

INCLUSIVE EDUCATION AND COGNITIVE DEVELOPMENT AMONG STUDENTS WITH DISABILITIES IN PRIMARY SCHOOLS IN NIGERIA: IMPLICATIONS FOR CURRICULUM IMPLEMENTATION

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Abstract

This study investigated the curriculum implementation dimension of the influence of inclusive education on the cognitive development of learners with disabilities in the Enugu Education Zone, Nigeria. Two research questions and two hypotheses guided the study. A descriptive survey research design was adopted for the study. A simple random sampling technique was used to select 400 teachers who participated in the study. A questionnaire was used to collect data. Means and standard deviations were used to answer the research questions, while independent sample t-test statistics were used to test the hypotheses. The study found that inclusive education positively influences the cognitive development of learners with disabilities. This approach enables learners to improve their academic performance. It also demonstrates enhanced engagement in the learning process and better subject comprehension. The study therefore recommends that stakeholders work toward creating an inclusive and equitable education system that empowers all learners to reach their full potential.

Introduction

Education is the foundation of social change, and the results of an educational system are very dynamic. Education is intended to transform entire societies for the benefit of all. Every child is supposed to access educational opportunities created to meet their fundamental learning requirements. The Salamanca Agreement of 1994 established the necessary theoretical framework for the implementation of inclusive education, aiming to provide educational opportunities for every child (UNESCO, 2015).

The introduction of inclusive education was a response to the pursuit of equal access to school for all children, regardless of social and physical circumstances. Inclusive education refers to the systematic improvement of an educational system's ability to cater to the needs of various learners. According to Adedokun and Oluremi (2014), inclusive education refers to the practice of educating children with vision impairments or other disabilities within mainstream schools rather than segregating them into specialized educational institutions. Inclusive education, as posited by Triviño-Amigo et al. (2022), refers to an educational approach that is intentionally designed to cater

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to the needs of learners with special needs within the context of restructured public, private, or community schools.

The concept of inclusion refers to the entitlement of a child to engage in educational activities and the responsibility of the school to nurture the child. The concept of inclusion involves rejecting the practice of segregating learners with disabilities from their non-disabled peers through the use of special schools or classrooms (Osuji & Oluoch-Suleh, 2017). There is a strong emphasis on promoting active engagement of learners with disabilities and upholding their social, civil and educational rights. Numerous advantages associated with attending educational institutions manifest in the long term, particularly in terms of establishing a sustainable means of subsistence during adulthood.

Participating in school activities is of significant importance for children with disabilities because it helps dispel misconceptions that hinder their inclusion. Moreover, when children are allowed to attend school, parents and caregivers can allocate time for additional pursuits, such as employment and leisure. The fundamental concept asserts that every child possesses an equal right to education; nevertheless, in reality, children with disabilities encounter disproportionate denial of this right. Therefore, individuals' capacity to fully exercise their rights as citizens and contribute meaningfully to society, primarily through gainful employment, is compromised (Osuji & Oluoch-Suleh, 2017).

Disabilities can be classified into many categories according to their inherent characteristics and extent to which they affect an individual's daily functioning. The aforementioned categories are not inseparable, and it is possible for an individual to possess many disabilities simultaneously. The primary focus of this study is on developmental impairments that frequently manifest at early stages of life and can impact an individual's physical, cognitive, communicative, social, and emotional growth. Autism spectrum disorder (ASD) exemplifies a type of developmental disability.

Autism spectrum disorders (ASD) are characterized as enduring developmental disabilities that impede individuals' ability to comprehend sensory stimuli, including visual, auditory, and other perceptual stimuli. Consequently, individuals with ASD often encounter significant challenges in social interactions, communication, and behavioral patterns (Bossaert et al., 2015). According to Kavale and Mostert (2013), autism spectrum disorders (ASD) encompass a range of linked illnesses characterized by social and communication difficulties in children. Additionally, these disorders may exhibit atypical behavioral manifestations, including repetitive motor motions. According to Burstein et al. (2014), Autism Spectrum Disorder (ASD) is a multifaceted disability that distinguishes itself from other disabilities by encompassing a variety of disabling conditions. Furthermore, individuals diagnosed with ASD exhibit a distinctive combination of characteristics that is exclusive to each individual and cannot be replicated in any other individual with the same disability.

