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## Emerging Didactical Strategies for Quality Delivery of Education Services to Children with Learning Disabilities in Nigeria

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### **Abstract**

*This study focused on the relationship between emerging didactical strategies and quality delivery of educational services for learners with learning disabilities in Nigeria with specific attention to Cross River State. It adopted quantitative methodology and descriptive survey as the design. The population consisted of all stakeholders in special need education in the State with 61 respondents purposively sampled for the study. Two null hypotheses were formulated to guide the research. A 20 item well validated questionnaire of 4 points Likert scale titled; Quality Delivery of Educational Services (QDES) was used for data collection. Data were statistically analyzed using Pearson Product Moment Correlation Analysis at 0.05 level of significance using SPSS software. Findings indicated strong positive relationship between the variables, this means that, ICT-tools and instructional accommodations are essential to the provision of quality educational services for learners with learning disabilities. It was recommended, among others, that ICT-tools and instructional accommodations should compulsorily be an integral part of educational plan for these learners. The capacity of teachers and learners should be upgraded to meet the emerging realities of the 21<sup>st</sup> century educational system. Finally, policy and legislative frame work should support practical use of these strategies to improve and sustain quality service delivery in schools.*

**Key words:** ICT-tools, instructional accommodations, disability, quality educational services

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## **Introduction**

One of the major roles and concerns of governments is to ensure quality educational services and practices in education of all children including those with learning disabilities. This is because, education is the basic tool and right required to prepare learners for future participation in national development and networked information society in which knowledge is the most critical resource for social and economic development. Quality educational services for learners with learning disabilities as broadly conceived in this discourse means, pre, actual and post instructional activities that aim at collection of valid base-line data on learners' disability profile, comprehensive needs that will determine the instruction/intervention for the child. The three-phase process here refers to, pre activities (identification/assessment), actual (real instruction/intervention in accepted settings) and post instruction activities (various assessment/evaluation activities that determine the success or failure of intervention/remediation). These activities are best offered in cyclical manner, procedurally in well-coordinated and professional practices in line with global standard (Perk, 2009).

Quality education services delivery will be incomplete or mirage without meeting the 2Qs condition (providing professionals in right quality and quantity). This implies that professionals and paraprofessionals relevant to education of learners with the disability should be in right proportion to provide professional services that equip children with right skills, attitudes, Knowledge, etc., to compete with their peers globally. Services that are provided must reduce or remove limitations imposed by impaired conditions.

Quality service delivery also involves the use of emerging didactical strategies with global research-based evidence such as ICT tools and instructional accommodations. Emerging didactical strategies as used here may be relative because what is emerging in Nigeria may be stale in developed countries. However, they are emerging in Nigeria because they are entry instructional/educational space in Nigeria. Information and Communication Technological tools and instructional accommodations (ICT & IA) are termed emerging didactical strategies in discourse because their relevance has suddenly become known and stakeholders are

beginning to develop interest in using them for instructional purposes.

Nores, *et al.* (2022), Castaneda-Pena *et al.* (2019), report that although the use of ICT and instructional accommodations as learning tools are an age-long practices in developed countries, these pedagogical practices are emerging in the typical Nigerian classroom especially their application in education of children with learning disabilities. The use of these strategies in school communities is seen as emerging innovation not only because it reduces effect of disability on the child and learning process, but also as mark of departure from analog to digital school generation.

Globally, ICT tools have become imperative and their role in facilitating teaching-learning process remains sacrosanct. Consequently, it is needless to say that the capacity of those who teach this group of learners should be built with comprehensive tech-tool literacy programme. More so, as commitment to provision of quality education services (QES), stakeholders should be deliberate in their efforts to provide these devices in 2Qs. Aboubakr, R.M, Hala, M.M and Bayoumy,D.SN (2022) argued that increasing the quality of education through strategies mentioned above has been a contemporary concern for many schools, teachers and international development agencies such as UNESCO, World Bank, UNICEF, etc. Education of learners with learning disabilities in Nigeria has faced a variety of social, cultural, economic, and technical challenges, as well as inappropriate assessment and placement. This has contributed to poor-quality education and related service (Lajira, 2012, Yolanda, 2010).

