HOME LITERACY MATERIALS AND THE LANGUAGE PERFORMANCE OF CHILDREN WITH DYSLEXIA IN PRIMARY SCHOOLS IN MEZAM OF CAMEROON

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ABSTRACT

This study investigated the effect of home literacy materials on the language performance of children with dyslexia in primary schools in Mezam Division of Cameroon. The mixed methods design with the sequential explanatory survey design was adopted for the study. Data was collected from 242 children with dyslexia and 21 parents of children with dyslexia. A reading readiness assessment instrument, questionnaire, interview guide and the 100 high frequency words test were used for data collection. The reading readiness assessment instrument and 100 high frequency words test were used to assess the language performance of children with dyslexia. The reliability analysis of the instrument stood at 0.767 and was tested using the Cronbach Alpha test. Both quantitative and qualitative data were collected for the study. The quantitative data were analysed using frequency count, percentages, multiple response sets and the Spearman's rho test adopted to verify the hypothesis while qualitative data were analysed thematically. Findings showed (35.2%) of the children with dyslexia said they do not have literacy materials at home to support them in language development while (64.8%) of them do have home literacy materials. The kinds of home literacy materials available were mostly chalkboard, colours and alphabet blocks. Pencils, computers, papers, rhyme books, TV, puzzle game, CDs, counting sticks, crayons, picture books, picture charts and children magazines were other learning materials available at home though not frequently mentioned the participants. Finally, findings show that there is a significant, positive and strong relationship between home literacy materials and the language performance of children with dyslexia ($P<0.05$). The positive sign of the relationship ($R = 501^*$) implies that the language performance of children with dyslexia was more likely to improve when they have literacy materials at home where they could practice with some literacy activities. For instance, findings showed that children with dyslexia who have literacy materials at home, a majority (61.1%) of them were not very bad/poor in their language performance while for those who do not have literacy materials at home, a majority (60.0%) of them were very poor in their language performance. The implication of these findings is that home learning materials have a significant and positive effect by improving on the language skills of children with dyslexia.

Keywords: Home Literacy Materials, Home Learning Materials, Children, Dyslexia, Language Development Skills.

INTRODUCTION

Reading research in the past three decades has confirmed the somewhat complex but symbiotic relationship between reading, writing and oral language (Butler & Cheng, 1998). Meanwhile knowledge of words constructed from sounds facilitates the development of phonological awareness, a pre-condition for reading acquisition in an alphabetic language system (Adams, 1990; Anthony and Lonigan, 2004). Phonological awareness comprises a variety of sub-skills that reflect the understanding of the sound system and structure of a spoken language. Children with dyslexia lack adequate

phonological awareness, reading and writing skills. In this study, dyslexia, particularly developmental dyslexia refers to a failure to learn how to read that is not due to brain injury (acquired dyslexia). Developmental dyslexia can be seen as a language-based learning disability affecting 5–17% of all children (World Health Organization, 1992; Lyon, 2003); and environmental factors such as home literacy resources have been shown to contribute to the development of early reading skills in children (Peterson & Pennington, 2015).

The absence of a supportive home literate environment with parental, sibling and peer involvement, as well as the unavailability of home learning materials can lead to a deficiency in phonological processing that affects reading decoding, while deficits in syntax, semantics, vocabulary, and reading decoding negatively affect reading comprehension (Kamhi & Catts, 1989; Torgesen, 1998; deMontfort, 2000). Reading deficits are known to profoundly retard vocabulary, verbal fluency, spelling, and general knowledge (Cunningham & Stanovich, 1998; Lyon, 2003), and are also highly prevalent, eventually leading to low achievement in primary school. Thus, home literacy materials provide the earliest important materials, knowledge and skills for the development of phonological awareness, reading and writing skills. This study set out to examine the effects home literacy materials on the language performance of primary school children with dyslexia in Mezam Division of Cameroon.

Background to the study

A historical review of dyslexia shows it evolved in four stages. During the first stage that spanned from about 1878 to 1950, dyslexia was highly viewed from a medical and neurological perspective (Critchley, 1964). During this period, the German neurologist Adolph Kussmaul, in 1878 introduced the term "word blindness" to describe his adult patients who could not read properly and regularly. They typically used words in the wrong order. This view was supported by Hinshelwood (1917), a Scottish eye surgeon, who published an account of a patient who had reading difficulties and also a congenital defect in the brain related to eyesight. From this evidence he concluded that the cause of reading difficulties was a malfunction of eyesight as a result of a brain defect. Hinshelwood's work reinforced the use of the term "word blindness" which was used regularly in medical journals to describe adults and children who had difficulty in learning to read due to brain dysfunction (de Psicologia and Guardiola, 2001).

Between 1896 and 1911, Hinshelwood published a series of reports and articles in the medical press describing clinical cases and suggesting its possible congenital nature (Hinshelwood, 1917). He contributed essentially to create a clinical and social awareness necessary to consider dyslexia as a medical issue of greatest importance. In 1917, Hinshelwood published a second treaty on "Congenital Word Blindness", which summarized the current knowledge on the issue (Hinshelwood, 1917). According to him, the defect involved the acquisition and storage of the visual memories of letters and words in the brain.

