How can phonemic awareness increase reading levels among students who have dyslexia and or, non-reader/ low progress readers?

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Introduction

Introduction and statement of topic

The term dyslexia is synonymous with literacy problem. American Dyslexia Association (2019) asserts that dyslexia is evident when accurate and fluent word reading and or spelling develops very incompletely or with great difficulty. However, the very existence of dyslexia was questioned by the National Research and Development Centre for Adults Literacy and Numeracy. On the other hand, countless researchers including Fawcett (2002), Hatcher and Snowling (2002), Singleton (2002), Everatt (2002) to name a few have researched and put forward that dyslexia does exit and that symptoms are evidently documented to justify such phenomenon of Dyslexia and the source/s of its different manifestations. Therefore assessment or screening of these manifestation(s) is inextricably bound to Dyslexia or the source of literacy.

Rationale: Dyslexia has been a topic of endless controversies, twists, progress and proposals. The varied views of dyslexia become more apparent when one looks at the three approaches: cognitive, behaviourial and biological. It is claimed that the theoretical foundation for the concept of dyslexia is very weak; this is further compounded by Fawcett (2002) asserted that researchers into dyslexia have their agendas. Nicolson goes out on a limb by suggesting that dyslexia research is driven by politics and marketing therefore the quest for genuine discovery is compromised which feeds the claim of dyslexia having a weak theoretical foundation.

Like many Jamaican teachers who have the opportunity to teach in the public education system, I have faced many challenges as it relates to children being labelled non-readers. Upon receiving my cohort of students every academic year I have observed that some students manifest some inadequacies in their ability to recognize phonemes. Some

students when asked to identify letters of the alphabet and the sounds were unable to do so. Some of whom are challenged with other learning disabilities or simply just never learned the way they were previously taught. Bearing in mind that I am a part of the primary school system and students should according to the curriculum of the Early Childhood Commission come into the system with basic knowledge of letter sound and letter identification. In an attempt to broaden my knowledge on the topic, so that I am better able to help these students I embarked on the topic-; how can phonemic awareness increase reading levels among students who have dyslexia and or non-reader/ low progress readers?

Method of search

After analysing my course outline/content for this course I instantly started to brainstorm possible research topics in my head. I then started to observing and interviewing the teachers in my school with an attempt to ascertain the most common issues that affect us as teachers. The three most common issues were; parental involvement, teacher's knowledge on subject areas, peer counselling and indiscipline in school. I then thought further as it relates to how effective what I intend to research will impact the teaching and learning process. During my period of brainstorming and reflecting the national literacy results for the grade three students were announced over the intercom, the results were nowhere impressive. The school scored an average of 45% and the target for the national standard is 85%. A large percentage of the students who have not mastered the exam were boys who were later identified as poor or struggling readers. Some of them could not even complete the personal information section on the front of the exam paper. I asked myself how we as a school can dissect the results to see the possible reasons for such poor performance on the exam particularly with our boys in the area of phonological awareness. I initially settled with the topic of parental involvement but later changed to; how can phonemic awareness increase reading levels among boys who have dyslexia and non-reader/ low progress readers.

With my topic identified, I immediately started to compile journal articles that would be useful in supporting my topic. I also started to request books from several sources on the topic. To make my job a little easier I did the abstract activities using articles that would be most appropriate for my intended topic. All the journal articles were obtained from Western Carolina University Jstor library and EBSCO host. Although the process of retrieving the articles was tedious it was a success after several attempts.

Literature Review

Hinshelwood was the first to describe Dyslexia in 1896. He felt that dyslexia resulted from a dysfunction in visual memory and visual perception due to a delay in maturation. Pringle Morgan (as cited in Pumfrey, 2006) brought developmental dyslexia to the forefront in his letter to the British Medical Journal where he described the case of a boy named Percy, who at age 14, had not yet learned to read, yet he showed great intelligence and was generally adept at other activities typical of children his age. Morgan suggest that the brain region suspected of being structurally damage by disease or injury in acquired dyslexia was underdeveloped in Percy however, here it seem to be congenital due to the absence of disease/injury.

Fawcett (2002) states that "all aspect of language, including orthography, morphology and vocabulary, should be addressed in addition to phonology in improving reading among dyslexics. This suggests that language relates to a deficit in reading abilities. However Silberberg and Silberberg (1967) in their research in hyperlexia found that students with dyslexia had unusually good memory, both visual and auditory, and the majority possessed an excellent stored vocabulary that could be used with written words despite the deficiency of their expressive language. Fawcett (2002) and many others assert these individuals are equipped with the necessary skills for reading conversely Silberberg and Silberberg (1967) concludes that language skills are not necessary for good decoding of written words. By

extension, Hymens and Hynd (2000), as cited in Knight and Hynd, 2002) suggested that the Specific Sulcal Morphology appears to relate to specific language abilities and not dyslexia.