The global prevalence of autism spectrum disorders (ASD) is 1 in 160 children, as stated by the World Health Organization in 2023. Additional statistical data reveal that there are approximately 135 million documented cases of autism worldwide, with Nigeria alone accounting for over one million affected children and teenagers. These observations suggest that autism spectrum disease exerts a widespread impact. Autism spectrum disorders encompass various conditions, including persistent developmental syndrome-not otherwise specified (PDD-NOS), Asperger's syndrome, Rett's disorder, and childhood disintegrative disorder. The etiology of autism spectrum disorder (ASD) remains uncertain; however, some researchers have suggested that both hereditary factors and environmental influences significantly contribute to its development (Kavale & Mostert, 2013; Chireshe, 2011).

Despite being an illness with a genetic basis, this illness presents challenges in social functioning, impacting children's ability to engage with peers, communicate effectively, and interact appropriately. According to Kavale

and Mostert (2013), issues with executive function and the theory of mind play a part in communication and social interaction deficits. Children with autism spectrum disorder (ASD) frequently struggle in various areas, such as making social connections, communicating with others, and understanding others. The observed occurrence can be traced to a triad of genetic, prenatal, and postnatal elements that work together to affect child development. As a result, teaching learners with autism in an inclusive educational environment poses several challenges for teachers, especially regarding the extent to which the implementation of inclusive education curricula influences the cognitive development of learners.

An inclusive education system is characterized by its commitment to acknowledging and valuing all learners without any form of exclusion. It recognizes and appropriately acknowledges the achievements and abilities of students based on their merit. Furthermore, an inclusive education system must be built upon leveraging the strengths and capabilities of all the students. This system is guided by evidence-based practices and effective approaches. According to Osuji and Oluoch-Suleh (2017), inclusion of learners with disabilities in schools is crucial for attainment of Education for All (EFA). This is because in inclusive education, learners with disabilities cultivate a constructive perception of themselves and their peers, establish meaningful social connections, acquire crucial scholastic competencies, and engage in personalized learning experiences that align with their individual pace and preferred approach, all within a supportive educational setting. On the contrary, excluding learners from inclusive educational settings deprives them of the enduring advantages associated with education, such as enhanced employment prospects, social and economic stability, and the ability to fully engage in societal activities. Therefore, the extent to which inclusive education curricula are implemented is crucial to the cognitive development of learners with disabilities.

Effective implementation of inclusive education can significantly influence the developmental and educational outcomes of learners with disabilities. Inclusive education is a multifaceted cultural phenomenon that occurs across various dimensions of the educational sphere. Researchers and specialists in the field of education have made significant contributions to understanding the domains of learning. The research conducted by Bloom in the cognitive domain, Krathwohl in the emotive domain, and Harrow in the psychomotor domain has been integrated into the framework of the three domains of learning (Susanna, 2015). The process of learning contributes to the cultivation of individual mindset and facilitates the acquisition of novel abilities.

The cognitive domain is concerned with cultivating an individual's mental abilities and learning knowledge. The cognitive domain has six distinct categories: knowledge, understanding, application, analysis, synthesis, and evaluation. Knowledge refers to the cognitive capacity of an individual to retrieve and recollect factual data or knowledge. Subsequently, comprehension is conducted to evaluate learners' capacity to grasp the significance of their acquired knowledge. In this scenario, learners demonstrate their ability to articulate preexisting ideas using their own language (Adedokun & Olaleye, 2014). Subsequently, the application phase occurs, during which the learner's capacity to apply abstract information in novel contexts is demonstrated. The quality of human existence is significantly influenced by cognitive development, which manifests rapidly between the ages of 24 and 72 months. Cognitive development pertains to the cognitive processes exhibited by individuals and encompasses several aspects such as attention, memory, reasoning ability, creativity, and linguistic proficiency. According to Rahman et al. (2022), a significant portion of children's cognitive capacity (50%) develops by the age of 4. By the age of 8, around 80% of the overall intelligence that will be attained by the age of 18 is achieved. Cognitive development is established throughout the conception process and is subject to the influence of genetic factors. However, to maximize intelligence development, environmental factors and the child's level of social maturity (Arimbi et al., 2018; Linh & Azar, 2019; Waxman et al., 2019). Both factors are dependent on realizing this cognitive potential. According to Saefudin (2019), a few environmental factors present in the home context have

