International Journal of Humanities Social Sciences and Education (IJHSSE)
Volume 3, Issue 8, August 2016, PP 28-49
ISSN 2349-0373 (Print) & ISSN 2349-0381 (Online)
http://dx.doi.org/10.20431/2349-0381.0307001
www.arcjournals.org

Effect of Differentiated Instruction on the Fluency and Decoding Skills of Children with English Language Reading Problems: A Case Study of Primary Four Pupils of Government School Bukwai. Cameroon

Awah Julia Azah, Ph.D.

Department of Educational Psychology,
Faculty of Education, University of Buea, Cameroon
Research Consultant: ***Foundation of Scientific Research, Community Based Rehabilitation and Advocacy on Inclusive Education***" (**FORCAIE-**Cameroon).
juliaazah@gmail.com

Abstract: *Many primary school children have fundamental learning gaps in the acquisition of reading skills and they actually go through primary school and complete without learning how to read fluently and accurately. A quasi experimental research design was used for this study. Both purposive and random sampling techniques were used for the study. Only pupils who fulfilled particular conditions peculiar for the study were allowed to participate. a pre-designed EpiData Version 3.1 (EpiData Association, Odense Denmark, 2008) database which had in-built consistency and validation checks was used to enter the data. According to the result gotten, Comparing between the experimental and the control group, though there was an increase in the difference in favor of the experimental group, this difference was not significant (Mann Whitney U test: P>0.05). The average score in fluency in the experimental group at pre-test was 3.111 with median at 3.000, and increased to 3.667 at post-test and this improvement was significant (Wilcoxon Signed Ranks test: P=0.047).These Reading problems are manifested through difficulties in word decoding, vocabulary, fluency and comprehension (Ehri, 2002). Many pupils have problems acquiring' reading skills because they lack specific skills necessary for proficient reading. This is a very serious problem that begins at the pre reading stage where pupils with reading problems are unable to identify and differentiate between letters for example 'd' and 'p'. This problem usually gets worse as the children progress in their educational career. If this problem is not identified and remedied, at the initial stage, the children will start to manifest common mistakes in the auditory and visual aspects like omission, inversions, as well as substitution of words and letters. For example making mistake in reading the word 'pat' and 'bat', 'bull' and 'pull' 'pool' and 'pull' etc. They can also make mistakes in pronouncing and spelling words like 'church' and 'such' as well as the long 'ee' sound in 'seed' and the short 'ea' sound as in 'seat'. Generally children with reading problems manifest in different ways such as slow reading speed, poor comprehension when reading material either aloud or silently , omission of words while reading, reversal of words or letters while reading, difficulty decoding syllables or single words and associating them with specific sounds (phonics) and limited side words. In addition to these symptoms, children with reading problems also experience delay in spoken language, confusion with opposites like (up /down), confusion with directions, (left/right) handed, mathematical disorders as well as disorder of written expression. For example they can write the following sentence as follows "the owl was a bird"as "Teh owl saw a brid".*

Keywords: *Differentiated Instruction, Fluency and Decoding Skills, English Language Reading Problems*

1. INTRODUCTION

Children with reading problems face a lot of academic problems that can lead to frustrate them and some even end up dropping out of school. According to Ramiro (2013), a UNESCO survey carried out in 2010 found that only about 20 percent of Cameroonian children could read. Problems such as lack of phonetic awareness, inadequate use of dictionaries, lack of parental encouragement, and inadequate exposure to printed materials are highlighted in relation to reading. English Language reading problems are aggravated in most village schools, such as GS Bukwai because children spent majority of the time speaking in pidgin and in their native language. English language is only read and only spoken during school hours. Because of these fundamental knowledge gaps, teachers need to adapt teaching to meet the needs of each individual learner particularly in the skills necessary to apply

phonemics, decoding, fluency and comprehension. The problem is further compounded with poor strategies used by some teachers for the teaching of reading. Many teachers are still stock with the old traditional methods of teaching reading Many teachers get frustrated with children with reading problems because they lack effective strategies to handle diversity in the classroom. While some teachers exhibit poor knowledge of pedagogy of reading instruction, others simply find it too cumbersome to implement and prefer to use the traditional methods. It is not uncommon to find teachers who remain insensitive to diverse learners in the classroom and teach as if all children were of equal learning preferences. The consequence is poor performance of learners with reading problems. If this problem is not handled then many children may develop more severe reading problems, with higher rates of school dropouts or grammar problems in higher classes.

2. BACKGROUND AND STATEMENT OF THE STUDY

With the high prevalence of children with reading problems in classrooms there is a need for teachers and educational institutions to develop new pedagogical techniques of helping children with reading problems acquire reading skill of which differentiated of instruction is one of them. Differentiated instruction is the model that proposes a rethinking of the structure, management and strategies of handling children in a diverse classroom including those with reading problems. (subban, 2006). Differentiation is not a new concept; the one room school house is an ideal example of how teachers have attempted to meet the needs of all students. (Anderson, 2007). Though differentiated instruction seems to be a broad term, it mainly refers to those classroom practices embodying student learning styles, interest, and prior knowledge. (Benjamin, 2002), states standards represent the knowledge to be taught but differentiated instruction gives a meaningful way to teach those required standards (Patheroe, 2007).

According to Tomlinson et al (2003), differentiated instruction is "an approach to teaching in which teachers proactively modify curriculum, teaching methods, resources, learning activities, and student products to address the needs of individual students and small groups of students to maximize the learning opportunity for each student in the classroom" (Tomlinson, Brighton, Hertberg, Callahan, Moon, Brimijoin, Conover, & Reynolds, 2003, p. 121). Differentiating instruction for children with reading problems involve three categories of modification. (a) Content, (what to learn) (b) instructional processes (how to learn it) and (c) work product (how to evaluate the outcome), which will help them improve reading skills. Differentiated Instruction is based on the use of techniques such as pre-assessment, precision teaching, brain based learning, instructional scaffolding and flexible grouping. With an understanding of the above conceptualization of reading problems and differentiated instruction, the present study was motivated by an observed presence of learners with reading problems in primary schools within Fako Division of the South West Region of Cameroon. Most teachers possess inadequate pedagogical skills to deal with these pupils especially teachers found in regular classrooms. Failure to propose early intervention procedures may result to more severe reading difficulties in children with these problems. Hence this study set out to examine the effect of differentiated instruction on the performance of children with reading problems in Fako Division, South West Region of Cameroon.

Contextually, many primary school children in Cameroon have experience critical learning issues in the acquisition of reading skills. This is a very serious problem which reading fluency, decoding, comprehension, recall, vocabulary and pronunciation. These problems are manifested through omissions, inversions, and substitution. Usually children with reading problems are unable to read and identify words that begin with /p/,and /d,/ch/ and /sh/ words. This fact was further confirmed by the researcher in an evaluation exercise carried out on Monday the 4th of May in Government primary school Bukwaie. Out of nineteen children in primary four, though they could write out the alphabet in both upper and lower case letters properly except one student, only three could score above average in the exercise given to them. They made common mistakes in reading spelling words like /pool/ for /pull/, /bak/ for /firday/ for /Friday/.

3. OBJECTIVES / PURPOSE OF STUDY

The main objective of the study was to examine the effect of differentiated instruction on the performance of children with reading problems in Fako Division, South West region Cameroon.

The study was guided by two specific objectives, aimed at examining:

1. The effect of differentiated instruction on the performance of children in decoding skills.
2. The effect of differentiated instruction on the performance of children in fluency skills.

3.1. Research Questions

The specific research questions included:

1. To what extent does differentiated instruction affect the performance of children in decoding skills?
2. How does differentiated instruction affect the performance of children in fluency skills?

4. REVIEW OF RELATED LITERATURE

4.1. Conceptual Perspectives

4.1.1. Meaning of Differentiated Instruction

Tomlinson (2005) considers differentiated instruction as a philosophy of teaching that is based on the premise that students learn best when their teacher accommodate the differences in their readiness levels interest and learning profiles. To differentiate instruction is to recognize students varying background knowledge, readiness, language, preference in learning, interest and to react responsively. Hall, (2002) stated that, to differentiate instruction is to acknowledge various students backgrounds, readiness levels languages, interest and learning profile. This therefore suggests that to differentiate instruction for students is for the teacher to tap into the needs of the students. Differentiation further suggests that teachers can craft lessons in ways that tap into multiple student interest to promote heightened learner interest in the standard. Differentiation allows teachers to vary the ways in which students work, alone or in groups, auditory or visual means, or creatively to further enhance student learning. (Tomlinson 2005), stated that the main objective of differentiation is to take full advantage of every student's ability to learn, she further points out that differentiating can be performed in a variety of ways and if teachers are willing to use this philosophy, in their classroom, they opt for more effective practice that responds to the needs of diverse learners. Tomlinson (2000) maintains that differentiation is not just an instructional strategy, nor is it a recipe for teaching, rather it is an innovative way of thinking about teaching and learning.

