Full Length Research Paper

Inclusive quality education for sustainable development in Nigeria

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In September 2015, Head of State and Government met in Paris to set the world on a path towards Sustainable Development through the adoption of the 2030 Agenda for Sustainable Development. Goal four (4) focused on inclusive quality education and lifelong learning opportunity for all. This research paper was carried out to ascertain teachers' perceptions on the use of Teaching Aids for inclusive education. Primary data were sourced for the study. A total of three hundred and eighty-seven questionnaires were administered to respondents, out of which eighty-nine questionnaires were administered to the teachers and the rest to the students using a stratified random sampling technique. Descriptive statistic was used to analyze the data while inferential statistics were used to test the hypothesis. Findings revealed that: There is a significant difference when teaching aids are used for inclusive Education. It reduces the level of abstraction, gives room for effective retention and it saves the teacher's time and energy. The Author advocates public and private partnership participation in the provision and funding of instructional materials in schools. Supportive services should be provided in schools for a child with special needs.

Keywords: Inclusive education, sustainable development goals, neighbourhood school.

INTRODUCTION

In Nigeria and around the world, children are excluded from the school where they belong because of disability, race, language, religion, gender and poverty. But every child has the right to be supported by their community to grow, learn and develop in the early years and upon reaching school age to go to school and be welcome and included by teachers and peers alike. When all children, regardless of their differences and needs are educated together, everyone benefits.

Inclusive system provide a better quality education for all children and are instrumental in changing discriminatory attitude – school provide the contexts for a child's first relationship with the world outside their families, enabling the development of social relationship and interaction, respect and understanding grow when students of diverse abilities and background play, socialize and learn together. Education that excludes and segregates perpetuate discrimination against traditionally marginalized groups.

PURPOSE OF THE STUDY

The objective of this study is to find out the effectiveness and teacher's perceptions in the use of teaching aids in inclusive education. The specific objectives of the study include:

i.) To ascertain teacher's perceptions on the use of Teaching Aids in Inclusive Education.
ii.) Determine the obstacles militating against the use of instructional materials in Inclusive Quality Education.
iii.) To find out the instructional materials needed for Inclusive Quality Education.

iv.) To make a necessary recommendation in the use of instructional materials for Inclusive Quality Education in Kogi State, Nigeria.

Research Hypothesis

To meet the purpose of this research, the following hypothesis will be tested.

H_0:   There is no significant difference when Teaching Aids are used for effective Inclusive Quality Education.

H_1:   There is a significant difference when Teaching Aids are used for effective teaching and learning in Inclusive Education.

CONCEPTUAL FRAMEWORK

Inclusive education

Inclusive education happens when children with and without disabilities participate and learn together in the same classes. Research shows that when a child with disabilities attends classes alongside peers who do not have disabilities, good things happen.

For a long time, children with disabilities were educated in separate classes or in separate schools. People got used to the idea that special education meant separate education. But we now know that when children are educated together, positive academic and social outcomes occur for all the children involved. Inclusive education occurs when there is ongoing advocacy, planning support and commitment. These are the principles that guide quality inclusive education:

1.   All Children Belong

Inclusive Education is based on the simple idea that every child and family is valued equally and deserves the same opportunities and experiences. Inclusive education is about children with disabilities – whether the disability is mild or severe hidden or obvious – participating in everyday activities, just like they would if their disabling were not present. It's about building friendships, membership and having opportunities just like everyone else.

2.   All Children Learn in Different Ways

Inclusion is about providing the help children need to learn and participate in meaningful ways. Sometimes, helps from friends or teachers works best. Other times, specially designed materials or technology can help. The key is to give only as much help as needed.

3.   It is Every Child's Right to be Included

Inclusive education is a child's right, not a privilege. The

individuals with Disabilities Education Act clearly states that all children with disabilities should be educated with non-disabled children their own age and have access to the general education curriculum.

This idea is also supported by the Nigerian government and it is clearly stated in the Nigerian Policy of Education (2004) that "integration is the most realistic form of special education since handicapped children are eventually expected to live in the society" (p. 31). The term "integration" is interchangeably used with mainstreaming. It is a process by which handicapped children are placed in a regular school environment to receive instruction with regular students. This form of integration can be partial or total. Partial integration involves providing a 'unit' in the regular schools for handicapped children who are taught separately by their specialist teachers. During school activities such as recess games, outdoor work and other non-academic activities, the disabled associated with their normal peers. This form of integration is what operates in Methodist Grammar School, Bodija, Ibadan, Akure High School, Akure, Baptist High School Benin City, Edo State and also State Grammar School, Eric-Moore, Lagos State. All in Nigeria.

Some of these children are also integrated fully into the regular classroom setting. The school like Ijokodo High School Ibadan and Technical Secondary School, Umuoka, Enugu State, Nigeria. Full Integration (Inclusive)

The handicapped constitute a minority in most societies, and since they must live with the non-disabled majority, it is necessary for them to begin early in life to learn to live and work together with the non-disabled.