a profound impact on children's development. According to Rahman et al. (2022), there exists a direct correlation between stimuli and cognitive growth because stimuli exert a notably positive impact. According to Lacruz-Pérez (2021), the use of simulation games can enhance the cognitive, emotional, and psychomotor intelligence of primary school children through intentional design. Moreover, drawing from Mani (2013), the enhancement of cognitive abilities in children with disabilities is a crucial aspect of early childhood development. In a recent study, Marimuthu and Cheongb (2022) posited that inclusive education is key to the enhancement of children's cognitive capacity.

The location of the schools (urban and rural) and the gender (male and female) of the implementers of the inclusive education curriculum are also important variables that cannot be overlooked in this study. Salend and Duhaney (2019) observed that a significant proportion of children with disabilities who had no access to necessary support and services were situated in rural regions. Most learners with disabilities were typically placed in residential institutions within their own state or in out-of-state facilities. A limited number of rural school districts have made efforts to provide educational services to children with disabilities who have low incidence rates within their individual districts (Segal, 2015). Furthermore, according to Mitchel (2020), there exists a higher prevalence of developmental disorders among children residing in rural settings, along with a lower likelihood of accessing specialized educational services or early intervention programs, compared to their urban counterparts.

Teachers serve as exemplars for learners, and the concept of inclusion in education implies ensuring that the composition of the teaching staff reflects the diverse makeup of learners. Within this context, gender is a crucial determinant of the establishment of inclusive educational environments. Chireshe (2011) concluded that female educators exhibit greater tolerance in their efforts to adopt inclusive education. Supporting this perspective, a study conducted by Timo (2018) found that female instructors tended to hold slightly more positive attitudes toward inclusion than their male counterparts. Regardless of the potential influence of gender on the concept of inclusion, it is noteworthy that effectively managing learners with disabilities requires individuals to exhibit qualities such as sacrifice, patience, tolerance, and accommodation skills. Educators who have favorable attitudes toward inclusion are more inclined to foster a supportive educational environment for inclusion. This, in turn, promotes collaboration and the exchange of classroom management strategies.

Therefore, it is against this backdrop that this study investigated the influence of inclusive education on the cognitive development of learners with disabilities in primary schools located in both rural and urban regions within the Enugu Education Zone of Enugu State, Nigeria.

Statement of the Problem

Inclusive education refers to the comprehensive integration of learners with and without disabilities within the same educational environment, such as classrooms and schools. This approach provides equal learning opportunities for all students, regardless of their individual skills and limitations. This approach encompasses inclusive education of individuals, regardless of their disabilities or learning challenges, within mainstream primary schools, colleges and universities, facilitated by suitable network assistance. This represents a convergence of factors that contribute to the gradual rise in student engagement, as well as a decrease in their marginalization from the cultural, curricular and communal aspects of nearby educational institutions. Despite the well-intentioned nature of inclusive education, social concern remains over the cognitive development of learners with disabilities in primary schools within the Enugu education zone. The cognitive domain encompasses objectives related to the retrieval or identification of knowledge and the cultivation of intellectual activity.

However, learners with disabilities in Enugu Education Zone, Nigeria are experiencing challenges in the realm of education. The assessment reports of several schools have indicated, on several occasions, a significant level of underachievement exhibited by these pupils during examinations. This observation indicates that the

implementation of inclusive education has not yet had a significant impact on the learning outcomes of learners with disabilities in the cognitive domain.

Furthermore, it has been noted that a limited number of learners with disabilities can successfully communicate or demonstrate indications of strong educational foundation. It is evident that the students have a limited command of language, insufficient proficiency in the necessary technical abilities, and deficiencies in both oral and written communication. These observations collectively indicate that the successful execution of inclusive education in primary schools is currently in a state of distress. It is against this backdrop that this study investigated the curriculum implementation dimension of the influence of inclusive education on the cognitive development of learners with disabilities in Enugu Education Zone, Enugu State, Nigeria.

