



Research Article

© 2023 Mbon et al.  
This is an open access article licensed under the Creative Commons  
Attribution-NonCommercial 4.0 International License  
(<https://creativecommons.org/licenses/by-nc/4.0/>)

Received: 9 July 2023 / Accepted: 23 August 2023 / Published: 5 September 2023

## Embracing Diversity in the Educational Landscape: Resource Supply and Inclusive Education in Secondary Schools

Usen F. Mbon<sup>1</sup>  
Godfrey G. Ukpabio<sup>1</sup>  
Ekpenyong E. Ekanem<sup>1</sup>  
Nse N. Ukpong<sup>1</sup>  
John A. Ekpenyong<sup>3,3</sup>  
Melvina Amalu<sup>2</sup>  
Ovat E. Okpa<sup>1</sup>  
Chidirim E. Nwogwugwu<sup>2</sup>  
Dorn C. Enamhe<sup>4</sup>  
Blessing A. Ntamu<sup>2</sup>  
Valentine J. Owan<sup>2,3\*</sup>

<sup>1</sup>Department of Educational Management,  
University of Calabar, Nigeria

<sup>2</sup>Department of Educational Foundations,  
University of Calabar, Nigeria

<sup>3</sup>Ultimate Research Network (URN),  
Calabar, Cross River State, Nigeria

<sup>4</sup>Department of Social Works,  
University of Calabar, Nigeria

\*Corresponding Author

DOI: <https://doi.org/10.36941/jesr-2023-0128>

### Abstract

Several studies have examined the challenges affecting the smooth implementation of inclusive education; focusing on resource inadequacies. However, these studies primarily relied on descriptive statistics: describing resource availability but not assessing their impact on policy implementation. The current study addresses this gap by analysing the extent of critical resource supply for implementing inclusive education and its influence on policy implementation. A descriptive survey design was adopted, targeting 281 principals from public secondary schools across three educational zones in Cross River State. Stratified proportionate sampling was used in selecting 120 principals as the sample. Data collection involved a structured questionnaire with an acceptable validity and a reliability indices. Descriptive statistics were used to answer the research questions, and Simple and multiple linear regression were used to test the hypotheses at the .05 level of significance. The findings of the study revealed low supply levels of physical, human, and financial resources for implementing inclusive education in secondary schools. The extent of inclusive education implementation was also found to be low. The study further indicated that the supply of physical, human, and financial resources collectively affected policy implementation, with physical resources having a greater impact. These results have practical implications for the government and stakeholders; emphasising the need for adequate physical, human, and financial resources to implement inclusive education in secondary schools.

**Keywords:** Educational access, funding, inclusiveness, special education, resources, educational policy, disability

## 1. Introduction

Inclusive education is a framework meant to expand access and equity to quality educational opportunities for all individuals of school-going age, regardless of their physical, social or economic status. The policy caters for students with different disabilities and those from educationally underserved populations, such as students from poor homes (Bassey et al., 2020). The policy was first introduced in Spain at the "World Conference on Special Needs in Education" organised by UNESCO in 1994 to make provisions for equal rights and educational access to all children within the age of schooling (Bansal, 2016; Bassey et al., 2020; Haug, 2017). Inclusive education enhances the education system's capacity in any country to reach diverse learners (Cornelius-Ukpepi & Opuwari, 2019; Singh, 2016). Research has shown that the basis for inclusive education is to remove all practices that limit children with disabilities from accessing quality education in a regular classroom like other learners, to ensure holistic development in society (Hankebo, 2018; Mansur et al., 2023).

There is an increasing attention on inclusive education among researchers across the globe, especially in studies about societal development and sustainability (Corcoran & Kaneva, 2021). This may be credited to the fact that 21<sup>st</sup>-century societal development is characterised by knowledge economies, where the level of social progress, economic viability, global competitiveness and advancement of a nation is premised on the quality of knowledge and competencies acquired by all citizens through quality education (Briedis et al., 2023; Carstensen & Emmenegger, 2023; Owan, 2019). Research has also shown that adequate access to quality education is a key index of economic development (Mbulawa & Mehta, 2016; Offem et al., 2017). It has also been established that as people acquire quality education in society, their labour power increases, they become more productive and thus boost the productive force of their nation, which in turn, reduces the level of poverty, unemployment and dependency ratio of the country (Ayara et al., 2013; Ekpenyong et al., 2022; Lawal, 2022; Robert & Owan, 2019).

The significance of inclusive education to modern societal development has necessitated the promulgation of several global education policies to increase educational access, ensure even development, and mobilise and plunge the impoverished segments of the populace into the social class. The Universal Basic Education (UBE) policy, introduced in 1999, established Nigeria's legal framework for inclusive education. This policy guided inclusive education and outlined the necessary guidelines for educating children with special needs (Arop et al., 2018; Omede, 2016; Owan, 2018). It is crucial to note that the UBE Act, implemented in conjunction with the policy, guaranteed the allocation of dedicated resources and funding for the education of children with special needs, thus firmly establishing inclusive education as a national educational policy. Consequently, it has been two decades since the formal integration of inclusive education into the Nigerian education system. With this historical margin, Nigerian society should have registered a remarkable improvement in the number of educated youths; a greater percentage of disabled youths should have been moved into the productive workforce of the nation; the level of illiteracy, poverty, unemployment and social upheavals should have been reduced among Nigerian youths.

