response that falls within these concepts*
46. WHAT SHOULD YOU DO IF YOU FOUND A CHECK MADE OUT TO SOMEONE ELSE IN YOUR MAILBOX?  
Mail it to the (intended) person; return it to the sender; give it back to the postman.  
*Any sensible response to get the check back to the intended, the sender or the post office*  
Score zero: Keep it; cash it; throw it away
47. WHAT DOES DANGEROUS MEAN?  
Not safe; unsafe; will harm you; will do you harm; it can hurt you; a big fire is dangerous when it can hurt (destroy) you (things)  
*If response: it is bad; it is not good; smoking is dangerous; ask for further explanation.*  
Score zero: it is bad; it is not good (no further comment).
48. JIM HAD SIX MARBLES AND HE GOT TWO MORE. HOW MANY DOES HE HAVE ALTOGETHER?  
Eight
49. HOW MANY DAYS ARE THERE IN A FULL WEEK?  
Seven  
*(If the examinee responds: 5, say "No, in a full week, including weekend.")*

Must pass one set

50. SAY SOME NUMBERS BACKWARDS FOR EXAMPLE, IF I SAY 1 2 3. YOU WOULD SAY 3 2 1. NOW SAY THESE NUMBERS BACKWARDS WHEN I FINISH SAYING THEM. 4 7 3 *If failure say, Say these numbers backwards 6 2 9.*  
*Say the numbers slowly, about one second apart; do not group the numbers in any way.*  
Must repeat one series backwards

51. WHAT DOES OBEY MEANS?  
To mind (your mother, father, teacher); to do what they tell you to do; to do what they want you to do; to follow their directions.  
*If the examinee responds: Not to disobey, ask for another answer*  
Score zero: Not to bother (mother). To be good

52. BETTY HAD SIX PENNIES. SHE SPENT THREE. HOW MANY DOES SHE HAVE LEFT?  
Three

Must pass both

53. a. HOW ARE AN AIRPLANE AND BALLON THE SAME?  
They both fly; carry people and go up in the air  
b. HOW ARE AN AIRPLANE AND BALLON DIFFERENT?  
The plane has an engine and the balloon does not; the balloon floats and the airplane does not; the airplane can carry more than the balloon; the airplane has guidance and direction but a balloon goes with the wind; the balloon is used at parties for fun, while the airplane is for work and transportation  
*If the individual responds by giving another likeness, then say: "Yes, that is how they are alike, but can you tell me how they are different?"*

54. WHAT IS PAPER MADE OF?  
Wood; (wood) pulp; fibre; rags; sawdust; trees  
*If the examinee responds: (Recycled) paper. Ask. "but what was paper first made of?"*

Begin age eight.

55. WHAT SHOULD YOU DO IF YOU WERE THE FIRST TO SEE AN AUTOMOBILEACCIDENT?  
Call the police; call an ambulance; call 911; go see if you could help; call for help.

56. WHY DO WE NEED TO COOK SOME FOODBEFORE WE EAT IT?  
Taste better; kill germs; cannot eat some food raw.

57. WHAT DO WE MEAN BY INFECTION?  
A sore; a cut with germs; an infected eye which is all red; a sickness or disease; germs get into a cut or (sore); you are sick with germs; you get cut and it get worse.
58. WHY SHOULD CARS MOVE OVER WHEN AN AMBULANCE COMES WITH ITS SIRENS GOING LOAD?  
It is an emergency and the ambulance need to get to the hospital (accident) quickly; someone may be in the ambulance and needs to get to the hospital; they need to get a sick person fast.
59. WHAT SHOULD YOU DO IF YOU CUT YOUR KNEE?  
Bandage it; wash it and bandage it; put alcohol (medicine, iodine, or any medicine to heal a cut) on it; Band aid (or any other commercial bandage) on it.  
*Any sensible response to start the healing process for a cut.*  
*If the examinee responds: Tell my mother (teacher, father, doctor); go to the hospital (doctor). Ask, "But what should you do if it were just a small cut?" If the individual replies with go home, ask, "Then what would you do?"*  
Score zero: Cry. Continue with telling mother, etc.
- Must pass one set
60. SAY THESE NUMBERS JUST THE WAY I SAY THEM WHEN I FINISH. 8 5 1 9 2 *If failure say, say these numbers when I finish 7 3 6 4 1.*  
*Say the numbers slowly, about one second apart; do not group the numbers in any way.*  
Must repeat one series correctly

## APPENDIX II

### Treatment Package for Pictorial Illustration (PI)

This reading package was developed by the researcher after due consultation with experts in the field of language, intellectual disability and educational psychology. The contents of the passage were carefully structured and based on the current reading curriculum and materials for primary four educable mentally retarded pupils in Nigerian Primary Schools. The reading package which is for six weeks consists of eighteen lessons. Three lessons were taught in each week in the following order:

- Lesson one - word recognition
- Lesson two - picture reading
- Lesson three - oral reading comprehension

The words that pupils were exposed to in one lesson one, were used as treatment instrument for both picture reading and oral reading comprehension. This method was adopted because repetition aids learning; and the researcher considered this suitable for mentally retarded children because of their level of cognition.

## **Week One Lesson One**

Topic and content

Recognition of words

(i) Clock (ii) shelf (iii) grandfather

Performance Objectives:

Pupils will be able to:

1. Recognize the words
2. Pronounce the words

Teaching aids and materials, word cards, picture cards, chalkboard concrete objectives

Steps

Step 1: The resource teacher writes the words – clock, shelf and grandfather on the board

Step 2: Resource teacher asks a pupil as he points at the first picture and pronounce the word. If the pupil says ‘Clock’, reinforce by saying ‘very good’. If the pupils say something else apart from ‘clock’, prompt and cues are given until such as ‘time’

Step 3: Resource teacher points at a (Concrete object- Shelf). Asks pupils what is this? If the pupil answers shelf, he is reinforced. Resource teacher asks pupil to point at the word shelf on the board. If she points to the right word, s/he is reinforced immediately with praises ‘very good’, ‘clap for her’.

Step 4: Resource teacher displays the word cards on the table with other cards. She calls on a pupil to pick the word cards for ‘grandfather’. If she gets it right, reinforce, if not continue to give cues until she arrives at the correct answer.

Exercises

Resources teacher calls on a pupil’s one after the other to write the words clock, shelf and grandfather on the chalkboard.

Reinforcement:

All good attempts are immediately reinforced with praises. Token economies such as eraser, pencil, can be given.

## **Week One Lesson Two**

Revision of the previous work

Topic and content:

Picture reading

The pictures of clock, shelf and grandfather are arranged in a particular way – Clock is placed on the floor in front of the shelf, Grandfather is sitting beside the shelf.

Performance Objectives:

Pupils will be able to:

1. Narrate what they can see in the picture
2. Form the sentences
3. Read the sentences

Teaching aids and materials:

Picture chart, sentence card and chalkboard

Steps

Step 1: The resource teacher displays the picture chart on the wall. Tells pupils to watch closely and narrate what they can see.

Step 2: A pupil that read the sentence appropriately like “That is a clock”, “The book is on the shelf”, and “Grandfather is sitting by the shelf”. The resource teacher says ‘Yes’ but can you express it better? She continues to give cues to lead the pupil to the right answer. Pupil is reinforced.

Step 3: The resource teacher calls another pupil to narrate the picture. Pupil say ‘clock’ is by the side of box. Resource teacher says ‘Very good’, clap for her’.

Step 4: Resource teacher brings out the sentences card and asks a pupil to read. If the pupil reads it correctly, he is immediately reinforced. If not continue to prompt and give cues until the pupil arrives at the right answer.

Exercise

Resource teacher asks pupils to write the following words on the chalkboard

1. Clock
2. Shelf
3. Grandfather



### **Week One Lesson Three:**

This starts with the revision of previous lesson

Topic and content

Oral reading comprehension

The book is on the shelf

The clock is on the floor

Grandfather is sitting beside the shelf.

Questions

1. What is on the shelf?
2. Is the clock on the shelf?
3. Where is grandfather sitting?

Performance Objective:

Pupils will be able to:

1. Reading the passage
2. Answer questions correctly

Teaching aids and materials

Reading package, board, picture card and concrete objects

Steps

Step 1: The resource teacher displays the picture on the board. Ask pupils to identify each picture and read it one after the other.

Step 2: A pupil that identify the pictures and read the passage correctly, is reinforced with praises and token economies. If she/he does not, continue to prompts until she/he is able to read the passage correctly.

Step 3: The resource teacher writes the passage on the board, calls on pupils one after the other to read and she reinforce pupils that read it correctly and prompt those that cannot.

Step 4: The resource teacher asks the questions that follow. One question at a time for example she asks. What is on the shelf? She expects and answers such as “The book is on the shelf”. She reinforces the pupil that responds correctly. If a pupil says anything different from what is written, the resource teacher says not quite, try more. She gives the cues until the pupil arrives at the right answer.

## Exercises

Resource teacher points at the pictures that describe what the passage is about. She asks pupils:

1. What is on the shelf?
2. Is the clock on the shelf?
3. Where is grandfather sitting?

Reinforcement:

Correct responses are reinforced with 'Clap for her', 'Very good'.

Assignment:

Fill in the missing letter in the following words from the letters in the bracket:

1. Cl \_ck (o, a, e)
2. Sh \_lf (u, e, z)
3. Fa \_her (m, n, t)
4. Gra \_d (n, u, i)

## **Week Two Lesson One**

Lesson starts by collecting the take-home assignments. Every pupil that does the assignment is reinforced.

Revision of previous lesson

Topic and content

Recognition of words

(i) Pawpaw    (ii) Orange    (iii) Sweet

Performance Objectives:

Pupils will be able to:

1.     Recognise the words
2.     Pronounce the words

Teaching aids and materials:

Word cards, picture cards, chalkboard and concrete objects.