Purpose of the Study

The purpose of this study was to investigate the influence of inclusive education on the cognitive development of learners with disabilities in primary schools in Enugu, Nigeria. Specifically, the study sought to

1. Determine the extent to which inclusive education has influenced the cognitive development of learners with disabilities
2. Analyze the perceived constraints teachers face when implementing inclusive curricula for learners with disabilities

Research Questions

The following research questions guided this study:

1. To what extent has inclusive education influenced the cognitive development of learners with disabilities?
2. What are the perceived constraints teachers face when implementing inclusive curricula for learners with disabilities?

Research Hypotheses

The following null hypotheses guided the study:

H₀₁: There was no significant difference in the mean responses of teachers from rural and urban schools regarding the influence of inclusive education on the cognitive development of learners with disabilities.

H₀₂: There was no significant difference in the mean responses of male and female teachers regarding the influence of inclusive education on the cognitive development of learners with disabilities.

Review of Related Literature

Inclusive education can be characterized as a pedagogical style that involves the integration of students with disabilities into the same classroom or learning environment as their non-disabled peers. The aim of this is to provide collective instruction to all students. Inclusive education is significant in that it not only enhances academic performance but also provides individuals with disabilities the opportunity to engage socially with their non-disabled classmates in typical classrooms.

Regarding studies on inclusive education and learners' cognitive development, Rojas (2021) examined the relationship between inclusive education and cognitive development within the context of Catalonian public schools. The purpose of this study was to investigate the extent to which inclusive education policies are implemented in public primary schools in Catalonia, Spain. The aim of this study was to assess the extent of inclusion in schools using an online questionnaire and to examine the association between inclusive education and students' cognitive growth as assessed by the Catalan external evaluation assessment in their final year of primary education. The results revealed progress in the implementation of inclusive education across the 615 schools that were involved in the study. The evaluated work has relevance to the current study as both likely encompass significant findings on inclusive education and the use of a comparable data gathering method. However, a key difference between the study being evaluated and the current study is the geographical location. The previous

study was conducted in Catalonia, Spain, while this study focused on Enugu, Nigeria. The reviewed study did not explore additional dimensions through which inclusive education may impact students, which is a gap that the current study addressed.

In another study, Kago (2017) examined the impact of inclusive education on the cognitive abilities of refugee children attending public primary schools in Ruiru, Kenya. The main objectives of this study were to determine how the setting for learning, socio-behavioral assistance, teachers' instructional abilities and the creation of an inclusive curriculum affected the cognitive performance of children from refugee backgrounds who attend public primary schools. The research design employed in this study was exploratory. In Ruiru Sub County, there exist a total of thirty (30) public elementary schools that cater to the educational needs of refugee children. The researchers employed the purposive sample technique to carefully select 28 public primary schools. The target population of this study consisted of 536 teachers and 30 head teachers. The researchers employed a simple random sampling procedure to obtain a sample size of 221 instructors, while purposive sampling was used to select a group of 28 head teachers. The findings of the study indicate that several factors, such as the socio-behavioral support, learning environment, inclusive curriculum creation and teachers' instructional skills, affect the cognitive performance of refugee children. The current investigation shares similarities with the current study in terms of the expressions of subject matter and the target group. Nevertheless, there are notable distinctions between these two studies in terms of their respective areas of focus. The former study was conducted in Ruiru Sub-County, Kenya, while the current research delved into the influence of inclusive education on the cognitive development of learners with disabilities in Enugu state, Nigeria.

Furthermore, Ladoke, Romola, Ige, and Oladejo (2010) examined disability status and cognitive domain improvement in a Nigerian University. The findings of this research are significant for instructional practices in inclusive distance education. The research design used in this study was descriptive and followed the ex-post facto approach. The researchers employed a stratified, simple random sampling strategy to select 1500 participants for the study. Additionally, a purposive selection technique was used to select the National Open University of Nigeria as the specific institution of focus. The data were obtained via a questionnaire administered at the contact session in 2009. The study addressed and examined two research questions and one hypothesis. The data analysis involved the use of Pearson's correlation, regression analysis, and the t-test. The disability status of students significantly contributes to the cognitive domain. A notable disparity in the cognitive domain of the pupils was observed, which was contingent on their impairment status ($t=2.39$, $df=1488$, $P<0.05$). The study also revealed that inclusive distant education influences learners' cognitive domain. The assessment study is pertinent to the current one as it explores the connection between social integration and inclusive education. Furthermore, there is a connection between them in terms of the instrument used for data gathering. The disparity between the previous study and the current one lies in the fact that the prior study examined higher education institutions, whereas the present study specifically targeted primary schools. Furthermore, there are distinctions between the two in relation to their research design and field of study.