Fawcett (2002) advocates an open approach with the dyslexia community, as no one theory or manifestation can comprehensively explain the cause of dyslexia. Firth (1997, as cited in Fawcett, (2002) highlights that it is important that the three levels of theories; cognitive, biological and behavioural are distinguish and taken into consideration when trying to understand dyslexia.

Having various approaches to a problem leads to a richer individual focus on particular aspects of the problem however it may undoubtedly lead to discrepancies among the viewpoints. With every approach a definition to direct its focus is needed. The National Research and Development Centre for Adults Literacy and Numeracy (2019) has been unable to grapple with the concept of dyslexia, so much so that it questioned if it is constructed or not. This quandary perpetuates among other renowned organizations and publications: The British Dyslexia Association in 2002 described dyslexia as a combination of abilities and difficulties that affects the learning process in one or more of the following: reading, spelling, writing; accompanying various weakness in speed of processing, short-term memory, sequencing, organization, auditory and/or visual perception, spoken language and motor skills. While Fletcher etal (2002) in the Journal of School Psychology defines dyslexia as one of several learning disabilities. It is a specific language-based word decoding skills, usually associated with insufficient phonological processing and rapid naming abilities. On the other hand, Goulandris etal (2000), as cited in Hatcher and Snowling (2002) describes dyslexia as a specific disorder of development because phonological processing is selectively impaired while other skills are normal.

Goulandris etal (2000) sides with Stanovich (1994), Nicholson (2001) and Fawcett (2006) in viewing dyslexia in relation to the cognitive processes but even within this view

there lies great difference and discrepancies. Stanovich and Nicholson attributed dyslexia to poor phonological awareness however they claim that dyslexia exist independent of intelligence; a claim which is verified by a number of empirical studies Snowling, (2000) and Stanovich, (1994) as cited in Hatcher and Snowling, (2002); and Stuart and Coltheart, (1998), as cited in Singleton, (2002).

O'Con nell, O'Brian, & Bryant, 1975 as cited in Elderredge, & Quinn, (1988) postulated that struggling readers have great difficulties deciphering the relationship of decoding to reading comprehension that is they may be able to read a passage but they are very well unable to comprehend was the content of the passage speaks to. They stated that "one of the characteristics of poor readers is that they are unable to connect the words they read to make sense, and they are unable to connect the sentences they read to make sense". This according to them is due to the fact that students with dyslexia have difficulty decoding hence they spend time on small units of print rather than larger unit of print. They further stated that students who are fluent readers focus on phrases while less able readers cannot.

Swerling (2015) stated that there are three common types of reading problems. The first is Specific Reading Difficulties which she explained is concerned with children reading words. The second types of reading problem identified by problem have a multiple weaknesses in word-reading skills and comprehension areas. With this Swerling was Specific Reading Comprehension Difficulties; this according to her is concern with students who have poor reading comprehension skills. The third type she identified was Mixed Reading Difficulties; students with this type of reading in mind, it is very important for teachers to know students and use the most effective strategy when teaching students. In the SWRD students phonological awareness skills are most effective as this strategy will aid in students' inability to read specific words. Swerling (2015 agreed with

Hatcher and Snowling (2002) on the point that phonological representation is created by spoken or written words.

Hatcher and Snowling (2002) agreed with Nicholson (2002) and Fawcett (2002) in the assertion the phonological awareness is a cause of dyslexia. They propose that dyslexics can perform normally when reading large unit of spoken words but have difficulties with smaller units of phonemes which has strong links to phonological representation.

Others such as Fowler (1991), Hulme (1992), Metsala (1997); Swan and Goswami (1997) as cited in Hatcher and Snowling (2002) and Singleton (2002) also traced difficulties that dyslexics face to weaknesses in phonological awareness. Snowling and Hulme (1994) as cited in Hatcher and Snowling, 2002) suggest that phonological representation is created by mapping the speech they hear to the speech they produce and vice versa which is gradually developed overtime along with improved proficiency. Hatcher and Snowling (2002) explain that reading and spelling development is built around phonological representation in so far as the alphabetic system relates to sounds and if any difficulties arise at the level, combining sounds to produce a word poses great difficulty. In other words, mapping orthography and phonology surpasses reading development as it is the foundation for automatic reading skills and fluency; this deficit could result in dyslexics reading only the words that they have been taught Snowling (1998) as cited in Hatcher and Snowling (2002). Nation and Snowling (1998, as cited in Hatcher and Snowling (2002) asserts that some dyslexic children get around their decoding difficulties as the semantic skills are normal. However, Hatcher etal (2002) as cited in Hatcher and Snowling (2002) claims that such compensatory process does not fully allow dyslexics to go around their difficulty.