Despite the considerable efforts made to raise awareness, promote inclusivity, and conduct extensive campaigns for inclusive education in Nigeria, the implementation of the policy remains inadequate, particularly at the secondary school level (Ayara et al., 2013; Bassey et al., 2020). According to a UN Children's Fund report, Nigeria currently has the highest number of out-of-school children in Africa, with an estimated 10.5 million children not attending school (Ogunode & Adanna, 2022). Disturbingly, recent data suggests that the situation has worsened, as the latest report indicates a staggering increase to 18.5 million out-of-school children in Nigeria (Voannews, 2022; UNICEF, 2022). In the specific context of Cross River State, available reports reveal that as of 2013, the total number of primary school-age children (4-9 years) in the State was 460,762. However, the enrolment figures for public primary schools stood at 212,909, indicating that 247,858 school-age children were not part of the public primary school system (Ayara et al., 2013). These figures highlight the significant number of children in the State who are not accessing formal education. This figure

may have been tripled, given the country's increasing trend of out-of-school children. This trend may not be unconnected with inadequacies in the supply of critical resources meant for full policy implementation. For example, Fuandai (2010) observed that children facing learning difficulties did not receive sufficient support regarding essential resources, physical infrastructure, and specialised equipment to meet their specific needs, unlike their peers in mainstream schools. Similarly, other researchers have noted that lack of equipment and facilities, poor funding, lack of trained specialists, lack of accurate data, irregular staff training, inaccessibility of the programme by students, and misinformation are impediments to the full implementation of inclusive education in Nigeria (Ekaette et al., 2019; Omede, 2016).

Studies have shown that the effective implementation of educational policies is tied to the supply or provision of adequate resources meant to implement the policies (Mbon et al., 2020; Osim et al., 2012). It means that the extent of the supply of physical, human, financial, and information resources can affect the implementation of inclusive education. The link between an adequate supply of physical resources and effective implementation of inclusive education has been established by different researchers across the globe. An illustrative case can be seen in a study that uncovered significant shortcomings regarding physical and essential teaching-learning resources (Akah et al., 2022). The available resources were either insufficient or in a state of disrepair. Moreover, a notable deficiency was observed in specialised teachers capable of effectively addressing the curriculum for special needs education. Another study emphasised the absence of crucial facilities and materials, such as: hand railings, hearing aids, Braille resources, instructional materials, and accessible toilets. The few resources that were accessible, such as: typewriters, resource rooms, and wheelchairs, were reported to be dilapidated, impeding the successful implementation of inclusive education (Oluremi, 2015). Instructional materials were inadequate for special needs children (Fuandai, 2010), and inadequate teaching and learning resources were discovered to affect inclusive education implementation (Mwangi & Orodho, 2014).

Insufficient human resources have consistently emerged as a significant challenge impeding the effective implementation of inclusive education. Onukwufor and Martins (2017) highlighted that the lack of personnel, inadequate training opportunities, and insufficient funding to acquire necessary technological resources were the main obstacles faced in their study area. Similarly, a study by Omede and Danladi (2016) found that the existing number of teachers fell short of meeting the individual needs of children with special needs in their classrooms. The study identified the shortage of qualified staff as a crucial factor hampering the successful implementation of inclusive education in Nigeria. Furthermore, inappropriate policy development, negative attitudes among teachers, lack of teacher training, insufficient support and resources for teachers, limited knowledge about inclusive education among educators, unfavourable student-teacher ratios, and inadequate teacher preparation were identified as key issues associated with the inadequate implementation of inclusive education (Masana & Kgothule, 2022; Mokaleng & Möwes, 2020; Revelian & Tibategeza, 2022; Ukpabio & Ekere, 2018). In another study (Razalli et al., 2021), although teachers were highly committed to delivering inclusive education, they lacked adequate skills, knowledge and strategy to implement the policy.

Scholars worldwide have blamed the inadequate supply of financial resources for the poor implementation of inclusive education. For example, reports have indicated that most of the emerging educational policies in developing countries fail due to a poor supply of funds to support their effective implementation (Cornelius-Ukpepi & Opuwari, 2019; Ekaette et al., 2019; Makoelle & Burmistrova, 2020). In teachers' colleges in Zimbabwe, the implementation of inclusive education faced considerable obstacles due to a scarcity of financial resources, material resources, infrastructure, and human resources (Hlatywayo & Mapolisa, 2020). Similarly, Adebisi et al. (2014) recognised financial constraints as barriers to the successful implementation of inclusive education. In Swaziland, the seamless execution of inclusive education was affected by factors, such as: the availability of material and financial resources, the classroom environment, human resources, playing materials, and spacious classrooms (Adebayo & Ngwenya, 2015). In the United Kingdom, concerns

about inclusive education were primarily centred around financial resources for training specialists and support staff, as well as resources and appropriate infrastructure (Warnes, 2022).

However, previous studies centred on analysing only resource inadequacies in the policy implementation without measuring the policy's actual implementation in the study areas. A study addressing the link between resource adequacies and the implementation of education policy should concentrate not only on resource supply but must also measure the actual implementation of the policy in the study locale. Thus, we measured the extent of resource supply and the extent of implementation of inclusive education differently. Most previous studies used unstandardised instruments, which could generate misleading results during the data analysis. A study of this magnitude should be based on a standardised instrument to reduce the chances of errors in measuring the study constructs. Thus, we standardised the instrument by applying a quantitative content validity approach using Expert-by-Item Matrix to establish the items' Content Validity Index (CVI). Most previous studies only described the barriers or challenges to the effective implementation of inclusive education without adequately estimating the extent to which the identified challenges contribute to the variance in implementing inclusive education. We address this gap by estimating the potency of resource supply in predicting the changes in inclusive education implementation across the schools surveyed.

## 2. Theoretical and Conceptual Frameworks

The study is grounded on the "Resource dependency theory" (Pfeffer & Salancik, 1978), which explains that institutions, including educational institutions, depend on external resources to succeed. It explains that providing or procuring external resources to work within an institution is an important tenet of an organisation's strategic and tactical management to attain goals. The theory proposes that institutions must negotiate with their external environment to secure access to multidimensional resources, such as: labour, capital, and raw materials needed to survive. They may associate with more suppliers or integrate vertically or horizontally to secure adequate resources for their functionality. The theory for this research implies that adequate access to critical resources is the basis for the effective implementation of educational policy in schools. Therefore, the extent of resource supply determines the extent of policy implementation.