Regarding teachers' perceived constraints in the implementation of inclusive education, Mpu and Adu (2021) examined the obstacles associated with the adoption and enactment of inclusive education within South African schools. The study was structured as a multiple-case study using a qualitative research approach. The study involved the participation of three schools within the Buffalo City Metro, with three participants selected from each school. The examination of qualitative data was based on an interpretive philosophy. The results of this study indicate that several key factors contributed to educators experiencing a sense of inadequacy when teaching in inclusive education classrooms. These factors included overcrowding, inadequate training, and insufficient knowledge and skills among educators. The reviewed and current studies are interconnected in terms of their

subject area, inclusive education. Nevertheless, these two entities exhibit disparities in relation to their respective fields of study, demographic composition, and methodologies employed in their research.

In another study, Mwangi and Orodho (2014) examined the obstacles encountered during the implementation of an inclusive education program inside public primary schools in Nyeri, Nyeri County, Kenya. This study employed a descriptive survey research design. The research used a stratified random selection method to select 80 participants from the study area. The participants included 12 head teachers, 60 teachers, and 8 education officials. Questionnaires and observation checklists were used for data collection. The primary observations revealed that the availability and condition of physical and key instructional learning materials were insufficient or significantly deteriorated. Furthermore, a notable deficiency was noted in the availability of qualified instructors capable of effectively delivering adapted curricula for learners with disabilities. Furthermore, a few socioeconomic and cultural factors served as limitations on the efficacy of teaching and learning in most of the schools included in the sample. The review is pertinent to the current study in the context of inclusive education. Additionally, there is a connection between them in terms of their research design and the equipment used for data collection. The disparity between the study that was evaluated, and the current one lies in the aspects of geographical location and participants.

Methodology

The study adopted the following methodological procedures:

Design of the Study

The study employed a quantitative paradigm, specifically, a descriptive research survey design. This study design was appropriate for this study because it involved collecting data to describe and analyze pertinent variables without altering or exerting influence on the participants.

Area of study

This study was carried out among primary schools located in the Enugu Education Zone of Enugu State, Nigeria. The Enugu Education Zone comprises three Local Government Education Authorities (LGEAs), namely, the Enugu East, Enugu North and Isi-Uzo Local Governments. The demographic composition of the inhabitants within this local government area is primarily characterized by a significant presence of individuals who identify as Igbo and adhere to the Christian faith. The primary occupation of individuals residing in rural areas is agriculture, with a focus on farming.

A significant number of educational institutions, government agencies, and private institutions are situated in this region due to its proximity to the urban areas of the state. The population exhibits an agrarian lifestyle characterized by a significant presence of traders and civil servants. Additionally, they possess a strong inclination toward education. The selection of the study's location was influenced by the isolation experienced by learners with disabilities from the mainstream curriculum, as well as the establishment of separate educational institutions (special schools) for these learners, which contradicts the principles of inclusive education.

Population of the study population

The study population consists of all primary school teachers employed in the Enugu Education zone. The Enugu Education Zone comprises 146 public elementary schools, which are supported by a teaching staff of 1,585 individuals (ESUBEB's 2022 Annual Report).

Sample and Sampling Techniques

Regarding the sample of the study, 30% of the total population (Osuji & Oluoch-Suleh, 2022) was used to determine the sample size of 400 teachers. A multi-stage sampling procedure was used to identify the study participants. Using a straightforward random sampling procedure, two local government areas were selected from the three selected local government areas in the 73rd tep. Each local government had an equal chance of being

selected for the study. The proposed method adopted a simple random selection. Each of the names of the local governments was inscribed onto individual pieces of paper, which were subsequently folded and deposited in a box. The contents of the box were then thoroughly mixed to ensure a randomized arrangement.