Steps

Step 1: Resource teacher displays the pictures of the following on the chalkboard

(i) Pawpaw    (ii) Orange    (iii) Sweet

Step 2: Resource teacher asks a pupil to point at the picture of a pencil, as he does this, he is reinforced.

Step 3: Resource teacher asks the pupil to identify the pictures correctly. Pupil picks a picture and matches it with the correct name 'Very good'. 'Clap for him'.

Step 4: Resource teacher calls on another pupil to point a shirt. He is reinforced for doing the right thing, but if he points at another picture, he is prompted to point at the correct thing. He's asked to relate this to corresponding word card. Correct performance is reinforced.

Step 5: The resource teacher asks a pupil to point to the third picture and related to the word that responds.

Exercises Dictation

Resource teacher dictates the following as pupils write them down

(i) Pawpaw    (ii) Orange    (iii) Sweet

Reinforcement

Pupils are reinforced for their attempts with praises ‘very good’, ‘clap for him’. Outstanding performances are reinforced with exercises books, pencil or biro.

## **Week Two Lesson Two**

This starts with the returning of the marked assignment. Pupils are reinforced for their efforts.

Revision of the previous work

Topic and content

Picture reading

“The pawpaw is in freeze”

“The orange is on the table”

“The woman gave the girl a sweet”

“Mary is holding a pawpaw”

Performance Objectives:

Pupils will be able to:

1. Narrate what they can see in the picture
2. Form the sentences
3. Read the sentences

Teaching aids and materials

Picture chart, sentence chart, and chalkboard

Steps

Step 1: The resource teacher displays the picture chart on the wall in front of the class. Resource teacher instructs pupil to study the picture very well.

Step 2: The resource teachers ask a pupil to narrate the event. If he is able to reinforce immediately, if not, continue to prompt until pupil arrives at the correct answer.

Step 3: The resource teacher calls on another pupil to narrate the event. If he is able to explain part of it, you say quite well, but that is not all; try more prompts and cues are given continually until pupil arrives at the correct answer.

Step 4: The resource teacher asks pupil to form complete sentences with the events in the picture. If a pupil completes the sentences, reinforce immediately with praises and token economies.

Step 5: The resource teacher picks up the picture card and read sentence cards that correspond with each, calls on a pupil to read the sentence. If he reads it correctly, he is reinforced. If not continue to prompt until he is able to read through the sentences.

Exercises:

Read these sentences and underline the word – (i) Pawpaw (ii) Orange (iii) Sweet

“The pawpaw is in freeze”

“The orange is on the table”

“The woman gave the girl a sweet”

“Mary is holding a pawpaw” will be sentence written on the board.

Reinforcement:

All attempts are reinforced with praises ‘very good’, ‘clap for her/him. Token economics of biscuits, sweet or pencil is given.

## **Week Two Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading comprehension:

The pawpaw is in freeze”

“The orange is on the table”

“The woman gave the girl a sweet”

“Mary holding a pawpaw”

And the teacher has the chalk questions

Who is holding a pawpaw?

What did the woman give the girl?

Where is the orange?

Performance Objectives

Pupils will be able to:

1. Read the passage
2. Comprehend the passage
3. Answer the question correctly

Teaching aids and materials

Reading package, picture card, concrete objects and chalkboard

Steps:

Step 1: The resource teacher writes the passage on the chalkboard and asks pupils to attempt reading it in turn.

Step 2: Resource teacher listens. A pupil read the passage correctly. She is reinforced with praises. ‘Well done’, ‘Clap for her’. If a pupil reads it haphazardly, the resource teacher says ‘You have tried, trying more’. She gives prompts and cues until pupil is able to read the passage correctly.

Step 3: The resource asks a pupil, what is Mary holding? If he/she responds that “Mary holding a pawpaw.” he/she is reinforced. If he says ‘Pawpaw’, the resource teachers say ‘ Yes but say it in a better way. She prompts the pupils until he is able to say in full sentence.

Step 4: The resources teacher asks a pupil the third and fourth question respectively and the same process is followed.

Exercises:

Teacher asks pupils to take their turns to write the following on the chalkboard

(i) Pawpaw (ii) Orange (iii) Sweet

Reinforcement:

All good attempts are immediately reinforced with praises and outstanding performances are rewarded with pencil, biscuits or exercise book.

Assignment

Fill in the missing letters in the gaps provided from the letters in the brackets:

1. Pawp\_w (a, n, o)
2. Swee \_ (i, a, t)
3. Orang\_ (u, e, s)

Assignment:



## **Week Three Lesson One**

Collection of the take-home assignments

Revision of previous lesson

Topic and content

Recognition of words

Star, Diamond, Sun and Sky

Performance Objectives

Pupils will be able to:

1. Recognise the picture
2. Match the picture with the correct word
3. Pronounce the words

Teaching aids and materials

Word cards, picture cards and chalkboard

Picture of a Diamond on a laptop, and the star in the sky

Steps

Step 1: The resource teacher shows the first word card- 'Star' to a pupil and asks him to identify and pronounce the word. If the pupil says, 'laptop', reinforce by saying 'Clap for her', 'Very good'. If the pupil says something else apart, prompts and cues are given until such a pupil has said laptop

Step 2: Resource teacher place picture card for the second word 'Diamond' on the board. She asks him to identify and match it the right word. If the pupil answers wrongly, resource teacher says No, not quite, she encourages him to continue trying as she prompts him, until the pupil arrives at the correct answer.

Step 3: The resources teacher calls on another pupil to identify and pronounce the third picture – the same process as for the first two pictures is followed.

Exercises Dictation

Teacher dictates the following words to pupils as they write

Star, Diamond, Sun and Sky

Reinforcement – reinforcement is used - 'Very good, 'Clap for him'

## **Week Three Lesson Two**

This starts by returning the marked scripts of pupil's assignment. Reinforcement is used.

Revision of the previous lesson

Picture reading

Picture of Star, Diamond, Sun and Sky

Performance Objectives:

Pupils will be able to:

1. Narrate what they can see in the picture
2. Form the sentences
3. Read the sentences

Teaching aids and materials

Picture chart, sentence card, and board

Steps

Step 1: The resource teacher displays the picture chart. Asks pupils to take turn to narrate what they could see on the table. Resource teacher write on the board all the pupils' responses and she reinforce them as they do this.

Step 2: Resource teacher asks a pupil to form sentences with what he could see from the picture. If he says 'The phone is on the computer'. You say 'Yes', very good, what else can you see 'The radio is beside the computer on the table'. Yes, quite true, but what else can you say about the position of the phone? Continue to give cues until he says the correct thing.

Step 3: The resource teacher calls another pupil to pick up the first sentence card and read. If he is able to read it, he is immediately reinforced with praises 'Very good', 'Clap for him'. If not continue to give prompts until he gets the correct answer.

Exercises: Teacher asks pupils to take their turns to narrate the things happening in the picture.

Teacher asks pupils to form sentences. This should be read out loud to other pupils.

Reinforcement:

Reinforce every attempt made by pupils with praises and token economies

### **Week Three Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading comprehension

The sun shines brightly

The sky is blue

There is a star in the sky

The diamond is on the laptop

Question:

What shines brightly?

Where is the star?

What is on the laptop?

What colour is the sky?

Performance Objectives:

Pupils will be able to:

1. Read the passage
2. Recognize specific words in the passage
3. Answer the questions

Teaching aids and materials

Reading package, picture cards, chalkboard and concrete objects

Steps

Step 1: The resource teacher writes the passage on the board and asks a pupil to read. A pupil that is able to read the passage is immediately reinforced. If any pupil cannot read through, continue to give cues read it through.

Step 2: The resource teacher calls on pupils to identify the words laptop, phone and radio from the passage. If a pupil is able to identify these words correctly, he is immediately reinforced. If not continue to give prompts and cues until such a pupil arrives at the correct answer.

Step 3: The researcher asks pupils to answer the questions generated from the passage. A pupil is asked a question that “What is on the laptop?”, if s/he answers it wrongly. The resource teacher continues to prompt and gives cues until the pupil says “The diamond is on the laptop”. A pupil is immediately reinforced.

#### Exercises Dictation

Teacher dictates the following to pupils as they write:

1. Star
2. Sun
3. Diamond
4. Sky

Reinforcement:

Pupils are reinforced with praises and token economies given

#### Assignment

Fill in the missing letter from the letters in the bracket

1. Su\_ (o, u, n)
2. Di\_ mond (a, j, n)
3. Sta\_ (u, d, r)
4. Sk\_ (y, n, l)

#### Assignment III

Use the following words to form sentence

Sun

Sky

Diamond

Star

## Week Four Lesson One

This starts with the collection of assignment III. Pupils are reinforced.

Revision of previous lesson

Topic and content

Recognition of words

(i) Pail (ii) Water (iii) Hill (iv) Bed (v) head

Performance Objectives:

Pupils will be able to:

1. Recognise the words
2. Pronounce the words

Teaching aids and materials

Word cards, picture cards, chalkboard

Steps

Step 1: The resource teacher writes the words on the chalkboard, calls on pupils to identify each word and pronounce. If a pupil is able to match a picture with the right words and pronounce correctly, he is immediately reinforced. If not prompts and cues are given to help the pupil arrive at the correct answer.

Step 2: The resource teacher calls on pupils to identify the words from the word cards placed on the table. If a pupil picks the picture and word cards of pail, water hill, bed and head the pupil is immediately reinforced. If he picks other words and pronounces correctly, he is immediately reinforced. If not prompts and cues are given to help the pupil arrive at the correct answer.

Step 3: The resource teacher asks pupils to pick the picture cards and match with the correct word's cards. If a pupil does it well, he is immediately reinforced. If not prompt such a pupil until he picks the right cards.

