

PRIMARY SCHOOL TEACHERS' PERCEPTION OF THE ROLE OF CURRICULUM ADJUSTMENT IN ENHANCING LEARNING AMONG PUPILS WITH DYSLEXIA IN PLATEAU STATE

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ABSTRACT

This paper examined primary school teachers' perception of the role of curriculum adjustment in enhancing learning among pupils with dyslexia in Plateau State. The study employed a cross-sectional survey research design. The researchers developed a closed-ended structured questionnaire to collect data for the study. The instrument was subjected to expert judgment from Test and Measurement experts and had a split-half reliability coefficient of 0.78 to measure internal consistency, which was considered valid and reliable for the study. The population consisted of 15,790 primary school teachers from the 17 local government areas in Plateau State, from which a sample size of 293 respondents was selected using the multi-stage cluster sampling technique. Four research questions and two hypotheses guided the study. Data obtained from the study were analysed using the mean score method to answer the research questions and chi-square and t-test for independent samples to test the hypotheses. The major findings revealed a significant role of curriculum adjustment in enhancing learning among pupils with dyslexia as perceived by primary school teachers in Plateau State. Also, there is no provision of curriculum adjustment for people with dyslexia in primary schools in Plateau State, and teachers are using the UBE Core Curriculum. Based on the findings, the following recommendations were made: the Plateau State Disability Rights Commission should, in addition to its stated goals, focus on people with dyslexia and create awareness instruction on reading performance of pupils with dyslexia in primary schools; the Plateau State Universal Basic Education Board (SUBEB), the Local Education Authorities (LEAs), and the State and Federal Ministries of Education should develop a standard curriculum adjustment document for people with dyslexia in primary schools, employ and train specialists in the area of dyslexia, and deploy them to primary schools.

Keywords: Curriculum, adjustment, learning, dyslexia, pupils

INTRODUCTION

Understanding Curriculum

Curriculum means a course to be run to reach a specific goal. A curriculum is broadly defined as the totality of student experiences in the educational process. There are many definitions of curriculum, but the most current and acceptable definition is that curriculum refers to an interactive system of instruction and learning with specific goals, contents, strategies, measurement, and resources. The desired outcome of the curriculum is successful transfer and/or development of knowledge, skills, and attitudes.

Education is using the curriculum, which is planned for a specific purpose. In relation to a primary school curriculum, it is a framework that structures what a school sets out to teach its pupils. In this way, it covers the skills, knowledge, attitudes, and values, laying out the theory, product, and practice (Dimensions Curriculum Ltd., 2004). The primary school curriculum encompasses a range of subjects, learning objectives, teaching methodologies, and assessment techniques tailored to the developmental needs of young learners, typically aged 6 to 12 years.

Primary education provides learning and educational activities typically designed to provide students with fundamental skills in reading, writing, and mathematics (i.e., literacy and numeracy) and establish a solid foundation for learning and understanding core areas of knowledge and personal development, thus preparing them for lower secondary education. It focuses on learning at a basic level of complexity with minor, if any, specialisation (UNESCO, 2012).

According to Leagan (2024), the primary curriculum aims to provide broad learning experiences. It encourages a rich variety of approaches to teaching and learning that cater to the different needs of individual children. The primary curriculum is designed to nurture the child in all dimensions of his or her life—spiritual, moral, cognitive, emotional, imaginative, aesthetic, social, and physical.

The Primary School Curriculum (2024) outlines the content and how of children's learning for their first eight years in school, from junior infants (nursery) to sixth class. The curriculum aims to ensure a love of learning and help children develop skills they will use all their lives. Based on the foregoing, there is a need for curriculum adjustment to meet the needs of every growing child, especially those with specific learning disorders or learning difficulties.

Curriculum Adjustment

Curriculum adjustment refers to the inclusion of variations in how the child engages with curriculum content. For instance, personalised changes to the context, providing multimodal interactions, literacy and communication stages, and varying the ways the pupil can demonstrate and express learning (Konza, 2005). Curriculum adjustments are crucial for tackling and enhancing learning for pupils with disabilities.