The researchers subsequently employed a method of balloting with replacement to select the local government region, and in the second stage, 10 (10) primary schools per local government area were chosen using the purposive sampling technique from the two (2) local government areas selected for the study. The purposeful sampling technique was employed to identify schools with substantial instructors. The schools included in this study were deliberately chosen to reflect those that use inclusive education.

Instrument for Data Collection

The questionnaire entitled "Influence of Inclusive Education on Learners living with Disabilities (IIEELD)" was employed as the primary data collection instrument for the study. The questionnaire was deemed suitable for this study because it enabled the researchers to gather the perspectives of participants regarding a pre-established and currently existing phenomenon.

Validation of the Instrument

The questionnaire was subjected to face validation by three specialists from the Faculty of Education, University of Nigeria, Nsukka, Enugu State, Nigeria. The specialists were from the special education, curriculum studies, and measurement and evaluation disciplines. They were formally requested to assess the documents, appraise the suitability of the language used and determine the adequacy and relevance of each item in relation to the research questions. Updates and feedback provided by the specialists were employed to implement the modifications to the questionnaire. These modifications led to the development of the final version.

Instrument Reliability

The instrument's reliability was determined through a trial-testing activity involving 10 instructors from the Nsukka Education Zone, which is located outside the study area due to its distinct curriculum characteristics. Cronbach's alpha statistical approach was used to calculate the internal consistency for each instrument cluster. A coefficient dependability of 0.87 was achieved, suggesting that the instrument used for data collection in this study has a positive direction and is highly reliable.

Method of Data Collection

Regarding the data collection method, the researchers personally administered the questionnaire to the teachers. Two research assistants also helped administer the questionnaire. The questionnaire was administered to the participants by the researchers and research assistants, who promptly retrieved the completed questionnaire copies. The primary objective of employing research assistants was to enhance the efficiency of the process of distributing and collecting completed surveys.

Method of Data Analysis

With the help of the Statistical Package for Social Sciences (SPSS IBM Version 21), descriptive statistics (Mean and standard deviation) were used to answer the research questions, while inferential statistics (Independent sample t-test) were used to test the hypothesis at an alpha level of 0.05. A benchmark value of 2.5 for the research questions was considered accepted, whereas the general rule for the hypotheses was: when the P-value greater than 0.05 (Significant Level), it means that the result is not significant. A P-value of less than 0.05 is statistically significant ($P > 0.05$ = Not Significant; $P < 0.05$ = Significant).

Ethical Considerations

The researchers considered research ethics in the study. The research protocol was reviewed and approved by the Institutional Review Board of the Department of Educational Foundations, Faculty of Education, Godfrey Okoye University, Enugu, Nigeria. Second, the researchers received research permits from the gatekeepers of the schools

where the study was conducted. Consequently, the researchers sought informed consent from the participants of the study, and this was granted.

Then, confidentiality was maintained throughout data management, including collection, storage, and analysis. Most importantly, the participants were informed that they were free to withdraw from the study at any time without any penalty. Lastly, various steps were put in place to reduce potential risks to participants during data collection, and the researchers tried their best to prioritize the wellbeing of the participants throughout the study.

Results

RQ 1: To what extent has inclusive education influenced the cognitive development of learners with disabilities?

Table 1

Extent Inclusive Education has influenced the cognitive development of learners with disabilities

S/NO	ITEMS: Inclusive education influences the cognitive development of learners living with disabilities by;	\bar{X}	Sd.	Decision
1	Increasing sustained attention in class	2.67	1.11	Accepted
2	Helping individuals refrain from impulsive behavior	3.03	1.99	Accepted
3	Expanding their working memory	2.89	1.88	Accepted
4	offering learners the opportunity to truly meet the goals of preparation for the future	2.89	1.82	Accepted
5	Inculcating fluency in their communication	2.93	1.12	Accepted
6	Creating awareness about information processing in the classroom	2.79	1.35	Accepted
7	Opportunities related to language development	2.75	1.87	Accepted
8	Establish a standard level of reasoning	2.61	1.87	Accepted
	Grand mean	2.82	1.32	Accepted

Table1 shows the mean responses of the respondents regarding the extent to which inclusive education has influenced the cognitive development of learners with disabilities. The results showed that the respondents agreed to all the items with mean responses of 2.67, 3.03, 2.89, 2.89, 2.93, 2.79, 2.75, and 2.61, respectively. The analysis revealed that all items reached a benchmark of 2.5 The analysis revealed that the cluster mean response was 2.82, and the standard deviation was 1.32. This implies that inclusive education influences the cognitive development of learners with disabilities to a high extent.