Differentiated Instruction sees the learning experience as social and collaborative; the responsibility of what happens in the classroom is first to the teacher and then the learner. Based on this Mulroy and Eddinger (2003) adds that differentiated instruction emerged within the context of increasingly diverse student population. Within the learning environment permitted by the differentiated instruction model, teachers, support staff and professionals collaborate to create an optimal learning experience for students. Mulroy and Eddinger (2003), add that, within this learning environment, each student is valued for his or her unique strengths. While being offered opportunities to demonstrate skills through a variety of assessment techniques. Differentiated instruction presents an effective means to address learner's variance Tomlinson (2004) also opines that it incorporates current research into the workings of the human brain, while supporting the multiple intelligences and varying learning styles within contemporary classrooms. Differentiation provides a crucial platform for all teachers of inclusive classrooms, to create opportunities for success for all students (Tomlinson 2002). Differentiated classroom balances learning needs common to all students, with more specific needs tagged to individual learners. Differentiation can liberate students from labels, offering students individual opportunities to perform at their best. Practicing differentiation enables teachers to shift their thinking from completing the curriculum and compels them to move closer to catering for individual student needs. Tomlinson (2009) further states student differentiating instruction allows the teacher to focus on the same key principle for all students, however the instructional process, the pace, and rate towards understanding these concepts varies. There are provision for every child to learn quickly and as deeply as possible as indicated by

(Turhle, 2000). Teachers opting for differentiations find that they can use time and resources, flexibly and creatively, to assist and create an atmosphere of collaboration in the classroom.

A fundamental fact in the differentiation model is that teachers must engage student in Classroom activities. Research supports the view that curricula should be designed to engage students; it should have the ability to connect to their lives and positively influence their levels of motivation as stated by Coleman (2001). Teachers are required to know their students backgrounds and their cultural links because this will enable teachers to figure out their strengths thereby helping them to move forward.

Differentiation is a complex and sometimes perplexing concept Tomlinson (1999), the main authority in this field expresses the fact that differentiation is not an instructional strategy or a teaching model. It is a way of thinking about teaching and learning, whereby learners are exposed to a plan of action which takes into consideration learner's readiness, interest and learning profile. It is a way of thinking that challenges how educators typically envisage assessments, teaching learning classroom roles, use of time and curriculum. Rather than providing a preplanned set of teaching and learning strategies, differentiation requires that teachers re-evaluate classroom structures and functions in their entirety. Differentiation changes the teachers' role from classroom commander to facilitator of time and space. As an assessor of students, the teachers' main role is to becoming a helper engaging students in rewarding tasks.

Conclusively Differentiation is a term often used with little knowledge of its true meaning. In order to fully understand the underlying concepts behind this approach, to teaching or delivering instruction, these misunderstanding must be clarified. First differentiation is not providing a variety of different unrelated activities for students. Rather it is a good teaching strategy focus on key concepts and skills based on those concepts. All students regardless of ability or readiness should be challenged to make sense of essential understanding (Association for supervision and curriculum Development, 1997). Another common misconception is that differentiated instruction means that a teacher must create a separate activity for each student. Not only is this unmanageable but it also not the best practice; because students need opportunities to work together as well as alone. Instead educators must provide a variety of inter-related, well planned instructional activities base on ongoing assessment of student strengths and weaknesses. Once teachers have a clear idea of what their students need, they can adjust curriculum base on students' differences (Mitchell and Hobson 2005).

4.2. Word Decoding

A code is a system of signals used to represent assigned meanings. Signals can be numbers (as in a military code), dots and dashes (Morse code), or letters (as in an alphabetic language like English). In themselves these signals are meaningless. They become meaning-bearing units only when an individual knows what meanings can be assigned to the signals. When an individual can apply meaning to signals, that person has learned to decode (Beck and Joel, 2002). In written alphabetic languages such as English, the code involves a system of mappings, or correspondences, between letters and sounds. When an individual has leaned those mappings, that person is said to have "broken the code." Now the individual can apply his or her knowledge of the mappings to figure out plausible pronunciations of printed words (Beck and Joel, 2002).

Most of the time, competent adult readers do not need to apply their knowledge of the mappings system consciously to recognize the words they encounter. If they do encounter a word they have never seen before, however, they are able to bring their knowledge of the code to bear in a deliberate and purposeful way. A number of terms are used to describe the application of the code when reading. It may be useful to consider the terms in light of two extremes of attention a reader pays to the code. At one extreme readers apply their knowledge of the code immediately and without any apparent attention. The terms used to describe this immediate phenomenon are word recognition, word identification, and sight word recognition. At the other extreme readers consciously and deliberately apply their knowledge of the mapping system to produce a plausible pronunciation of a word they do not instantly recognize, such as the name of a character an English speaking reader might encounter in a Russian novel. The term associated with this self-aware "figuring out" is word attack. Individuals involved in either extreme are decoding in that they are using symbols to interpret a unit that bears meaning. Hence, word recognition, word identification, word attack, and sight word recognition are all terms applied to decoding, albeit to decoding with different levels of conscious attention (Beck and Joel, 2002).

Early attainment of decoding skill is important because this early skill accurately predicts later skill in reading comprehension. There is strong and persuasive evidence that children who get off to a slow start rarely become strong readers (Stanovich, 1986). Early learning of the code leads to wider reading habits both in and out of school (Juel, 1988). Wide reading provides opportunities to grow in vocabulary, concepts, and knowledge of how text is written. Children who do not learn to decode do not have this avenue for growth. This phenomenon, in which the "rich get richer" (i.e., the children who learn early to decode continue to improve in reading) and the "poor get poorer" (i.e., children who do not learn to decode early become increasingly distanced from the "rich" in reading ability), has been termed the Matthew effect (Stanovich).

4.3. Vocabulary

Vocabulary development refers to the knowledge of stored information about the meanings and pronunciations of words necessary for communication. Vocabulary development is important for beginning reading in that when a student sounds out a word, he or she is also determining if the word makes sense based on his or her understanding of the word. If a student does not know the meaning of the word, it is difficult to check for the word that fits. Vocabulary development is also a primary determinant of reading comprehension. Readers cannot understand the content of what they are reading unless they understand the meaning of the majority of words in the text. Oral language development and vocabulary development go hand in hand. Research tells us that language learning occurs through interaction. Therefore, the point of learning language and interacting socially, is not to master rules, but to make connections with other people and to make sense of experiences. Classrooms should be full of active learners who are hardly ever silent. Structured talk about academically relevant content rather than rote memorization of word lists is necessary. It is important to model and teach deliberate strategies for clarifying word meaning as well as to provide students opportunities to use the words in context. Children have to talk as well as listen. According to Cummins (1980), students develop oral language within the first two years of immersion in the target language; however, academic language takes about 5 – 7 years. Teachers need to provide instruction in which oral language development, content learning, and literacy development support one another. Teachers can assist by directly teaching vocabulary within a meaningful context and providing them with many encounters with language. This will help children discover the joy and power of literacy. Effective vocabulary instruction should include the following three components:

1) Definitional and contextual information about a word - To know a word, students need to see it in context and learn how its meaning relates to the words around it. An approach that includes definitions and shows how words are used in various contexts can generate a full and flexible knowledge of word meanings.

2) Multiple exposures to a word in different contexts - A word that is encountered once has about a 10 percent chance of being learned from context. When students see a word repeatedly, they gather more and more information about it until they get an idea of what it means.

3) Encouragement of students' active participation in their word learning - Students remembers words better when they relate new meanings to knowledge they already have. Group discussion of word meanings also helps students learn new vocabulary by having to actively participate in their own learning. Vocabulary needs to be taught explicitly and be a part of the daily curriculum to promote English language development. In order to read fluently and comprehend what is written, students need to use not just phonics, but also context. It is possible for students to read phonetically yet not comprehend what they read because they do not have the vocabulary. Scientific research on vocabulary development demonstrates that children learn the majority of their vocabulary indirectly in the following three ways:

1. Conversations, mostly with adults,

2. Listening to adults read to them, and

3. Reading extensively on their own (CIERA, 2001).

Therefore, educators must provide many opportunities for students to learn vocabulary directly, including explicitly teaching vocabulary words before students read a text and providing read aloud and structured independent reading time. Vocabulary knowledge is critical to students' success at reading. A central goal of vocabulary knowledge is to help students develop full word knowledge (Allen, 1999). Full word knowledge means that students know multiple meanings for a given word and / or different ways a word can be used. It is not necessary, or possible to have full word knowledge for every word. For most word students will have partial knowledge. They will know one definition for the word and be able to use it in a sentence. The more words students have at the partial and full knowledge the better their comprehension of the text. Students who have limited and partial word knowledge in the early grades often have reading difficulties latter in school if their vocabulary is not fully developed.