Lundberg etal (1998) as cited in Hatcher and Snowling, (2002) concludes that pre-school training in phonological awareness improves reading. However Bradley and Bryant

(1983) as cited in Hatcher and Snowling, (2002) based on their study advocates that letter-sound correspondences in the context of phonological training is more effective than phonological training alone. By extension, Hatcher etal (1994) as cited in Hatcher and Snowling, (2002) suggest that dyslexics exposed to Reading and Phonological Awareness Training made the most progress in reading and spelling as Phonological Awareness Training alone resulted in the acquisition of phonological skills. Later Hatcher proposed that Sound Linkage Programme would best promote reading and writing.

As a cognitive cause of dyslexia, Palmer (2000) as cited in Singleton (2002) asserts that poor visual memory is an underlying factor in dyslexia. Palmer (2000) as cited in Singleton (2002) found that phonological awareness is less pronounced than visual-spatial memory therefore visual memory as a greater effect than phonology on dyslexia. Johnston and Anderson (1998) as cited in Singleton (2002) and Singleton and colleagues (2002) likewise report that poor reader displays a preference to using pictorial rather than verbal information; whilst Fawcett (1998) as cited in Singleton (2002) refers to a case that shows the above assumption is a questionable. The reference was to a boy (very bright) who had difficulties learning words by sight but made strides when a combination of a more phonological and auditory approach was used. Everatt (2002) based on his research studies in support of Fawcett, highlighted that non-dyslexic and dyslexic are comparable and the verbal issue is likewise.

Everatt (2002) proposed a scientific explanation as to why the vision process is a factor in the cause of dyslexia, however he believes that phonological deficit is a contributing factor. Willows etal (1993) as cited in Everatt, (2002) proposes visual recognition or representation or a letter or word is faulty in some way which leads to difficulties in identifying visual forms. One could suggest that this view (Willows et al (1993) was influenced by Orton (1937) as cited in Everatt (2002) who argued that two hemisphere

formed mirror-image representations of visual stimuli where in non-dyslexics the left side is dominant while in dyslexics the right is dominant resulting in a reversed image representation. This view falls out of favour with the conclusion drawn by Carr (1998 as cited in Everatt, 2002) and Mason and Katz (1976 as cited in Everatt, 2002) which clearly states that both non-dyslexics and dyslexics perform comparably in identifying letters. By extension, Ellis and Miles (1978, as cited in Everatt, 2002) and Everatt (2002) asserts that while letter recognition is comparable, dyslexics performed much poorer than their counterparts when they had to verbalize it. Everatt (2002) address the claim that the cause of this phenomenon is a questionable one. Nelson and Warrington (1980, as cited in Everatt, 2002) and Everatt (2002) argues that it is a linguistic rather than a visual deficit that cause non-dyslexics to outperform dyslexics in memory task which involve linguistic coding of visual stimuli but they performed equally when phonological recoding was not important.

Crampton, K., Herb, K., Sokal, L., & Thiem, C., (2009) assert that a multistrategy approach can aid struggling readers. They did not have much endorsement with such theory as Fawcett (2002) in trying to explain the difficulties experienced by dyslexics assert that cerebellar deficit is a strong contributory factor. The hypothesis is based firmly on work in cognitive neuroscience that shows the cerebellum is a key structure in skill automatisation, together with the recent realization that the cerebellum is centrally involved in cognitive skill as well as motor skill Fawcett (2002). Fawcett (2002) states that there is strong evidence to support this hypothesis but an implication for this is that dyslexics face broader barriers than phonological difficulties and magnocellular deficit such as cerebellum flaws.

A hypothesis that has not been recently proposed is that dyslexia may be a consequence of an abnormality in the neural pathways of the visual system. A division can be made with the pathway into parvocellular and magnocellular system; parvocellular system responds to slow changing information and colours whereas magnocellular system is more

sensitive to gross or rapid changing information Everatt (2002). Everatt (2002) cites Chase (1996), Hogben (1997) and Lovegrove (1996) in claiming that the magnocellular pathway is responsible for the poor performance of dyslexics and Livingstone etal (1991) concludes from post-mortem studies that reveal magnocellular layers showed difference in cell size and organization. Hogben (1997), as cited in Everatt, (2002) among others asserts that not all dyslexics' present Magnocellular pathway deficit and good readers also show poor performance on the same task.

Everatt (1999) as cited in Everatt (2002) despite the evidence against the frequency of Magnocellular pathway deficit claims that it is associated with Scotopic Sensitivity Syndrome (SSS) (Cotton and Evans, 1990) which is considered as a feature of dyslexia and encourages the use of visual filters to improve reading Wilks etal, (1992);(1994). Lopez etal (1994) as cited in Everatt (2002) claims that the very diagnosis of SSS is controversial as it is unclear what mechanism is responsible and may be like the practice of using filters to improve reading produces a placebo effect.