The disabled child is prepared early to adapt to the realities of life and moves away from the sheltered environment of the special school for the handicapped. The inclusion of students with disabilities in general education classrooms results in a favourable outcome. Positive outcomes have been shown for both students with high incidents disabilities (learning disabilities and other "mild" disabilities) and those with low incidence disabilities (intellectual, multiple and "severe 'disabilities').

Placement matters: Studies investigating the effects of placement in general education classrooms reveal positive outcomes in the areas of IEP quality, time of engagement and individualized supports. Significant increases in IEP quality on measures of age-appropriateness, functionality and generalization were found when students move into general education classes from special education settings even though the special educator remained the same (Hunt & Farron – Davis, 1992) with the general education classroom, there was an increase in the amount of instruction on functional activities as well as basic academic skills such as literacy for students with severe disability (Hunt et al., 1994) in addition, students were observed to be less engaged and often more alone in self-contained classroom. Inclusive

learning environments facilitated the acquisition of literacy and adaptive skills as well as enhancing students' social relationships, (Kliewer and Biklen, 2002).

Shaping attitudes "inclusion is a philosophy that urges schools, neighbourhood, and communities to welcome and value everyone; regardless of differences, central to the philosophy of inclusion are the beliefs that everyone belongs. Diversity is valued and we can all learn from each other" (Renzaglia et al., 2003). Holding such an attitude can greatly impact the participation of students with disabilities in inclusive classrooms. Most research studies examining educational outcome have found positive effects of inclusion. Baker and Colleagues reviewed three meta-analyses that addressed the issue of the most effective setting for the education of students with disabilities. A small to moderate positive effect for inclusive placement was found in all three meta-analysis (Baker et al., 2002) more recently, Waldron and Majd (2001) investigated the effects of inclusive programs for students with high incidence disabilities and their effects of inclusive programs for students with high incidence of disabilities and their typical peers. This two-year study found that 41.7% of students with learning disability made progress in mathematics in the general education classroom compared to 34% in traditional special education settings, without the presence of non-disabled peers. Gains in reading were comparable in both settings. When comparing progress with their typical peers 43.3% of students with disabilities made comparable or greater progress in math in inclusive setting versus 35.9% in traditional settings. Similar academic gains were reported in a study examining the use of classwide peer tutoring on the achievement of students with high incidence disabilities in inclusive classrooms, significant increases in spelling, social studies and other academic indicator were observed (Pomerantz & Smith, 1994).

Making Inclusion Work

Recognizing that inclusion benefits both students with and without disabilities has led to research that seek to define the necessary contexts, instructional practices and curricular efforts that result in improved learner outcome.

Peer-Mediated and Intervention: The use of peer-mediated instruction and intervention are often cited in the literature as one of the most effective strategies for an inclusive classroom. In several studies focused on students with mild disabilities, the use of peer-mediated strategies results in improved academic outcomes for all students including those considered at-risk academically (Sailor, 2002).

The students' behaviour problems were reported to be lower, and the students were more socially included with peers. Prater (2003) also identified teacher attitudes as one of several elements that are critical in promoting the success of students with disabilities in a general education setting.

In addition to the role that teacher attitudes play in the success of inclusive classrooms, it is widely acknowledged that an inclusive school culture begins with the committed leadership of the principal. Praisner (2003) examined principals' attitudes toward inclusion, including their placement perceptions. Out of 408 principals surveys, only one in five held a positive attitude towards inclusion. Factors that were associated with positive attitude included experiences with students with disabilities and exposure to special education concepts, furthermore, principals who had positive attitudes were more likely to place students in less restrictive settings. Clearly, teacher and administrator attitudes are critical. Factors that shaped the experiences of students with disabilities.

Instruction and Curriculum Adaptation: Instruction and curriculum adaptation can be conceptualized in two categories. Routine adaptations include the use of varied grouping arrangement, material and goals while specialized adaptations are those made above and beyond ones that are in direct response to specific challenges faced by students (Fuchs & Fuchs, 1998). Weymer and Colleagues use the term curriculum augmentations to refer to efforts to augment or expand the general education curriculum to provide additional skills or strategies that help students succeed (Wehmeyer et al., 2002). Research on curriculum and instructional adaptations that support students with disabilities in general education classrooms is varied.

For students with learning disabilities, many studies describe instructional methods that extend the typical adaptations and help to promote progress in the progress in the core content areas for students (including those without disabilities). These include graphic or advance organizers, self-regulation strategies, semantic maps, mnemonics, chunking, questioning, and visualizing strategies (Baker et al., 2002).