The study's conceptual model, depicted in Figure 1, illustrates the relationships between the variables. The lines with arrowheads indicate predictive links, while the non-arrow lines represent the measures of the predictor variable, which in this case is resource supply. The criterion variable is the implementation of inclusive education, which is expected to be influenced by the availability of resources.

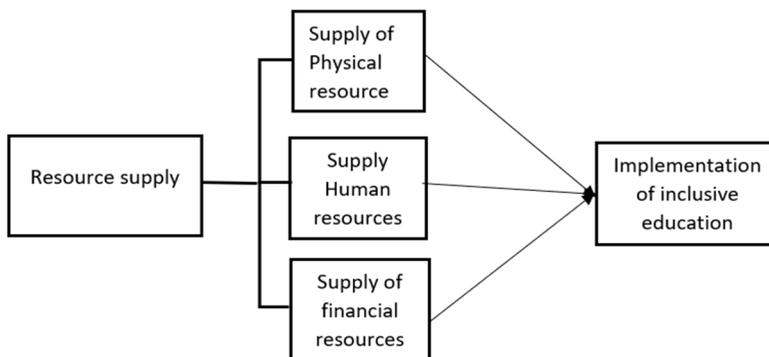


Figure 1: Conceptual model of the study

### 2.1 Research questions

Answers were provided to the following research questions;

1. To what extent are physical resources available for implementing inclusive education in secondary schools in Cross River State?
2. To what extent are human resources available for implementing inclusive education in secondary schools in Cross River State?
3. To what extent are financial resources available for implementing inclusive education in secondary schools in Cross River State?
4. What is the extent of the implementation of inclusive education in secondary schools in Cross River State?

### 2.2 Research hypothesis

Two hypotheses were tested in the study:

1. There are no significant relative effects of the supply of physical, human and financial resources on implementing inclusive education in secondary schools.
2. There is no significant cumulative effect of the supply of physical, human and financial resources on implementing inclusive education in secondary schools.

## 3. Methods

### 3.1 Philosophical stance, design and participants

The study adopted a positivist research philosophical stance, which involves objectively observing and measuring the phenomenon being studied to provide quantitative estimates of the variables under investigation. This approach allowed the researchers to quantitatively assess the relationship between resource supply and the effective implementation of inclusive education using a structured questionnaire for data collection. To facilitate this research approach, the study employed a descriptive survey design. This design enabled the researchers to describe the quantitative linkages between resource supply and the implementation of inclusive education.

The target population for the study consisted of all 281 principals from the 281 public secondary schools in the three Educational Zones of Cross River State. To select a representative sample, the researchers used stratified proportionate sampling. Firstly, the population was divided into strata based on the three Education Zones in Cross River State. Then, a proportionate sample of 42.7 per cent was selected, resulting in 120 principals being chosen as participants in the study. This sampling method ensured that the sample adequately represented the larger population and allowed for meaningful analysis of the research questions.

### 3.2 Measures and instrument

This study has four measures: supply of physical resources, human and financial resources, and implementation of inclusive education. The supply of physical, human, and financial resources serves as predictor variables while the implementation of inclusive education is the criterion variable. To collect data, the researchers used a self-structured questionnaire called the "Resource Supply and Implementation of Inclusive Education Questionnaire (RSII EQ)." The researchers themselves developed the questionnaire based on the knowledge gathered from an extensive literature review. Since no previously developed instruments were available specifically tailored to this study's context, the researchers took the initiative to design their questionnaire. The instrument was created using a modified four-point Likert scale, with response options including "Strongly Agree (SA)," "Agree (A)," "Disagree (D)," and "Strongly Disagree (SD)." For positively worded items, a rating of 4-points was

assigned to "Strongly Agree (SA)," 3-points to "Agree (A)," 2-points to "Disagree (D)," and 1-point to "Strongly Disagree (SD)." The responses were reverse-coded to ensure consistency regarding negatively worded items.

### 3.3 *Validity and reliability of the instrument*

To establish the instrument's validity for this study, a panel of 10 experts was involved, including seven experts in the Economics of Education and three experts in Measurement and Evaluation. These experts assessed each question for clarity and relevance, using a rating scale of one to four, where higher scores indicated higher clarity and relevance. The Item Level Content Validity Index (I-CVI) was calculated to determine the instrument's content validity, with relevance scores ranging from 0.83 to 0.97 and clarity scores ranging from 0.89 to 0.98. The Scale Content Validity Index (S-CVI) for relevance was determined to be 0.92; for clarity, it was 0.99. Additionally, considering the proportion of universal agreement, the S-CVI for relevance was 0.89, and for clarity, it was 0.95. All items in the instrument were retained as they met the criteria for retention, with all I-CVIs and S-CVIs falling within the range of 0.80 to 0.99. Retaining items with an I-CVI or S-CVI value of 0.78 or higher is generally recommended, while values between 0.60 to 0.77 indicate a need for revisions.

### 3.4 *Ethical considerations*

A comprehensive approach was followed to ensure the validity and adherence to regulatory requirements in collecting the data for this study, aiming to minimise potential bias. Ethical clearance was not sought as the research fell under the Nigerian Code for Health Research Ethics (NCHRE) exemption for survey research, which carries a minimal risk to participants who complete a questionnaire. This exemption can be verified at the following link: <https://bit.ly/3pK9ORh>. Before participation, a written informed consent was obtained from all participants, indicating their understanding of the study and their voluntary agreement to participate. They were assured that their responses would be treated with confidentiality and anonymity to protect their privacy and ensure data security. The collected information was stored on computers accessible only to the researchers and safeguarded by a security system that included strong passwords, antivirus software, and a firewall to prevent unauthorised access. The participants were informed that their responses would be aggregated and presented in a peer-reviewed journal.