Another theory is that eye movement co-ordination which includes the eye movement itself (saccades) and fixation period is proposed as a contributor to reading difficulties Everatt (2002). Numerous researchers agree that shorter saccades and longer fixation causes erratic eye movement behaviours which could lead one to think that poor eye movement as strong correlations with reading problems. Rayer & Pollatsek (1989) as cited in Everatt (2002) challenge the eye movement theory by suggesting that a dyslexics' reading problem is not proportionate to the eye movement behaviour displayed and in eye movement abnormalities are produced as a compensatory mechanism for their reading problems. Fisher & Weber (1990) as cited in Everatt, 2002) further studied eye movement and found that dyslexics showed inappropriate handling of engaged/disengaged states and insufficient eye control within the attention system. Klein and D'Entremont (1999) as cited in Everatt (2002

Mercer et al, (2011) state that reading difficulty among students is the condition that arises from being unable to respond appropriately to formal reading instruction despite access to linguistic and environmental opportunities, because of an initial weakness in phonological processing that is due to an executive dysfunction that is, a deficit or delay in metacognitive functioning and/or a deficiency in the phonological processing module. On the other hand Snowling (2002) argues that dyslexia is a specific form of language impairment which affects the brain's encoding of phonological features of spoken words. Poorly specified phonological representations stems from a phonological processing deficit which affects reading and spelling skills, however these effects can be modified. Reason (2002) suggests that observation and facts regarding performance are at the behavioural level along with the influence of the environment. Frith (2002) made a bold yet unmitigated proposal that it is a possibility that reading problems are caused by social-emotional problems of an environmental origin. Knight and Hynd (2002) to some extent back the Frith proposal based on their research by suggesting that environment plays a clear role in dyslexia as they found that the school and home environment played a general part in literacy and reading issue.

Genetic Factors

Pennington (1999) as cited in Knight & Hynd (2002) assert that behaviour genetics studies indicate that dyslexia is inheritable through multiple genes which increases ones risk. However, strategies can be employed in an attempt to mitigate the severity of the child's academic performance such as an IEP that includes an intervention plan the extent to which this tendency is evident is determined by policies. Bronfenbrenner (1979) as cited in Wearmouth & Reid (2002) claims that the learning environment could be conceptualized in Microsystem, Mesosystem, Exosystem and Macrosystem and various literatures exist to support the claim of its influence on instructional outcome.

One cannot ignore the argument put forward by various proponents such as Miles & Nicolson (2001) and a renowned organization like the BPS that IQ has a strong correlation to dyslexia. Conversely, Stanovich & Velluntino etal (2004) based on empirical research found that reading problems or dyslexia are independent of one's IQ.

Nicolson (2001) as cited in Fawcett, (2002) promotes the co-existence of various themes of the various approaches in an ecosystem even though the approaches are quite conflicting around various viewpoints. Frith (2002) supports Nicolson by explaining that if we present dyslexia as a neuro-developmental disorder, we cannot avoid its association with the biological and environmental risk factors that will contribute to the manifestation of various difficulties.

Swerling (2015) indicated in her article that reading difficulties vary depending on the type of difficulty that particular child is experiencing. It is therefore important for teachers to understand each individual child as a learner and then use the most effective medium that will enable the child to reach him/her fullest potential. Dyslexia came to light in the British education system with the Warnock Report in 1978; since then the mode of thinking as changed.

Analysis

In analyzing the authors theory it is evident to say that there has been support from some authors to support that dyslexia does exist and that it does affect students particularly equally there are some authors to denounce the mere existence of such. It is important to note that dyslexia vary depending on the severity. The Department for education skill acknowledges dyslexia and even defines it as a difficulty with processing written language which is independent of intelligence that affects approximately 10 % of the population. With acknowledgement, action to alleviate these experienced difficulties must be enacted. Resource allocation from the Local Education Authority has always been an issue; the ideal

scenario is always sorted, where funding is distributed promptly, fairly, transparently and sensibly. Pumfrey (1996) as cited in Fawcett (2002) states that the reactive approach of the Local Education Authorities are usually due to parental pressures and positive in a bid to rectify or control the situation, based on research there are practical implications on varying aspects of predictive, preemptive and indeed reactive work on dyslexia in school and from the local education authority. Mile & Nicolson (2002) among others have put forward the view of IQ as an indicator of reading problems while Pennington (1999) as cited in Knight & Hynd claims that genetics could be a useful indicator of dyslexia. Conversely Fawcett (2002) deemed Pennington's claim as premature and proposed that further research is necessary to establish this; and its now well accepted that IQ is irrelevant as a predictor of dyslexia. Therefore, it would be irresponsible for a Local Education Authority, school, family or individual to use a dyslexic family member as a claim for someone being dyslexic. Another issue of early diagnostic testing for signs of dyslexia according to Fawcett (2002) has its merits however disadvantages were highlighted by other researchers; nonetheless one could argue that irrespective of the validity of the evidence for early screening and intervention, one cannot site an issue with this doing nothing but promote normal literacy development.