One of the most important figures in the history of dyslexia was the American neurologist Samuel Torrey Orton, who between 1925 and 1948 modeled the evolution of the study of dyslexia. As Director of Greene County Mental Clinic, in Iowa, he had the opportunity to study the language disorders of mentally retarded patients, and afterwards, his research focused on language disorders.

Despite the proliferation of research on clinical and neurological causes of dyslexia, it was not until the 1950s that it was discovered that there exists another form of dyslexia which is not caused by a sudden brain insult. Hence, children with specific literacy difficulties began to be no longer considered to be under the jurisdiction of medicine. Educational and psychological research began to accumulate at this time, broadening understanding and refining concepts of child development. This increased knowledge base helped to redefine the origins of childhood learning difficulties and how best to manage these difficulties (Critchley, 1964). Childhood learning difficulties were now more commonly recognized as being within the province of education. Even where occasionally a child's learning difficulties were diagnosed as being of a medical origin, it was agreed that the primary management of the problem was best conducted within an educational environment (Fletcher & Morris, 1986).

There was therefore a trend that went beyond the neurological causes of behavior to explanations of environmental factors. Nonetheless, there is still a gap between the identification of children with dyslexia and the implementation of interventions especially at home. According to Soares, Evans & Patel (2018), parents can provide access to books either in the home or at the public library. Spending time every day in reading with their children and choose reading materials based on the child's interest is capable of helping to improve on the reading abilities of children with dyslexia. It suffices therefore to imagine that affected children who are exposed to a variety of home literacy and learning materials, and who receive adequate social support at home may experience sharp gains and increases in language prowess with corresponding effects on language performance at school. They are more likely to perform better than their peers who may not be exposed to such home literacy-rich environments.

Early reading is an essential skill that affects the development of literacy and is supported by experiences throughout childhood (Ehri, 2005). It is characterized by difficulties with speed and accuracy of word/text decoding, poor spelling and comprehension performance (Siegel, 2006). Deficits may further include difficulties in speech perception, inaccurate representation and manipulation of speech sounds, problems with language memory, rapid automatized naming, or letter sound knowledge. Most children begin formal reading education at about 3-6 years when in nursery school; however, by the time they reach this age, many genetic and environmental factors have already begun to shape their future reading ability (Whitehurst & Lonigan, 1998). Dyslexia is therefore a disorder by which literacy acquisition can be affected by complex genetic and environmental interactions (Ozernov-Palchik, Yu, Wang, & Gaab, 2016).

Several environmental factors have been shown to contribute to the development of early reading skills in children, including socioeconomic status and home literate environment (e.g. Peterson & Pennington, 2015). Studies investigating the nature of the relationship between home learning environment, literacy materials and reading success have further observed that home literacy materials are related to oral language, phonological sensitivity, and word decoding ability in preschoolers (Burgess, Hecht, & Lonigan, 2002). And storybook exposure, a term used to describe informal literacy activities and defined by factors such as child exposure to literacy materials, parent–child literary interactions, number of books in the home, and age when reading to the child began predicts oral language and phonological awareness in preschool children

(Sénéchal & LeFevre, 2002). They are therefore an important and valuable predictor of language development in general and improved language performance in particular.

Home Literacy resources include a broad range of family resources and activities such as exposure to literacy materials, parent-child storybooks and picture book reading, as well as opportunities for literacy interactions between the child and family members. Parents can support their children if they engage in literacy-related activities with them (Leseman & de Jong, 2001) leading to better performance in language-related tasks. To encourage children to explore literacy materials, families must have access to print resources and literacy reading materials. A rich home literacy environment is important not only for the early years of childhood, but also for supporting the formal learning-to-read process at school. They provide opportunity for language learning-related activities and create an environmentally sensitive arena for language learning. Such a sensitive and stimulating home environment provides support, assistance and adequate scaffolding required for better and improved language performance, especially when affected children begin the formal learning-to-read process at school. However, the mere presence of literacy materials at home does not simply translate in improved language performance. Children must be modeled into using the said materials through parental and peer support, as well as any other forms of social support available at home and as children enter school.

The theoretical underpinning of the present study is Holdaway's theory of literacy development which explains how home literacy environments can affect the literacy development of children learning to read (Holdaway, 1979). The theory maintains that learning to read is a natural phenomenon closely linked to a child's natural development of oral language skills. It further contends that literacy development begins in children's homes and is based on meaningful learning experiences through observation, collaboration, practice and performance. Cameroon, being a multicultural and multilingual society, with children exposed to two official languages, English and French and about 286 local languages and the widely spoken West African Pidgin English expose its young to a myriad of early language experiences. Within the context of the present study, Mezam Division of North West Cameroon, children are exposed to at least three to four languages (native language, English, French, Pidgin English) in a socio-cultural context that is also multilingual. It goes without saying that children developing with such linguistic diversity are most likely to experience English language deficiency, and would require meaningful learning experiences and support networks to be able to perform well in language tasks. A study of home literacy materials and implications for language performance becomes justified as a way of facilitating and improving language performance standards among children with dyslexia.