The Disability Standards for Education (2005), which falls under the Disability Discrimination Act 1992 of the Australian Government (Department of Education), highlights the responsibility of education providers to ensure that schoolwork is accessible and allows any pupil with a disability to participate in learning experiences. The Disability Discrimination Act also makes it unlawful for an education authority to discriminate against students because they have a disability, and that educators must offer students with disability the same educational opportunities as students without disability. Additionally, educators must make changes or “reasonable adjustments” to how a student with disability accesses a course, the course delivery, and the assessment procedure. However, it states that change should not cause “unjustifiable hardship.” This paper focuses on dyslexia as a disability under the Disability Discrimination Act.

Understanding Dyslexia

Dyslexia (a specific learning disorder with impairment in reading) is a difficulty learning to read. Students with dyslexia may have difficulty with reading accuracy or fluency. They may also have difficulty with reading comprehension, vocabulary, and spelling (SPELDNSW, 2022). According to Roitsch and Watson (2019), dyslexia is a learning disorder that includes trouble recognising language sounds and how they relate to written language, also known as “decoding.” Areas in the brain responsible for processing letters do not function in people with dyslexia like those without it.

Research published in the Journal of Learning Disabilities, according to Firoozabadi and Abaci (2019), suggests that dyslexia can affect one in five people. They also observed that although it does not impair development or intellectual functioning, this variation in neuro-processing makes it difficult for dyslexic pupils to quickly and accurately hear, store, remember, and produce different speech sounds. As a result, students with dyslexia can struggle with reading, writing, and spelling.

The Sedona Sky Academy (2024) presents the following facts about dyslexia:

- p.** Dyslexia is a neurological condition that affects reading and writing skills
- q.** It is estimated that 5–10% of the population has dyslexia
- r.** Dyslexia is not related to intelligence or lack of effort
- s.** Dyslexia can run in families and is often hereditary

- t.** Early identification and intervention can help individuals with dyslexia succeed in school and life
- u.** People with dyslexia may also have difficulty with organisation, time management, and spatial awareness
- v.** There are different types of dyslexia, including phonological dyslexia, surface dyslexia, and rapid naming deficit dyslexia.
- w.** Assistive technology such as text-to-speech software and audiobooks can be helpful for individuals with dyslexia.
- x.** Many successful people have been diagnosed with dyslexia, including Albert Einstein, Richard Branson, and Steven Spielberg.
- y.** Dyslexic individuals may excel in creative fields such as art or music
- z.** Multisensory teaching methods can be effective for individuals with dyslexia
- aa.** Individuals with dyslexia may need extra time on tests or accommodations such as a quiet testing environment or access to a scribe
- bb.** The International Dyslexia Association offers resources and support for individuals with dyslexia and their families
- cc.** Dyscalculia, a condition that affects math skills, can coexist with dyslexia
- dd.** Research has shown that early reading intervention can improve outcomes for children at risk of developing dyslexia
- ee.** The use of colored overlays or lenses may be helpful for some individuals with dyslexia who experience visual stress while reading
- ff.** In some cases, vision therapy may be recommended as part of a comprehensive treatment plan for individuals with dyslexia
- gg.** Teachers play an important role in identifying students who may have dyslexia and providing appropriate interventions
- hh.** While there is no cure for dyslexia, with appropriate support and accommodations, individuals with dyslexia can lead successful and fulfilling lives
- ii.** It is important to raise awareness about dyslexia and reduce stigma surrounding the condition

The Global Context of Dyslexia

Dyslexia is a global problem. The European Dyslexia Association (EDA) (2020) maintained that dyslexia is everywhere, regardless of country or language. In like manner, Maunsell (2020) stated that dyslexia is a global issue and that it encompasses a range of language and literacy cultures with many variations regarding reading, spelling, and grammar. The la Caixa Foundation (2023) also stated that one in ten people has dyslexia, and most are unaware of it. It adds that dyslexia is estimated to affect 10% of the world's population.

The United Nations Educational, Scientific, and Cultural Organisation (UNESCO, 2024) noted that this learning disability (dyslexia) affects 10 per cent to 20 per cent of the world's population, and the percentage could reach 30 per cent in lower-income communities. Also, Dyslexia Help Africa (2019), a support and awareness group, estimated the dyslexia rate in Nigeria to be 20 per cent of the total population. Despite this high rate, however, there appears to be insufficient awareness and understanding of the condition in Nigeria.