4.4. Fluency

Fluency is the ability to read words accurately and quickly and with expression (Rassinski, 2006). Students with poor fluency abilities read words slowly, in isolation, and often without any inflection. They tend to focus more on how to say the words and less on what the words in the sentence or paragraph mean. Pupils may read at faster rates depending on the difficulty of the text being read and their fluency ability may change depending on the genre of the text. Most students should be able to read by first grade. Fluency is dependent upon the type of reading, the reader's familiarity with the words, and the amount of practice reading text. The components of fluency are automaticity, prosody, accuracy and speed, expression, intonation and phrasing. Automaticity refers to accurate, quick word recognition, not to reading with expression. Although students may recognize words, their oral reading may be expressionless and/or lack phrasing and punctuation. Fluent readers know when to pause within and at the ends of sentences and when to change emphasis and tone. Reading fluency growth does not merely consist of the ability to read words automatically in isolation (sight words). This is because the ability to read these words may not transfer when these same words appear in sentences or in connected text. Therefore, it is important to give students instruction and practice in fluency as they read connected text. Reading fluency is a critical factor necessary for reading comprehension.

Unlike less fluent readers, fluent readers do not have to focus on decoding words. They can recognize words and construct meaning at the same time. Additionally, they are able to make connections between the text and their background knowledge. Fluent readers are more likely to comprehend and remember the material because they read without difficulty and in an efficient way (Rasinski, 2000).

Ways to improve and build fluency:

1) Modeling good oral reading – Reading to students in a natural manner models fluent reading. Students should not confuse word-perfect decoding with good reading.
2) Encouraging fluency through phrasing – Often the meaning of a text is found, not in the isolated words, but in the phrases. The ability to chunk the text into phrases helps in comprehension.
3) Providing oral support – When a student simultaneously hears and reads a fluent rendition of a text, his or her fluency and comprehension improve.
4) Offering many practice opportunities – With practice, students can move from decoding words to making sense of the reading.

Teachers must provide explicit instruction, guided practice, supported application and independent practice in fluency. For independent practice it is critical that the reading materials be at the student's independent level (word recognition 95% or better) or instructional level (word recognition 90% or better) (Blevins, 2001). Research has shown that oral reading leads to better silent, independent reading. However, silent, independent reading does not necessarily lead to increased fluency and reading achievement (Armbruster, Lehr & Osborn, 2001). Readers who are not fluent are less likely to benefit from silent, independent reading. These readers would benefit more from direct instruction in reading. Fluency can be improved through authentic instructional activities such as read aloud, practicing poetry or scripts, and supported reading. If you carefully observe children in the learning process, it is easy to understand why behavioral fluency is an essential success factor in learning and performance of any kind. Both informal experience and scientific research (Binder, 1996; Wolf, 2001) suggest that fluency contributes directly to three types of critical learning outcomes:

- Retention and maintenance: the ability to perform a skill or recall knowledge long after formal learning programs have ended, without re-teaching in school year after year
- Endurance: the ability to maintain performance levels and attention to task for extended time periods while resisting distraction, and
- Application: the ability to combine and apply what is learned to perform more complex skills, creatively, and in new situations.

These are important outcomes that education is supposed to accomplish, but which are sadly lacking in the long-term results of many educational programs. Parents usually see the lack of these outcomes as symptoms, or problems that arise at homework time and when children try to apply what they've

learned in school to life situations. Even in relatively successful students, who do not falter in obvious ways, a lack of fluency in essential skills and knowledge can seriously limit their ability to achieve the full learning potential of which they are capable.

4.5. Differentiation of Instruction Base on Students' Readiness

Differentiation by readiness refers to a complex set of facts that affect the level of difficulty at which students are ready to learn and the rate at which they grow. Readiness is not synonymous with ability, although a student's ability is likely to play a role in her readiness. However there are numerous other factors that affect student readiness, including whether or not a student's basic needs are being met outside and inside the classroom, physical and emotional developmental factors, her previous exposure to a topic, her physical and mental health on a particular day, whether or not she has made a connection with the teacher, and so forth. In fact, we might even collapse interest and learning profile into the readiness category, as students are more ready to learn if they are interested in a topic and if that topic is presented and practiced in ways that are comfortable to them.

The following teacher talk shows common ways teachers respond to student variance in readiness:

- Those of you who indicated a need for help in coming up with a topic for your short story, please meet over here and I will help you brainstorm ideas.
- If you rated yourself a novice in writing lab reports, start with this assignment. If you rated yourself an apprentice, try this other assignment.
- If you feel that you have already mastered the material in this chapter, please see me to discuss an alternative project.
- Please visit those stations that will most help you review for the test.
- If you have trouble reading and following a map, you will find some bookmarked Web sites that will help you improve your skills.
- If you feel that the work I am asking you to do is too hard or too easy, please write me a note.
- There are vocabulary sheets available for those of you who need them.
- I have put some sample projects in the back of the room so you can see how others students have approached this assignment in the past.

Readiness uses baseline and ongoing data on students' experiences and interest in the concepts and skills under study to determine the best course of instruction. It is important to consider the assessment of student readiness as an ongoing process. The first stage of readiness assessment is a pre-assessment. Pre-assessments should provide answers to the following questions

- What key concepts and skills do students has already mastered?
- Based on overall student readiness, what further instruction and opportunities for mastery are required?
- What might spark the interest of students related to the targeted content and skills?
- Based on overall student readiness, what are essential components of a learning contract?

In addition to pre-assessment strategies, there are a myriad of strategies that can be used for ongoing assessment of student readiness and interest. Ongoing assessment should measure the enduring understanding – what students know and are able to do with the content. These data sources can be student-generated, such as journals, question writing, or oral response. Sources can also be teacher-driven methods, such as class discussion, performance checklists, and anecdotal records. However, with regards to readiness Vygotsky (1978-1986) as quoted by Tomlison (2003), expresses the idea that, an individual learns in his or her "Zone of prozinal development" [ZDP]. This implies that there is a time in the learning process where the child or learner cannot function alone but with the help of a knowledgeable adult through scaffolding or support. In that light new learning will take place. The teachers' job is to push the learner into his or her zone of proximal development coach for success, with a slightly more complex task than the child can handle alone. Through this process learners

grasp new ideas, master new skills, and become increasingly more independent. Changing how instruction is delivered with students' readiness level in mind will motivate them in the learning process. When differentiating by readiness, teachers give more challenging assignments to advanced learners and more basic assignments to struggling learners. All students must be engaged in respectful work which teaches essential understanding rather than having higher performing, students doing more difficult ask and vice versa . Instead assignments need to provide multiple approaches to process, content and product. A task that is a good match for students' readiness extends that students knowledge understanding and skills a bit beyond what the student can do independently. A good readiness match pushes the student a little beyond his comfort zone and then provides support in bridging the gap between the known and unknown. Expert teachers often differentiate instruction in their classrooms based on the readiness level of their students. That is they simply do what seems right for their student generally, intuition begins the process, and overtime teachers learn from successes and failures, refining what they do as they get along.

Byrnes, (1996). Suggest that instruction should always be "in advance" of a child's current level of mastery. That is teachers should teach within a child's current level of mastery. That is teachers should teach within a child ZDP. If material is presented at or below the mastery level, there will be no growth if presented well above the zone; children will be confused and frustrated.

Challenges must be at the proper level of difficulty in order to be and remain motivating:- task that are too easy become boring and less challenging while task that are too difficult cause frustration (National Research Council 1999). This seems to be the essence of readiness differentiation for all learners and a central challenge for teachers in diverse classroom. Implications here are that teachers can use diagnostic assessments to determine student readiness. These assessments can be formal or informal. Teachers can give pre-tests, question to students about their background knowledge, or use know, want learned (KWL) chats (chats that ask students to identify what they already know, what they want to know, and what they have learned about a topic). Teachers should incorporate different instructional strategies based on the assessed needs of their students. Throughout a unit of study, teachers should assess students on a regular basis. These assessments can be formal, but is often informal and can include taking anecdotal notes on student progress examining students' entry level, work done during the lesson and after the lesson. The results can then be used to drive further instruction. When differentiating product based on a student readiness the following tools can be utilized. Alternative Assessment – any type of assessment which students create response to a question or task. Alternative assessment can include short answer, questions, essays, performance assessment, oral presentation, demonstrations, exhibitions and portfolios.

4.6. Differentiation of Instruction Base on Students Interest

Differentiating according to student interest involves the purposeful use of course content, instructional processes, end products and/or classroom interest of the student. For many students technology provides opportunities to engage their interest authentic task involving technology can provide a variety of activities, processes and learning environments that are differentiated according to the interest of the children. Interest based study is linked to motivation and appears to promote positive impacts on learning in both the short and long term says (Herbert 1993). Modifying instruction to students interest is also supported by theory and research as a means of enhancing motivation, productivity and achievement (Amabile, 1996) – Questions and task that are interesting to students are more likely to lead to enhanced student engagement with the task, the students sense that the work is rewarding, greater evidence of student creativity, increased student productivity, and a higher level of intrinsic motivation.