Statement of problem

The development of literacy is a slowly building process which starts at home and gradually extends to other environments like the school. The home and school are two principal instructional contexts that ought to provide developmentally appropriate learning materials, experiences and social support systems for children's forms of deficits in phonological awareness, vocabulary, reading and writing to flourish and develop into conventional literacy. The home therefore should offer implicit and explicit experiences that assure each child's language development and performance. Evidence from comparative observational studies show that children from stimulating home literate environments with adequate parental support and have access to home

literacy materials are more literate than their peers without these resources. Beginning from home and as children move through elementary school, problems can get worse as reading becomes more complex and important to learning. It is therefore very important for parents to understand, accept and participate in supporting their child's effort by encouraging and assisting them in reading at home. The difficulties experienced by children with dyslexia can be remedied with an enriching home literate environment full of literacy materials for exploitation. This study therefore investigated how home literacy materials affect the language development of children with dyslexia.

LITERATURE REVIEW

Dyslexia is a learning difficulty, primarily affecting skills involved in accurate and fluent word reading and spelling. The main characteristics are difficulties in phonological processing, verbal memory and verbal processing speed (Rose, 2009). Lyon (1995) considers dyslexia as a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; the difficulties are not the result of generalized developmental disability or sensory impairment. Dyslexia manifests with a variety of difficulties with different forms of language, often including, in addition to problems with reading, a conspicuous problem with acquiring proficiency in writing and spelling (Lyon, 1995).

Dyslexia can either be acquired or developmental. According to Lyon (2003), acquired dyslexia is an acquired disturbance in reading ability that had previously been learned, commonly arising from a traumatic brain injury, resulting in the loss or impairment to comprehend written or printed language. Generally reading, disturbances that occur from right-brain damage cause problems with visual processing whereas left-brain damage usually results in a linguistic deficit and may occur alone or as part of other language deficits (Cherney, 2004). In this regard, individuals with phonological dyslexia, letter-to-phoneme conversion, fail even when they try to sound out single letters (Marshall & Newcombe, 1973). This involves, for instance, the rule that dictates the way the */a/* sound is pronounced in *"mate"*, which is different from the way it is pronounced in *"mat"*; and the way the pronunciation of /c/ sound is affected by the following letter, as in *"city"* and *"cell"* versus *"care"*, "*core"*, and *"cure"*.

Furthermore, phonological dyslexia can be multi-letter involving the more complex rules of conversion that apply to more than a single letter. Such multi-letter or context-sensitive rules in English would be for example the rule that dictates how to pronounce the */sh/* sound in *ship* and the */ch/* in *chip*. Multi-letter phonological dyslexia does not affect the pronunciation of single letters, but can be detected when multi-letter graphemes are read (Marshall & Newcombe, 1973). Such multi-letter deficits can either result from a deficient parsing of letters into multi-letter graphemes or from a deficient conversion of multi-letter graphemes (or letters within certain multi-letter contexts) into phonemes. These two sources of multi-letter phonological dyslexia may be very difficult to discern, especially in the case of developmental dyslexia.

To add, individuals with phonological dyslexia show difficulties with long words and morphologically complex words not only when they read them, but also when they repeat or spontaneously say them (Dotan & Friedmann, 2015). Furthermore, phonological dyslexia can equally be seen through vowel omission, substitution,

transposition, and addition of vowel letters. Thus, the word *"bit"* can be read as *"bat"*, *"but"* as *"boat"*. These errors occur in reading without parallel errors in speech production and affect vowel letters rather than vowel phonemes. The focus of this study is on developmental phonological dyslexia which can be remedied if the child's home literate environment is improved upon, with literacy materials made available to support language learning.

Literacy skills development

Literacy or being literate is defined in a number of ways, and these definitions are continually evolving. The term for example, sometimes refers only to reading, sometimes to reading and writing and sometimes, more rarely, to reading, writing, speaking and listening. Inglis and Aers (2008, p.32) note that "most children learn to talk fairly easily. In contrast, learning to read and write is a labourious process. It is the ability to read and write that makes a person 'literate', with varying degrees of fluency." The National Literacy Trust, however, includes speaking and listening in its definition of literacy and maintain that literacy is the ability to read, write, speak and listen well. A literate person is able to communicate effectively with others and to understand written information.

Literacy skills, which include reading and writing, are important to academic success as well as serving the functional purposes in everyday life. Unlike spoken language, knowledge of written language needs to be taught explicitly before competent writing and reading skills are developed. Research in the last four decades has shown however, that before formal instruction begins, certain emergent literacy skills need to be in place (e.g. Inglis & Aers, 2008). Although researchers use different classification systems and terminology, most models of emergent literacy include key skills in the areas of oral language (e.g. vocabulary, syntactic awareness, and narrative skills) and code-related skills. As such children's early literacy experiences lay the foundation of the learning-to-read process prior to formal schooling. Literacy experiences include a broad range of family activities, such as exposure to literacy, parent-child storybook and picture book reading, as well as opportunities for literacy interactions between family members and the child (Leseman & de Jong, 2001).