### 3.5 *Procedure for data collection and analysis*

To facilitate data collection, copies of the questionnaire were distributed to the respondents, and the assistance of six research assistants was enlisted. The data collection process involved administering the questionnaires to 120 principals from public secondary schools in Cross River State. It is important to note that participation in the study was completely voluntary, and participants were free to withdraw their involvement at any stage without any negative consequences. All 120 distributed questionnaires were successfully collected, with no missing data, as all participants completed the questionnaires accurately. Descriptive statistics, such as: simple percentages, mean, and standard deviation, were employed to address the research questions and provide an overview of the data. Furthermore, to test the hypothesis, simple and multiple linear regression analyses were performed, with a significance level of .05 chosen to determine statistical significance.

### 3.6 *Models' specification*

This study comprises four linear models. The initial three models aimed to determine the impact of each measure of resource supply on the implementation of inclusive education. In contrast, the fourth model examined the combined effect of all measures of resource supply on the

implementation of inclusive education. The specifications for the simple linear and multiple regression models in this study are as follows:

$$\text{IIE} = a + b_{\text{SPR}} + e \quad (1)$$

$$\text{IIE} = a + b_{\text{SHR}} + e \quad (2)$$

$$\text{IIE} = a + b_{\text{SFR}} + e \quad (3)$$

$$\text{IIE} = a + b_{\text{SPR}} + b_{\text{SHR}} + b_{\text{SFR}} + e \quad (4)$$

Where:

IIE = Implementation of Inclusive Education

SPR= Supply of Physical Resources

SHR= Supply of Human Resources

SFR= Supply of Financial Resources

## 4. Results

### 4.1 Research question 1

What is the extent of the supply of physical resources for implementing inclusive education in secondary schools? The Analysis of this research question shows that a good number of the respondents (85%) disagreed with the fact that additional classrooms are built in their schools to accommodate the increase in enrolment, 86% of the participants disagreed that there are adequate instructional materials to enhance the learning process of the physically challenged in their schools. The Analysis also shows that 70 % of the respondents disagreed with the fact that classrooms are modified to accommodate the learning experiences of people with disabilities in their schools. In comparison, 90% of the participants maintained that classrooms are inadequate to promote inclusive education in their schools. The average mean score of all the items is 1.75. It is below the criterion mean of 2.50, meaning that there is a high degree of acceptance that the extent of the supply of human resources for implementing inclusive education in secondary schools is low. This means physical resources are insufficient to implement inclusive education in secondary schools fully.

### 4.2 Researcher question 2

What is the extent of the human resource supply for implementing inclusive education in secondary schools in Cross River State? The Analysis of this research question indicates that a good number of the respondents (75%) disagreed that teachers are adequate for the number of students in their schools; 76% disagreed that there are special education teachers in their schools. The Analysis also shows that 71% of the respondents disagreed with the fact that more teachers with adequate knowledge of inclusive teaching are sent to their schools. In comparison, 70% of the participants disagreed that teachers in their schools have adequate competencies in special education. In all, the items have an average mean score of 1.96 which is below the criterion mean of 2.50, implying that there is a high degree of acceptance that the extent of supply of human resources for implementing inclusive education in secondary schools is low. Human resources are insufficient to implement inclusive education in secondary schools fully.

### 4.3 Researcher question 3

What is the extent of the supply of financial resources for implementing inclusive education in secondary schools? The Analysis of this research question indicates that a good number of the respondents (65%) disagreed with the fact that there is adequate provision for inclusive education in the school budget, 75.9% of the participants disagreed that more funds are given to administrators for implementation of inclusive education, 85% of the respondents disagreed with the fact that available funds were enough for the full implementation of inclusive education in their schools. In comparison,

80.8% of the participants disagreed that their school budgets capture expenditures and receipts on special needs education. The average mean score of all the items is 2.00, below the criterion mean of 2.50. This implies that there is a high degree of acceptance among the participants that the extent of the supply of financial resources for implementing inclusive education in secondary schools is low. Financial resources are insufficient to implement inclusive education in secondary schools fully.

#### 4.4 Researcher question 4

What is the extent of implementation of inclusive education in secondary schools? The Analysis of this research question indicates that a greater percentage of the respondents (80%) disagreed with the fact that there are many disabled students admitted to their schools every school year, 77.9% of the participants disagreed that there are specified programs that help disabled students to learn effectively with other students in the same classroom in their schools, 58.7% of the respondents agreed with the fact that no physically impaired student is allowed to enroll in their schools because of inadequate resources to accommodate them, and 59.1% of the participants also agreed that most public secondary schools in the State do not have physically challenged students. The Analysis also indicated that 68.9% of the respondents disagreed that their school curriculum could accommodate all categories of learners, 80.7% agreed that their classrooms could not accommodate special children, and 68.9 % disagreed that they get support from the host communities to promote inclusive education, and 80.1% of the participants agreed that special students are not adequately taken care of in their schools due to lack of experts. The Analysis also showed that 60.7% of the respondents agreed that teachers do not always give special attention to students with learning difficulties, and 58.3 % disagreed that all categories of students in their schools have equal opportunities to access quality education. Most participants (69.35) agreed that their school accommodates students from all backgrounds. At the same time, 61.5% disagreed that there are modern classroom facilities to enhance the delivery of inclusive curricula in their schools. The average mean score of all the items is 2.42, below the criterion mean of 2.50. It means there is a high degree of acceptance that the extent of implementation of inclusive education in secondary schools is low, implying that inclusive education is not fully implemented in secondary schools.

#### 4.5 Hypothesis one

There are no significant relative effects of the supply of physical, human and financial resources on implementing inclusive education in secondary schools. The results are presented in Table 1.