As complement to ICT tools, instructional accommodations have become trending in education of persons with disabilities inclusive of those with learning disabilities. Instructional accommodations are professional and legally approved adjustment in instructional process by teachers and response by learners without undermining the curriculum and the validity of assessment. According to Ajuwan (2012), instructional accommodations are support or modification that gives persons with disabilities equal opportunity to participate and benefit from all instructional activities in the school and assessment process in preferred settings. National Center for Learning Disabilities (2006) defined it as positive alterations in the way tasks are presented to allow children with learning disabilities complete the same task(s) as other students.

Instructional accommodation as a strategy, if professionally used, will bypass the disability that limits children participation in all pedagogical activities. It makes curriculum activities accessible to children with learning disabilities in order to oust the ineffective one-size-fits-all approach to instruction that has plagued and produced poor learning outcome among learners with learning disabilities. Lewd (2012) and (Tom, 2004) have recently identified instructional accommodation as one of the strategies of helping more learners, especially those with learning disabilities in diverse classrooms, succeed by benefitting maximally from instruction in the classroom.

Despite the numerous definitions of LD, researchers agree that children with these conditions have average or above average intelligence yet perform below their actual potentials due to disorders in input and output mechanism that enhance learning. Consequently, they have problems ranging from dyslexia, dyscalculia, dysorthographia, dysgraphia, attention deficit hyperactivity disorder to perceptual disorders. These disorders negatively affect the child's ability to learn. Considering the nature and effect of LD on the child's education, professionals have brought to the fore their training and experience in agitating and making provision for these strategies that will facilitate their education as well as enhance life fortune of children with learning disabilities (Orim & Ezekiel 2017, Orim & Ikwen, 2016).

### **Statement of the Problem**

One of the emerging concerns of stakeholders like parents, international development agencies, professional associations, government and children with learning disabilities globally is the nature and quality of educational services delivery as part of educational process for children with learning disabilities. The education of these learners due to the heterogeneity and unpopular nature of learning disabilities in Nigeria is currently facing pedagogical, psychological, research, cultural, technological and economic challenges. These have great implications on the quality of service delivery. Thus, it becomes crystal clear that the existing educational practices are not beneficial and do not improve the learning outcome of children with learning disabilities in Nigeriabecause teachers, administrators and other relevant stakeholders do not embrace the use of emerging instructional

strategies in line with the global best practices to ensure quality service delivery. The obvious result of this negligence is frustration, poor teaching-learning process, and poor educational outcome and perhaps increase dropout rate of children with learning disabilities from schools. This bane in education of learners with learning disabilities negates both international and national policies aimed at increasing access to quality education for self and national development. This has prompted concerned stakeholders such as international development partners and professionals in special needs education to advocate and recommend the use of research based-evidence strategies in teaching learners with learning disabilities primarily to improve and sustain quality service delivery in all settings. The focus of the problem is, what is the relationship between emerging didactical strategies and delivery of quality educational service to learners with learning disabilities in Nigeria?

### **Research Hypotheses**

The following two null research hypotheses were formulated to guide the study:

1. There is no significant relationship between instructional accommodations and quality educational services delivery for children with learning disabilities.
2. There is no significant relationship between ICT tools and quality educational services delivery for children with learning disabilities

### **Relevant Existing Literature**

Emerging didactical strategies for education of children with learning disabilities are internationally proven, and there are research-based strategies for teachers, school administrators and school community to promote quality service delivery in the school system. The word emerging as used here implies that, these strategies are just gaining ground, acceptance, and being used in pedagogical processes in Nigeria. It is important to clarify, as mentioned earlier, that what is emerging in one environment may not be in another environment, because these strategies have long been used in developed school system. They are in a vogue to developing school system like Nigeria. Berlin (2008) reports that these

strategies grew out of recognition that ordinary school practices no longer produce the knowledge, skills, and habits of mind that students need for success. The 21<sup>st</sup> century special education needs assistance in reviewing learning standards, organizational structures, leadership models, teaching strategies, professional development, and student outcomes in relation to research on high-performing educational systems and practices.