Separate and apart from funding the primary issue of the family being concerned with the inadequate funding available or even worst their child being ignore by the system; some theoretical perspective such as social context vaguely ascribe casual significance to the child's social context may lead to blame being loaded on the parent/s or carer/s. Somlity (2001)suggests that potential sources of learning opportunities (e.g. parental input) might account both for the pre-school differences in phonological awareness and for differences in progress with learning to read. This means that the learning opportunities in and out of school are very important for literacy development. If

Somlity is right, any effective intervention in dyslexia must be a partnership between the family and the educational setting.

Conclusion

The practical implications of dyslexia research for schools are multifaceted and have far reaching effects for various reasons. Initially, if the finding of various studies were taken on board by the government the policies of the school would have to reflect the laws. Therefore procedures to enact this must be implemented. Hence, statements for dyslexic learners must show signs of meta-cognitive intervention; diagnostic records must be representative of different views; a positive focus on the strengths of the individual must be nurtured; intelligence would be treated separate from literacy difficulties and vice-a-versa; etc (Fawcett, 2002). By extension support for dyslexic in the form of special examination arrangements must be tailored to address the weaknesses and enhance the strengths for genuine equal opportunities to take place. The sole focus on synthetic phonics in policy; as Carson cites Carbo, 1981; Carbo, Dunn & Dunn (1986), Weaver (1988) as cited in Wearmouth & Reid (2002) in arguing the mechanics of phonics places dyslexics at a disadvantage and the whole book or top down approach is more effective and this has particular importance to the teaching and learning process.

In concluding, it is important to note that no one approach can lead to the full understanding of dyslexia whether it is a definition or explanation therefore when addressing causal links among the cognitive, biological and behavioural approach one should take the view of probability and not determinism Frith, (2002). This means that parents, practitioners and indeed dyslexics themselves should not overemphasize one view especially in addressing various difficulties which present themselves. Many theorists have said that dyslexia is a learning disability that affects a large percentage of the population. Some people go through

life without being diagnosed. It is important for teachers to use multiple strategies that will cater to the needs of all students.

Participants

Initially I started with ten students from my grade two class. After carefully analyzing the time period in which I have to complete the assignment and how involved I am with my students and the topic, I decided to cut the group into two and use another grade two class in an attempt to have an accurate discovery of the intervention outcome. I immediately seek permission from the selected students' parents; this was done in a written form. The content of the intervention along with purpose of the intervention was explained and how it will proceed. There were two sets of participants engaged in the research; the class teacher and a group of grade two students. The class teacher which I will refer to as Mrs. S* is between the age of 30 – 35 and has been teaching for 8 years at the school. I have attained a teaching diploma and is presently pursuing a bachelor's degree from a prominent university at the time the reflective practicum has been conducted. I participated in the study based on a series of interviews that were conducted to confirm the data collected through the observational periods. The students who were participants in the programme are from another grade two classroom. The class has a total of thirty- five students of which twenty- two were boy and thirteen were girls. The intervention revolved around five students; three boys and two girls of which are from the two closest communities to the school district and were selected from a number of pre-testing and post testing interviews and observation.

Profile of students

Les Allen*(name change) is an eight year old child who is from a neighbouring community close to the school district. He lives with his grandparents who are both unemployed. He attends school poorly and is often times seen without snacks and lunch. The class teacher ensures that he gets lunch from the canteen daily this he says motivates him wanting to attend school. His mother who is now nineteen is a mother of two Les* being the first operates a small grocery shop. She shows no interest in him according to the grandfather, as his father is deceased and she is now living with her second child father. Les has little access to literacy materials at home. His performance in the letter recognition and sound is below average.

Shave Bernard* (name change) is an energetic seven year old child who enjoys playing with building blocks and colouring pictures. He resides with his step father, mother and two younger siblings in a nearby community to the school. His Step father operates a taxi which provides the family with the basic needs. His mother is unemployed but tries to bake coconut drops and sell seasonally usually around Jamaica Day and bandanna Day. He writes beautifully but as it relates to recognizing letters and sounds this is a problem to him. He is eager to learn and always wants to help. His parents provide him with the basic tools for school but do not have the resources to get him auditory devices with letters and phonetic sounds that would be useful in him learning the lacking skills.

Junior Clarke* (name change) is a seven year old student who is repeating the grade. He lives with his parents who are both unemployed. His performance in the letter sound is below average. He has little access to literacy materials at home. He is an energetic student who loves to play tricks on his classmates. His parents provide him with a book and a pencil for school but that's it. He is attracted to big bright prints in books and often times caught picture reading. His attendance however is a concern to me.

Shenae Reid*(name change) has excellent comprehension and reason ability. She is a vibrant six year old who can hold a conversation well. Her ability to recognize letters and sound is below average. She has no fear in trying new things and is deemed a competitor. Access to literacy materials at home seems scarce. Her clever and outspoken personality draws persons towards her. She lives with her father and step mother who work occasionally in the sugar industry. The ladies who sell at the school gate provide her with writing books, pencils and even lunch when she is not provided with any by her parents.