Generally, interest contributes to a sense of competence and self determination in learners and to positive learning behaviours such as willingness to accept challenges and persist in it states (Csikszentmihlyi et al 1993) Learners differ in general motivation to learning and response to specific learning task. Experts suggest, therefore, that students be encouraged to select their own topics for project and to encourage with discussion with parents and teachers about learning that brings them joy. Learning that brings them joy. For instance when children are ask to chose reading material of interest to them/they are more likely to demonstrate substantive engagement and thus, experience improved reading performance. Schlechty (1997), states that the appropriate question in today's classroom is no longer "how can I motivate students"? Rather it is what motivates this particular student and how to design work that is responsive to these motions. Determining and designing tasks

that tap the motivation of particular students is at the heart of interest based differentiation. Tomlison et al., (2003) also opines that differentiating the curriculum base on students can have a profound effect on their learning. Interest refers to a child's affinity, curiosity, or passion for a particular picture or skill. Changing how curriculum is delivered with students' interest in mid will invoke student motivation. Differentiating instruction and lesson delivery touch on a specific interest of students will lead to engagement, high student autonomy, and increased production

5. THEORETICAL PERSPECTIVE FOR THE STUDY

5.1. The Social Constructivist Theory

The constructivist psychological school of thought provides a necessary framework for active pedagogy. is centered on needs and competencies of the learner. Constructivism is often associated with pedagogic approaches that promote active learning, or learning by doing. Social constructivist theory, Wertsh (1997) asserts acknowledges the uniqueness and complexity of the learner and actually encourages, utilize and reward it as an integral part of the learning process. Social constructivism encourages the learner to arrive at his or her version of truth influenced by his or her background culture or embedded world view. This theory also stresses the importance of the nature of the learner's social interaction with knowledgeable members of the society. Without the social interaction with other more knowledgeable people it is impossible to acquire social meaning of important symbol system and learn how to utilize them. According to the social constructivism approach, instructors have to adapt to the role of facilitator and not teachers Baverfeld, (1995). The facilitators help the learner to get his or her own understanding of the content while the teacher gives a lecture that covers the subject matter. The emphasis thus is on the learner and not on the instructor and the content. (Gamoran, Secada &Marrett, 1988). We shall focus on Vygotsky's Social Constructivism from the point of view of Zone of Proximal development and Scaffolding as well as his social construction of disability.

5.2. Vygotsky's (1978) Socio-cultural Theory of Cognitive Development

One of the first attempts to consider intellectual or cognitive development as a construct of socialization was made by the Russian psychologist Lev Semyonovich Vygotsky. According to Vygotsky (1978), individual intellectual development cannot be understood without reference to the social milieu in which the child is embedded. For Vygotsky, children's cognitive development must be understood not only as taking place with social support interaction with others, but also as involving the development of skill with socio-historical development tools that mediate intellectual activity. Hence, where Piaget looked at developing children and saw junior scientists, working by themselves to develop an independent understanding of the world, Vygotsky saw cognitive apprentices, learning from master teachers the skills that are important in the child's culture (Feldman, 2003). Vygotsky argued that children's efforts to understand their world are embedded in a social context. They strive to understand their universe by asking questions. For instance, "How do machines work?" "Why is the sky blue?" "Why does the weather change?" In answering such questions, adults guide a child's growth in important ways. They not only provide instruction but also foster the child's motivation and interest. Adults present challenges for new learning. Thus, in many respects, the young child is an apprentice in thinking. Parents, child-care workers, and older siblings act as mentors stimulating intellectual growth. Children learn to think through guided participation in social experiences that explore their world. Vygotsky argued that what children can do with the help of others may be more indicative of their mental development than what they can do alone.

Vygotsky maintained that for each developing individual there is a zone of proximal development, a range of skills that the child can perform with assistance but not quite independently. How and when children master important skills is partly linked to the willingness of others to provide scaffolding, or sensitive structuring of children's learning encounters.

5.3. Zone of Proximal Development (ZDP)

The definition of zone of proximal development according to Vygotsky is, the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with

more capable peers (Vygotsky, 1978). In other words ZPD is the level at which a child can almost, but not fully, perform a task independently, but can do so with the assistance of someone more competent (Feldman, 2003). As understood by Vygotsky, a child usually follows or imitates an adult's example for acting and reacting, and gradually develops the ability to perform tasks without any assistance. Hence, zone of proximal development is the difference between what a child can do with help and cannot do without assistance or guidance.

5.4. Stages Involved in Zone of Proximal Development

Guiding an individual through a particular problem and withdrawing help as the individual uses his or her prior knowledge to develop new concepts and understanding is all worked through certain stages. Tharp and Gallimore (1988), presented the following stages involved from learning with the aim to acquiring knowledge and skills independently. Stage One: The first stage demonstrates how children develop language and speech by relying on others such as caretakers or instructors for performing the task, Stage Two: In the second stage, the children or learner uses prior knowledge to carry out the task without any guidance. The zone of proximal development occurs between the first and second stages, Stage Three: In this stage, the task is performed automatically after being internalized, and according to Vygotsky, is fossilized, Stage Four: At this juncture, the process is de-automatised through addresses and recursion.

Lev Vygotsky's Zone of proximal development acknowledges that there is a link between an individual's current level of development and his or her potential level of development. In other words it is the distance between the actual development and the potential level of development. Hence the zone of proximal development (ZDP) links that which is known to that which is unknown. (Riddle and Dabbagh 1999). This implies that, in order to develop the ZDP, learners should actively interact socially with a knowledgeable adult or capable peer. In this instance, the teacher's role becomes one of purposeful instruction, a mediator of activities and substantial experiences allowing the learner to attain his or her ZDP. vygotsky (1978) as in Tomlinson (2004) establish the fact that it is important to understand the relationship between learning and development which are neither separate nor identical processes, rater they are combined in a complex way. According to vygostky, teaching learning process play a major role in development, because learning leads to development. His interest is in the collaboration between adults and children and how this interaction can explain children's learning and development. The main issue in this theory is that as a child's cognitive development occurs through participation in activities slightly beyond its competence, the task of the more skilled person is to structure and model the learning situation. Contemporary interpretation of the vysgotkian theory uses the concept of scaffolding (Wood, Bruner and Ross 1976) and guided participation (Rogoff,1990) when referring to how a child learns in the ZDP. The implication of this theory is that it is in accordance with the ideology of inclusion, all children are entitle to receive a differentiated and appropriate education in ordinary classrooms adapted to their learning characteristics. This requires the teacher to understand how children learn and develop. Teachers need to be familiar with the child's actual developmental level, while also being able to stimulate the child's development potentials. Scaffolding, or assistance, in the zone of proximal development is based on collaboration between the children and the more capable adult. The teacher must be able to adopt various ways of providing support and assistance. The teacher must also be aware of when not to give assistance, remembering that the child is to take over more and more responsibility so that it can develop from other regulation to self-regulation. For this to occur the child must be active in the learning situation.

5.5. Scaffolding

The provision for assisted performance by parents, elders, older siblings, child care givers and more competent peers to a child, is known as scaffolding. It is the support for learning and problem solving that encourages independence and growth (Feldman 2003). Common elements of scaffolding include

- Task definition
- Direct or indirect instruction
- Specification and sequencing of activities
- Provision of materials, equipment and facilities
- Other environmental contributions

Scaffolding may include assistance with planning, organising, doing and/or reflecting on the specific task. Such assistance is best made available in a timely manner matched to the learning needs and interests of the learner. Within the African context, scaffolding is seen as when parents give assistance to their children in cooking duties and farming. Furthermore, during games and play songs, more experienced peers and older siblings scaffold children to a mastery of games and draw out appropriate social meanings from them.

Effective scaffolding makes two major contributions.

- Scaffolding makes it easier for the learner to undertake a task successfully and thus expands the possible learning activities and experiences
- Scaffolding increases the rate at which learning may be achieved and extends what is possible for a learner to perform and thus expands the ZPD since the provision of powerful tools and well-formed instructions enable higher order problems to be solved more rapidly.

5.6. Relevance of Vygotsky's Theory

The theory enables teachers to distinguish between primary disability (organic impairment), secondary and tertiary disability (cultural distortions of socially conditioned, higher mental functions). Focusing exclusively on primary reasons for disability implies ignoring the developmental processes. In the light of Vygotsky's theory, reading problems can only be considered as secondary disabilities that are socially constructed and can be prevented or eliminated via differentiated instruction.

5.7. Research Design

A quasi experimental research design was used for this study. The purpose of the quasi experimental design was to determine the cause and effect relationship that exist between differentiated instruction and reading problem according to Campbell (2008), this design differs in the pure experimental study in that it lacks the elements of random assignments to treatment and control groups. This was done by exposing one of the groups to a treatment of differentiated instruction. In such a research design, there was a parallel group design, that is, two groups were studied, the control and experimental groups. The control group is the group to which no special treatment is administered while the experimental group is that which the special treatment was being administered. There were two variables, differentiated instruction which is the main independent variable or treatment variable while the dependent or observed performance of children with reading problems is the dependent variable. The experimental group of students was thought using differentiated instructional strategies, while the control group was taught using traditional methods of teaching.Sub-treatment variables or indicators for the various hypotheses were

1) The effect of differentiated instruction on fluency skills.
2) The effect of differentiated instruction on decoding skills.

There researcher made use of pre-test and post-test techniques in the administration the instruments. This implies that students of the control group were taught using traditional methods while differentiated method of instruction was used for teaching students of the experimental group. After the exercise which lasted for six weeks a post test was given in order to assess the validity of the differentiated method of teaching as a holistic approach to teaching children with reading problems. Besides the above quantitative method, the researcher made use of other qualitative methods of data collection, such as observations and interviews in order to have more data to support the results of the study.