Tech-tools have become common in the 21st century classroom globally, Nigeria cannot afford to be left behind. Tech-tools are particularly relevant to persons with disabilities as the devices can reduce or remove effect of disability on individuals and learning process. Tsay, Kofinas and Luo (2018) evaluate the use of Gamification websites and apps to facilitate learning among students and conclude that there is no classroom environment that ICT-tools have not come to stay in educational-space. Saini, Rashid and Al-Mamri, (2019) report that, in the last four and half decade technology has revolutionized and improved every aspect of education in Omani and government adopted it as national framework for her educational system.

Fisher (2010), Wiska, and Sala's (2014) findings have shown that, the use of ICT devices as pedagogical strategies with global results is the first step towards defining in detail, the characteristics of effective 21st century special needs education. Applying them means, creation of new models of teaching, learning, and removal of limitations imposed on learners by impairments. The author argued that these devices are seen as global Practices and comprehensive tools designed to equip schools with thoughtful processes for in-depth professional practice with the aim of ensuring quality education of children with learning disabilities. Fisher (2010) asserted that, ICT promotes quality educational service delivery for children with learning disabilities and should holistically be welcomed and accommodated in the school system. In recognition of the prominent role of ICT in advancing knowledge and skills necessary for effective functioning in the 21<sup>st</sup> century in digital and knowledge-based economy as a strategy to ensure quality education, ICT has become the expected practice of every Nigerian classroom (Federal Republic of Nigeria, 2004).

Besides the above strategy, research has equally proven that instructional accommodations are becoming increasingly relevant in education of

children with learning disabilities. Kern, *et al* (2019) inspected special education plan of 222 students using instructional accommodations in USA and found that most of them had been diagnosed of learning disability. Also, Burns, *et al* (2020), reviewed school psychologists' evaluation report for 130 students and saw that professionals mostly recommend accommodation services for students with learning disabilities.

Hustus,*et al* (2020), studied special education plans for 183 students and found that accommodations services are mostly used for learning. In Lovett (2021), it was revealed that accommodations are so prevalent and school professionals seem to naturally respond to disability by proposing and using accommodations for didactical interactions in classroom. Like others, Harrison,*et al* (2020), found that students with ADHD, ages 11-15 were given organizational support as accommodation in their assignments and class note consequently, the rate of completing these tasks improves. National Center for Learning Disabilities (2006) defined it as alterations in the way tasks are presented to allow children with LD complete the same task(s) as other students.

Accommodations are opportunities for learners with LD to participate in all instructional activities and assessment without disability-based limitations. The idea of accommodation is championed by USA, however, few other countries are beginning to realize the essence of accommodation and have begun to advocate for its inclusion in the education of students with LD, perhaps as inclusionary principle in schools. NCLD (2006) and Ajuwon (2012) noted that Educational Testing Services (ETS) and Scholastic Achievement Test (SAT) etc. in America have embraced the concept of accommodation. The State Education Department Office of Vocational and Educational Services for Individuals with Disabilities, (VESID) (2006) recommended that accommodations should be received or administered in the following ways, instruction presentation, and response to instructional presentations, timing/scheduling and setting. In this vein, accommodations are tools and procedures that provide equal access to instruction and assessment for students with disabilities (Etier, 2001). Lerner and Kline (2006) opined that IDEA 2004 permits accommodation in State wide test for students with LD. However, these accommodations must be written in the students' IEP and have the support of the teacher and Guidance Counselor in planning for and administration. It allows students with LD a



level opportunity and does not give them due advantage in terms of grading, as well as the content of curriculum. It is primarily aimed at giving the learners opportunity to express what they know without being impeded by their disabilities.

What is interesting about ICT tools and instructional accommodations as emerging didactical strategies is that they can be concurrently used. For instance, while learners without learning disabilities use the traditional pen and exercise book to write in class those with dysgraphia, a sub-type of learning disabilities can be allowed to use tablet to write during classroom and assessment activities like test, examinations just like those with dyscalculia can use math Daisy for learning.