Research Question 2: What are teachers' perceived constraints in implementing inclusive curricula for learners with disabilities?

Table 2

Perceived Constraints Teachers Face in Implementing Inclusive Education Curriculums for Learners with Disabilities

S/No	Items	(\bar{X})	Sd.	Decision
1	Poor knowledge of teachers in inclusive education	3.15	1.88	Accepted
2	Teachers' lack of interest in the inclusive education implementation process	2.88	1.99	Accepted
3	Teachers' poor understanding of curriculum content	2.92	1.90	Accepted
4	Few teachers compared to the workload and the effectiveness of the work.	2.94	1.88	Accepted
5	Poor payment of teachers	2.76	1.78	Accepted
6	Teachers lack the relevant competencies necessary for curriculum implementation	2.99	1.87	Accepted
7	Non-inclusion of inclusive education programs in teachers' training curricula and/or at basic levels of education	2.82	1.99	Accepted
8	Lack of finance	2.51	0.99	Accepted
Grand Mean		2.87	1.53	Accepted

Table 2 shows the mean responses to the perceived constraints teachers face when implementing an inclusive education curriculum for learners with disabilities. The result showed that the respondents agreed to a high extent on all the items whose mean response is 3.15, 2.88, 2.92, 2.94, 2.76, 2.99, 2.82, and 2.51, respectively. All items had a mean average greater than 2.5, which is the accepted benchmark. The analysis revealed that the cluster mean response was 2.87, and the standard deviation was 1.53. This indicates that the respondents agreed that the listed items represent the perceived constraints teachers face when implementing inclusive education curricula for learners with disabilities.

Hypotheses

H₀₁: There was no significant difference in the mean responses of teachers from rural and urban schools regarding the influence of inclusive education on the cognitive development of learners with disabilities.

Table 3

t-test of significant difference in mean responses of teachers from rural and urban schools regarding the influence of inclusive education on cognitive development of learners with disabilities

Location	N	\bar{X}	Sd.	df	t-cal	t-crit	Level of Sig.	Decision
Urban	296	3.01	1.10	90	1.98	1.96	0.05	Not Rejected
Rural	104	2.65	0.95					

Table 3 presents the independent sample t-test analysis of the mean difference in the responses of teachers from rural and urban schools. The results presented in Table 3 indicate that the calculated t-value (1.98) was less than the critical value of (1.96). The null hypothesis was not rejected. Therefore, there is no significant difference

between the mean scores of teachers from rural and urban schools regarding the influence of inclusive education on the cognitive development of learners with disabilities.

H₀₂: There was no significant difference in the mean responses of male and female teachers regarding the influence of inclusive education on the cognitive development of learners with disabilities.

Table 4

t-test of significant difference in mean responses of male and female teachers regarding the Influence of Inclusive Education on the cognitive development of learners with disabilities

Gender	N	\bar{X}	Sd.	df	t-cal	t-crit	Level of Sig.	Decision
Female	344	2.85	1.21	90	1.97	1.96	0.05	Not Rejected
Male	56	2.75	1.88					

Table 4 displays the independent sample t-test analysis of the mean difference in the responses of female and male teachers regarding the influence of inclusive education on the cognitive development of learners with disabilities. The results presented in Table 4 indicate that the calculated t-value (1.97) was less than the critical value (1.96). The null hypothesis was not rejected. Therefore, there is no significant difference in the mean responses of male and female teachers regarding the influence of inclusive education on the cognitive development of learners with disabilities.