Exercise Dictation:

Write down the following

(i) Pail (ii) Water (iii) Hill (iv) bed (v) head

## **Week Four Lesson Two**

Teacher returns marked assignment to pupils, reinforces are used

Revision of the previous lesson

Topic and content

Picture reading

The pail is on the chair

A cup of water is on the shelf

Mark is sleeping on the bed

Sola is touching his head

Performance Objectives:

Pupils will be able to:

1. Narrate what they can see in the picture
2. Form the sentences
3. Read the sentences

Teaching aids and materials

Picture chart, sentence card and chalkboard

Steps:

Step 1: The resource teacher asks pupils to observe the picture chart and narrate what they can see. Any pupil that narrates the picture correctly, continue to reinforce until the pupil can say the correct thing

Step 2: The resource teacher tells pupils that three sentences can be formed from the picture. She calls pupils read out the first sentence. The pupil that says “A cup of water is on the shelf”, he is immediately reinforced. If he says something else, you continue to reinforce until such a pupil arrives at the correct answer.

Step 3: The teacher calls on another pupil to read the second sentence he can from the picture. If the pupil says “Sola is touching his head”. She is immediately reinforced with praises “Well done”. ‘Clap for her’ token economies can also be given.

The resource teacher calls on another pupil to form the third sentence and read. The same process is followed as for the first two sentences.

Exercises: Teacher asks pupils to take their turn and narrate the picture to turn other pupils. As they do this, they showed read out loud the sentence formed.

#### Reinforcement

Pupils are reinforced with praises- 'a Very good', 'well done' token economy of exercise books pencil is given.

### **Week Four Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading comprehension

The pail is on the chair

A cup of water is on the shelf

Mark is sleeping on the bed

Sola is touching his head

Questions:

1. What is on the chair?
2. What is on the shelf?
3. Where is Mark sleeping?
4. Who is touching his head?

Performance Objectives

Pupils will be able to:

1. Read the passage
2. Answer the question

Teaching aids and materials

Reading package, picture cards and chalkboard

Steps:

Step 1: Pupils are asked to read the passage. If a pupil is not able to read through the passage, prompts are given until such a can read through.

Step 2: The resource teacher displays the picture of the events happening in the passage, this would further help pupils to know what the passage is about if a pupil reads

The pail is on the chair

A cup of water is on the shelf

Mark is sleeping on the bed

Sola is touching his head

The teacher says quiet, tries more. She continues to give cues those who did it wrongly until the pupils provide correct answer.



Step 3: The resource teacher asks questions from the passage. If a pupil gets to answer, he is immediately reinforced with praises and token economies.

Exercises:

Teacher calls every pupil to come out one by one to read the passage. This is to be given token economies of biscuit, sweet or pencil.

Reinforcement

All the pupils are reinforced for their attempts. Outstanding performances are given token economies of biscuits, sweet or pencil.

Assignment

Form sentence with the following words

- (i) Pail
- (ii) Water
- (iii) Hill
- (iv) Bed
- (v) Head

## Week Five Lesson One

The lesson begins by collecting the take home assignment. Reinforcements are used.

Review of the previous lesson

Recognition of words

(i) Shoe                      (ii) Stick                      (iii) Door (iv) Hen

Ayo laid the stick on the floor

Mike put the shoe beside the table

Tope is standing by the door

The hen is fat

Questions:

(i) Shoe                      (ii) Stick                      (iii) Door (iv) Hen

Performance Objectives

Pupils will be able to:

1. Recognise the words
2. Pronounce the words

Teaching aids and materials

Words cards, picture cards, concrete objects and board

Steps

Step 1: The resource teacher pastes pictures of the following soap, comb and cream on the board and place words for each on the table. She asks a pupil to identify the picture and match the correct word 'soap' and pronounce it. If the pupils are able to do this he is immediately reinforced. If not, continue to prompt until the pupil is able to identify the correct words.

Step 2: Resource teacher asks a pupil to identify the word 'comb'. The teacher says not quite if s/he picks 'cream' instead of 'comb'. She continues to prompt and gives clues until he is able to get it right. The same process is followed for the word cream.

Step 3: The resource teacher asks pupil to match the word with the corresponding pictures. If a pupil does it correctly, he is reinforced. If not give the clue to help him arrives at the correct answer.

Step 4: Resource teacher asks pupils to demonstrate the use of each item. All attempts of pupils are reinforced.

Exercises:

Teacher asks pupils to pick up the word cards for shoe, door and hen to match with the pictures.

Reinforcement:

All attempts of pupils are reinforced.

## Week Five Lesson Two

This starts with returning the marked assignments

Revision of the previous lesson

Topic and content

Picture reading:

Performance Objectives:

Pupils will be able to:

1. Narrate what they can see in the picture
2. Form the sentences
3. Read the sentences

Teaching aids and materials

Picture chart, sentence cards and chalkboard

Steps

Step 1: The resource teacher puts up the picture chart. She asks pupils to observe closely what is happening in the picture.

Step 2: Resource teacher asks a pupil to relate what he has seen. If he says

Ayo laid the stick on the floor

Mike put the shoe beside the table

Tope is standing by the door

The hen is fat

You say 'very good' 'clap for him'

Step 3: Resource teacher calls on another pupil to relate another thing in the picture if he says "Tope is standing by the door", you reinforce immediately. If he says something else that is not in the picture, continue to prompt until he gets the right answer.

Step 4: The resource teacher writes out three sentences on the chalkboard. She asks pupils to take their turn to read out loud. All pupils that can read the sentences are reinforced.

Exercises:

Teacher writes the sentences on the chalkboard and asks pupil to underline the following words

1. Door

2. Shoe
3. Hen
4. Stick

#### Reinforcement

Reinforcers are used for good performance

### **Week Five Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading comprehension

Ayo laid the stick on the floor

Mike put the shoe beside the table

Tope is standing by the door

The hen is fat

Questions:

1. Who laid the stick on the floor?
2. Is the hen short?
3. Where did Mike put his shoe?
4. Who is standing by the door?

Performance Objectives

Pupils will be able to:

1. Read the passage
2. Comprehend the passage
3. Answer the question appropriately

Teaching aids and materials

Reading package, picture charts and chalkboard

Steps

Step 1: The resource teacher asks pupils to read out loud the passage. Several pupils attempt if they are able to read the passage correctly, reinforcement is used ‘very good’, ‘well done’. As many as are able to read through are given prompts and cues until they are able to read the passage.

Step 2: The resource teacher calls on pupils to pick up the picture cards of Ayo laid the stick on the floor “Mike put the shoe beside the table” “Tope is standing by the door” and “The hen is fat” This are match with the correct sentence cards. If the pupil is able to do this, the pupil is

reinforced with praises ‘very good’, ‘clap for him/her. If pupils pick the wrong cards, continue to give cues until such a pupil arrives at the correct ones.

Step 3: The resource teacher asks the pupils to write the words ‘shoe’, ‘stick’ ‘door’ and ‘hen’ on the board. Every attempt is reinforced.

Exercise:

Underline the following words in the passage:

‘shoe’, ‘stick’ ‘door’ and ‘hen’

Ayo laid the stick on the floor

Mike put the shoe beside the table

Tope is standing by the door

The hen is fat

Assignment

Fill in the missing letters in the following words:

1. Sh\_e (o, a, s)
2. Doo\_ (m, o, r)
3. Sti\_k (e, w, k)
4. He\_ (n, w, p)

## Week Six Lesson One

Topic and content

Recognition of words

(i) Clock (ii) shelf (iii) grandfather

Performance Objectives:

Pupils will be able to:

1. Recognize the words
2. Pronounce the words

Teaching aids and materials, word cards, picture cards, chalkboard concrete objectives

Steps

Step 1: The resource teacher writes the words – clock, shelf and grandfather on the board

Step 2: Resource teacher asks a pupil as he points at the first picture and pronounce the word. If the pupil says ‘Clock’, reinforce by saying ‘very good’. If the pupils say something else apart from ‘clock’, prompt and cues are given until such as ‘time’

Step 3: Resource teacher points at a (Concrete object- Shelf). Asks pupils what is this? If the pupil answers shelf, he is reinforced. Resource teacher asks pupil to point at the word shelf on the board. If she points to the right word, s/he is reinforced immediately with praises ‘very good’, ‘clap for her’.

Step 4: Resource teacher displays the word cards on the table with other cards. She calls on a pupil to pick the word cards for ‘grandfather’. If she gets it right, reinforce, if not continue to give cues until she arrives at the correct answer.

Exercises

Resources teacher calls on a pupil’s one after the other to write the words clock, shelf and grandfather on the chalkboard.

Reinforcement:

All good attempts are immediately reinforced with praises. Token economies such as eraser, pencil, can be given.



## **Week Six Lesson Two**

Lesson starts by collecting the take-home assignments. Every pupil that does the assignment is reinforced.

Revision of previous lesson

Topic and content

Recognition of words

(i) Pawpaw (ii) Orange (iii) Sweet

Performance Objectives:

Pupils will be able to:

3. Recognise the words
4. Pronounce the words

Teaching aids and materials:

Word cards, picture cards, chalkboard and concrete objects.

Steps

Step 1: Resource teacher displays the pictures of the following on the chalkboard

(i) Pawpaw (ii) Orange (iii) Sweet

Step 2: Resource teacher asks a pupil to point at the picture of a pencil, as he does this, he is reinforced.

Step 3: Resource teacher asks the pupil to identify the pictures correctly. Pupil picks a picture and matches it with the correct name 'Very good'. 'Clap for him'.

Step 4: Resource teacher calls on another pupil to point a shirt. He is reinforced for doing the right thing, but if he points at another picture, he is prompted to point at the correct thing. He's asked to relate this to corresponding word card. Correct performance is reinforced.