To encourage children to explore literacy and literacy activities, families must have access to print resources and literacy materials. In particular it is necessary that books and children's books in particular are available in a household. Parental attitudes to reading activities have an impact on the home literacy environment, as they determine the extent to which parents themselves get involved in activities and encourage their children to do so (Leseman & de Jong, 2001). And parents who engage in many literacy activities with their children foster the development of positive attitudes towards reading and writing (Sonnenschein, Brody & Munsterman, 1996). From a rich literacy environment positive effects can be expected with respect to early language skills and emergent literacy, which in turn support the development of reading and writing competencies (Bus, van IJzendoorn, & Pellegrini, 1995; Sénéchal, & LeFevre, 2002). Being the immediate social environment of the developing child, the home environment is the ecology of child development. And the notion of home literacy environment is a reflection of the home and interactions in and around it. Learning experiences are vital for young children's development and are shaped by the nature of everyday life and learning activities for the child (Bradley & Caldwell, 1995). Children learn to investigate the world through the family context and as such it provides the blueprint

for learning, behaviour, and attitudes. That is why constructivists maintain that effective learning would only be a product of an activity-based, problem-related and stimulating learning environment; an environment that gives learners opportunities to explore, operate and interact with various literacy materials (Meece, 1997). In this regard Tchombe (2019) in her mediated mutual reciprocity theory asserts the active role of the child characterised by need-interest-driven action. The assumption is that when children see the need for learning to read and write, the vales attached to such need generates interest and industry, and provokes a growing power that leads to transformative language learning (Tchombe. 2019).

In literacy-rich context also, Meece (1997) argues that children with dyslexia build their own knowledge and skills in reading and writing from interactions with their rich environment, teachers, parents, siblings, peers and any significant others who help guide this knowledge and skills building process by focusing attention, posing questions and stretching children's reading and writing abilities. Of course, in literacy-rich environments, problem-solving, "hands-on" experimentation, concept development, logical reasoning and authentic learning in reading and writing are emphasized (Farnham-Diggory, 1990). In this process, the power of purposive and goal-directed behaviour is paramount and plays a fundamental role in shaping language learning efforts.

Positive early learning experiences within the home can lead to substantial social and educational benefits that can have lasting and life changing impacts; however, neglect or abuse inhibit learning and can also have lasting consequences (Bradley and Caldwell, 1995). Home learning activities that have been studied by early years' research primarily involve parent-child activities that are educational or developmentally stimulating in nature. When the child is very young this might include simple activities such as reading to a child, playing with numbers or letters, sorting or counting things, painting and drawing, or learning songs/poems/rhymes (Farnham-Diggory, 1990). They can also include the provision of learning resources and literacy materials such as books and allowing children to interact with visiting peers (Bradley and Caldwell, 1995). Parental involvement, sibling support, interaction with peers and home learning materials have been found to be common threads in recognizing and understanding how the home environment influence's a child's literacy development. According to Meece (1997), such social interactions provide the main vehicles for literacy development. Through scaffolding and guided participation, children are able to select and structure activities that fit into their literacy skills and interests; their participation in literacy activities is monitored and supported; and level of assistance is adjusted as children begin to gain more independence in reading and writing skills.

Home literacy materials

The availability of literacy materials in the home may indicate that children have opportunities to participate in literacy and language-related activities. The availability of these literacy materials may engage children in language-enriched activities that promote their expressive and receptive language abilities (Burgess, Hecht & Lonigan, 2002). Moreover, language-supportive activities, such as book reading, are more likely to occur in homes that contain children's books (Hess & Holloway, 1984). Much research has been conducted on children's home literacy environment and its effects on reading achievement (e.g. Strickland & Schickedanz, 2009). Such studies have shown that children from home environments that provide ample opportunities for interaction

with print resources such as numerous books and books on tape; alphabet materials - including magnets, cards, and blocks; trips to the library; and reading and/or storytelling experiences and discussions have higher emerging literacy skills when measured upon entry into school than those who do not (Hildebrand & Bader, 1992). Home literacy materials can be divided into reading and writing materials as well as gadgets and props that can foster literacy skills in children. These are illustrated in table 1 below.

Table 1: Reading materials

Examples of reading materials			
Books	Catalogs	Junk Mail	Children's Dictionary
Magazines	Pamphlets	Recipes	Phone Book
Maps	Newspapers	Store Fliers	Daily Schedule
Grocery List	Cookbooks	Calendars	Sign-In Sheets
Job Chart	Alphabet Posters	Labels	Sign-Up Sheets
Coupons	Library cards	Take-Our Menus	Nursery Rhyme Posters
Examples of writing materials (Utensils & Surfaces)			
Pencils	Markers	Crayons	Paint Brushes
Dry-Erase Markers	Chalk	Letter Stamps	Letter Sponges
Letter Stencils	Ink pads	Easel	Pavement
Variety of Paper	Dry-erase board	Chalkboard	Envelopes
Clipboards	Index cards	Notebooks	
Gadgets and New Technologies			
Tape/CD Players		Headphones	
Music and Books on Tape/CD		Computers with Keyboards	
Tablets		Ipad	
Props to support literacy activities			
Felt Board with Flannel Story Pieces	Paper Clips	Magnetic Letters	Brass Paper Fasteners
Tape	Rulers	Tape	Rulers
Modeling Clay or Play Dough	Hole Punch	Dress-Up Clothes/Costumes	Stickers
Alphabet Blocks	Scissors	Dolls	Glue/Paste
Puppets	Shoe Boxes		