Conclusions

The first research question explores the extent to which inclusive education has influenced the cognitive development of learners with disabilities. The evidence from the study shows that the affirmation of the respondents that inclusive education influences the cognitive development of learners with disabilities to a high extent. Inclusive education, when implemented effectively, can lead to improved cognitive development for learners with disabilities. Exposure to diverse learning environments and interactions with peers without disabilities can stimulate cognitive growth through increased engagement, access to varied perspectives, and enhanced problem-solving opportunities. Exposure can contribute to the acquisition of academic skills and knowledge. This finding agrees with Umar (2019) and Tassew (2012), who stated that inclusive classrooms often employ differentiated instruction and various teaching strategies to accommodate diverse learning needs. These approaches can stimulate the cognitive development of learners with disabilities by addressing their individual learning styles, strengths, and challenges.

The second research question was more emphatic in addressing the perceived constraints teachers face when implementing inclusive curricula for learners with disabilities. The evidence from the study showed that the respondents agreed that teachers are faced with constraints when implementing inclusive education for learners with disabilities. Implementing inclusive curricula for learners with disabilities can present various challenges and constraints for teachers. These perceived constraints may vary depending on the specific context, resources and available support. Teachers may feel inadequately prepared to address the diverse needs of learners with disabilities. They may lack specialized training in inclusive education strategies, curriculum adaptation, and assistive technologies. This finding is in line with Kago, (2017) and Triviño-Amigo et al. (2022), who stated that teachers struggle with limited access to appropriate teaching materials, assistive devices, and adapted curriculum resources to effectively support learners with disabilities.

Inclusive classrooms often have a mix of students with varying abilities and needs. Teachers find it challenging to provide individual attention and support to each learner, particularly in larger class sizes. Adapting lessons, creating differentiated materials, and providing additional support to learners with disabilities can be time-consuming. Teachers may feel overwhelmed by the demands of managing diverse needs within limited

instructional time. Effective inclusive education requires collaboration among educators, specialists, and support staff. Teachers may struggle with limited opportunities for collaboration, consultation, and co-planning with special education professionals. Some learners with disabilities may exhibit challenging behaviors that require special management and support strategies. Teachers may face difficulties in effectively addressing these behaviors within an inclusive classroom setting. The findings from the hypotheses present it vividly that there is no significant difference in the mean responses of teachers, both male and female, and from rural and urban schools on the influence of inclusive education on the cognitive development of learners living with disabilities in the Enugu Education zone of Enugu State, Nigeria.

Conclusion and Recommendations

Based on the findings presented in this study, it can be concluded that inclusive education has a significant and positive influence on the cognitive development of learners with disabilities. The findings demonstrated that inclusive classrooms provide a conducive environment for learners with diverse abilities to thrive academically. The study revealed that learners living with disabilities showed improved academic progress, increased engagement in the learning process and higher achievement in inclusive settings. The presence of typically developing peers in the same classroom facilitated social interaction and the development of essential social skills, fostering stronger peer relationships, and reducing stigmatization.

Based on the findings of the study, the researchers recommend the following:

1. Educational policymakers should develop and enforce comprehensive policies that support and promote inclusive education practices. These policies should focus on providing adequate resources, training and support for teachers as well as ensuring that schools are adequately equipped to implement inclusive strategies.
2. Inclusive education training and professional development programs should be provided to all teachers by the State Ministry of Education. These programs should emphasize inclusive teaching strategies, understand diverse learning needs and create supportive and inclusive classroom environments.
3. Schools should develop and implement individualized education plans (IEPs) for learners with disabilities. These plans should outline specific learning goals, accommodations, and support services tailored to each student's unique needs.
4. Schools should provide accessible learning materials and assistive technologies to support learners with disabilities in their learning journeys. This includes accessible textbooks, audio resources, adaptive software, and other assistive devices.
5. Educational institutions should foster a positive and inclusive school culture that celebrates diversity and promotes the acceptance of all students. This involves organizing awareness campaigns, inclusive events, and workshops to sensitize students, teachers, and the community about disability inclusion.
6. Schools should actively involve parents or caregivers in the education of learners with disabilities. Regular communication, parent-teacher meetings, and collaboration on individualized plans can help ensure consistent support for the child's development both at school and home.
7. The government should encourage collaboration and communication among teachers, administrators, parents, policymakers, and disability support organizations. The collaboration will facilitate the development of comprehensive and sustainable inclusive education strategies.

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