Step 5: The resource teacher asks a pupil to point to the third picture and related to the word that responds.

Exercises Dictation

Resource teacher dictates the following as pupils write them down

(i) Pawpaw (ii) Orange (iii) Sweet

## Reinforcement

Pupils are reinforced for their attempts with praises 'very good', 'clap for him'. Outstanding performances are reinforced with exercises books, pencil or biro.

### **Week Six Lesson Three**

Collection of the take-home assignments

Revision of previous lesson

Topic and content

Recognition of words

Star, Diamond, Sun and Sky

Performance Objectives

Pupils will be able to:

4. Recognise the picture
5. Match the picture with the correct word
6. Pronounce the words

Teaching aids and materials

Word cards, picture cards and chalkboard

Picture of a Diamond on a laptop, and the star in the sky

Steps

Step 1: The resource teacher shows the first word card- 'Star' to a pupil and asks him to identify and pronounce the word. If the pupil says, 'laptop', reinforce by saying 'Clap for her', 'Very good'. If the pupil says something else apart, prompts and cues are given until such a pupil has said laptop

Step 2: Resource teacher place picture card for the second word 'Diamond' on the board. She asks him to identify and match it the right word. If the pupil answers wrongly, resource teacher says No, not quite, she encourages him to continue trying as she prompts him, until the pupil arrives at the correct answer.

Step 3: The resources teacher calls on another pupil to identify and pronounce the third picture – the same process as for the first two pictures is followed.

Exercises Dictation

Teacher dictates the following words to pupils as they write

Star, Diamond, Sun and Sky

Reinforcement – reinforcement is used - 'Very good, 'Clap for him'

## **Week Seven Lesson One**

This starts by returning the marked scripts of pupil's assignment. Reinforcement is used.

Revision of the previous lesson

Picture reading

Picture of Star, Diamond, Sun and Sky

Performance Objectives:

Pupils will be able to:

4. Narrate what they can see in the picture
5. Form the sentences
6. Read the sentences

Teaching aids and materials

Picture chart, sentence card, and board

Steps

Step 1: The resource teacher displays the picture chart. Asks pupils to take turn to narrate what they could see on the table. Resource teacher write on the board all the pupils' responses and she reinforce them as they do this.

Step 2: Resource teacher asks a pupil to form sentences with what he could see from the picture. If he says 'The phone is on the computer'. You say 'Yes', very good, what else can you see 'The radio is beside the computer on the table'. Yes, quite true, but what else can you say about the position of the phone? Continue to give cues until he says the correct thing.

Step 3: The resource teacher calls another pupil to pick up the first sentence card and read. If he is able to read it, he is immediately reinforced with praises 'Very good', 'Clap for him'. If not continue to give prompts until he gets the correct answer.

Exercises: Teacher asks pupils to take their turns to narrate the things happening in the picture.

Teacher asks pupils to form sentences. This should be read out loud to other pupils.

Reinforcement:

Reinforce every attempt made by pupils with praises and token economies

## **Week Seven Lesson Two**

Revision of the previous lesson

Topic and content

Oral reading comprehension

The sun shines brightly

The sky is blue

There is a star in the sky

The diamond is on the laptop

Question:

What shines brightly?

Where is the star?

What is on the laptop?

What colour is the sky?

Performance Objectives:

Pupils will be able to:

4. Read the passage
5. Recognize specific words in the passage
6. Answer the questions

Teaching aids and materials

Reading package, picture cards, chalkboard and concrete objects

Steps

Step 1: The resource teacher writes the passage on the board and asks a pupil to read. A pupil that is able to read the passage is immediately reinforced. If any pupil cannot read through, continue to give cues read it through.

Step 2: The resource teacher calls on pupils to identify the words laptop, phone and radio from the passage. If a pupil is able to identify these words correctly, he is immediately reinforced. If not continue to give prompts and cues until such a pupil arrives at the correct answer.

Step 3: The researcher asks pupils to answer the questions generated from the passage. A pupil is asked a question that “What is on the laptop?”, if s/he answers it wrongly. The resource teacher continues to prompt and gives cues until the pupil says “The diamond is on the laptop”. A pupil is immediately reinforced.

#### Exercises Dictation

Teacher dictates the following to pupils as they write:

2. Star    2. Sun            3. Diamond    4. Sky

Reinforcement:

Pupils are reinforced with praises and token economies given

#### Assignment

Fill in the missing letter from the letters in the bracket

5. Su\_ (o, u, n)
6. Di\_ mond (a, j, n)
7. Sta\_ (u, d, r)
8. Sk\_ (y, n, l)

#### Assignment III

Use the following words to form sentence

Sun

Sky

Diamond

Star

### Week Seven Lesson Three

This starts with the collection of assignment III. Pupils are reinforced.

Revision of previous lesson

Topic and content

Recognition of words

(i) Pail (ii) Water (iii) Hill (iv) Bed (v) head

Performance Objectives:

Pupils will be able to:

3. Recognise the words
4. Pronounce the words

Teaching aids and materials

Word cards, picture cards, chalkboard

Steps

Step 1: The resource teacher writes the words on the chalkboard, calls on pupils to identify each word and pronounce. If a pupil is able to match a picture with the right words and pronounce correctly, he is immediately reinforced. If not prompts and cues are given to help the pupil arrive at the correct answer.

Step 2: The resource teacher calls on pupils to identify the words from the word cards placed on the table. If a pupil picks the picture and word cards of pail, water hill, bed and head the pupil is immediately reinforced. If he picks other words and pronounces correctly, he is immediately reinforced. If not prompts and cues are given to help the pupil arrive at the correct answer.

Step 3: The resource teacher asks pupils to pick the picture cards and match with the correct word's cards. If a pupil does it well, he is immediately reinforced. If not prompt such a pupil until he picks the right cards.

Exercise Dictation:

Write down the following

(i) Pail (ii) Water (iii) Hill (iv) bed (v) head

## **Week Eight Lesson One**

Teacher returns marked assignment to pupils, reinforces are used

Revision of the previous lesson

Topic and content

Picture reading

The pail is on the chair

A cup of water is on the shelf

Mark is sleeping on the bed

Sola is touching his head

Performance Objectives:

Pupils will be able to:

4. Narrate what they can see in the picture
5. Form the sentences
6. Read the sentences

Teaching aids and materials

Picture chart, sentence card and chalkboard

Steps:

Step 1: The resource teacher asks pupils to observe the picture chart and narrate what they can see. Any pupil that narrates the picture correctly, continue to reinforce until the pupil can say the correct thing

Step 2: The resource teacher tells pupils that three sentences can be formed from the picture. She calls pupils read out the first sentence. The pupil that says “A cup of water is on the shelf”, he is immediately reinforced. If he says something else, you continue to reinforce until such a pupil arrives at the correct answer.

Step 3: The teacher calls on another pupil to read the second sentence he can from the picture. If the pupil says “Sola is touching his head”. She is immediately reinforced with praises “Well done”. ‘Clap for her’ token economies can also be given.

The resource teacher calls on another pupil to form the third sentence and read. The same process is followed as for the first two sentences.



Exercises: Teacher asks pupils to take their turn and narrate the picture to turn other pupils. As they do this, they showed read out loud the sentence formed.

#### Reinforcement

Pupils are reinforced with praises- 'a Very good', 'well done' token economy of exercise books pencil is given.

## **Week Eight Lesson Two**

Teacher returns marked assignment to pupils, reinforces are used

Revision of the previous lesson

Topic and content

Picture reading

The pail is on the chair

A cup of water is on the shelf

Mark is sleeping on the bed

Sola is touching his head

Performance Objectives:

Pupils will be able to:

7. Narrate what they can see in the picture
8. Form the sentences
9. Read the sentences

Teaching aids and materials

Picture chart, sentence card and chalkboard

Steps:

Step 1: The resource teacher asks pupils to observe the picture chart and narrate what they can see. Any pupil that narrates the picture correctly, continue to reinforce until the pupil can say the correct thing

Step 2: The resource teacher tells pupils that three sentences can be formed from the picture. She calls pupils read out the first sentence. The pupil that says “A cup of water is on the shelf”, he is immediately reinforced. If he says something else, you continue to reinforce until such a pupil arrives at the correct answer.

Step 3: The teacher calls on another pupil to read the second sentence he can from the picture. If the pupil says “Sola is touching his head”. She is immediately reinforced with praises “Well done”. ‘Clap for her’ token economies can also be given.

The resource teacher calls on another pupil to form the third sentence and read. The same process is followed as for the first two sentences.

Exercises: Teacher asks pupils to take their turn and narrate the picture to turn other pupils. As they do this, they showed read out loud the sentence formed.

#### Reinforcement

Pupils are reinforced with praises- 'a Very good', 'well done' token economy of exercise books pencil is given.

### **Week Eight Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading comprehension

The pail is on the chair

A cup of water is on the shelf

Mark is sleeping on the bed

Sola is touching his head

Questions:

5. What is on the chair?
6. What is on the shelf?
7. Where is Mark sleeping?
8. Who is touching his head?

Performance Objectives

Pupils will be able to:

3. Read the passage
4. Answer the question

Teaching aids and materials

Reading package, picture cards and chalkboard

Steps:

Step 1: Pupils are asked to read the passage. If a pupil is not able to read through the passage, prompts are given until such a can read through.

Step 2: The resource teacher displays the picture of the events happening in the passage, this would further help pupils to know what the passage is about if a pupil reads

The pail is on the chair

A cup of water is on the shelf

Mark is sleeping on the bed

Sola is touching his head

The teacher says quiet, tries more. She continues to give cues those who did it wrongly until the pupils provide correct answer.

Step 3: The resource teacher asks questions from the passage. If a pupil gets to answer, he is immediately reinforced with praises and token economies.