Dyslexia Support in Plateau State

In Plateau State, the Open Doors Special Education Centre basically aims to serve individuals with intellectual disability and developmental delay. These include: mental retardation, autism, cerebral palsy, dyslexia, Down syndrome, reading disability, speech and language delay, articulation disorder, and learning disability. Their curriculum is designed to develop the potential of each individual with emphasis on the acquisition of basic literacy and numeracy skills, the ability to communicate, and the development of daily living, prevocational, and vocational skills.

Models for Curriculum Adjustment

Curriculum adjustment, according to Bhattacharyya (2022), is not “newer things to do” but somewhat different ways of doing them. Bhattacharyya opined that the curriculum is a tool in the hands of the artist (teacher) to mould his material (child) according to his ideals (objectives) in his studio (school). He presented a model for curriculum adjustment to include:

- f. Modifying the content
- g. Modifying the instructional strategies
- h. Adopting different methods for assessment

Best Practices in Dyslexia Curriculum

Dyslexia presented the best dyslexia curriculum on Demand (2024). According to this organisation, the best approach or interventions and curricula for dyslexia directly and systematically teach students awareness of the sounds of language, letter-sound associations, vocabulary, spelling, and strategies for understanding written language. In today’s dyslexia interventions, the Orton-Gillingham approach stands out as a tried and true method for teaching.

Dyslexia on Demand further explains the functions of the Orton-Gillingham method, the first teaching approach designed specifically to help struggling readers learn the connections between letters and sounds. Its multisensory approach has proven highly effective for dyslexic pupils. The Orton-Gillingham approach influenced many successful reading programs, but two of these curriculum programs stand out: Take Flight and Basic Language Skills.

Take Flight Programme

Take Flight is one of the best programs for pupils with dyslexia. The curriculum focuses on:

- p. **Curriculum length:** Two years
- q. **Expert instruction:** Certified Academic Language Therapist (CALT)
- r. **Student demographics:** Designed for pupils with dyslexia who are 7–13 years old, or throughout adulthood
- s. **Specific goals:** To help pupils with dyslexia achieve and maintain better word recognition, reading fluency, and reading comprehension
- t. **Focus on phonemic awareness:** Teaches the relationship between speech-sound production and spelling-sound patterns.
- u. **Hooked on Phonics:** Use of single-word decoding
- v. **Fluency is key:** Teaches multiple word learning strategies that include definitional, structural, and contextual approaches.
- w. **Complete comprehension:** Teaches strategies like cooperative learning, story structure, and question generation, answering, and summarising text
- x. **Pointing towards the future:** Helps in transition from a therapy setting to more real-world learning.

Basic Language Skills (BLS) Programme

Another excellent dyslexia curriculum presented by Dyslexia on Demand is the Basic Language Skills (BLS). It involves the same therapeutic elements as Take Flight. It focuses on:

- 9. **Curriculum length:** Intensive, systematic, sequential, and comprehensive literacy programs for 2–3 years
- 10. **CALTs only:** Designed to be taught only by CALTs
- 11. **Specific goals:** To improve pupils’ skills in phonemic awareness, letter recognition, decoding, spelling, fluency, comprehension, handwriting, vocabulary, and oral-written expression

This paper aims to examine primary school teachers’ perceptions of the role of curriculum adjustment in enhancing learning among pupils with dyslexia in Plateau State.

STATEMENT OF THE PROBLEM

In mainstream classrooms, ensuring that all pupils achieve their potential becomes increasingly complex when a class has a broad range of abilities. Pupils with learning difficulties, especially those with specific learning disorders such as dyslexia, have cognitive characteristics that mean regular class instruction, particularly in large groups and with a formal general curriculum, is less effective for people with dyslexia a.

The significant characteristics of people with dyslexia include difficulty with simultaneously listening and writing, slowness with handwriting and subsequent discomfort or fatigue over long periods, with handwriting becoming illegible when under pressure. Dyslexic pupils also have difficulty processing and remembering information they see and hear, which can affect learning and acquiring literacy skills. The biggest challenge for dyslexic pupils is writing. They have difficulty with spelling, grammar and punctuation, organisation of thoughts, materials, and time. This makes it difficult for them to keep track of assignments, stay on task, and complete work quickly, which impedes their learning.