### **Methodology**

This study adopted descriptive survey design of correlational type. It is preferred because it involves the collection of data or opinion of subjects about an issue or puzzle to accurately and objectively describe variable(s) or phenomena being studied. Also, it gives researchers opportunity to canvass the opinions of relevant stakeholders in education of children with learning disabilities on quality delivery of education services in line with global best practices in the education of these children. More so, it described the relationship existing between variables understudied.

The population of this study consists of all stakeholders in special needs' education in Cross River State such as, special education teachers, Desk Officers in the Ministry of Education, Local Education Authority, postgraduate students in the Department of Special Education, University of Calabar, support staff and parents. Purposive sampling technique was used to get participants, who specifically consisted of 61 (sixty-one) respondents, 3 administrators from special schools, 2 desk officers, 40 Special Education Teachers (SET) across the levels of education (primary, secondary and tertiary), 8 postgraduate students in special education, 2 support staff and 6 parents who have children with the disability. This sampling strategy require the use of experts who are knowledgeable on the subject matter of the research to get information that will improve the situation under focus. A 20 item self-developed questionnaire of 4 points Likert scale titled; *Quality Delivery of Educational Services (QDES)* was use for data collection.



The instrument was validated and piloted with 25 respondents to provide initial support for the reliability (reliability coefficient of 0.79 and 0.87). The instrument was administered to the respondents personally and retrieved accordingly, this led to the 100% return rate recorded. Two null research hypotheses were formulated to guide the study. The data collected were statistically analyzed using Pearson Product Moment Correlation Analysis at 0.05 level of significance.

## Results

**Hypothesis 1:** There is no relationship between instructional accommodation and quality educational services delivery for children with learning disabilities. The variables under consideration were instructional accommodation and quality educational services delivery for children with learning disabilities.

**Table 1**

Pearson Product Moment Correlation Analysis of the Relationship between instructional accommodation and quality educational services delivery for children with learning disabilities (N=61)

Variables	Mean	Stand. Deviation	$\Sigma X^2$ $\Sigma Y^2$	$\Sigma XY$	Sig	r
Instructional accommodations	10.53	3.33	792.67			
Quality educational services delivery	11.81	4.56	1539.39	631.47	0.001	0.40

P<0.05 Degree of Freedom (df) =59

In Table 1, instructional accommodation with a mean of 10.53 and SD of 3.33 and quality educational services delivery for children with learning disabilities with mean of 11.81 and SD of 4.56 is significant at  $p < .05$ . The correlation coefficient between instructional accommodation and quality educational services delivery for children with learning disabilities is  $r = 0.40$  at df of 59 showing that instructional accommodation and quality educational services delivery for children with learning disabilities are significantly related. Therefore, the null hypothesis was rejected. This

shows that instructional accommodation promotes quality educational services delivery for children with learning disabilities.

**Hypothesis 2:** There is no significant relationship between ICT-strategy and quality educational services delivery for children with learning disabilities. The variables under consideration were ICT strategy and quality educational services delivery for children with learning disabilities.

**Table 2**

Pearson Product Moment Correlation Analysis of the Relationship between ICT strategy and quality educational services delivery for children with learning disabilities (N=61)

Variables	Mean	Stand. Deviation	$\Sigma X^2$ $\Sigma Y^2$	$\Sigma XY$	Sig	R
ICT-enhanced strategy	12.21	4.61	1570.59			
Quality educational services delivery	11.81	4.56	1539.39	1243.99	0.0002	0.800

P<0.05 Degree of Freedom (df) =59

The Table 2 above shows that ICT as didactical strategy with a mean of 12.21 and SD of 4.61 and quality educational services delivery for children with learning disabilities with a mean of 11.81 and SD of 4.56 is significant at  $p>.05$  from a correlation coefficient of  $r= 0.800$  at df of 59. This shows that ICT-tools has a significant statistical linkage with quality educational services delivery for children with learning disabilities. Therefore, the null hypothesis was rejected. This result indicates that ICT strategy is emerging way of improving quality of educational services and by implication performance and autonomy of learning by children with learning disabilities.