Exercises:

Teacher calls every pupil to come out one by one to read the passage. This is to be given token economies of biscuit, sweet or pencil.

Reinforcement

All the pupils are reinforced for their attempts. Outstanding performances are given token economies of biscuits, sweet or pencil.

Assignment

Form sentence with the following words

- (vi) Pail
- (vii) Water
- (viii) Hill
- (ix) Bed
- (x) Head

### **APPENDIX III**

#### **Treatment Package for Music Therapy (MT)**

This treatment package was developed by the researcher after due consultation with experts in the field of intellectual disability and English language. The contents of the passage were carefully structured and based on the current English Language curriculum that deals with reading and materials for primary school educable mentally retarded pupils in Nigeria Primary Schools.

The treatment package is designed for six weeks which consist of eighteen lessons. Three lessons were held in each week in the following order:

Lesson one – word recognition

Lesson two – picture reading

Lesson three – oral reading

The words that the pupils were exposed to in lesson one was used as treatment instrument for the picture reading and music therapy treatment package. The reason for adopting this method was because of the fact that repetition is known to aid learning and the researcher consideration of its suitability for persons with intellectual disability due to the level of their cognition.

## **Week One Lesson One**

Topic and content

Recognition of words: clock, shelf and grandfather

Performance Objectives:

1. Recognise the words
2. Pronounce the word

Teaching aid and materials: MP 3, concrete objects, board

Steps:

Step 1: The teacher writes the words on the board, s/he points to each word at a time and reads out loud. S/he repeats this about three times while pupils listen and repeat after the teacher.

Step 2: The teacher calls on pupils one after the other to imitate what she has done by pointing at the words and reading out loud the words on the chalkboard.

Step 3: The teacher relates the words concrete objects and sing a song “My grandfather’s Clock” words- ‘clock, shelf’ and ‘grandfather’. She goes through this about three times while pupils listen.

Step 4: The teacher calls on the pupil one after the other to sing the song that she has just sang.

Exercise:

Teacher asks pupils do the following in turn:

- 1 Pick the word cards for clock, shelf and grandfather and relate to the appropriate pictures.

Reinforcement:

Pupils’ performance is reinforced with words of praise- “very good” “clap for him” “try more”.

## Week One Lesson Two

Revision of previous lesson;

Topic and content;

Sentence reading,

The song with words like clock, shelf and grandfather is sang to the children

Performance Objectives:

Pupils will be able to:

1. Repeat the words of the song
2. Sing the song
3. Form sentences from the word

Teaching aids and material

MP 3, sentence card, and word card

Steps:

Step 1: The teacher interprets the song to pupils. Teacher points at the sentence of the song and read to pupils while they observe her.

Step 2: The teacher asks pupils to initiate what she has done by sing the song and reading what they can see.

Step 3: The teacher picks up a sentence card and reads to the students and relates with pictures. She does this for the word bottles as well. She repeats this about three times.

Step 4: The teacher asks the pupils to take turns in relating the song to each sentence card.

Exercise Dictation

Write the following words down

- (i) clock                      (ii) shelf                      (iii) grandfather



### **Week One Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading comprehension

My grandfather's clock was too large for the shelf,  
So it stood ninety years on the floor;  
It was taller by half than the old man himself,  
Though it weighed not a pennyweight more.  
It was bought on the morn of the day that he was born,  
And was always his treasure and pride;  
But it stopped short — never to go again —  
When the old man died.

Ninety years without slumbering  
(tick, tock, tick, tock),  
His life's seconds numbering,  
(tick, tock, tick, tock),  
It stopped short — never to go again —  
When the old man died

Questions

1. What was too large for the shelf?
2. Where was the clock?
3. When did the clock stop?

Performance Objectives

Pupils will be able to:

1. read the passage
2. answer questions correctly

Teaching aids and materials:

Reading chart, MP3 Player, Word card

Steps:

Step 1: The teacher reads the passage slowly to the pupils, stressing the importance of the words.

She does this about four times or more. Pupils listen and watch.

Step 2: The teacher calls on pupils to read the passage together, then on individual basis.

Step 3: The teacher writes the song on the Chalkboard and underlines important. Points at each of the words and reads out loud.

Step 4: The teacher rubs off what has been written, rewrites the song and asks pupils to come one after the other and underline the words.

Step 5: The teacher guides the pupils to answer the questions based on the song one by one after the other.

Exercises:

Facilitator/Teacher calls pupils to read the passage out loud one after one the other to the others.

Reinforcement:

Pupils are reinforced with praises 'very good' 'well done'. Token economics such as biscuits or sweet may be given.

Assignment

Fill in the gaps of the words from the letters in the bracket

1. Cl \_ ck (a, o, e)
2. Gra \_ d (p, t, d)
3. Fathe \_ (r, u, i)
4. S \_ elf (p, h, d)

## **Week Two Lesson One**

This starts with the submission of take home work (assignment I)

Revision of the previous lesson

Topic and content

Recognition of words

Pawpaw, Orange, Sweet

Performance Objectives

Pupils will be able to:

1. Recognition the words
2. Pronounce the words

Teaching aids and materials

Word cards, word cards, concrete objects, MP 3 player

Steps

Step 1: The teacher picks up the word cards for each word – Pawpaw, Orange, Sweet. She reads out the words to pupils listen and watch.

Step 2: The teacher displays the word card on the board. The teacher pronounces each word and asks the pupils to do the same.

Step 3: The teacher picks up a pawpaw from the table shows the pupils and she say. This is a pawpaw. Picks up an orange and says this is an orange, same for the sweet.

Step 4: The teacher calls on the pupils one by one to pick up the items like she has done and do the same.

Exercise Dictation

Teachers asks pupils to write down the following as she dictates

(i) pawpaw    (ii) sweet    (iii) orange

## **Week Two Lesson Two**

This starts with the marking and returning of assignment

Revision of previous lesson

Topic and content

Sentence Reading

“Pawpaw is a type of fruit”

“Sweet like sugar”

“Yellow like Fanta”

“Everybody like pawpaw”

Performance Objectives

Pupils will be able to:

1. Narrate the event to the pupils
2. Form sentences using the words
3. Read sentences

Teaching aids and materials:

Picture chart; sentence cards board

Steps

Step 1: The facilitator asks pupils to look up while s/he explains the arrangement of the items to them. S/he goes over this about four times. Pupils watch and listen.

Step 2: The facilitator asks pupils to relate the story as s/he has done.

Step 3: The facilitator picks up the sentence cards and reads out what is in the picture to pupils

Step 4: The facilitator asks pupils to read the sentence card as she has done.

Exercises:

Teacher rubs off the chalkboard, puts up the picture chart and asks pupils to: read the sentence based on the happenings in the picture.

Reinforcement:

Pupils are reinforced with praises and token economics are also given.

Exercises Dictation:

Teacher asks pupils to spell the following words as she dictates: pawpaw, orange, sweet

### **Week Two Lesson Three**

Revision of previous lesson

Topic and content

Singing of the comprehension

“Pawpaw is a kind of fruit”

“Sweet like sugar”

“Yellow like Fanta”

“Everybody like pawpaw”

Questions:

1. What is a kind of fruit?
2. What does everybody like?
3. Is pawpaw black like coke?

Performance Objectives:

Pupils will be able to:

1. Read the passage
2. Comprehend the passage
3. Answer the questions correctly

Teaching aids and materials:

Reading package, concrete objects, board

Steps:

Step 1: The teacher recites the words of the slowly but clearly to pupils. Pupils listen to her.

Teacher sings the song about four times.

Step 2: The teacher sings to the pupils

Step 3: The teacher asks the pupils to sing the song while s/he listens to them and make correction where and when necessary.

Step 4: The teacher asks the pupils questions based on the sentence.

Step 5: The teacher now asks pupils to answer other questions one by one.

Exercise

Mention four kinds of fruit

Reinforcement:

Pupils are reinforced for giving correct responses.

Assignment

Fill in the gaps from the words in the brackets:

1. Fr\_it (u, n, o)
2. Swee\_ (l, t, m)
3. Paw\_aw (u, a, p)

## **Week Three Lesson One**

This lesson begins by collecting the home assignment

Revision of previous lesson

Topic and content

Recognition of words: Star, Diamond, Sun and Sky

Performance Objective

Pupils will be able to:

1. Recognition of words
2. Pronounce the words

Teaching aids and materials:

Word cards, board, real life object

Steps:

Step 1: The facilitator teach shows the pupils' word cards of the word. S/he pronounces the words pointing at each word one at a time while repeat after the facilitator

Step 2: The facilitator asks pupils to pronounce the words one by one on their own and ensures that they are well pronounced.

Step 3: The facilitator lays the word cards for each of the words side by side with the corresponding object, for better appreciation of the words. Reads out loud the word and pupils watch him/her as s/he does this.

Step 4: The facilitator calls on pupils, observe then as they imitate what she has done by placing the word cards beside the respective pictures.

Exercise Dictation:

Teacher dictates the following words to pupils, as they write

(i) Star (ii) Diamond (iii) Sun (iv) sky

Reinforcement:

Pupils are reinforced for giving answering correctly while those who answer wrong are guided

## Week Three Lesson Two

Resource teacher returns the marked assignments to pupils

Revision of previous lesson

Performance Objectives

Pupils will be able to:

1. Sing song with the new words
2. Form sentences
3. Spell the new words

Teaching aids and materials:

MP3, sentence card and board

Twinkle twinkle, little star,  
How I wonder what you are.  
Up above the world so high,  
Like a diamond in the sky.  
Twinkle twinkle, little star,  
How I wonder what you are.

When the blazing sun is gone  
When he nothing shines upon  
Then you show your little light  
Twinkle, twinkle, all the night.  
Twinkle, twinkle, little star,  
How I wonder what you are.