5.8. Population of the Study

The population of this study consisted of all the primary school pupils and teachers in Buea sub-division this is elaborated in the table that follows.

Table2. *Population of the Study*

Category of School	Number of Schools	Population	
		Teacher	Pupils
Public	34	384	8,349
Confessional	18	106	2,266
Lay Private	43	223	3,106
Total	95	713	13,721

Thus the population of this study was 13,721 which was further classified into target and accessible population

Table3. *Summary of Target Population*

Category of School	Population of the Study	Target Population	
		Teacher	Pupils
Public	8,349	384	1,311
Confessional	2,266	106	401
Lay Private	3,106	223	566
Total	13,721	713	2,278

This implies that the target population was 713 teachers and 2278 pupils.

5.9. Accessible Population

According to Nworgu (2004), the accessible population that is within the reach of the researcher. Explorable.com (2004) also sees the accessible population as a subset of the target population the researcher at times draws his sample from the accessible population or could use it as its sample particularly when its number is small and all could be used in the experiment or investigation. In this study ,all the class four pupils of Government school Bukwai that is group one and group two constituted the accessible population which was used as the sample of the study.

Table4. *Accessible Population was Composed of Primary Four Pupils of this School, with a Total Number of 22 Pupils.*

School	Class	Accessible Population or Sample for Pupils
G.S Bokwai	2	22
Total		22

5.10. Sample and Sampling Technique

Both purposive and random sampling techniques were used for the study. Only pupils who fulfilled particular conditions peculiar for the study were allowed to participate. The sampling procedure went through two successive stages. First a pre-assessment reading test was given to primary four pupils. This test enabled the researcher to select children with reading problems that eventually participated in the study. Out of the twenty two pupils eighteen were identified with reading problems. These eighteen constituted the sample that participated in the study. Secondly, the children with reading problems were then randomly selected for the control and experimental groups. This was done by the use of lots. That is, nine papers were sealed with CG (control group) and nine others were sealed with EG (experimental group). The pupils were then made to pick up any of the papers. Any pupil, who picked up CG, belonged to the control and any pupil who picked EG belonged to the experimental group.

Table5. *Population and Sample of the Study*

Total Population	Sample	Experimental Group	Control Group
19	14	7	7

5.11. Instrumentation

The study made use of both quantitative and qualitative methods of data collection. Five instruments of data collection were used for the study.

1) **Pre-assessment Test:** This test was made of items in relation to phonological awareness, word decoding, vocabulary, fluency and comprehension. The purpose of this test was to identify learners with reading problems, who formed participants of the study.

2) **Pre-Test:** : A pre-test was administered at the start of each experiment .since there were five experiments, each with a different objective five pre-test were designed and administered **.**This test composed of items relating to reading skills, such as, phonological awareness, word decoding, vocabulary, fluency and comprehension. The purpose of the pretest was to determine the initial performance of children with reading problems. This test was administered under the same conditions to both the control and experimental groups of the study.

3) **Post-Test.** After teaching the control and experimental groups within a period of six weeks a post test was administered. This test composed of items in relation to reading skills, such as, phonological awareness, word decoding, vocabulary, fluency and comprehension. The test was

aimed at assessing the performance of the experimental and control groups after six weeks of exposure to different methods of instructions.

4) **Interview Guide:** A structured interview guide made of seven items was administered to teachers to solicit qualitative information from teachers on their knowledge and implementation of differentiated instructional methods in the classroom.

5) **Classroom Observational Guide:** This observational guide was equally aimed at observing the classroom interaction between teachers and pupils to see the extent to which differentiated instruction is used in the classroom.

5.12. Treatment of Experimental and Control Groups

In order to avoid the teacher variable affecting the results, the researcher personally taught the experimental and control groups during each experiment. In the first experiment, the experimental group was taught reading skills using the differentiated teaching strategy of pre- assessment, while the control group was taught using the traditional the textbook method each lesson lasted for thirty minutes within a period of one week. At the end of the end a post test was administered. In the second experiment the experimental group was taught reading skills using the differentiated teaching strategy of precision teaching strategy, while the control group was taught using the traditional textbook method each lesson lasted for thirty minutes within a period of one week. At the end of the end a post test was administered. Each lesson lasted for thirty minutes within a period of one week. At the end of the end a post test was administered.

5.13. Quantitative Data Analysis

As for the quantitative data, a pre-designed EpiData Version 3.1 (EpiData Association, Odense Denmark, 2008) database which had in-built consistency and validation checks was used to enter the data. Further consistency, data range and validation checks were also performed in SPSS version 21.0 (IBM Inc., 2012) to identify invalid codes. Data were made essentially of categorical variables hence; chi-Square test of independence was used to measure the cause and effect relationship between the conceptual indicators of the study. The Explanatory Power (EP) of individual background indicators like gender, age was calculated as well as the Integrated Value Mapping (IVM) using Cox and Snell Pseudo R-Square. The effect of these indicators was also appraised using the Log-Likelihood Ratio test. The P-Value could tell us if the effect was significant or not. In fact, the smaller the P-value, the more the contribution and which contribution is significant when P-value is <0.05. Inter-component relationship or association between the indicators of differentiated instruction was assessed using the non-parametric Spearman's rho correlation test. The non-parametric correlation test was used because composite variables departed significantly from theoretical normal distribution according to Kolmogorov Smirnov and Shapiro Wilk test ($P<0.05$) All statistics were presented at the 95% Confidence Level (CL), Alpha =0.05. In the other sense, whenever the P-value was less than Alpha, there was significant difference, a significant relationship, a significant dependence or association or a significant variability explained.

The following statistical Measures were used in quantitative data analysis.

a) Chi-Square: The use of Chi square demands that data should be categorical and variables made of two or more categories. (Greenwood & Nikulin, 1996).The use of Chi-square was meant to measure the effect of differentiated instruction on the performance of children with reading problems. The Chi-Square was the most suitable for this purpose because data were made essentially of categorical variables.

b) Log-Likelihood Ratio Test (Pseudo R-Square): Logistic regression, also called a logit model, is used to model dichotomous outcome variables. In the logit model the log odds of the outcome is modelled as a linear combination of the predictor variables (Hosmer & Lemeshow, 2000).The likelihood ratio test was meant to determine the predictive value of gender and age on performance in reading problems. This was the most efficient test that could indicate the predictive value of individual categorical and dichotomous variables that were not continues.

The Log-Likelihood Ratio Test was equally used to determine which of the differentiated instructional strategies had the highest predictive value on the performance pupils with reading problems.

6. SUMMARY OF FINDINGS

Research hypothesis one: Differentiated instruction has no significant effect on the performance of children with problems in decoding skills.

Table: *Comparing decoding scores within group from pre-test to prost-test and between experimental and control group.*

Group		Decoding pre-test	Decoding post test	Mean difference	Wilcoxon Signed Ranks test
Experimental	N	9	9	0.667	Z=-1.897 P=0.048
	Mean	2.889	3.556		
	Median	3.000	4.000		
	Minimum	2.00	3.00		
	Maximum	4.00	4.00		
	Std. Deviation	0.601	0.527		
Control	N	9	9	0.555	Z=-1.890 P=0.059
	Mean	2.556	3.111		
	Median	2.000	3.000		
	Minimum	1.00	2.00		
	Maximum	4.00	4.00		
	Std. Deviation	1.014	0.601		
Mean difference		0.333	0.445		
Mann Whitney U test		U=31.000 P=0.436	U=25.000 P=0.190		

The average score in decoding in the experimental group at pre-test was 2.889 with median at 3.000, and increased to 3.556 at post-test and this improvement was significant (Wilcoxon Signed Ranks test: P=0.048).

In the control group, at pre-test, the average score was 2.556 and increased to 3.111 at post-test (Wilcoxon Signed Ranks test: P=0.059) therefore implying that the change in the experimental group was more obvious than in the control group; the null hypothesis is then rejected. Comparing between the experimental and the control group, though there was an increase in the difference in favor of the experimental group, this difference was not significant (Mann Whitney U test: P>0.05).

Research hypothesis two: Differentiated instruction has no significant effect on the performance of children problems fluency.

Table: *Comparing fluency scores within group from pre-test to prost-test and between experimental and control group.*

Group		Fluency pre-test	Fluency post test	Mean difference	Wilcoxon Signed Ranks test
Experimental	N	9	9	0.556	Z=-1.667 P=0.047
	Mean	3.111	3.667		
	Median	3.000	4.000		
	Minimum	2.00	3.00		
	Maximum	4.00	4.00		
	Std. Deviation	0.601	0.500		
Control	N	9	9	-0.111	Z=-0.707 P=0.480
	Mean	3.111	3.000		
	Median	3.000	3.000		
	Minimum	2.50	3.00		
	Maximum	4.00	3.00		
	Std. Deviation	0.486	0.000		
Mean difference		0.000	0.667		
Mann Whitney U test		U=40.000 P=0.961	U=13.500 P=0.004		

The average score in fluency in the experimental group at pre-test was 3.111 with median at 3.000, and increased to 3.667 at post-test and this improvement was significant (Wilcoxon Signed Ranks test: P=0.047). In the control group, at pre-test, the average score was 3.111 and stagnated at 3.000 at post-test (Wilcoxon Signed Ranks test: P=0.480), therefore implying that the change in the experimental group was more obvious than in the control group; the null hypothesis is then rejected. Comparing between the experimental and the control group, there was an increase in the difference in favor of the experimental group and this difference was statistically significant (Mann Whitney U test: P=0.004).