Source: Centre for Early Literacy Learning (2019)

A major theoretical frame for literacy skills development is Donald Holdaway's Theory of literacy development. Holdaway's (1979) theory encompasses three assumptions: that the acquisition of literacy skills follows a natural developmental pattern; that there are four processes central to learning literacy; and that the utilization of specific teaching methods enhance literacy development. Firstly, Holdaway (1979) asserts that the development of emergent literacy reflects a natural progression in literacy-rich environments, mimicking the development of oral language (Strickland & Schickedanz, 2009). For example, oral language development begins with adults talking to children who eventually start babbling and imitating sounds; followed by imitating and vocalizing words; and language development continues to become more complex as children master the developmental oral language progression, ultimately understanding that utterances carry meaning (Genishi & Dyson, 2009). The process of oral language development is however, socially mediated and scaffolded by adults who

also constitute part of the literacy-rich environment (Tchombe, 2019). Similar to oral language development, emergent literacy also shows a developmental progression based on children's participation in interactive environments with an adult language user (Strickland & Schickedanz, 2009). First, children observe adults engaging in literate behaviours, such as reading and writing, then begin to explore these literacy behaviours by creating stories, memorizing and reciting storybooks, and scribbling to mimic writing (Farnham-Diggory, 1990). Finally, as children progress and internalize the emergent literacy skills they are able to become independent literate individuals.

The second assumption of Holdaway's theory of literacy development states that there are several processes that are the foundation of literacy development, all of which are rooted in meaning-based instruction (Holdaway, 1979). The first process involves the child's observation of literacy behaviours such as being read to. For example, the child observes specific linguistic and cognitive actions that are taken by adults like page turning, tracking the lines of print, pointing to pictures, and these behaviours come to be assimilated into the children's own metalinguistic performance (Justice, Chow, Capellini, Flanigan, & Colton, 2003). In the second process, the adult and the child work together to jointly participate in book reading through interactions that are rich with encouragement, motivation and assistance. For example, the adult may invite the child to participate in the book-reading routine, while the adult steps back to transfer the control of specific aspects of the linguistic processes to the child, but stepping in to scaffold and prompt performance when the child is not able to perform the processes independently (Strickland & Schickedanz, 2009). This is in line with Vygotsky's theorization that such assistance to children must be consistent until such a moment when the child is capable of independently performing the reading or writing task. The third process involves allowing ample opportunity for additional practice of learned skills to become a fluent, literate individual. The adult, for example, may provide frequent opportunities for the child to re-read the book with the support of adult or taped models (Meece, 1997). The final process is having the child perform or share their knowledge with adults and peers without the guided or scaffolded assistance that characterized earlier interactions.

Finally, the third dimension of Holdaway's theory of literacy development assumes that specific teaching methods enhance literacy development. Holdaway (1979) argued that certain literacy practices facilitate literacy growth. The first aspect is developing a literacy rich classroom or environment. For example, providing access to a multitude of books, explicitly placing print throughout the classroom (that is labeling objects), and systematically embedding print in every aspect of the classroom (that is free play, centers, classroom routines) are instructional instances that contribute to the creation of a literacy-rich environment, be it at home or at school (Kantor, Miller, & Fernie, 1992). The second literacy practice espoused is engaging children in high-quality literacy practices which were socially mediated through both peer interaction and adult-directed scaffolds. Shared book reading would be an example of a socially mediated activity in which peers and adults are actively engaged, while allowing for social interactions that support young readers through prompts, gestures, and linguistic or cognitive models.

Parents, siblings and peers support children with dyslexia through the use of shared reading and conversation. In order to successfully teach children through shared reading, it is important to create a strong literacy environment and Holdaway (1979) presents three necessary aspects of such an environment. The first is an element of

discovery that involves introducing children to an enjoyable story experience that they will want to return to later, encouraging children to join in on repetitive text, reading commonly used words, predicting what will happen, becoming engaged in the story, and presenting children with a model of appropriate book language and word decoding strategies.

Holdaway (1979) also discusses the element of exploration which includes re-readings of the often predictable books used during shared reading and thus presents opportunities for teaching new concepts. These re-readings allow the teacher to point out special structures of the stories, provide all students with more chances to practice reading aloud and using word-decoding strategies, and of course, provide more fun listening experiences for all students. The third and final element presented by Holdaway (1979) is independent experience and expression. This means allowing students to further explore and experience the stories on their own or in small groups. Furthermore, students can participate in expressive activities that help them identify with the stories and internalize the language used. This element also provides children with a chance to practice individual reading, gives them a sense of achievement and self-confidence, "encourages the development of self-monitoring and self-correction", and allows students to help teach each other when reading in groups (Holdaway, 1979). Once these elements are in place, shared reading can become a very effective teaching tool.