Steps

Step1: The facilitator explains the arrangement of the nursery rhyme to the pupils thus:

Step 2: The facilitator reads the sentence slowly while pupils listen to the facilitator and repeat the same thing.

Step 3: The facilitator recites the rhyme to the pupils while pupils listen to the facilitator and repeat the same thing.

Step 4: The facilitator asks pupils to practice on their own and make correction where and when necessary.



Step 5: The facilitator shows the sentence cards to pupils and relates it to the image. She reads this about three times to the pupils who repeat what is said.

Exercises: Teacher calls pupils one by one to act as the facilitator. Pupil should come to the front of the class and read out the sentences formed from the picture while others listen.

Reinforcement: Reinforced pupils with praises- 'very good' 'clap for her'

### Week Three Lesson Three

Revision of the previous work

Topic and content

Oral reading

Twinkle twinkle, little star,  
How I wonder what you are.  
Up above the world so high,  
Like a diamond in the sky.  
Twinkle twinkle, little star,  
How I wonder what you are.

When the blazing sun is gone  
When he nothing shines upon  
Then you show your little light  
Twinkle, twinkle, all the night.  
Twinkle, twinkle, little star,  
How I wonder what you are.

Question:

Is the star big?

What is the star like?

Where is the star?

What is blazing?

Performance Objectives:

Pupils will be able to:

1. Read the passage
2. Identify specific word in the passage
3. Answer the questions

Teaching aids and materials

Reading package, picture cards, chalkboard, concrete objects.

## Steps

Step 1: The facilitator recites the rhyme to the pupils out loud but slowly stressing important words. Pupils listen and repeat after the facilitator.

Step 2: The facilitator asks pupils to sing the song one by one the way she has done. The pupil is asked to recite it as a group

Step 3: The facilitator makes correction where and when necessary, ask questions from the pupils on the passage again after the last pupil have read.

Step 4: The facilitator demonstrates with concrete/real objects. S/he picks points to a laptop. S/he tells the pupils “I have a big laptop”. She picks up a phone and places it close to the ear. S/he tells pupils, I make call with my phone.

Step 5: The facilitator asks pupils to demonstrate the way s/he has done and make sentence on their own

## Exercise Dictation

Write the following down as I dictate to you:

(i) star          (ii) sun          (iii) sky

## Reinforcement

Pupils are reinforced with words of praise “very good”, “that’s beautiful”, token economies such as biscuit or sweet is given to outstanding pupils.

## Assignment

Fill in the missing letters from the letters in the brackets

1 S\_ n                      (a,u,n)

2 St\_ r                     (a, i, e)

3 Sk\_                        (u, d, y)

## Assignment (III)

## **Week Four Lesson One**

This starts with collection of assignment III

Reinforcement is used, review of previous lesson

Topic and content: recognition of words:

(i) Pail (ii) Water (iii) Hill (iv) bed (v) head

Performance Objectives:

Pupils will be able to:

1. Recognition the word
2. Pronounce the words

Teaching aids and materials; word cards, sentence cards

Steps:

Step 1: The facilitator writes the words on the board. S/he first of all writes hill; pronounces it out loud, while pupils observe and repeat after her. S/he does the same for the words head and bed.

Step 2: The facilitator asks pupils to read the words out loud, while she listens to them.

Step 3: The facilitator places the word cards on the table she points at the words representing monkey. Follow the same process for “sister and family”

Exercise Dictation:

Write the following down

(i) Pail (ii) Water (iii) Hill (iv) bed (v) head

Reinforcement

Reinforcement is used for pupils who get the answers correctly.

## **Week Four Lesson Two**

Teacher returns marked scripts to pupils

Reinforcement are used

Revision of the previous lesson

Topic and content: Picture reading:

Jack and Jill went up the hill  
To fetch a pail of water.  
Jack fell down and broke his crown,  
And Jill came tumbling after

Up Jack got and home did trot,  
As fast as he could caper;  
And went to bed and bound his head  
With vinegar and brown paper

Performance Objectives

Pupils will be able to:

1. Narrate the rhyme
2. Form sentences
3. Read the sentences

Teaching aids and materials

Picture chart; sentence card, board

Steps

Step1: The facilitator explains the arrangement of the nursery rhyme to the pupils thus:

Step 2: The facilitator reads the sentence slowly while pupils listen to the facilitator and repeat the same thing.

Step 3: The facilitator recites the rhyme to the pupils while pupils listen to the facilitator and repeat the same thing.

Step 4: The facilitator asks pupils to practice on their own and make correction where and when necessary.

Step 5: The facilitator shows the sentence cards to pupils and relates it to the image. She reads this about three times to the pupils who repeat what is said.

### Exercise

Teacher asks pupils to take their turn and act as the model by narrating the events in the picture to other pupils.

### Reinforcement

Pupils are reinforced with praise “very good” “clap for her”.

### **Week Four Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading comprehension

Jack and Jill went up the hill  
To fetch a pail of water  
Jack fell down and broke his crown,  
And Jill came tumbling after

Up Jack got and home did trot,  
As fast as he could caper;  
And went to bed and bound his head  
With vinegar and brown paper

Questions:

1. Who went up the hill?
2. What did Jack break?
3. Who came tumbling after Jack?

Performance Objectives:

1. Read the passage
2. Understand the passage
3. Answer the questions

Steps

Step 1: The facilitator recites the rhyme to the pupils out loud but slowly stressing important words. Pupils listen and repeat after the facilitator.

Step 2: The facilitator asks pupils to sing the song one by one the way she has done. The pupils are asked to recite it as a group

Step 3: The facilitator makes correction where and when necessary, ask questions from the pupils on the passage again after the last pupil have read.

Step 4: The facilitator demonstrates with concrete/real objects. S/he picks points to a laptop. S/he tells the pupils “I have a big laptop”. She picks up a phone and places it close to the ear. S/he tells pupils, I make call with my phone.

Step 5: The facilitator asks pupils to demonstrate the way s/he has done and make sentence on their own

Exercise:

Teacher calls pupils out one by one to read the passage.

Reinforcement

Pupils are reinforced for their attempts. Pupils that cannot read well and answer the questions correctly are not reinforced.

Assignment:

Fill in the missing letters of the following words

1. H \_ l l (i, e, a)
2. W a t \_ r (i, e, o)
3. Pa i \_ (g, l, u)

Assignment (IV)



## Week Five Lesson One

The lesson begins by collecting the take home assignment. Reinforces are used review of the previous lesson.

Topic and content

Recognition of words;

(i) Shoe                      (ii) Stick              (iii) Door (iv) Hen

Performance Objectives:

Pupils will be able to:

1. Recognise the words
2. Pronounce the words

Teaching aids and materials

Word cards, picture cards, concrete objects and board.

One, two,  
Buckle my shoe;  
Three, four,  
Shut the Door;  
Five, six,  
Pick-up sticks;  
Seven, eight,  
Lay them straight:  
Nine, ten,  
A big, fat hen;

Steps

Step 1: The facilitator introduces pupils to the words- shoe, stick, door and hen, by writing them on the chalkboard. The facilitator pronounces the words about three times.

Step 2: The facilitator asks pupils to read the words. Pupils take their turn in doing this.

Step 3: The facilitator picks up word cards for shoe, stick, door and hen use each in forming sentences. Facilitator reads the words to the pupil again pointing at the concrete object.

Step 4: The facilitator demonstrates with concrete objects of shoe, stick, door and hen, to enhance leaning.

Step 5: The facilitator calls on pupils to demonstrate the uses of the objects.

### Exercises

Teacher (Facilitator) calls out pupils in turn to pick up the word cards for soap brush, comb, cream and match with their pupils.

### Reinforcement

pupils are reinforced adequately with words of praise, - 'that's good' 'clap for him/her, token economies of pencil or eraser may be given.

### Exercise

Pick up the sentence cards that read:

I want to polish my shoe

The stick is on the table

My brother is at the door

## **Week Five Lesson Two**

- This starts with returning the marked scripts of pupils take home assignments.
- Revision of previous lesson

Topic and content

Picture reading

Pictures of a boy washing clothes with a bar soap, a girl picking a comb from a table and a girl applying cream on her body.

Performance Objectives:

1. Narrate the song
2. Form sentences with the words
3. Read the sentences

Teaching aids and materials: Sentence cards, chalkboard

One, two,  
Buckle my shoe;  
Three, four,  
Shut the Door;  
Five, six,  
Pick-up sticks;  
Seven, eight,  
Lay them straight:  
Nine, ten,  
A big, fat hen;

Steps:

Step1: The facilitator explains the arrangement of the rhyme to the pupils thus:

Step 2: The facilitator reads the sentence slowly while pupils listen to the facilitator and repeat the same thing.

Step 3: The facilitator recites the rhyme to the pupils while pupils listen to the facilitator and repeat the same thing.

Step 4: The facilitator asks pupils to practice on their own and make correction where and when necessary.

Step 5: The facilitator shows the sentence cards to pupils and relates it to the image. She reads this about three times to the pupils who repeat what is said.

Exercises:

Teachers write the sentences on the board and ask pupils to underline the following words:

1. Shoe
2. Stick
3. Door
4. Hen

Reinforcement

Reinforcements are used for good performance

### **Week Five Lesson Three**

Revision of the previous lesson

Topic and content

Oral reading:

One, two,  
Buckle my shoe;  
Three, four,  
Shut the Door;  
Five, six,  
Pick-up sticks;  
Seven, eight,  
Lay them straight:  
Nine, ten,  
A big, fat hen;

Performance Objectives:

Pupils will be able to:

1. Read the passage
2. Comprehend the passage
3. Answer the Questions appropriately

Teaching aids and materials reading package and board

Steps

Step 1: The facilitator asks pupils to recite the rhyme. Pupils make attempts while the facilitator observes them do this and make necessary corrections.