Furthermore, the Nigerian curriculum did not include dyslexia in Teacher Training Colleges, which makes most teachers ignorant of the presence of dyslexia in children (Tikolo, 2019). Therefore, there is a need for curriculum adjustment to facilitate and enhance pupils' learning.

PURPOSE OF THE STUDY

The general purpose of this study is to determine whether curriculum adjustment could serve as a tool for enhancing learning among pupils with dyslexia in primary schools in Plateau State. Specifically:

1. To find out whether there are pupils with dyslexia in primary schools
2. To determine whether the occurrence of dyslexia among primary school pupils is related to school location
3. To find out the extent of provision for curriculum adjustments in primary schools for dyslexics
4. To examine the extent to which curriculum adjustments can enhance learning among pupils with dyslexia in primary schools

RESEARCH QUESTIONS

1. What is the extent to which pupils with dyslexia have been identified in primary schools as perceived by teachers in Plateau State?
2. As an innate characteristic, is the occurrence of dyslexia among primary school pupils related to school location?
3. What is the extent of provision for curriculum adjustment in primary schools for people with dyslexia?
4. To what extent can curriculum adjustments enhance learning among pupils with dyslexia in primary schools?

RESEARCH HYPOTHESES

The following null hypotheses guided the researchers in the course of the study:

H₀₁: There is no significant role of curriculum adjustment in enhancing learning among pupils with dyslexia as perceived by primary school teachers.

H₀₂: There is no significant occurrence of dyslexia among primary school pupils based on school location.

METHODOLOGY

The study adopted a cross-sectional survey research design. The population comprised 15,790 teachers from all 17 Local Government Areas of Plateau State. A sample size of 292 teachers was selected to serve as respondents. The multistage cluster sampling technique was utilised, where each of the three zones in the state

forms a stratum and each of the local governments a sub-stratum, and a simple random sample of primary schools and teachers was finally selected.

A structured questionnaire titled Primary School Teachers' Perception of the Role of Curriculum Adjustment Questionnaire (PSTPRCAQ) was used to collect data from the respondents. The instrument consisted of two sections. Section A contained the respondents' demographic information, while Section B contained information relevant to eliciting responses to the questionnaire items. The PSTPRCAQ contained 20 items made up of a closed-ended response pattern of the modified 4-point Likert Scale of Strongly Agreed (SA) = 4 points, Agreed (A) = 3 points, Disagreed (D) = 2 points, and Strongly Disagreed (SD) = 1 point.

The instrument was validated through the expert judgment of two Test and Measurement staff in the School of Education, Federal College of Education, Pankshin. The experts were requested to examine and assess the instrument for adequacy, relevance, and appropriateness of the items to the questions, and their independent contributions added to the final production of the questionnaire. The instrument was trial tested on 43 primary school teachers who were not involved in the study. A split-half reliability coefficient of 0.78 using the Spearman-Brown formula was established as a measure of internal consistency, which showed that the instrument possessed the quality of reliability for the study.

The statistical tool used to answer the research questions was the mean score method, while the research hypotheses were tested using chi-square and t-test for independent samples.

RESULTS

Research Question One:

What is the extent to which pupils with dyslexia have been identified in primary schools as perceived by teachers in Plateau State?

Table 1: Mean Rating of Pupils Identified with Dyslexia in Primary Schools in Plateau State

S/N	Item	SA	A	D	SD	Mean Score	Decision
1	Dyslexia is more pronounced among primary one pupils	93	79	67	53	2.73	Accepted
2	Every primary six pupil can write well	3	5	99	185	1.40	Rejected
3	Primary one pupils can hardly pair up sounds with the alphabet	82	101	58	51	2.73	Accepted
4	Primary school pupils have difficulty with spelling, grammar and punctuation	75	123	52	42	2.79	Accepted

Table 1 Revealed that items 1, 3, and 4, with mean scores of 2.73, 2.73, and 2.79 (greater than the criterion score of 2.5), are accepted, while item 2, with a mean score of 1.40 (less than the criterion score of 2.5), is rejected. This implies that there are pupils identified with dyslexia in primary schools as perceived by teachers in Plateau State.