## **Discussion of Findings**

The result of hypothesis 1 shows that there is a significant relationship between instructional accommodation and quality educational services delivery for children with learning disabilities. The findings of this study are in agreement with the study of National Center for Learning Disabilities (2006) which supported that one of the best practices in special education that improve performance and ensure quality service delivery to children with learning disabilities is instructional accommodation. This strategy, if properly planned and applied, reduces the frustration children with learning disabilities experience in schools. The idea of instructional accommodation is to adjust the way instructional activities are presented and how students respond to instructional evaluation/assessment without altering or watering down the content, quality and standard of the instruction and assessment (Ajuwon, 2012).

For proper use of instructional accommodation in line with global best practices, teachers and IEP team must be equipped with basic knowledge and understanding of how it works. Lovett (2020) opined that, it could be viewed and applied from two perspectives or models, the general instructional presentation and specific disability model. Ajuwan (2012), in line with the findings of this research, stated that instructional accommodations support and give equal opportunity to persons with disabilities to participate and benefit from all instructional activities in the school. Obani (2004) affirmed that this strategy, when used in professional standard, benefit, learners with disabilities.

The result of Hypothesis two revealed that there is a significant relationship between ICT as didactical strategy and quality educational services delivery for children with learning disabilities. In agreement, Roseti (2009) supported that Information and Communication Technology (ICT) has become an essential tool in today's information age, makes a dramatic impact on the lives of people through education, research and development in the global perspective. Roseti states that it has proven to be a catalyst for

improving access to quality instructional delivery in the classroom.

Studies revealed that, over the past decades in the field of Special Education, there has been a concerted ongoing push and crusade for integration of ICT into teaching pedagogy to improve the learning outcome of children with learning disabilities (Jedeskog, 2005). Just like these findings, Tella (2007), confirms that ICT can be used in kindling these students' interest, enhancing recall of previous learning, providing new stimuli, activating learner's response, and providing systematic and steady feedback, thereby promoting quality teaching and participation of all learners in the classroom and other related activities. It provides opportunities to stimulate learning and increase motivation that enables teachers and the disabled students to interact productively within the classroom, neighboring communities and global economy in a wider and higher scope.

In a similar view, there is substantial evidence from Yasser and Gayle (2007) that Information and Communication Technology promote quality special education service delivery and effective teaching-learning atmosphere for both children with learning disabilities and teachers. In line with this study, Aaron (2009 & 2013), UNESCO (2009, & 2010) accept that ICT tools have the ability of inspiring and engaging the students in learning to link the school experiences to the work practices, enriching and perpetuating skill as well as creating economic viability for future generations.

Rolaza, Munto, (2010) and Roseti (2009) also accepts use of ICT devices in education of children with disabilities because it provides equal educational opportunities and readjust classroom environment for quality instruction and learning, greater flexibility, interactivity and accessibility for individual, group, and society. Anderson (2002) further supported that the integration of ICTs into the school curriculum to enable students with learning disabilities work independently and constructively thereby reducing the effect of the disability.

## **Conclusion**

In contemporary society, education and technology are seen as indispensable two prongs fork for learners without disabilities. However, this study has shown that for those with disabilities, it has to be three prongs, namely, education, technology and instructional accommodations. These prongs are essential for effective participation in the development of any society, including Nigeria. Thus, the need for paradigm shift from using normative instructional strategies to emerging ones with global research-evidence remains sacrosanct. The use of these practices in education of learners with disabilities has the capacity to reduce or remove limitations disability has placed on this category of learners. The three-cord rings are inseparable as the quality of education and related services are proportional to use of teach-tools and accommodations in instructional processes. Nigeria education system should therefore be upgraded to this reality for provision of quality services in the industry.

## **Recommendations**

Base on the findings of this study, it was recommended among others that:

- i. Instructional accommodations should be an integra part of education of children with disabilities for improved and quality service delivery.
- ii. ICT-tools should be an essential component of teaching-learning process for all learners inclusive of those with disabilities.
- iii. Teachers, learners and stakeholders in school system should upgrade their skills to meet tech-needs for 21<sup>st</sup> century classroom.
- iv. Policy and legislation should enforce the use of these emerging strategies in Nigeria education system as in developed world.

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