Step 2: The facilitator sings the song the way it should be emphasizing the salient points. Pupil listens carefully.

Step 3: The facilitator calls on pupils to sing the song as she has done. Pupils read the passage.

Exercise:

Make sentences with the following words:

Shoe:

Door:

Stick:

Hen

Reinforcement is used to motivate and encourage pupils

Assignment:

Fill in the gaps of the following words from the letter in the bracket

1. Sh\_e (o, a, s)
2. Doo\_ (m, r, o)
3. Sti\_k (c, m, a)
4. H\_n (o, j, e)

(Assignment V)

## **Week Six Lesson One**

Topic and content

Recognition of words: clock, shelf and grandfather

Performance Objectives:

1. Recognise the words
2. Pronounce the word

Teaching aid and materials: MP 3, concrete objects, board

Steps:

Step 1: The teacher writes the words on the board, s/he points to each word at a time and reads out loud. S/he repeats this about three times while pupils listen and repeat after the teacher.

Step 2: The teacher calls on pupils one after the other to imitate what she has done by pointing at the words and reading out loud the words on the chalkboard.

Step 3: The teacher relates the words concrete objects and sing a song “My grandfather’s Clock” words- ‘clock, shelf’ and ‘grandfather’. She goes through this about three times while pupils listen.

Step 4: The teacher calls on the pupil one after the other to sing the song that she has just done.

Exercise:

Teacher asks pupils do the following in turn:

- 1 Pick the word cards for clock, shelf and grandfather and relate to the appropriate pictures.

Reinforcement:

Pupils’ performances are reinforced with words of praise- “very good” “clap for him”.

## **Week Six Lesson Two**

This starts with the submission of take home work (assignment I)

Revision of the previous lesson

Topic and content

Recognition of words

Pawpaw, Orange, Sweet

Performance Objectives

Pupils will be able to:

3. Recognition the words
4. Pronounce the words

Teaching aids and materials

Word cards, word cards, concrete objects, MP 3 player

Steps

Step 1: The teacher picks up the word cards for each word – Pawpaw, Orange, Sweet. She reads out the words to pupils listen and watch.

Step 2: The teacher displays the word card on the board. The teacher pronounces each word and asks the pupils to do the same.

Step 3: The teacher picks up a pawpaw from the table shows the pupils and she say. This is a pawpaw. Picks up an orange and says this is an orange, same for the sweet.

Step 4: The teacher calls on the pupils one by one to pick up the items like she has done and do the same.

Exercise Dictation

Teachers asks pupils to write down the following as she dictates

(i) pawpaw    (ii) sweet    (iii) orange



### **Week Six Lesson Three**

This lesson begins by collecting the home assignment

Revision of previous lesson

Topic and content

Recognition of words: Star, Diamond, Sun and Sky

Performance Objective

Pupils will be able to:

3. Recognition of words
4. Pronounce the words

Teaching aids and materials:

Word cards, board, real life object

Steps:

Step 1: The facilitator teach shows the pupils' word cards of the word. S/he pronounces the words pointing at each word one at a time while repeat after the facilitator

Step 2: The facilitator asks pupils to pronounce the words one by one on their own and ensures that they are well pronounced.

Step 3: The facilitator lays the word cards for each of the words side by side with the corresponding object, for better appreciation of the words. Reads out loud the word and pupils watch him/her as s/he does this.

Step 4: The facilitator calls on pupils, observe then as they imitate what she has done by placing the word cards beside the respective pictures.

Exercise Dictation:

Teacher dictates the following words to pupils, as they write

(i) Star (ii) Diamond (iii) Sun (iv)sky

Reinforcement:

Pupils are reinforced for giving answering correctly while those who answer wrong are guided

## **Week Seven Lesson One**

This lesson begins by collecting the home assignment

Revision of previous lesson

Topic and content

Recognition of words: Star, Diamond, Sun and Sky

Performance Objective

Pupils will be able to:

5. Recognition of words
6. Pronounce the words

Teaching aids and materials:

Word cards, board, real life object

Steps:

Step 1: The facilitator teach shows the pupils' word cards of the word. S/he pronounces the words pointing at each word one at a time while repeat after the facilitator

Step 2: The facilitator asks pupils to pronounce the words one by one on their own and ensures that they are well pronounced.

Step 3: The facilitator lays the word cards for each of the words side by side with the corresponding object, for better appreciation of the words. Reads out loud the word and pupils watch him/her as s/he does this.

Step 4: The facilitator calls on pupils, observe then as they imitate what she has done by placing the word cards beside the respective pictures.

Exercise Dictation:

Teacher dictates the following words to pupils, as they write

(i) Star (ii) Diamond (iii) Sun (iv) sky

Reinforcement:

Pupils are reinforced for giving answering correctly while those who answer wrong are guided

## Week Seven Lesson Two

Resource teacher returns the marked assignments to pupils

Revision of previous lesson

Performance Objectives

Pupils will be able to:

1. Sing song with the new words
2. Form sentences
3. Spell the new words

Teaching aids and materials:

MP3, sentence card and board

Twinkle twinkle, little star,  
How I wonder what you are.  
Up above the world so high,  
Like a diamond in the sky.  
Twinkle twinkle, little star,  
How I wonder what you are.

When the blazing sun is gone  
When he nothing shines upon  
Then you show your little light  
Twinkle, twinkle, all the night.  
Twinkle, twinkle, little star,  
How I wonder what you are.

Steps

Step1: The facilitator explains the arrangement of the nursery rhyme to the pupils thus:

Step 2: The facilitator reads the sentence slowly while pupils listen to the facilitator and repeat the same thing.

Step 3: The facilitator recites the rhyme to the pupils while pupils listen to the facilitator and repeat the same thing.

Step 4: The facilitator asks pupils to practice on their own and make correction where and when necessary.

Step 5: The facilitator shows the sentence cards to pupils and relates it to the image. She reads this about three times to the pupils who repeat what is said.

Exercises: Teacher calls pupils one by one to act as the facilitator. Pupil should come to the front of the class and read out the sentences formed from the picture while others listen.

Reinforcement: Reinforced pupils with praises- 'very good' 'clap for her'

### Week Seven Lesson Three

Revision of the previous work

Topic and content

Oral reading

Twinkle twinkle, little star,  
How I wonder what you are.  
Up above the world so high,  
Like a diamond in the sky.  
Twinkle twinkle, little star,  
How I wonder what you are.

When the blazing sun is gone  
When he nothing shines upon  
Then you show your little light  
Twinkle, twinkle, all the night.  
Twinkle, twinkle, little star,  
How I wonder what you are.

Question:

Is the star big?

What is the star like?

Where is the star?

What is blazing?

Performance Objectives:

Pupils will be able to:

1. Read the passage
2. Identify specific word in the passage
3. Answer the questions

Teaching aids and materials

Reading package, picture cards, chalkboard, concrete objects.

## Steps

Step 1: The facilitator recites the rhyme to the pupils out loud but slowly stressing important words. Pupils listen and repeat after the facilitator.

Step 2: The facilitator asks pupils to sing the song one by one the way she has done. The pupil is asking to recites it as a group

Step 3: The facilitator makes correction where and when necessary, ask questions from the pupils on the passage again after the last pupil have read.

Step 4: The facilitator demonstrates with concrete/real objects. S/he picks points to a laptop. S/he tells the pupils “I have a big laptop”. She picks up a phone and places it close to the ear. S/he tells pupils, I make call with my phone.

Step 5: The facilitator asks pupils to demonstrate the way s/he has done and make sentence on their own

## Exercise Dictation

Write the following down as I dictate to you:

(i) star          (ii) sun          (iii) sky

## Reinforcement

Pupils are reinforced with words of praise “very good”, “that’s beautiful”, token economies such as biscuit or sweet is given to outstanding pupils.

## Assignment

Fill in the missing letters from the letters in the brackets

1 S\_ n                      (a, u, n)

2 St\_ r                     (a, i, e)

3 Sk\_                        (u, d, y)

## Assignment (III)

## Week Eight Lesson One

This starts with collection of assignment III

Reinforcement is used, review of previous lesson

Topic and content: recognition of words:

(i) Pail (ii) Water (iii) Hill (iv) bed (v) head

Performance Objectives:

Pupils will be able to:

1. Recognition the word
2. Pronounce the words

Teaching aids and materials; word cards, sentence cards

Steps:

Step 1: The facilitator writes the words on the board. S/he first of all writes hill; pronounces it out loud, while pupils observe and repeat after her. S/he does the same for the words head and bed.

Step 2: The facilitator asks pupils to read the words out loud, while she listens to them.

Step 3: The facilitator places the word cards on the table she points at the words representing monkey. Follow the same process for the word“sister and family”

Exercise Dictation:

Write the following down

(i) Pail (ii) Water (iii) Hill (iv) bed (v) head

Reinforcement

Reinforcement is used for pupils who get the answers correctly.

## Week Eight Lesson Two

Teacher returns marked scripts to pupils

Reinforcement are used

Revision of the previous lesson

Topic and content: Picture reading:

Jack and Jill went up the hill  
To fetch a pail of water.  
Jack fell down and broke his crown,  
And Jill came tumbling after

Up Jack got and home did trot,  
As fast as he could caper;  
And went to bed and bound his head  
With vinegar and brown paper

Performance Objectives

Pupils will be able to:

1. Narrate the rhyme
2. Form sentences
3. Read the sentences

Teaching aids and materials

Picture chart; sentence card, board

Steps

Step1: The facilitator explains the arrangement of the nursery rhyme to the pupils thus:

Step 2: The facilitator reads the sentence slowly while pupils listen to the facilitator and repeat the same thing.

Step 3: The facilitator recites the rhyme to the pupils while pupils listen to the facilitator and repeat the same thing.