Method

The mixed methods approach with the sequential explanatory survey design was adopted for the study. The target population was made up of 38,996 children in 662 primary schools in Mezam Division. The sample size was made up of 263 participants including 242 children with dyslexia and 21 parents (mothers and fathers) of children with dyslexia. These children were selected from primary 3 and 4 classes (3rd and 4th years of elementary primary education) from 9 primary schools in Bamenda. While in Bamenda, three schools including a public school, lay private school, and confessional school were selected from each of the three subdivisions, that is, Bamenda I, Bamenda II and Bamenda III subdivisions, making a total of 9.

Table 2: **Sample distribution: Distribution showing children with dyslexia by demographic information**

Demographic information	Categories	Frequency	Percentage
Sub-division	Bamenda One	77	31.8
	Bamenda Two	98	40.5
	Bamenda Three	67	27.7
	Total	**242**	**100**
School type	Government	91	37.6
	Lay Private	83	34.3
	Confessional	68	28.1
	Total	**242**	**100**
School	Government Practicing School Old Town.	34	14.0
	P.S Ntamulung	33	13.6
	Saint Agnes School	32	13.2
	Saint Bridgit Bilingual School	26	10.7
	Maxness Primary School	25	10.3

	Government Primary School Bamenda Group 1A.	23	9.5
	Government Primary School Group 1A.	21	8.7
	Saint Felix Catholic School	20	8.3
	All Saint BNPS	15	6.2
	Government Primary School Station	13	5.4
	Total	**242**	**100**
	Class three	112	46.3
Class	Class four	130	53.7
	Total	**242**	**100**
	Male	123	50.8
Sex	Female	119	49.2
	Total	**242**	**100**
	7-8	90	37.2
	9-10	111	45.9
Age range	11-12	25	10.3
	13 and above	16	6.6
	Total	**242**	**100**

Instrumentation

The instruments used for data collection were a Reading Readiness Assessment Instrument (Ihenacho, 1998), a Questionnaire for Children with Dyslexia, the 100 High Frequency Words Test (Ihenacho, 1998) and an interview for parents of children with dyslexia. The Reading Readiness Assessment Instrument (Ihenacho, 1998) was used along with informal methods including pupils' English language reports, portfolios, anecdotal records and teacher nomination to identify children with dyslexia. The reading readiness diagnostic test is made up of six measurement traits that are tested using a reading readiness master plan of activities. The measurement traits include visual discrimination, auditory discrimination, verbal comprehension, recognition of letters, words and numbers, recognition of words in sample lessons and drawing and copying. These measurement traits were tested within a time scale of 1-5 seconds using a frequency count chart for each. A child who answered out of the stipulated 1-5 seconds was judged to show signs of dyslexia (Ihenacho, 1998). Children diagnosed with dyslexia were further served a 46-item questionnaire while some parents of children with dyslexia were interviewed for the study. The questionnaire for children with dyslexia was made up of six demographic measures including sex, age, school type (public, lay private and confessional), class (either three or four) and Sub Divisions while measures of home literacy materials had ten item-measures designed in a 4-point Likert scale format against which respondents answered: Always, Most of the times, Sometimes and Never.

The language performance of the children with dyslexia was measured using the 100 High Frequency Words Test (Ihenacho, 1998). This test is a list of 100 commonly used words that children of 6-11 years and of classes 3 and 4 should be familiar with and be able to identify, pronounce, spell and use them to form sentences and communicate. These words were all written on flash cards of different colors and were randomly picked and presented to each child to spell and pronounced while using a frequency count chart of 0-5 seconds to time them and a count chart of 1-3 minutes to form phrases and sentences with the words on the flask cards. The interview guide for parents was made up of structured items but also gave opportunity for prompting during interviews.

Findings

Table 3 Language problems of children with dyslexia

Language problems	Frequency	Percentage
Phonological awareness	96	39.7
Reading	69	28.5
Oral language	35	14.5
Phonological awareness and reading	42	17.3
Total	**242**	**100**

Among the 242 children with dyslexia sampled for the study, 96 (39.7%) of them had problems with phonological awareness, 69 (28.5%) had problems with reading, 35 (14.5%) had problems with oral language while 42 (17.3%) had problems with phonological awareness and reading.

Table 4: Degree of language problem of children

Degree of language problem	Frequency	Percentage
Surface dyslexia	99	40.9
Visual dyslexia	85	35.1
Severe dyslexia	37	15.3
Deep dyslexia	21	8.7
Total	**242**	**100**

Among the 242 children with dyslexia, 99 (40.9%) of them had surface dyslexia, 85 (35.1%) had visual dyslexia, 37 (15.3%) had severe dyslexia and 21 (8.7%) had deep dyslexia.

Table 5: Distribution of children by language performance

Language performance	Frequency	Percentage
Not very bad	149	61.6
Very bad	93	38.4
Total	**242**	**100**

Findings on table 5 show that 149 (61.6%) of the children were not very bad in language performance while 93 (38.4%) were very bad with it.