Research Question Two:

As an innate characteristic, is the occurrence of dyslexia among primary school pupils related to school location?

Table 2: Mean Ratings of Dyslexia in Primary School Pupils Based on School Location

S/N	Item	SA	A	D	SD	Mean Score	Decision
5	Urban primary schools do not have pupils with dyslexia	5	8	98	181	1.44	Rejected

S/N	Item	SA	A	D	SD	Mean Score	Decision
6	Rural primary school pupils are more prone to dyslexia	90	104	89	9	2.94	Accepted
7	The occurrence of dyslexia among pupils is based on the school location	132	88	52	20	1.86	Rejected

Table 2 showed that item 6, with a mean score of 2.94 (greater than the criterion score of 2.5), was accepted, while items 5 and 7, with mean scores of 1.44 and 1.86, respectively, were rejected. This implies that, as an innate characteristic, the occurrence of dyslexia among primary school pupils is not based on school location.

Research Question Three

What is the extent of curriculum adjustment provisions for people with dyslexia in primary schools?

Table 3: Mean Ratings on Provision of Curriculum Adjustment for Dyslexics

S/N	Item	SA	A	D	SD	Mean Score	Decision
8	An adjusted curriculum is available in all primary schools	2	4	97	189	1.38	Rejected
9	Teachers are all trained to use the adjusted curriculum in primary schools for dyslexics	1	6	101	184	1.40	Rejected
10	Parents are aware of the availability of curriculum adjustment in primary schools	1	3	106	182	1.39	Rejected
11	Curriculum adjustment for people with dyslexia is only introduced in special schools	149	81	53	9	3.27	Accepted
12	Teachers are using only the UBE core curriculum in primary schools	155	83	52	2	3.34	Accepted

Table 3 indicates that items 8, 9, and 10, with mean scores of 1.38, 1.40, and 1.39 (less than the criterion score of 2.5), are rejected, while items 11 and 12, with mean scores of 3.27 and 3.34, respectively (greater than the criterion score of 2.5), are accepted. This implies that there is no provision of curriculum adjustment for people with dyslexia in primary schools in Plateau State. Teachers are using the UBE curriculum.

Research Question Four:

To what extent can curriculum adjustment enhance learning among pupils with dyslexia in primary schools?

Table 4: Mean Ratings on Curriculum Adjustment in Enhancing Learning

S/N	Item	SA	A	D	SD	Mean Score	Decision
13	Curriculum adjustment can be utilised for teaching and assessments	83	104	59	46	2.77	Accepted
14	Curriculum adjustment can help to enhance reading ability in dyslexics	73	109	67	43	2.74	Accepted
15	Teachers can make adjustments by changing the way they plan and prepare programs, materials and activities	58	142	70	22	2.81	Accepted
16	Teachers can help pupils if they know what dyslexia is and what it means for the person to live with it	79	132	66	15	2.94	Accepted

Table 4 Revealed that items 13, 14, 15, and 16, with mean scores of 2.77, 2.74, 2.81, and 2.94 (greater than the criterion score of 2.5), are all accepted. This implies that curriculum adjustment can enhance learning among pupils with dyslexia in primary schools.

Research Hypotheses

H₀₁: There is no significant role of curriculum adjustment in enhancing learning among pupils with dyslexia as perceived by primary school teachers.

Table 5: Summary Table for Chi-Square Test of Independence showing the role of curriculum adjustment in enhancing learning in Primary Schools

Cell	Fo	Fe	Df	χ^2 -Calc	χ^2 -Crit. ($\alpha = .05$)
i.	187	195	3	7.858	7.815
Ii	105	97			
Iii	182	195			
Iv	110	97			
V	200	195			
vi	92	97			
vii	211	195			
viii	81	97			

Table 5 Revealed that at $df = 3$, $\alpha = 0.05$ significance level, the chi-square calculated value (χ^2 -calc. = 7.858) is greater than the chi-square critical value (χ^2 -crit. = 7.815). Based on this, the null hypothesis is rejected (not retained) while the alternative hypothesis is accepted (retained). This implies a significant role of curriculum adjustment in enhancing learning among pupils with dyslexia as perceived by primary school teachers.