Step 4: The facilitator asks pupils to practice on their own and make correction where and when necessary.

Step 5: The facilitator shows the sentence cards to pupils and relates it to the image. She reads this about three times to the pupils who repeat what is said.



### Exercise

Teacher asks pupils to take their turn and act as the model by narrating the events in the picture to other pupils.

### Reinforcement

Pupils are reinforced with praise “very good” “clap for her”.

### Week Eight Lesson Three

Revision of the previous lesson

Topic and content

Oral reading comprehension

Jack and Jill went up the hill  
To fetch a pail of water  
Jack fell down and broke his crown,  
And Jill came tumbling after

Up Jack got and home did trot,  
As fast as he could caper;  
And went to bed and bound his head  
With vinegar and brown paper

Questions:

4. Who went up the hill?
5. What did Jack break?
6. Who came tumbling after Jack?

Performance Objectives:

1. Read the passage
2. Understand the passage
3. Answer the questions

Steps

Step 1: The facilitator recites the rhyme to the pupils out loud but slowly stressing important words. Pupils listen and repeat after the facilitator.

Step 2: The facilitator asks pupils to sing the song one by one the way she has done. The pupils are asked to recite it as a group

Step 3: The facilitator makes correction where and when necessary, ask questions from the pupils on the passage again after the last pupil have read.

Step 4: The facilitator demonstrates with concrete/real objects. S/he picks points to a laptop. S/he tells the pupils "I have a big laptop". She picks up a phone and places it close to the ear. S/he tells pupils, I make call with my phone.

Step 5: The facilitator asks pupils to demonstrate the way s/he has done and make sentence on their own

Exercise:

Teacher calls pupils out one by one to read the passage.

Reinforcement

Pupils are reinforced for their attempts. Pupils that cannot read well and answer the questions correctly are not reinforced.

Assignment:

Fill in the missing letters of the following words

1. H \_ l l (i, e, a)
2. W a t \_ r (i, e, o)
3. Pa i \_ (g, l, u)

Assignment (IV)



## SECTION C

Recognition of words

Instruction: Underline the word that corresponds with the picture in this section

Each number attracts 2 marks only

Example:



Cup, spoon, Knife

The correct word is cup; hence it is underlined.

Now do the following exercises:



1. Father, Boy, Woman



2. House, School, Church



3. Pawpaw, Mango, Sweet



4. Table, Door, Window



5. Sun, Bus, Diamond



6. Star, Moon, Light



7. Basket, Bag, Bucket



8. Shoe, Sandal, Socks



9. Cow, Hen, Cat



10. Pail, Pen, Cup

**(20 Marks)**



## SECTION D

### PICTURE READING

Instruction: Study the picture in front of each sentence and choose the correct word in the bracket to complete the sentence:

Each number attracts 2 marks only

Examples 1



The girl is \_\_\_\_\_ on a chair

The picture shows that of a girl sitting on a chair. Hence, to complete the sentence, running is written and the sentence read thus:

- The girl is sitting on a chair

Example 2

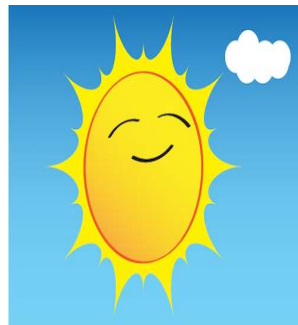


The boy is \_\_\_\_\_ a football

The picture shows that of a boy kicking football. Hence, to complete the sentence, the word Kicking/playing a football would be added and the sentence

Reads thus- The boy is Kick/play a football

Now do the following exercises:



1. The sun shines \_\_\_\_\_ (brightly, greatly)



2. The boy is at the \_\_\_\_\_ (door, wall)

3. The woman is carrying \_\_\_\_\_ of water (buckets, cups)



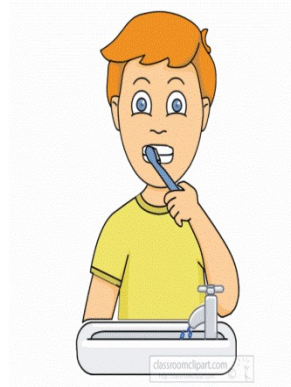
4. The boy is holding his \_\_\_\_\_ (shoes, books)



5. The books are on the \_\_\_\_\_ (shelf, cupboard)



6. The boy is \_\_\_\_\_ his teeth



(Brushing, Counting)

7. That woman is holding a \_\_\_\_\_



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Psh/PhotoDisc/Dreamstime.com

(Comb, Stick)

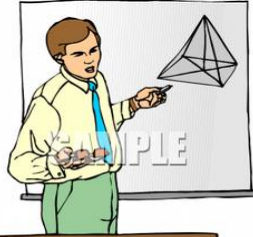
8. The \_\_\_\_\_ is on the cooker



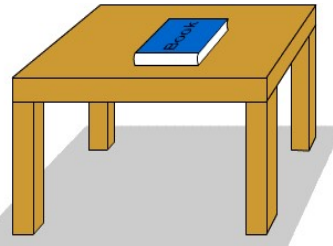
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(Pot, Pail)



9. The teacher is pointing at the \_\_\_\_\_ (wall, board)



10. The book is on a \_\_\_\_\_ (Table, Basket)

**(20 Marks)**

## **SECTION E**

### ORAL READING

Instruction: Read out loud the following sentences.

Each number attracts 2 marks

Pupil that is able to read through each sentence without any mistake is scored 2 marks

Pupil that is able to read half of the sentence is scored 1 mark

Pupil that is unable to read any of the sentences is scored 0

1. My grandfather's clock
2. The boy is at the door
3. Ade is holding a stick
4. The clock is on the shelf
5. The boy is singing
6. Please lay the stick straight
7. Mike went to fetch a pail of water
8. The teacher is on the hill
9. The hen is fat
10. Orange is sweet
11. I have a black shoe

**(20 Marks)**



Example			
angry	wood	before	Ayodele

1. white      all      Akpan      arm
2. about      lion      away      ark
3. Ali      mother      Abdul      area
4. safe      arm      water      Aluko
5. Ayo      new      Adaeze      and

Write the missing letters according to the sequence.

Example
AB <u>CD</u> EF    GH    IJ <u>KL</u> MN    OP

1. OP      \_\_\_\_\_      \_\_\_\_\_ WX    YZ \_\_\_\_\_
2. CD    EF      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_
3.      \_\_\_\_\_      \_\_\_\_\_ MN    OP    QR
4. MN      \_\_\_\_\_ QR    ST      \_\_\_\_\_      \_\_\_\_\_
5. EF    GH      \_\_\_\_\_ MN    OP

Draw a ring around the words that start with “g” and “G”

**Example**

gum

Guitar

1. green race horse gas
2. bell race gap God
3. shower girl flower grass
4. picture office garden gold
5. number gun order growth

Write five words that begins with letter “c”

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**Appendix VI**  
**Parental Socio-Economic Status Scale**



Dear Respondents,

This instrument is designed to elicit your sincere responses on the following as it applies to your parents or care givers. It will be appreciated if all statements are responded to accordingly as listed. The purpose for this exercise is purely for research and your answers will be treated with utmost confidentiality.

There are two sections in the inventory, Section A and B. There is no right or wrong, please be sure not to omit any items listed.

I look forward to your overall impressions regarding each statement.

### **Section A: Personal Data**

Kindly tick using this sign (√) to the appropriate spaces in the following items;

1. School: .....
2. Name of pupil: \_\_\_\_\_
2. Sex: Female ( ) Male ( )
3. Religion: Christianity ( ) Islam ( )
- 5a. How many cars does your parents have? \_\_\_\_\_
- b. Do they have: – motor cycle ( ) bicycle ( ) Tricycle ( )

### **Section B**

6. Parents' Occupation: Tick as appropriate (one tick each for each parent)

Instructions: Please circle the option that best applies to you and your parents.

Strongly Agree (SA)

Agree (A)

Disagree (D)

Strongly Disagree (SD)

Please tick  $\surd$  the appropriate box

A	B	C	D	E
Professional's e.g.	Clerk	Trade	Craftsman	Farmer
Lawyer, Engineer	Office Worker	Business man	Artisan	Taxi Driver
Medical doctor	Nurse,		Security	Messenger
Civil servant	Teacher			
Professor, Lecturer	Police			
Manager, Senior Army	Soldier			
Senior Civil Servant	Religious Worker			
Bishop, Priest				
5	4	3	2	1

7. Educational levels of parents (please ( $\surd$ ) the appropriate)

<b>Educational level</b>	<b>Father</b>	<b>Mother</b>	<b>Guardians</b>
No schooling			
Elementary school			
Secondary school or teacher training			
Professional training – clergy, trade school			
Higher than a- d but not university graduate			
University graduate (1 <sup>st</sup> degree)			
Above 1 <sup>st</sup> degree			

8. Parents' Residence: (please (√) the appropriate)

<b>Parents</b>	<b>Own House</b>	<b>Company/Government/University Quarters</b>	<b>Rented House</b>
Father			
Mother			
Guardians			

9. Put an X in appropriate space. If in rented house, state whether it is

(a) A flat ( ) (b) Two rooms ( ) (c) Oneroom ( )

10. Do you have one or a combination of the following? Put X in appropriate space

Radio ( ) Stereo set ( ) A Television ( ) A Refrigerator ( )

Gas/Electric cooker ( ) Freezer ( ) Video Player ( )

11. Do you have one or a combination of the following? Put X in appropriate space

Executive furniture ( )      Cushion ( )      Wooden furniture ( )      Iron chair ( )

Mat ( )

12. Do you have access to one or a combination of the following? Put X in appropriate space

Library ( )      Book shelf ( )      Periodicals/Magazine ( )      newspapers ( )

Nothing related to books ( )