Table 6: Appreciation of the availability of home literacy materials to support the language performance of children with dyslexia

Issues	Response options				
	Always	Most of the times	Sometimes	Never	N
There are alphabet letter blocks to play with at home.	51 (21.1%)	32 (13.2%)	36 (14.6%)	123 (50.8%)	242
There are crayons and pencils readily available for writing and drawing at home.	122 (50.4%)	65 (26.9%)	32 (13.2%)	23 (9.5%)	242
There are papers and exercise books readily available for writing and drawing at home.	109 (45.0%)	54 (22.3%)	59 (24.4%)	20 (8.3%)	242
There is a table or surface readily available for writing or drawing at home.	98 (40.5%)	48 (19.8%)	40 (16.5%)	56 (23.2%)	242
There is at least one rhyme book at home.	60 (24.8%)	28 (11.6%)	42 (17.4%)	112 (46.3%)	242

I have all my language text books at home.	65 (26.9%)	44 (18.2%)	41 (16.9%)	92 (38.0%)	242
I have toys that help me learn how to speak and write.	54 (22.3%)	42 (17.4%)	43 (17.8%)	103 (42.5%)	242
I use the computer keyboard to learn the letters of the alphabet.	54 (22.3%)	33 (13.6%)	37 (15.3%)	118 (48.1%)	242
There is a chalkboard available at home that I use to write and draw.	96 (39.7%)	49 (20.2%)	34 (14.0%)	63 (26.0%)	242
There is a children's dictionary I use at home.	48 (19.8%)	21 (8.7%)	30 (12.4%)	143 (59.1%)	242
Multiple response set	**757 (31.3%)**	**416 (17.2%)**	**394 (16.3%)**	**853 (35.2%)**	**2420**

While findings show that 35.2% of the children with dyslexia said they do not have literacy materials at home to support in their language performance, 64.8% of them had home learning materials; and 31.3% and 17.2% of them said home literacy materials are always and most at times available. 16.3% of them said these materials are available only sometimes. We observed significant variation in the availability of home literacy materials.

Table 7: Parent opinion on availability of literacy materials at home to support children with dyslexia to improve language performance

Themes	Groundings	Sampled Quotations
Chalkboard	17	"Chalkboard". "Blackboards".
Colours	10	"Colours".
Story books	10	"Story books". "Bible story telling books".
Alphabet charts	7	"Alphabet charts". "Alphabet charts and blocks".
Pencil	6	"Pencils"
Computer	5	"Computer teachings".
Papers	4	"Papers".
Rhyme books	3	"Rhyme books".
TV	3	"TV".
Note books	2	"Note books".
Puzzle charts	2	"Puzzle charts".
CDs (videos)	2	"CDs (videos). "CDs".
Counting sticks	1	"Counting sticks".
Crayons	1	"Crayons".
Picture books	1	"Picture books".
Picture charts	1	"Picture chart".
Children's magazines	1	"Children's magazines".

The most available home literacy materials according to parents were chalkboard, colours, story books and alphabet charts/blocks. Pencils, computers, papers, rhyme books, TV, puzzle games, CDs, counting sticks, crayons, picture books, picture charts and children magazines were other literacy materials available at home though not frequently mentioned by the parents.

Table 8: Parent opinion on how available home literacy materials are used

Themes	Groundings	Sampled Quotations
Writing on chalkboard	12	"Doing of homework on the chalkboard before transferring it into books". "Writing on chalkboard". "Helping on spelling drills on the blackboard". "Ask him to write on the blackboard on straight lines". "I use the chalkboard to spell words for my child to pronounce".
Reading of story books	9	"Reading of story books". "They read the stories and narrate to friends". "Ask him to read and try to interpret what is on the magazines". "They use the story books and narrate to their friends". "Read story books and I will ask the child questions on the stories".
Colouring of objects	8	"Colouring of objects with colours". "Colouring of objects". "Colouring of pictures". "Use colours to paint pictures". "I use colours to colour pictures".
Use crayons/pencils to draw	6	"I use crayons and pencils to draw pictures". 'Use pencils to draw". "Use pencils to draw pictures".
Use of computers to learn words	6	"The child uses the computer to learn the letters of alphabets". "Use the computer to teach letters of the alphabet". "Repeat pronunciation from the computer". "I use computer to teach the child letters of the alphabet".
Using TV programs to learn words like cartoons	4	"The child watches TV programs on language such as cartoons rouge, America got talent and watches CDs in which songs are sang using letters of the alphabets". "We watch TV programs like cartoons". "Watch educative programs on TV".
Using alphabet blocks to learn words	3	"I use Alphabet block to construct words". "Use alphabet chart to spell and read names of objects".
Using chart to learn pronunciations	3	"The child uses alphabet chart to pronounce words".
Use of counting sticks for numbering	1	"Use counting sticks for numbering".

Table 9: Comparing language performance by home literacy materials

Home learning materials	Language performance		Total
	Not very bad/poor	Very bad/poor	
Available	96(61.1%)	61(38.9%)	157
Not available	34(40.0%)	51(60.0%)	85

$\chi 2=9.92$, df=1, P=0.001

Statistically, findings on table 9 show that language performance for children with dyslexia from homes with home literacy materials was better than that for those from homes without literacy materials.