Rasheeda Bowen *(name change) is a student who one would think does not know anything. He is an observer who verbalizes few words. The seven year old lives with her grandmother who happens to be deaf and do mostly sign language he tends to use his body parts to do gestures. His father is dead and his mother who has a physical disability is staying with other family members in a rural area. His exposure to literacy materials at home seems minimal. His performance in recognizing letters and letter sound is below average.

Intervention Plan

Practicum Site: A primary school in St. Catherine.

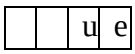
Problem Identified

It has been revealed through observation, pretesting, interview and other mediums that students from a grade two class at a primary school have difficulties reading simple three worded sentences. I have therefore engineered strategies and methods with an attempt to improve student's difficulties.

Area of Focus: Improving reading levels/ability among students who have dyslexia and non-reader/ low progress readers through phonological awareness.

Timeline and action plan

Time/ 45mins/ 2 days per week	*Aim*	*Specific Objectives*	*Instructional Materials*	*Methodology*	*Activities*	*Assessment*	*Evaluation*
Week 1	Students should be able to identify the first 10 letters of the list of 20 letters.	Students should be able to identify the first 10 upper and lower case letters of the alphabet	Letter tiles Computer software Alphabet freeze	Students will be paired in small group engagement	Students will model letter cut out then paste them in workbook	Circle and say the names of selected letters, say whether they are upper or lower case	Students were able to identify 5 – 8 of the letters.
Week 2	students should be able to reproduce the phonetic	Students should be able to reproduce the first 5 letters on the list	Busy beavers Youtube videos related to the topic	Pair group, whole group discussion	Reproduce /make the sounds the letter makes, using	Identify the beginning sound for each picture e.g. book, bat, bench, board,	Students were able to produce 4-6 of the letter sound

	sounds of the first 10 letters.						
Week 3	Students should be able to identify the remaining 10 letters from the list	Students should be able to identify the remaining 10 letters from the list	Busy beavers Phonics software, computer, speakers	Small groups, Whole group discussion	Use play dough to form letters.	Identify the medial sound in the word "bag"	Students were able to identify 5-6 of the letters
Week 4	Students should be able to reproduce the remaining 10 letters from the list	Students should be able to reproduce the remaining 10 letters from the list	Computer, speaker, youtube video related to the topic	Pair groups	Listen to the audio then reproduce selected sounds. e.g. /k/ which other letter make that sound?	Match pictures to the beginning letter. E.g dog, kite, goat	Students were able to produce 4-6 of the letter sound.
Week 5	Students should be able to identify initial blends such as "bl", cl, pl	Students should be able to identify initial blends such as "bl", cl, pl	Youtube video related to the topic, letter tiles	Whole group	 The clue: I am the name of a colour.	Place the blends at the beginning pl, bl, cl _ _ate _ _ ap _ _ ade	one of the five students was able to identify initial blends.
Week 6	Students should be able to identify simple letter words such as, is, it, am	Students should be able to identify simple letter words such as, is, it, am	Letter tiles	Whole group	place index finger under each letter to say the simple two letter words.	Join both letters sound to make simple words. Oral Assessment E.g is, am, in, it	Two students were able to identify the four of the words.

Data from Observation

The observational data were the first set of information collected to identify a problem within the classroom that formed the basis for my intervention. During the first two weeks of observation, I kept field notes to record my observation of the teacher, the children and how they interacted with each other during class activities, lunch break and at play. The field notes indicated that some students were not readily chosen by the class teacher Mrs. S* to participate in the class activities as they too did not show much enthusiasm and interest in participating and interacting with the activities. These children appeared withdrawn and were not frequently engaged. They often found other things to do such as eating snack from another child's lunch bag, playing and fighting which resulted in them being disciplined by the class teacher for being disruptive.

During one of my observational sessions, I saw a student struggling with the seated work given. The activity given to the class was to circle the initial sound for each picture. Les* (name change) had great difficulty completing the task as his competence level to recognize the beginning sound was not yet developed. This was the premise on which I was able to design my intervention plan along with my research question. During other activities, not only did I realize that some students were not given the guidance they needed but five children in particular did not know letters and their corresponding sounds and they were not eager to learn what was being taught.

I further scrutinized the students' books, portfolios booklets and the marks book with previous year grades of the unengaged children which confirmed that they would be most suitable to be a part of the research participants. The children who were always active in the class and mastered most concepts actively participated while the other students at the presumed non mastery level sat quietly or found other things to occupy their time. There was this instant where a student was caught eating cheese tricks from another student's bag during

the lesson. He was one of the students who was not as active and was often seen as disruptive and rude by the class teacher and students. The observational sessions presented me with sufficient evidence to facilitate my intervention.