**Table 1:** The relative effects of resource supply on the implementation of inclusive education

SPR	R	R <sup>2</sup>	Adj. R <sup>2</sup>	SE	B	t	SE	P
	.76	.574	.570	3.24	2.03	12.61	.16	.000
Source	SS	df	MS	F-ratio	Sig.			
Regression	1668.30	1	1668.30	158.97	.000			
Residual	1238.37	118	10.50					
Total	2906.67	119						
SHR	R	R <sup>2</sup>	Adj. R <sup>2</sup>	SE	β	t	SE	P
	.59	.346	.34	4.02	1.480	7.89	.19	.000
Source	SS	df	MS	F-ratio	Sig.			
Regression	1004.41	1	1004.41	62.31	.000			
Residual	1902.26	118	16.12					
Total	2906.67	119						
SFR	R	R <sup>2</sup>	Adj. R <sup>2</sup>	SE	β	t	SE	P
	.58	.334	.33	4.05	1.28	7.70	.17	.000

SPR	R	R <sup>2</sup>	Adj. R <sup>2</sup>	SE	B	t	SE	P
Source	SS	df	MS	F-ratio	Sig.			
Regression	972.05	1	972.05	59.29	.000			
Residual	1934.62	118	16.40					
Total	2906.67	119						

Note: SPR=Supply of Physical Resources; SHR=Supply of Human resources; SFR=Supply of Financial Resources

Based on the result of the Analysis, the Simple Regression models are fitted as follows:

$$IIE = 15.828 + 2.027SPR + 3.240 \tag{5}$$

$$IIE = 21.993 + 1.480SHR + 4.015 \tag{7}$$

$$IIE = 25.391 + 1.275SFR + 4.049 \tag{8}$$

The results in Table 1 show that the Analysis of variance in the regression output produced an F-ratio of 158.967 for the supply of physical resources (hereafter SPR), 62.305 for the supply of human resources (hereafter SHR) and 59.289 for the supply of physical resources (hereafter SFR), which are all statistically significant at .05 probability level (critical F = 2.67). Based on this result, therefore, hypothesis one is rejected. This means that there are relatively significant effects of the supply of physical, human and financial resources on implementing inclusive education in secondary schools. The result also shows simple regression coefficients (R) of .758, .588 and .578 for SPR, SHR, and SFR, respectively. This means that SPR, SHR, and SFR have significant relationships with implementing inclusive education in secondary schools. The Analysis also produced coefficients of determination (R<sup>2</sup>) of .574, .346, and .334 for SPR, SHR, and SFR, respectively. This implies that 57.4 % of the variance in the extent of implementation of inclusive education in secondary schools is attributed to the changes in SPR, 34.6 % to changes in SHR, and 33.4 % to the changes in SFR. The analysis further revealed that SPR, SHR, and SFR have positive unstandardised beta coefficients (β) of 2.027, 1.480, and 1.275, respectively. This establishes that both resource supply and implementation change in the same direction and that improvements in the supply of physical, human and materials resources will lead to a more than proportionate improvement in the implementation of inclusive education in secondary schools.

#### 4.6 Hypothesis two

There is no significant cumulative effect of the supply of physical, human and financial resources on implementing inclusive education in secondary schools. The results are presented in Table 2.

**Table 2:** The cumulative effects of resource supply in the implementation of inclusive education

Model	SS	df	MS	F-ratio	Sig.	R	R <sup>2</sup>	Adj. R <sup>2</sup>	SE
Regression	12486.73	7	1783.82	86.69	.000	.84	.71	.70	4.54
Residual	5206.03	253	20.58						
Total	17692.76	260							
Variables				SE	β	t	P	Rank	
Constant				7.35	2.04		3.61	.000	
Supply of physical resources (SPR)				1.38	.16	.51	8.65	.000	1 <sup>st</sup>
Supply of human resources (SHR)				.70	.14	.28	4.95	.000	3 <sup>rd</sup>
Supply of financial resources (SFR)				.61	.12	.28	5.01	.000	2 <sup>nd</sup>

Based on this result, the Multiple Regression model is fitted as follows;

$$IIE = 7.350 + 1.375SPR + 0.698SHR + 0.612SFR + 4.536 \tag{9}$$

The results in Table 2 indicate that the Analysis of variance in the multiple regression output produced an F-ratio of 86.689, all statistically significant at the .05 probability level (critical F = 2.67). Based on this result, therefore, hypothesis two is rejected. This means that there is a significant

cumulative effect of the supply of physical, human and financial resources on implementing inclusive education in secondary schools. The result also shows a multiple regression coefficient (R) of .84. Resource supply is significantly related to implementing inclusive education in secondary schools. The Analysis also produced coefficients of determination (R<sup>2</sup>) of .71. This means that changes in resource supply account for 70.6 % of the variation in the implementation of inclusive education in secondary schools. In comparison, 29.4 % is attributed to other variables extraneous to the study. The Analysis of the relative contribution of predictive strength of the supply of physical, human resources and the supply of financial resources in predicting the variance in the implementation of inclusive education in secondary schools shows that the supply of physical resources was most potent in predicting the variation in the level of implementation of inclusive education in secondary schools, followed by human resources and then financial resources.

## 5. Discussion

The result of the first research questions revealed an inadequate supply of physical resources for implementing inclusive education in secondary schools. This result implies that the level at which physical resources are supplied to secondary schools for the implementation of inclusive education is below what is needed to enhance the effective implementation of the policy. This result is not far from the findings of previous studies (e.g., Nyangia & Orodho, 2015; Oluremi, 2015), which reported poor provision of physical resources, including instructional materials, as impediments to the smooth implementation of inclusive education. The lack of physical resources for effective inclusive education implementation is widespread. This result suggests two possible scenarios: either there is a lack of collaboration among stakeholders in providing these material resources, or school administrators fail to maintain the available resources adequately. Consequently, this finding implies that all relevant stakeholders, including host communities, government entities, non-governmental organisations, and parents, must collaborate closely with secondary schools to ensure that the required physical resources for implementing inclusive education are adequately provided and properly maintained by principals. By recognising the importance of stakeholder involvement and resource maintenance, this study highlights the need for a collective effort to address the challenges related to physical resource provision in inclusive education. It underscores the importance of establishing partnerships and fostering collaboration among stakeholders to ensure that secondary schools have access to the necessary physical resources; promoting the effective implementation of inclusive education policies. Additionally, it emphasises the responsibility of school principals to maintain the available resources to sustain their impact on inclusive education.