H₀₂: There is no significant occurrence of dyslexia among primary school pupils based on school location.

Table 6: Summary Table for t-Test of Respondents on Occurrence of Dyslexia among Pupils Based on School Location as Perceived by Teachers

Category	N	$\bar{X}$	S ²	Df	t-calc.	T-crit. ($\alpha = .05$)
Urban	227	43.24	210.24	290	1.716	1.960
Rural	65	40.13	153.31			

Table 6 revealed that at $df = 290$, $\alpha = 0.05$ significance level, the t-calculated value (t-calc. = 1.716) is less than the t-critical value (t-crit. = 1.960). Therefore, the null hypothesis is accepted while the alternative hypothesis is rejected. There is sufficient evidence to prove no significant occurrence of dyslexia among primary school pupils based on school location as perceived by teachers.

DISCUSSION OF FINDINGS

The significant finding in this paper is that curriculum adjustment significantly enhances learning among pupils with dyslexia in primary schools in Plateau State. This finding is in agreement with Achilike (2020), who conducted a study on teachers' perceptions of the prevalence of dyslexia among primary school pupils in Abakaliki metropolis, Ebonyi State, Nigeria: psychological implications on academic performance. The results showed the prevalence of dyslexic symptoms in the area, with 36.3% attributed to reading disorders.

Yang (2022) also found that developmental dyslexia (DD) has an estimated worldwide prevalence in primary school children.

Findings in Table 2 showed that dyslexia among primary school pupils is not based on school location. This finding does not agree with Daniel and Barth (2023), who conducted a study exploring reading profiles of rural school students. They found heterogeneity in the reading profiles of rural upper-elementary grade students.

Table 3 indicates minimal provision for curriculum adjustment in primary schools for people with dyslexia in Plateau State. This finding aligns with the work of Shey (2017), who conducted a study on curriculum adaptation and the accommodation of children with dyslexia in regular schools in Buea Sub-Division, Cameroon. The findings revealed that teachers faced many difficulties in teaching children with dyslexia in regular classrooms and taught strictly on prescribed schemes of work. This implies that an adjusted curriculum is not available in mainstream schools to cater for the special needs of pupils with dyslexia.

Tables 4 and 5 found that curriculum adjustment can enhance learning among pupils with dyslexia in primary schools. This finding is consistent with Bliznakov (2024), who opined in his study that drawing on historical and contemporary research on dyslexia as well as principles of differentiated instruction and 21st-century teaching, the paper advocated for tailored accommodations such as varied Lexile levels, extended time allocations, and support tools. These adaptations aim to provide fair, accurate, and comprehensive evaluations while aligning with the diverse needs of dyslexic learners in modern educational settings. These will enhance learning for people with dyslexia.

CONCLUSION

This study concludes that curriculum adjustment significantly enhances learning among pupils with dyslexia in primary schools in Plateau State. However, there is currently minimal provision for such adjustments, with teachers relying solely on the UBE Core Curriculum, which does not adequately address the specific needs of dyslexic learners.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are put forward:

1. The Plateau State Disability Rights Commission should, in addition to its stated goals, focus on people with dyslexia and create awareness and instruction on the reading performance of pupils with dyslexia in primary schools.
2. The Plateau State Universal Basic Education Board (SUBEB), the Local Education Authority (LEA), and the State and Federal Ministries of Education should develop a standard curriculum adjustment document for people with dyslexia in primary schools, employ and train specialists in the area of dyslexia, and deploy them to primary schools.
3. The Open Doors Special Education Centre in Jos, Plateau State, established to serve individuals with intellectual disability and developmental delay, such as dyslexia (and other forms of disabilities), should expand its activities to all primary schools in the state.
4. Teachers should embrace people with dyslexia by being patient and guiding them toward progressive learning.
5. The Plateau Radio Television Corporation (PRTVC) should create special programs to enhance learning for pupils with dyslexia.
6. Continuous professional development programs should be organised for primary school teachers to equip them with the knowledge and skills to identify and support dyslexic pupils.
7. The government should fund the procurement of assistive technologies and learning materials specifically designed for dyslexic learners.

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