Sustainable Development

Sustainability, it is believed will result from the adoption of an Education strategy that is based on inclusiveness, will bring about the creation of sustainable human development. The Earth Charter which has become an authoritative educational instrument and policy tools offers a useful articulation of the values and principle of sustainability. In the context of quality education for all and promote lifelong learning education seeks "to promote development that meets the need of the present without compromising the ability of future generations to

Table 1. Sex of teachers' respondents.

Sex	Frequency	Percentage
Male	50	56
Female	39	44
Total	89	100

Source: Fieldwork (2016).

Table 2.   Educational background of respondents.

Educational Background	Frequency	Percentage
National Certificate in Education	20	22
B.A / B.Sc	30	56
B.A Ed / B.Sc Ed	25	4
Postgraduate M.Ed	14	22
Total	89	100

Source: Fieldwork (2016).

meet their own needs" (Brundtland Commission Report, 1987). This definition embodies two key concepts, the "needs", particularly the essential needs of the world's poor to which should be given overriding priority and the placement of limitation on the ability to meet present and future needs.

RESEARCH METHODOLOGY

The data used in this study were primary data. The questionnaire was employed to source for data from respondents using stratified random sampling techniques. The teachers were drawn from six secondary schools in Lokoja the State Capital of Kogi State, Nigeria. The objectives that guide this research were the perceptions of teachers on the use of instructional materials in inclusive education. Inferential statistics were used to test the hypothesis.

Sample size
The sample of this study was eighty-nine (89) staff of secondary schools in Lokoja which represents 24% of the population size.

Population of the Study

The study population comprises of the staffs and students of the selected six secondary schools in Lokoja Local Government Area of Kogi State, Nigeria.

Sample and Sample Techniques

Stratified random sampling technique was used to select six schools. The sample stratified tool for boys, girls and

two teachers making sixty-two (62) students for each school that were selected. A total of three hundred and eighty-four (384) questionnaire was administered to respondents.

Method of Data Analysis

The analysis of the data involved the use of t-type rating scale, the use of frequency, mean and chi-square. The nominal value was assigned to each of the responses categories as follows:

Strongly Agree (SA)	4 points	
Agree	(A)	3 points
Disagree	(D)	1 point
No Opinion	(N)	0 point

DATA PRESENTATION, ANALYSIS AND FINDINGS

The data collected were analyzed and presented as follows:

Research Question 1
What are the benefits of Teaching Aids in Inclusive Quality Education?
The sample size for the study was 89. The researcher administered Eighty-nine questionnaires to the respondents which were all completed and returned.

   Table 1 indicates that 56 per cent of the respondents are male while 44 percent were female.

   Table 2 revealed that 22% of the respondents hold National Certificate in Education while 33.7% obtained First Degree B.A / B.Sc while 28% possessed B.Sc Ed / B.A Ed and 15% of the respondents have postgraduate qualifications. By inference, all the respondents are

Table 3. The percentage of the respondents.

Responses	Frequency	Percentage
Strongly Agreed	45	50.1
Agree	40	44.9
Undecided	-	-
Disagree	4	4.5
Strongly Disagree	-	-
Total	89	100

Source: Fieldwork (2016).

Table 4. The mean (X) response of the benefits of teaching aids in teaching and learning in inclusive quality education.

S/N	ITEM	X	4	3	2	1	$\bar{X}$		Decision
1		F	150	132	32	30	40	2.84	Agree
		Fx	Fx	Fx	Fx	Fx	Fx		
			600	396	64	30	0		
	Give room for effective retention of concepts		512	345	96	46	0	2.60	Agree
	Save the teachers time and energy		475	330	120	43	0	2.52	Agree
	Keep the students busy and active		572	372	84	45	0	2.79	Agree
	Stimule the imagination of the students		500	357	66	42	0	2.54	Agree

qualified teachers. The least qualified teacher has a National Certificate in Education which is the minimum qualification for teaching in Nigeria as stipulated in the National Policy on Education (NPE 1981).

Research Question 3: Teacher with specialized Training is essential for Inclusive Education.

Table 3 reveals that 95.4 per cent of the respondents agreed that Teachers with specialized training are essential for Inclusive Education.

Table 4 revealed that respondents with a mean score of 2.52 and above agreed to the benefits of using Teaching Aids for Inclusive Quality Education. While none of the respondents disagreed with the benefits of the use of Teaching Aids for Inclusive Quality Education.

Summary of Findings

The following are the findings of the researchers on the perception of the use of teaching aids for inclusive quality education.

i.) It reduces the level of abstraction.
ii.) It gives room for effective retention of concepts.
iii.) It saves the teacher's time and energy.
iv.) It keeps the students busy and active.

The researcher found out that the instructional materials needed for effective inclusive education include:

i.) Audio Aids
ii.) Audio – Visual Aids
iii.) Resource Person and Community Resources

However, the respondents disagree that manual communication is required for effective inclusive quality education.