7. DISCUSSIONS OF FINDINGS

Research hypothesis one: differentiated instruction has no significant effect on the performance of children with problems in decoding.

Comparing score in decoding skills within group from pre test to post test and between experimental and control group , the null hypothesis was rejected The average score in decoding in the experimental group at pre-test was 2.889 with median at 3.000, and increased to 3.556 at post-test and this improvement was significant (Wilcoxon Signed Ranks test: P=0.048). In the control group, at pre-test, the average score was 2.556 and increased to 3.111 at post-test (Wilcoxon Signed Ranks test: P=0.059) therefore implying that the change in the experimental group was more obvious than in the control group; the null hypothesis is then rejected. Comparing between the experimental and the control group, though there was an increase in the difference in favor of the experimental group, this difference was significant (Mann Whitney U test: P>0.05). The magnitude or degree of difference between the variables was high meaning therefore that differentiated instruction has a significant effect on the acquisition of decoding skills in relation to these results was the quasi experimental research carried out by Huebner (2010) on the effects of differentiated instruction on oral reading fluency, reading comprehension and reading attitude . The study incorporated cluster randomized assignment to groups with thirty seven classrooms in the treatment condition and thirty three in the control condition being overall reading fluency, reading comprehension as well as teaching as well as reading attitude and practices. after analyzing the data collected from both groups results indicated that, the use of differentiated instruction and enrichment teaching methods , including high interest; self selected books that were above students independent reading , resulted in higher reading fluency and comprehension in some students. Consequently teachers could replace whole and small group instruction with differentiated instruction techniques with the hope of improving achievement scores this falls in line with(Lee Vygostsky,s 1978) zone of proximal development ZDP.

According to the social constructivism approach, instructors have to adopt to the role of a facilitator and not as teachers Baverfeld, (1995) the facilitators helps the learner to get his or her own understanding .the emphasis is on the learner and not on the instructor. Vygotsky argued that what children can do with the help of others may be more indicative of their mental development than what they can do alone. He maintained that for each developing individual there is a zone of proximal development, arrange of skills that the child can perform with assistance but not quiet independently. How and when children master important skills is partly linked to the willingness of others to provide scaffolding, or sensitive structuring of children's learning encounters. Children develop language and speech by relying on others such as caregivers or instructors for performing the task and also that learners use prior knowledge to carry out the task without any guidance this links to pre assessment. In the ZDP, Vygostky emphasis that there is a link between an individual's current level of development and his or her potential level of development. In other words it is the distance between the actual developments and his or her potential level of development .hence the ZDP links that which is known to that which is unknown. (Riddle and Dabbagh 1999) . This implies that in order to develop the ZDP, learners should actively interact socially with a knowledgeable adult or capable peer. In this instance the teachers rule becomes one of purposeful instruction, a mediator of activities and substantial experiences allowing the learner to attain his or her ZDP.

Thus in imparting of decoding skills differentiation of instruction is essential in combination with the child's ZDP and previous knowledge. Decoding skills are vital for speech development. Early attainment of deciding skills is important because this early skill accurately predicts latter skill in reading comprehension. There is strong and persuasive evidence that children who get off to a slow

start rarely become strong readers. (Stanovich, 1986) early learning of the codes leads to wider reading habits in and out of school. Thus differentiating instruction for children who lack the skill is a rewarding thing to do as indicative by the above hypothesis.

Research hypothesis two: Differentiated instruction has no significant effect on the performance of children with problems in fluency skills.

Comparing fluency scores within group from pre-test to prost-test and Between experimental and control group. The average score in fluency in the experimental group at pre-test was 3.111 with median at 3.000, and increased to 3.667 at post-test and this improvement was significant (Wilcoxon Signed Ranks test: P=0.047). In the control group, at pre-test, the average score was 3.111 and stagnated at 3.000 at post-test (Wilcoxon Signed Ranks test: P=0.480), therefore implying a significant change in the experimental group as oppose to the control group therefore the null hypothesis was rejected and the null retained. Therefore differentiated instruction has a significant effect on the performance of children acquiring fluency skills. Reading fluency is the ability to read words accurately and quickly. Fluent readers know when to pause within and at the end of the text and in line with this is the conclusion drawn by (2007) differentiated instruction has a positive and significant effect on fluency skills. It was found out that on the assessments carried out in fall (pre test) students read an average of 54 words per minute, and on the winter assessments (post test) students read an average of 77 words per minute. Children participated in differentiated learning task in reading through small group instruction and literacy center activities. The researcher also generalized that teachers uses of differentiated reading instruction in cooperation with classroom management strategies allowed students to become more fluent readers. Similarly

Sally et al (2011) in her experimental research on the effect of differentiated instruction and enrichment pedagogy on reading fluency and comprehension reveals in results that demonstrate that an enrichment reading approach with differentiated instruction and less whole group instruction ,was as effective or more effective than a traditional whole group basal approach. Brunner's theory is of relevance to differentiated instruction especially at the iconic and symbolic modes of representation that has to do with reading problems. Brunner (1978) in his mode of representation theory arguers that students should be helped to understand the structure of a field of study or the discipline, he believes that if students are helped to grasp the overall pattern of a field of study, they are more likely to remember what they learn, and understand the principles that can be applied in a variety of situations. He insisted on discovery learning (Brunner, 1980) discovery learning which must be guided teaching in the class room where school learning takes place too much in the form of step by step presentation of knowledge which are applicable only in the classroom. His views tie with differentiated instruction and flexible grouping. Tchombe (2011) states that teachers should confront students with problems and help them look for solutions either independently or in interactive group work. Teachers should give students much opportunity for practice so that they can acquire confidence in their own learning abilities. This will help children who have problems with reading fluently and who dread reading aloud to develop confidence in them and consequently improved performance in the acquisition of fluency skills.

8. RECOMMENDATIONS AND INTERVENTION STRATEGIES TO MOTIVATE STUDENTS

Despite many teachers' beliefs that they have little influence on student motivation, teachers can influence and support student motivation by setting clear goals and expectations (setting a purpose) for reading and writing assignments, focusing students on their own improvement, providing a variety of reading materials, allowing students to choose reading materials, and providing opportunities for students to discuss reading and writing tasks with one another. Below are some recommendations to help motivate student in the language learning process.

8.1. Set Clear Goals and Expectations for Performance

Adolescents' understanding of a task and the work necessary to complete it successfully influence their motivation If a teacher assigns a chapter to read for homework without letting the students know that they are expected to discuss the major developments in the chapter the next day, then students do not understand the "real" assignment, nor do they know how to complete it successfully. Goals and expectations for reading and writing assignments should be clear and specific. For example, in assigning a textbook chapter for reading, the teacher should be clear about why the reading is assigned and what students are expected to do as a result of reading it. Provide guidance by giving examples of

strategies that students can use in reading the chapter and relate that to successful participation in the discussion to enhance motivation for performing the reading activity [92, 93]. Teachers may feel reluctant to implement the following strategies because of concerns over the relevance of materials that are not directly tied to the curriculum or to high stakes tests.

8.2. Guide Students to Focus on their Own Improvement

Students' tendencies to compare themselves with their peers, which is exacerbated by grading and tracking practices at the primary level, negatively influence their motivation for reading and writing in school. Helping students to set goals for their literacy and content learning and then guiding them to focus on their progress toward attaining these goals is one way to improve motivation. In this era of standards-based learning and high stakes testing, teachers must also ensure that individual learning goals address content and performance standards. Together, the reading specialist, the special education teacher, the school librarian, and content-area teachers can collect and organize a pool of reading materials that address standards based content and are written at different reading levels. Specialists can also assist the content area teachers by providing diagnostic assessment information and helping them use that information to match texts to students and to determine reading strategies and skills students need to learn. Teachers can then use these resources and information to guide students to set learning goals individualized to their reading abilities and content learning needs and track their progress in meeting these goals. Teachers can teach students to keep track of their progress through reading logs and progress checklists, which the student then shares with the teacher on a regular basis

8.3. Provide Variety and Choice in Reading Materials

The textbooks used in many secondary level classrooms often do not hold students' interests. Teachers can provide students with other reading materials that interest them and that pertain to the subjects that they teach. Teachers can start by conducting online searches for *high interest, matched-to-reading-level materials*. Books, magazines, and newspaper articles that adolescents consider interesting help them view reading as a way to learn more about topics that are attractive to them , Self-determination is critical to motivation. Allowing students to select some of their own reading materials gives students control over their learning. Teachers need to structure and guide student choices so that struggling readers select materials that are appropriate for their reading level and that address the content they are learning [92, 93, 95].