Data from Teacher's interview

Following the observational session an informal interview was conducted with the class teacher to further clarify information collected during the observational session. On the informal interview with the class teacher I found that the five children who I had originally chosen to be a part of the intervention were in fact the ones who were at the non-mastery stage in understanding letter recognition and sounds. Based on findings from the interview, it revealed that the class teacher approved the notion of using the alphabetic principle as an effective method of improving children's phonics skills. The results also indicated that the class teacher was knowledgeable on the topic of phonemic awareness and its importance on students' ability to read.

Data from pre-test

	Student A		Student B		Student C		Student D		Student E	
Letters	letters	Sound	letters	Sound	letters	Sound	letters	Sound	letters	Sound
C	✓	X	✓	X	X	X	X	X	X	X
B	X	X	X	X	X	X	X	X	X	X
E	X	X	X	X	X	X	✓	X	X	X
F	X	X	X	X	X	X	X	X	X	X
M	X	X	X	X	X	X	✓	X	X	X
S	X	X	✓	X	X	X	X	X	X	X
P	X	X	X	X	X	X	X	X		X
A	✓	X	✓	✓	✓	X	✓	✓	✓	X
T	X	X	X	X	X	X	X	X	X	✓
I	X	X	X	X	X	X	X	X	X	X
N	X	X	X	X	X	✓	X	X	X	X
J	X	X	X	X	X	X	X	X	X	X
R	X	X	X	X	✓	X	X	X	X	X
V	X	X	X	X	X	X	X	X	X	X
D	X	X	X	X	X	X	X	X	X	X
L	X	X	X	X	X	X	X	X	X	✓
G	X	X	X	X	X	x	X	X	X	X
O	X	X	X	X	X	x	X	X	X	X
K	X	X	X	X	X	x	X	X	X	X
H	X	X	X	X	X	x	X	X	X	X
scores	2/20	0/20	3/20	1/20	2/20	1/20	3/20	1/20	1/20	2/20

Student A was able to identify two letters. They are “C” and “A”, but was unable to make the sound of any. Student B was able to identify three letters they were “C”,”S” and “A” but was only able to make the sound of one letter which was /a/. Student C was able to identify and make the sound of one letter which was “A”. Student D was able to identify three letters “E”, “S” and “A” but was only able to make the sound of /a/. Student E was able to identify one letter A, but was successful in producing two of the letter sounds /t/ and /a/

From the pre-test it was found that children's awareness of letter recognition and sounds were low. The results showed that all the children were able to recognize letters than were they able to make the sounds of the letters identified. Less than 10% of the students were able to identify five letters from the total of twenty. Of the five student participants, 0% was able to make the sound of five or more letters.

Data in percentage of pre-test

Students	Score for letter recognition /20	Percentage % for letter recognition	Score for letter sound /20	Percentage % for letter sound	Comments
Student A	2	10%	0	0%	Student A was able to identify two letters. They are C and A, but was unable to make the sound of any letter
Student B	3	15%	1	5%	Student B was able to identify three letters and produce the sound of one of the letters
Student C	1	5%	1	5%	Student C was able to identify one letter but was also able to produce the sound of one letter as well.
Student D	3	15%	1	5%	Student D was able to identify 3 letters and produce the sound of one of the letters.
Student E	1	5%	1	5%	Student E was able to identify one letter but was successful in producing one of the letter sounds

	Student A		Student B		Student C		Student D		Student E	
Letters	letters	Sound	letters	Sound	letters	Sound	letters	Sound	letters	Sound
Cc	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bb	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
Ee	X	X	X	X	✓	✓	✓	X	✓	X
Ff	X	X	X	✓	X	X	✓	✓	X	✓
Mm	X	X	X	X	X	X	✓	✓	✓	✓
Ss	✓	✓	X	X	✓	✓	X	X	✓	X
Pp	X	X	✓	X	X	X	X	✓	✓	X
Aa	✓	✓	✓	X	✓	✓	✓	✓	✓	X
Tt	✓	X	✓	X	✓	✓	✓	X	✓	X
Ii	X	✓	X	X	X	X	X	✓	X	✓
Nn	X	X	✓	X	✓	✓	✓	✓	X	X
Jj	X	X	✓	X	X	X	X	X	X	X
Rr	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Vv	X	X	X	X	✓	✓	X	X	X	✓
Dd	X	X	✓	✓	X	X	✓	✓	✓	X
Ll	✓	✓	X	✓	✓	✓	X	✓	X	✓
Gg	✓	X	✓	X	X	X	X	✓	✓	✓
Oo	✓	✓	✓	✓	✓	✓	✓	X	✓	X
Kk	✓	X	X	✓	X	X	✓	✓	✓	X
Hh	X	✓	X	X	X	X	X	X	X	✓
scores	10/20	8/20	11/20	8/20	11/20	11/20	12/20	13/20	14/20	9/20