However, manual communication (sign languages) has a low mean response from those respondents as a teaching from the respondents as a Teaching Aid for inclusive quality education.

RECOMMENDATION AND CONCLUSIONS

The researcher recommends the following public and private partnership participation in the provision of fund and supply donations of the needed instructional materials for schools, employment of well-trained personnel and counsellors that can use Teaching Aids effectively in teaching and learning in Inclusive Quality Education.

When the Teaching Aids are provided with the school management should make sure that they are maintained.

Adequate time should be allocated for practical so as to encourage effective skill acquisition.

The handicapped constitute a minority in most societies and since they must live with the non-handicapped majority it is necessary for them to begin earlier in life to learn to live and work together with the non-handicapped.

Both parents of handicapped and non-handicapped children learn about each other. The former have the opportunity of developing realistic attitudes towards their child's handicap, while the later gain some insights into the kind of adjustments they must make and the needs of the handicapped child and his/her parents. However, one form of supportive service or the other should be provided for such a child.

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APPENDICES

Table 1. Test for Research Hypothesis 1.

S/N	4	3	2	1	0	Row Total
1	150 (133)	132 (120)	32 (44)	30 (41.2)	40 (45.8)	384
2	128 (133)	115 (120)	48 (44)	46 (41.2)	52 (45.8)	384
3	119 (33)	110 (120)	60 (44)	43 (41.2)	52 (45.8)	384
4	143 (133)	124 (120)	42 (44)	54 (41.2)	30 (45.8)	384
5	125 (133)	119 (120)	38 (44)	42 (41.2)	60 (45.8)	384
Column Total	665	600	220	206	229	1920

To compute the expected frequencies

Row 1   Column 1: $\dfrac{384 x 665}{1920} = 133$

Row 1   Column 2: $\dfrac{384 x 600}{1920} = 120$

Row 1   Column 3: $\dfrac{384 x 220}{1920} = 44$

Row 1   Column 4: $\dfrac{384 x 206}{1920} = 41.2$

Row 1   Column 5: $\dfrac{384 x 229}{1920} = 45.8$

And so forth …
Chi-square (x^2) is computed as:

$$X^2 = \Sigma \frac{(oj - ej)^2}{Ej}$$

$$X^2 = \frac{(150-133)^2}{133} + \frac{(132-120)^2}{120} + \frac{(32-44)^2}{44} + \frac{(30-41.2)^2}{41.2} + \frac{(40-45.8)^2}{45.8} + \frac{(128-133)^2}{133} + \frac{(115-120)^2}{120} +$$

$$\frac{(48-44)^2}{44} + \frac{(46-41.2)^2}{41.2} + \frac{(47-45.8)^2}{45.8} + \frac{(119-133)^2}{133} + \frac{(110-120)^2}{120} + \frac{(60-44)^2}{44} + \frac{(45-41.2)^2}{41.2} +$$

$$\frac{(30-45.8)^2}{45.8} + \frac{(125-133)^2}{133} + \frac{(119-120)^2}{120} + \frac{(38-44)^2}{44} + \frac{(42-41.2)^2}{41.2} + \frac{(60-45.8)^2}{45.8}$$

X^2 = 2.17 + 1.2 + 3.27 + 3.04 + 0.73 + 0.19 + 0.20 + 0.36 + 0.03 + 1.47 + 0.83 + 5.82 + 0.08 + 0.84 + 0.75 + 0.03
The calculated
X^2 = **21.01**

Taking 5% as the level of significance at the 0.05 level of significance and 16 degree of freedom. The critical value of X^2 = **38.93**

Decision: The calculated valued of x^2 exceed the critical value of x^2 that is **38.93** > 21.57.

Hence null hypothesis is rejected.

That: There is a significant difference when Teaching Aids were used in effecting teaching and learning in Inclusive Quality Education.

Research Question 4

What are the Teaching Aids needed for Inclusive Quality Education?

Table 2. The mean of instructional materials needed for Inclusive Quality Education in items 1, 2, 3 and 4.

S/N	OPTIONS ITEMS	X Fx	4 Fx	3 Fx	2 Fx	1 Fx	0 Fx		Decision
1	Audio Aids		520	375	94	42	0	2.68	Agree
2	Manual Communication		400	345	120	57	0	$\bar{X}$	Agree
3	Audio – Visual Aids		592	402	76	34	0	2.88	Agree
4	Resource Person and Community Resources		528	387	84	42	0	2.72	Agree

From Table 2, respondents agreed that items with a mean score of 2.40 and above Teaching Aid needed for Inclusive Quality Education. Instructional materials are important both for the teachers and the students. Abolade (1986) asserted that an appropriate selection and utilization of resource person can facilitate and enhance learning and instruction. He recognizes "Resource Person" as a professional or expert in a specific field of specialization capable of enlightening students in a specific learning experience.