8.4. Provide Opportunities for Students to Interact Through Reading

To provide students with opportunities for interaction, teachers can:

- Create opportunities for small groups of students to discuss their reading,
- Structure groups carefully so that students with differing abilities are able to talk about a common topic, and
- Offer different viewpoints or information on that topic. For example, if students are reading different materials at different reading levels on the writing of the U.S. Constitution, students who have read different selections can form a group to talk about what they learned from the different texts.

9. CONCLUSION

Countless middle and high school students at every socioeconomic level are struggling with learning academic content because they cannot read and write at grade level. To address this problem, all educators, including content-area teachers, need information on how to incorporate effective literacy learning strategies into the content-area curriculum. This document has presented, summarized, and discussed the relevant literature on adolescent literacy and has described promising, research-based instructional practices for improving adolescent literacy skills. Though the research base on adolescent literacy is incomplete, existing research offers some suggestions for how content-area teachers can work with struggling adolescent readers in their classrooms. Some common themes have emerged from the research literature as effective practices for instruction. The most common suggestion made throughout the research surveyed is that teachers should use systematic, explicit, and

direct instruction. When students experience explicit instruction on a specific skill, teacher modeling, guided practice, and independent practice, they are much more likely to become proficient at the skill being taught.

The second common theme throughout many of the literacy components discussed is the use of repetition. One way to ensure that students retain a strategy or skill is to review it in different contexts and with different texts [6, 16, 20]. Whether applied to reading a text repeatedly to improve fluency or practicing the steps of a strategy multiple times to master that strategy, repetition contribute to the improvement of adolescent literacy skills. The improvement of adolescent literacy is an issue that all middle and high school teachers should be equipped to address in their instruction. To be effective, content-area teachers must be aware of instructional approaches and strategies that can be used within their existing curricula to help improve the literacy levels of the struggling readers that they encounter. In this way, they will learn the content area. We hope that this report provides some of the information needed to help teachers better educate today's adolescents.

REFERENCES

Armbruster, B.B., Lehr, F., & Osborn, J. (2001). Put Reading First: The research building blocks for teaching children to read, kindergarten through grade 3. Jessup, MD: Partnership for Reading, 21-32.

Association for Supervision and Curriculum Development (Producer). (1997). Differentiation instruction: Creating multiple paths for learning. (Available from the Associat ion for Supervisio nand Curriculum Development, P.O. Box 79760, Baltimore, MD 212790760)

Bauersfeld, H. (1995). "Language Games' in the Mathematics Classroom: Their Function and Their Effects", in P. Cobb & H. Bauersfeld (Eds.), The emergence of mathematical meaning:Interaction in classroom cultures, Hillsdale, US-NJ: Lawrence Erlbaum: 211-292.

Baumgartner, T., Lipowski, T., & Rush, C. (2003). *Increasing reading achievement of primary and middle school students through differentiated instruction.* Unpublished doctoral dissertation, Saint Xavier University, Chicago, IL. (ERIC Documentation Reproduction Service No. ED 479203)

Bernard-Opitz, V. (2005) Autism Spectrum Disorders: A training manual for parents, teachers and therapists, (German:Kohlhammerpublication; English in printin Pro Ed).

Bishop, D. V. M., & Adams, C. (1990). A prospective-study of therelationship between specific language impairment, phonological disorders and reading retardation.*Journal of Child Psychology and Psychiatry and Allied Disciplines*, 31(7), 1027–1050

Blau, V., Reithler, J., van Atteveldt, N., Seitz, J., Gerretsen, P., Goebel, R. & Blomert, L. (2009). Deviant processing of letters and speech sounds as proximate cause of reading failure: a functional magnetic resonance imaging study of dyslexic children. *A Jounral of Neurology,* 133, 868-879.

Brooks, J. G., & Brooks, M. G. (1993). *In search of understanding: The case for constructivist classrooms*.Alexandria, VA: Association for Supervision and Curriculum Development.

Caine, R., Caine, G., &Crowell, S. (1999). *Mindshifts: A Brain-Compatible Process for Professional Development and the Renewal of Education* Tucson, Ariz : Zephyr Press

Caine, R., Caine, G., McClintic, C., &Klimek, K.(2009)*12 Brain/Mind LearningPrinciples in Action: Developing Executive Functions of the Human Brain.*Thousands oaks, Calif : Corwin Press

Christensen, T. (1993). Individualizing reading assignments in large class language study. *Journal of Hokusei Junior College*, 29, (pp. 85-101). (ERIC Document Reproduction Service No. ED346082)

Collins, A., & Brown, J. S. (1988). The computer as a tool for learning through reflection. In H. Mandl &A. Lesgold (Eds.), *Learning issues for intelligent tutoring systems* (pp. 1–18). New York: Springer Verlag.

Collins, A., Brown, J. S., & Newman, S. (1989). Cognitive apprenticeship: teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser*(pp. 453-494). Hillsdale, NJ: Erlbaum.

Csikszentmihalyi, M. Rathunde, K., & Whalen, S. (1993). Talented teenagers: The roots of success and failure. New York: Cambridge University Press.

Cummins, J. (1980). The cross-lingual dimensions of language proficiency. Implications for bilingual education and the optimal age issue. *TESOL Quarterly*, 14, 175-187.

D'Amico, J. & Gallaway, K. (2008). *Differentiated instruction for the middle school math teacher; activities and strategies for an inclusive classroom.* Hoboken, N. J.: Wiley Pub.

Davis, E. A., & Linn, M. C. (2000). Scaffolding students'knowledge integration: Prompts for reflection in KIE. *International Journal of Science Education, 22,* 819–837.

Dennis, M., & Barnes, M. (1993). Oral discourse after early-onset hydrocephalus: Linguistic ambiguity, figurative language, speech acts and script-based inferences. *Journal of Pediatric Psychology, 18*, 639-652.

Dinnocenti, S.T. (1998). Differentiation: Definition and description for gifted and talented students. Storrs, CT: National Research Center on the Gifted and Talented. (ERIC Document Reproduction Service No. ED424709)

Edelson, D. C., Gordin, D. N., & Pea, R. D. (1999). Addressing the challenges of inquiry-based learning through technology and curriculum design. The Journal of the Learning Sciences, 8, 391–450.

Edelson, D. C., Pea, R. D., & Gomez, L. (1996). Constructivism in thecollaboratory. In B. Wilson (Ed.), *Constructivist Learning Environments: Case Studies inInstructional Design,*. Englewood Cliffs, NJ: Educational Technology Publications.

Ehri, L.C. (2002). Phases of acquisition in learning to read words and implications for teaching. In R. Stainthorp and P.Tomlinson (Eds.) *Learning and teaching reading.* London: British Journal of Educational Psychology Monograph Series II

Fabrizio, M. A. & Moors, A. L. (2003)Evaluating Mastery: Measuring Instructional Outcomes for Children with Autism.*European Journal of Behavior Analysis.*

Feldman, R. S. (2003). *Development across the Life Span.* (3rd ed) Upper Saddle River, New Jersey.

Gamoran, A., Secada, W. G.,& Marrett, C. B. (2000). The organizational context of teaching and learning. In*Handbook of the sociology of education*(pp. 37-63). Springer US.

Gernsbacher, M. A. (1990). Fine tuning the activation of lexical representations during comprehension. In G. B. Simpson (Ed.), Comprehending word and sentence. Amsterdam: North-Holland

Gernsbacher, M. A., & Faust, M. E. (1991). The mechanism of suppression: A component of general comprehension skill. *J. of Experimental Psychology: Learning, Memory and Cognition* 17, 245-262

Gilbert, T. F. (1978). *Human Competence: Engineering worthy performance*. New York: McGraw Hill.

Gindis, B. (2003) Remediation through Education: Sociocultural Theory and Children with Special Needs. In: Kozulin et al. (Eds.) Vygotsky`s Educational Theory in Cultural Context.(Cambridge University Press), 200-225.

Hall, T. (2002). Differentiated Instruction. Effective Classroom Practices Report. National Center on Accessing the General Curriculum, CAST, U.S. Office of Special Education Programs. [Online] http://www.cast.org/ncac/classroompractice/cpractice02.doc [15 May 2005].

Hogan, K., & Pressley, M. (1997). Scaffolding scientific competencies within classroom communities of inquiry. In K. Hogan & M. Pressley (Eds.), *Scaffolding student learning: Instructional approachesand issues* (pp. 74–107). Cambridge, MA: Brookline.

Hollas, B. (2005). *Differentiating Instruction in a Whole-Group Setting: Taking the Easy First Steps into Differentiation*. Peterborough, NH: Crystal Springs Books.

Juel, C. (1988). "Learning to Read and Write: A Longitudinal Study of Fifty-Four Children from First Through Fourth Grade." *Journal of Educational Psychology*, 80, 437-447.

King-Friedrichs, J. (2001). Brain friendly techniques for improving memory. Educational Leadership, 59(3), 76-79.