Similarly, the study revealed that the supply of human resources across the schools surveyed was inadequate to enhance the effective implementation of inclusive education in secondary schools. Like the physical resources, this result supports the finding of different studies conducted previously in different parts of the world. For instance, studies (e.g., Masana & Kgothule, 2022; Ukpabio & Ekere, 2018) all found that poor provision of personnel was a key problem in implementing inclusive education. This result may mean that the teachers and helping staff available in schools for inclusive education are insufficient to contend with the rising trend of special, gifted, and disadvantaged children. Teachers provided for the problem may also not have the experience and skills to deliver an inclusive education curriculum. This supports the finding of Razalli et al. (2021), who discovered that many teachers committed to inclusive education lacked the appropriate skills to deliver an inclusive education curriculum. The result implies that inclusive education will be effectively implemented when an adequate number of teachers are recruited in secondary schools and properly trained in special education.

Again, the result of the study indicated that financial resources are inadequately supplied in secondary schools for the implementation of inclusive education. This result is in line with what previous studies have discovered. In different studies (e.g., Cornelius-Ukpewi & Opuwari, 2019; Ekaette et al., 2019; Makoelle & Burmistrova, 2020), poor funding or inadequate provision of financial

resources was a major weakness in militating against the implementation of inclusive education implementation. The result may mean that inclusive education is not properly budgeted for or that there is an embezzlement of funds earmarked for the policy by administrators and government officials. This result implies that the government should make a separate budget for inclusive education and monitor the disbursement and deployment of the fund to ensure that the policy is properly funded.

The analysis conducted in this study revealed that the level of implementation of inclusive education in the surveyed schools was found to be low. These findings align with the research outcomes of Eleweke (2002), who also observed the unsatisfactory implementation of inclusive education in many developing countries. Eleweke identified several significant challenges to implementing inclusive education in those countries, including the absence of support services, insufficient training programs for personnel, inadequate funding structures, and enabling legislation. Similarly, other scholars (such as Ekaette et al., 2019; Omede, 2016) have documented instances of poor implementation of inclusive education and associated it with factors such as a lack of equipment and facilities, insufficient funding, absence of trained specialists, inaccurate data, irregular staff training, limited accessibility of the program for students, and misinformation. These findings support the outcomes of research questions 1, 2, and 3, which established the inadequate availability of resources necessary to implement inclusive education fully. Consequently, these findings underscore the importance of ensuring an adequate supply of resources to implement inclusive education policies effectively.

Accordingly, the test of hypotheses indicated that the supply of physical, human, and financial resources has relative effects on implementing inclusive education. It was also obvious from the study that a greater percentage (70.6%) of the variance in implementing inclusive education across the schools is attributed to the joint effect of resource supply. This implies that there is a poor implementation of inclusive education in secondary schools because physical, human and financial resources meant to deliver the policy effectively are in short supply. The results strengthen the discoveries of previous studies that the materials meant for full implementation of the policy are always inadequately provided in schools, thus affecting the full implementation of the policy (Egaga & Aderibigbe, 2015; Omede, 2016). The basic explanation for the results is that physical, human and financial resources are inputs in education. Therefore, it may be difficult for any school system to implement emerging educational policies when critical physical, human and financial resources are inadequately supplied. It means that poor policy implementation follows the poor supply of resources. This result implies that parents, cooperate organisations, NGOs, government, and secondary school administrators must work together to ensure that essential resources needed for the full implementation of inclusive education are adequately provided, effectively deployed, properly maintained, and regularly monitored in secondary schools.

These results have strong theoretical implications as it supports the underpinnings of Resource dependency theory (RDT) by Pfeffer and Salancik (1978), which explains the fact that educational institutions depend on resources to succeed and that adequate access to critical resources is the basis for implementing educational policy effectively in schools. If the supply of physical, human and financial resources is low in any system, the implementation of the emerging educational policy may not succeed, as shown in the study. Thus the adequate supply of physical, human and financial resources in secondary schools will ensure the full implementation of inclusive education.

## **6. Limitations and Future Research Directions**

One major limitation of this study is its reliance on a positivist philosophical stance, emphasising a quantitative questionnaire approach. While the quantitative approach allows for an objective examination of the research problem and enables generalisations based on a large sample, it may not facilitate an in-depth understanding of the problem or explain the causal relationships between explanatory variables and the response variable.

Although this limitation does not undermine the validity of the study's results, future research can adopt a pragmatist philosophical stance that integrates both quantitative and qualitative approaches. This would enable a more comprehensive investigation into why the low resource supply is associated with implementing inclusive education in secondary schools. Researchers can explore the underlying mechanisms and contextual factors contributing to the observed relationships by incorporating qualitative methods.

Additionally, this study did not explore other potential intervening variables that may have moderated or mediated the association between resource supply and the implementation of inclusive education. While the study acknowledged the influence of extraneous variables on policy implementation, it did not provide detailed explanations. To address this limitation, future studies could employ a moderated mediated model to examine the complex relationships between resource supply, implementation of inclusive education, and the various intervening factors that may influence these relationships. By adopting a more comprehensive approach and considering additional variables, future research can provide a deeper understanding of the implementation of inclusive education and identify strategies to enhance its effectiveness.