After the intervention programme the post test revealed that student A was able to identify ten letters they were C, B, S, A, T, R, L, G,O and K and was successful in producing

eight letter sounds. They were /c/,/s/,/a/,/i/./r/,/l/,/o/ and /h/. Student B was able to identify eleven letters they were “C”,B, P,A,T,N,J,R,D,G, and “O” but was only successful in producing the sound of eight letters. They were /C/,/B,/F/,/R/,/D/,/L/,/O/ and /K/. Student C was successful in identifying eleven letters. They were C, B, E, S, A, T, N, R, V, L and O, and was able to produce the phonetic sounds of eleven letters. They were /C/, /B/, /E/, /S/, /A/,/T/, /N/, /R/, /V/, /L/, and /O /. Student D was able to identify twelve letters. They were C, B, E, F, M, A, T, N, R, D, O and K but was able to produce the sounds of thirteen letters. They were /C/,/B/,/F/, /M/,/P/,/A/,/ I/,/N/,/R/,/D/,/L/,/G/ and /O/ Student E was able to identify fourteen letters, C, B, E, M,S, P,A,T, N,R,D, G, O and K. but was successful in producing nine of the letter sounds. They were /C/, /B/, /F/, /M/, /I/, /V/, /L/, /G/ and /H/. The letters that most students had difficulty recognizing was letter “H” of the five participants’ student A and student E were the only two who were able to produce the phonetic sound /h/. They were both unsuccessful in identifying the letter “h” All five participants were able to identify the letter “C” and produce the phonetic sound.

Data from post- test in percentage

Students	Score for letter recognition /20	Percentage % for letter recognition	Score for letter sound /20	Percentage % for letter sound
Student A	10	50%	8	40%
Student B	11	55%	8	80%
Student C	11	55%	11	55%
Student D	12	60%	13	65%
Student E	14	70%	9	45%

Comparison of Pre-test results and post- test results

	Data from pre-test				Data from post-test			
Students	letter recognition /20	Percentage % for Letter recognition	letter sound /20	Percentage % for letter sound	Score for letter recognition /20	Percentage % for letter recognition	Score for letter sound /20	Percentage % for letter sound
Student A	2	10%	0	0%	10	50%	8	40%
Student B	3	15%	1	5%	11	55%	8	40%
Student C	1	5%	1	5%	11	55%	11	55%
Student D	3	15%	1	5%	12	60%	13	65%
Student E	1	5%	1	5%	14	70%	9	45%

From the finding of the post-test improvements were seen both in the recognition of letters and letter sounds. In identifying the letter names all five participants got over 40% while two students got over 55% in associating letter sounds. A comparison of the post- test and pre-test results revealed that there was an increase in the scores which concretized that the intervention was somewhat effective to an extent. A further breakdown of the increase showed that student A had an increase of 40% on letter recognition and 40% on letter sound association. Student B had an increase of 40% in recognizing the letters and in 35% in sound association. Student C had shown a major improvement in both areas. Student C has improved 50% in letter recognition and 50% in letter sounds. This is the greatest increase recorded. Student D had shown a 45% increase in letter recognition while in producing the letters sound a 60% increase was recorded. Student E with an increase of 65% in letter identification and 40% respectively in recognition of letter sounds. Also; the results indicated that all the participants were better able to identify letters than they were able to

associate the correct sound with the letter. The intervention showed fluctuation among the participants in the increase of the test scores and to a great extent the children's personal improvement. Students who appeared shy were now actively participating in oral discussions during the intervention sessions. Student E showed greater improvement when the scores from the pre- test were compared with that of the post-test showing an increase of 65% and 40% respectively in identifying letter names and sound association. Student A showed the least improvement increasing by 40% in identifying letter names and 40% in associating the correct sound with each letter name. This could have been due to her attendance as she was absent from school for two consecutive weeks. The findings from the post-test showed that the intervention was more successful for some children than it was for the others.

Future Planning

Though the intervention sessions lasted for six short weeks the sessions were very interactive and adequately resourced. It can be concluded that some students have shown greater improvement than others even though all students benefited from the intervention sessions; Base on my interaction with the group of students it would be rather irresponsible for me to say or suggest that the students have dyslexia as base on the knowledge that I have gained through the intervention and research processes the students have never been tested or diagnosed prior to the intervention. I sincerely think that these students were struggling non-readers who lacked instruction in phonological awareness. Had they gotten the exposure with such they would be better abled readers. It is important to note that these five participants are very disruptive and probably they were been ignored as every teacher likes children who are disciplined and brilliant. I think going forward there should be a system designed by the school and the ministry of Education that will track students' progress or lack thereof, as this will make it easier to identify students who are struggling readers or low achievers. As it

relates to phonological awareness, I think that every student should be interactively exposed to such as this is the basis on which reading will be achieved. As it relates to the five students who a part of the intervention process, I trust that they have garnered enough that will help them to integrate with their classmates; this is where differentiated instruction would have helped them. I could also include them in my after school intervention group that I have started with my students to help to hone their skills in attacking words.

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