Kitao, K. (1994). Individualizing English instruction using computers. Doshisha Studies in English, 62, (pp. 167-190). (ERIC Document Reproduction Service No. ED377675)

Koedinger, K. R., & Anderson, J. R. (1993). Reifying implicit planning in geometry: Guidelines for model-based intelligent tutoring system design. In S. P. Lajoie & S. J. Derry (Eds.), *Computers ascognitive tools* (pp. 15–45). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Kolodner, J., Owensby, J., & Guzdial, M. (2004). Case-based learning aids. In D. H. Jonassen (Ed.), Handbook of research on educational communications and technology: A project of the Association for Educational Communications and Technology(2nd ed., pp. 829–861). New York: L. Erlbaum.

Laing, E., Hulme, C., Grant, J., & Karmiloff-Smith, A. (2001). Learning to read in Williams syndrome: Looking beneath the surface of atypical reading development. Journal of Child Psychology and Psychiatry, 42, 729–739.

Larkin, L.K., Sackor, S.M., & Zigmond, N.(2002). Teaching reading to poor readers in the intermediate grades: A comparisonof text difficulty. *Journal of Educational Psychology*, 94(3), 474–485.

Leach, D., Coyle, C.A. & Cole, P. G. (2003) Fluency in the Classroom. In:Waugh, R. F. *On the Forefront of Educational Psychology*, New York:Nova Science Publishers, Inc.

Lepper, M. R., Woolverton, M., Mumme, D. L., & Gurtner, J. (1993). Motivational techniques of expert human tutors: Lessons for the design of computer-based tutors. In S. P. Lajoie & S. J. Derry (Eds.), *Computers as cognitive tools* (pp. 75–105). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Lindsley, O. R. (1972). From Skinner to Precision Teaching. In J. B. Jordan & L. S. Robbins(Eds.), *Let's try doing something else kind of thing* (pp. 1-12). Arlington, VA: Council on ExceptionalChildren.

Long, D. L., Seely, M. R., & Oppy, B. J. (1999). The strategic nature of less skilled readers' suppression problems. Discourse Processes, 27, 281–302.

McGill-Franzen, A., Zmach, C., Solic, K., & Zeig, J. L. (2006). The confluence of two policy mandates: Core reading programs and third-grade retention in Florida. Elementary School Journal, 107(1), 67–91.

Mitchell, L., & Hobson, B. (2005). *One Size Does Not Fit All: Differentiation in the Elementary Grades*. Paper presented at the Beaverton School District Summer Institute, Beaverton, OR.

Molenda, M. J., Pershing, J. A. and Reigeluth, C. M. (1996),"Designing Instructional Systems". In R. L. Craig (Ed).TheASTD Training and Development Handbook, (4th ed pp266-293). New York: McGraw Hill.

Moody, S. W., Vaughn, S., & Schumm, J. S. (1997). Instructional grouping for reading: Teachers' views. Remedial and Special Education, 18(6), 347-356.

Nation, K. & Snowling. M.J. (1997) Assessing reading difficulties: the validity and utility of current measures of reading skill. *British Journal of Educational Psychology, 67,* 359-370.

Quintana, C., Eng, J., Carra, A., Wu, H.-K., & Soloway, E. (1999). Symphony: A case study in extending learner-centered design through process space analysis. In M. G. Williams, M. W. Altom, K. Ehrlich, & W. Newman (Eds.), *Proceedings of CHI 99 Conference on Human Factors in ComputingSystems* (pp. 473–480). Reading, MA: Addison-Wesley.

Ramiro, M. (2013). *New methods and strategies for teaching Mathematics and reading have been implemented in nursery and primary schools in the Southwest Region*. CameroonPostline.com

Reiser, B. J., Tabak, I., Sandoval, W. A., Smith, B. K., Steinmuller, F., & Leone, A. J. (2001). BGuILE: Strategic and conceptual scaffolds for scientific inquiry in biology classrooms. In S. M. Carver & D. Klahr (Eds.), *Cognition and instruction: Twenty-five years of progress* (pp. 263–305). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Schumm, J. S., Moody, S. W. & Vaughn. S. R. (2000). Grouping for reading instruction: Does one size fit all? *Journal of Learning Disabilities*, 33 (5), pp. 477–488.

Servilio, K. (2009). You get to choose! Motivating students to read through differentiated instruction. *Teaching Exceptional Children Plus*, 5(5), 2-1l.

Sharma, M., Purdy, S.C, Newall, P., Wheldall, K., Beaman, R. & Dillon, H. (2006). Electrophysiological and behavioral evidence of auditory processing deficits in children with reading disorder. *Clinical Neurophysiology*, 117, 1130-1144.

Sigman, M., & Ungerer, J. (1981). Sensorimotor skill and language comprehension in autistic children. *Journal of abnormal Child Psychology*, 9, 149-165.

Stanovich, K.E. (1986). "Matthew Effects in Reading: Some Consequences of Individual Differences in the Acquisition of Literacy." *Reading Research Quarterly*, 21, 360-406.

Subban, P. (2006). Differentiated instruction: A research basis. *International Education Journal*, 7(7), 935-947. ISSN 1443-1475 © 2006 Shannon Research Press

Sullivan, M. (1993). A meta-analysis of experimental research studies based on the Dunn and Dunn learning styles model and itsrelationship to academic achievement and performance.Unpublished doctoral dissertation, St. John's University,Jamaica, NY.

Tchombe, T. M. S. (2011) Theories of learning. In Nsamenang, A. B. & Tchombe, T. M. S. (Eds) Handbook Of African Educational Theories And Practices: A Generative Teacher Education Curriculum. Human Development Resource Centre. Bamenda. pp 175 – 193

Temple, C.M. & Carney, R. (1996) Reading skills in children with Turner' s Syndrome: An analysis of
hyperlexia. *Cortex*, 32, 335-345

Thames, D.G., & Reeves-Kazelskis, C. (1992). Effects of individualized, integrated language arts instruction on the attitudes of poor readers. Knoxville, TN: Mid-South Educational Research Association. (ERIC Document Reproduction Service No. ED353570)

Tieso, C. (2005). The effects of grouping practices and curricular adjustments on achievement. *Journal for the Education of the Gifted*, 29(1), 60–89.

Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, Virginia: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms.* Alexandria, VA. Association for Supervision and Curriculum Development

Tomlinson, C. A. (2003). *Fulfilling the Promise of the Differentiated Classroom: Strategies and Tools for Responsive Teaching*. Alexandria, VA: ASCD.

Tomlinson, C. A., and Kalbfleisch, M. L. (1998). Teach me, teach my brain: A call for differentiated classrooms. Educational Leadership, 56(3), 52-55

Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T., & Brimijoin K., Conover, L.A. & Reynolds, T. (2003). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of the literature. *Journal for the Education of the Gifted*, 27 (2/3), 119-45.

Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T., & Brimijoin K., Conover, L.A. & Reynolds, T. (2003). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of the literature. *Journal for the Education of the Gifted*, 27 (2/3), 119-45.

Tuttle, J. (2000). Differentiated Classrooms (Report). Woodbury: Cedar Mountain Academy.

Vygotsky, L. (1993). The collected works of L.S.Vygotsky. Vol.2: The fundamentals of defectology (abnormal psychology and learning disabilities) (R.W.Rieber & A.S. Carton, Eds.). NY: Plenum Press.

Vygotsky, L.S. (1978). Mind and Society: The development of higher mental processes. Cambridge, MA: Harvard University Press

Wendling, B.J., & Mather, N., (2009). Essentials of Evidence-Based Academic Interventions. New Jersey: John Wiley & Sons, Inc.

Westwood, P. (2008). What teachers need to know about Learning difficulties. Camberwell: Australian Council for Educational Research (ACER).

Westwood, P., (2001). Reading and learning difficulties: Approaches to teaching and assessment. Camberwell: Australian Council for Educational Research (ACER).

Williams, J.H.G., Whiten, A., & Singh, T. (2004). A Systematic Review of Action Imitation in Autistic Spectrum Disorder. Journal of Autism and Developmental Disorders, 34 (3),285-299.

Wood, D., Bruner, J., &Ross, G. (1976) The role of tutoring in problem solving. Journal of ChildPsychol.Psychiat.,Vol. 17, 1976, pp. 89 to 100. Pergamon Pres

Wood, S., Burke, L., Kunzelmann, H., & Koenig, C. (1978). Functional criteria in basic math skill proficiency. *Journal of Special Education Technology, 2*, 29-36.

Yuen, K.M. & Hau, K.T. (2006). Constructivist teaching and teacher-centred teaching: a comparison of students‟ learning in a university course. *Innovations in Education and Teaching International*, Vol.43 No.3, pp. 279-290.

AUTHOR'S BIOGRAPHY

Dr. Awah Julia Azah, is a teacher of Special Needs Education at the University of Buea and a teacher trainer at Government Teacher Training College Buea, Cameroon. Awah Julia has a PhD in Special Needs Education with a Double Concentration in Inclusive Education and Learning Disabilities. She has a Master's Degree (M.Ed) in Curriculum Development, a Higher Teacher Grade One Diploma (DIPEN II) In Sciences of Education and a Bachelor's Degree B.A (Hons) in English Modern Letters. Dr. Awah Julia Azah is a renowned Researcher working with: ***Foundation of Scientific Research, Community Based Rehabilitation and Advocacy on Inclusive Education***" (**FORCAIE-Cameroon**).