## 7. Conclusion

The primary aim of this study is to investigate the influence of resource supply, encompassing physical, human, and financial resources, on the implementation of inclusive education in secondary schools. The overall finding supports the notion that resource supply significantly contributes to the effective implementation of inclusive education in secondary schools. Moreover, the study provides compelling evidence underscoring the indispensable nature of physical, human, and financial resources for the successful execution of inclusive education. Consequently, the study offers a definitive response regarding the significance of resource supply in implementing inclusive education in secondary schools. Furthermore, this research extends the application of Resource Dependency Theory (RDT) to address relevant concerns within the contemporary school system, particularly, concerning resource supply and school performance. Through the incorporation of RDT, the study offers valuable insights into the intricate relationship between the availability of resources and the achievement of a successful inclusive education. The implications of this study are noteworthy, emphasising the crucial need for an adequate supply of physical, human, and financial resources by various stakeholders, including the government and host communities, to facilitate the effective implementation of inclusive education in secondary schools. These findings underscore the importance of collaborative efforts to ensure that schools have access to the necessary resources, thereby promoting the success of inclusive education initiatives. The study serves as a call to action for policymakers and stakeholders to prioritise resource allocation and support for inclusive education, recognising its significance in fostering an inclusive and equitable educational environment. Therefore, it is recommended that:

1. Authorities should prioritise providing adequate physical resources, such as instructional materials, assistive devices, and accessible infrastructure, to support the implementation of inclusive education in secondary schools. This can be achieved through increased funding, resource mobilisation efforts, and collaborations with relevant stakeholders.
2. Efforts should be made to improve the availability and quality of trained specialists, including teachers, administrators, and support staff, who have the knowledge and skills to implement inclusive education practices effectively. This can be achieved through targeted training programs, professional development opportunities, and recruitment strategies to attract qualified personnel.
3. In collaboration with stakeholders, governments should establish sustainable funding mechanisms to ensure a steady and adequate flow of financial resources for inclusive education. This can involve allocating a specific budget for inclusive education, exploring partnerships with private organisations or NGOs, and advocating for inclusive education

- funding within national education policies.
- All relevant stakeholders, including government entities, host communities, parents, and non-governmental organisations, should collaborate closely to ensure the effective implementation of inclusive education. This collaboration can involve joint resource mobilisation efforts, sharing expertise and best practices, and establishing platforms for continuous communication and engagement.
  - School administrators should be empowered to manage and maintain the available resources for inclusive education effectively. This can include developing policies and procedures for resource allocation, utilisation, and maintenance and establishing mechanisms for monitoring and evaluation to ensure optimal resource utilisation and sustainability.

## References

- Adebayo, A. S., & Ngwenya, K. (2015). Challenges in the implementation of inclusive education at Elulakeni Cluster primary schools in the Shiselweni district of Swaziland. *European Scientific Journal*, 11(13), 246-261. <http://bitly.ws/AUHz>
- Adebisi, R. O., Jerry, J. E., Rasaki, S. A., & Igwe, E. N. (2014). Barriers to special needs education in Nigeria. *International Journal of Education and Research*, 2(11), 451-462. <http://bitly.ws/AUWd>
- Akah, L. U., Owan, V. J., Alawa, D. A., Ojie, F. C., Usoro, A. A., Dada, O. A., Olofu, M. A., Ebuara, V. O., Ajigo, I., Essien, E. E., Essien, C. K., Unimna, F. A., Ukpong, J., Adeleke, P. O., & Neji, H. A. (2022). ICT deployment for teaching in the COVID-19 era: A quantitative assessment of resource availability and challenges in public universities. *Frontiers in Education*, 7, Article ID 920932. <https://doi.org/10.3389/educ.2022.920932>
- Arop, F. O., Owan, V. J., & Ekpang, M. A. (2018). A qualitative analysis of universal basic education policy implementation strategies in Nigeria: Effective management for goals realization. *International Journal of Research and Innovation in Social Science*, 2(9), 48-54. <https://doi.org/10.2139/ssrn.3254780>
- Ayara, U. E., & Udah, E. (2013). The universalisation of basic education in Nigeria: The Cross River State experience. *Wudpecker Journal of Publicisation Admin*, 1(1), 7-19. <http://bitly.ws/AMHR>
- Bansal, S. (2016). Attitude of teachers towards inclusive education in relation to their professional commitment. *Indian Journal of Educational Studies: An Interdisciplinary Journal*, 3(1), 96-108. <https://bit.ly/3cb2ViP>
- Bassey, B. A., Owan, V. J., Ikwen, E. U., & Amanso, E. O. (2020). Teachers' attitudes towards learners with disability scale (TALDS): Construction and psychometric analysis. *The Journal of Social Sciences Research*, 6(5), 518-530. <https://doi.org/10.32861/jssr.65.518.530>
- Briedis, K., Hoffstätter, U., & Schwabe, U. (2022). The German national academics panel study (Nacaps). A new longitudinal survey on early researchers' careers and life courses. *Soziale Welt*, 73(4), 736-758. <https://doi.org/10.5771/0038-6073-2022-4-736>
- Carstensen, M. B., & Emmenegger, P. (2023). Education as social policy: New tensions in maturing knowledge economies. *Social Policy & Administration*, 57, 109 - 121. <https://doi.org/10.1111/spol.12888>
- Corcoran, S. L., & Kaneva, D. (2021). Developing inclusive communities: Understanding the experiences of education of learners of English as an additional language in England and street-connected children in Kenya. *International Journal of Inclusive Education*, 1-18. <https://doi.org/10.1080/13603116.2021.1886348>
- Cornelius-Ukpepi, B. U., & Opuwari, O. S. (2019). Determinants of effective implementation of inclusive education at the basic education level in Nigeria. *British Journal of Education*, 7(8), 34-44. <http://bitly.ws/AMpr>
- Egaga, P., & Aderibigbe, S. A. (2015). Sustainable implementation of inclusive education programme for children with hearing impairment in Nigeria: Strategies involved. *International Journal of Humanities Social Sciences and Education*, 2(4), 162-165. <http://bitly.ws/ARxh>
- Ekaette, S. O., Ekpenyong, J. A., & Owan, V. J. (2019). School characteristics and enrollment trend in upper basic schools in Akwa Ibom State, Nigeria from 2008-2016. *Pedagogical Research*, 4(3), 2-10. Retrieved from: <https://doi.org/10.29333/pr/585>
- Ekpenyong, J. A., Owan, V. J., Ogar, J. O., & Undie, J. A. (2022). Hierarchical linear modelling of educational outcomes in secondary schools: What matters—teachers' or administrators' input? *Cogent Education*, 9(1), 2133491. <https://doi.org/10.1080/2331186X.2022.2133491>
- Eleweke, C.J. & Rodda, M. (2002). The challenge of enhancing inclusive education in developing countries. *International Journal of Inclusive Education*, 6(2), 113-126. <https://doi.org/10.1080/1360311010067190>