Table 10: Relationship between home literacy materials and language performance of children with dyslexia

Test statistics		Home learning materials	Language performance of children with dyslexia
Spearman's rho	R-value	1.000	.501*
	P-value	.	.018
	N	242	242

*. Correlation is significant at the 0.05 level (2-tailed).

Statistically, findings show that there is a significant, positive and strong relationship between home literacy materials and the language performance of children with dyslexia (P<0.05). The positive sign of the relationship (R = 501*) implies that the language performance of children with dyslexia is more likely to improve when they have literacy materials at home. For instance, findings on 9 show that children with dyslexia who have literacy materials at home were not very bad/poor in their language performance while those without literacy materials were very poor in language performance. The implication of these findings is that home learning materials have a significant and positive effect on the language performance of children with dyslexia.

DISCUSSIONS

This study's findings showed a significant, positive and strong relationship between home literacy materials and the language performance of children with dyslexia, implying that language performance is more likely to improve when affected children have literacy materials at home. This finding is in line with Hildebrand and Bader (1992) who earlier argued that children from home environments that provided ample opportunities for children to interact with print had higher emerging literacy skills when measured upon entry into school than those who did not. The literacy materials provide activity-based, project-oriented and stimulating rich environments which have been found to pay off in language learning. Such rich environments not only provide materials but also the social support, assistance and scaffolding needed in literacy skills development. Among the many materials Hildebrand and Bader (1992) listed were numerous books and books on tape; alphabetic materials - including magnets, cards, and blocks; trips to the library; and reading and/or storytelling experiences and discussions. Ntuli and Pretorius (2005) also found that children entering school without any storybook exposure had a distinct disadvantage and tended to lag behind their classmates who came from literacy-rich environments.

The most available home literacy materials according to parents were chalkboard, colours, story books and alphabetic charts/blocks. Others, though not highly mentioned were pencils, computers, papers, rhyme books, TV, puzzle games, CDs, counting sticks, crayons, picture books, picture charts and children magazines. These materials of course were a major booster of language performance for children in homes that had them as they provided opportunities for children to participate in literacy and language-related activities. Burgess et al. (2005) earlier argued that the literacy materials at home engage children in language-enriched activities which promote their expressive and receptive language abilities. And in addition to this, language supportive activities such as book reading were found to be more likely in homes that had children's books (Hess & Holloway, 1984), and of course led to better language skills. Stone & Christie (1996) also found that a combination of literacy-enriched environments stimulate literacy behaviours in children with dyslexia, and to be specific, Ngorosho (2011) found that these literacy materials lead to the development of phonological awareness, vocabulary, reading and writing.

On the importance of home literacy materials, parents were categorical on a number of issues suggesting the unchallenged relevance of such materials in homes of children with dyslexia. For example, they were unanimous on the need for a chalkboard for spelling and pronunciation drills; storybooks for learning to read; colours for developing motor skills for eventual writing ability; and so on. The availability of these and more, no doubt supports the formal learning-to-read process at school and parents who engage in many literacy activities with their children foster the development of positive attitudes towards reading (Sonnenschein, Brody & Munsterman, 2002). In line with this, Farrant & Zubrick (2012) found that through parent-child book reading and conversations, for instance, parental involvement in using home literacy materials with children could positively impact children's vocabulary development, reading acquisition, letter-sound knowledge and oral language skills. There are also findings linking games and activities that encourage letter knowledge, phonological awareness and functional writing with orthographic and phonological skills (Aram & Biron, 2004).

CONCLUSION

In conclusion, findings have shown that home literacy materials have a significant and positive effect on the language performance of children with dyslexia. Therefore, parents having children with dyslexia should provide adequate home literacy materials for children with dyslexia to facilitate the development of language skills. As an environmental factor, home literacy materials have been shown to contribute to the development of early reading skills among children (Peterson & Pennington, 2015), yielding better language performance among children with dyslexia. We have also seen that the absence of a supportive home literacy environment as well as the unavailability of home literacy materials can lead to deficits in phonological processing that affects reading decoding and overall language performance. And deficits in syntax, semantics, vocabulary and reading decoding negatively affect reading comprehension (Torgesen, 1998). Meanwhile reading deficits are known to profoundly retard vocabulary, verbal fluency, spelling, and general knowledge development (Lyon, 2003). A celebrated way of curbing this is installing as many useful home literacy materials as possible in the homes of children with dyslexia. However, it is not just about equipping the homes of

these materials but also about effectively using or encouraging and assisting children with language problems to make use of them.

Beyond language performance, findings also show that children of less supportive home literate environments, especially those with literacy materials are at greater risk of developing emotional and psychological consequences; and suffer higher frequency of academic failure at school (Alexander, 1999). Therefore, home literacy materials provide the earliest important knowledge and skills for the holistic development of the individual, and among children with dyslexia in particular, the development of phonological awareness, reading and writing skills. A variety of studies show that most successful children in reading and writing come from families with literacy-rich environments (Whitehurst & Lonigan, 2003) where they are encouraged and supported through a variety of reading materials at home. Their homes are stuffed with literacy materials and their parents, siblings and peers are effective readers, and are also effectively supporting affected children make use of the materials.

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