- Fuandai, C. (2010). Catering for children with special needs in the regular classroom: challenges and the way forward. *Edo Journal of Counselling*, 3(1), 144-151. <https://doi.org/10.4314/ejc.v3i1.52693>
- Hankebo, T. A. (2018). Inclusive education as an approach to reduce inequitable access to education: Exploring the practices of Jegnoch Metasebiya primary school in Harar Town, Ethiopia. *Journal of Teacher Education and Educators*, 7(2), 123-138. <http://bitly.ws/AMle>
- Haug, P. (2017). Understanding inclusive education: Ideals and reality. *Scandinavian Journal of Disability Research*, 19, 206-17. Available: <https://doi.org/10.1080/15017419.2016.1224778>
- Hlatywayo, S., & Mapolisa, T. (2020). Inclusive education implementation gaps in teachers' colleges in Zimbabwe. *European Journal of Education Studies*, 7(1), 412-422. <https://doi.org/10.5281/zenodo.3748058>
- Ibrahim, H., Mamat, N., Ali, M. M., Masran, N., Piragasam, G. A., Ahmad, N. A., Satari, N. (2021). Preparedness of special education teachers in the implementation of inclusive education. *International Journal of Academic Research in Progressive Education and Development*, 10(2), 823-838. <https://doi.org/10.6007/IJARPEd/v10-i2/10363>
- Lawal, S. (2022). Implementation of inclusive education in Nigerian schools: Challenges and way forward. *International Journal of Formal Education*, 1(3), 32-41. <http://bitly.ws/AMl5>
- Makoelle, T. M., & Burmistrova, V. (2020). Funding inclusive education for equity and social justice in South African schools. *South African Journal of Education*, 40(4), 1-9. <https://doi.org/10.15700/saje.v40n4a2037>
- Mansur, H., Utama, A. H., Mohd Yasin, M. H., Sari, N. P., Jamaludin, K. A., & Pinandhita, F. (2023). Development of inclusive education learning design in the era of society 5.0. *Social Sciences*, 12(1), 35-48. <https://doi.org/10.3390/socsci12010035>
- Masana, S., & Kgothule, R. (2022). Teaching learners with learning disabilities in inclusive classrooms: Challenges and possible solutions. *International Journal of Research in Business and Social Science*, 11(8), 367-375. <https://doi.org/10.20525/ijrbs.v11i8.2012>
- Mbulawa, S., & Mehta, P. (2016). The effect of access and quality of education on economic development in Botswana. *International Journal of Business, Economics and Management*, 3(11), 144-159. <https://doi.org/10.18488/journal.62/2016.3.11/62.11.144.159>
- Mokaleng, M., & Mōwes, A. D. (2020). Issues affecting the implementation of inclusive education practices in selected secondary schools in the Omaheke Region of Namibia. *Journal of Curriculum and Teaching*, 9(2), 78-90. <https://doi.org/10.5430/jct.v9n2p78>
- Mwangi, E. M., & Orodho, J. A. (2014). Challenges facing the implementation of inclusive education in public primary schools in Nyeri Town, Nyeri County, Kenya. *Journal of Education and Practice*, 5(16), 115-125. <http://bitly.ws/ASjI>
- Offem, O. O., Aniah, S. A., Agunwa, J. N., & Owan, V. J. (2017). Managing education for sustainable national income and economic growth rate in Nigeria. *International Journal of Continuing Education and Development Studies (IJCEDs)*, 4(1), 145-156. <https://doi.org/10.5281/zenodo.4320399>
- Ogunode, N. J., & Adanna, C. M. (2022). An analysis of factors responsible for high out of school children in Nigeria and way forward. *International Journal on Integrated Education*, 5(6), 194-202. <http://bitly.ws/ARsx>
- Oluremi, F. D. (2015). Inclusive education setting in southwestern Nigeria: Myth or reality? *Universal Journal of Educational Research* 3(6), 368-374. <https://doi.org/10.13189/ujer.2015.030603>
- Omede, A. A. (2016). Policy framework for inclusive education in Nigeria: Issues and challenges. *Public Policy and Administration Research*, 6(5), 33-38. <http://bitly.ws/ARwG>
- Omede, A. A., & Danladi, M. (2016). Teacher preparation for inclusive education of persons with special needs in Nigeria: The challenges and solutions. *European Journal of Educational and Development Psychology*, 4(1), 34-40. <http://bitly.ws/B3uj>
- Onukwufor, J. N., & Martins, U. (2017). Challenges of implementing inclusive education of children with visual impairment in Port Harcourt, Rivers State. *International Journal of Education, Learning and Development*, 5(3), 1-9. <http://bitly.ws/B3uM>
- Osim, R. O., Uchendu, C. C., & Mbon, U. F. (2012). Management's innovative behaviours and task performance among secondary school teachers in Cross River State, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(5), 661-664. <http://bitly.ws/AQQs>
- Owan, V. J. (2018). Management of educational support services and attainment of universal basic education goals in primary schools in Cross River State. *Humanities and Social Sciences Letters*, 6(4), 203-210. <https://doi.org/10.18488/journal.73.2018.64.203.210>
- Owan, V. J. (2019). School-community relationship and school system effectiveness in secondary schools in Cross River State. *World Journal of Vocational Education and Training*, 1(1), 11-19. <https://doi.org/10.18488/journal.119.2019.11.11.19>

- Pfeffer, J., & Salancik, G. R. (1978). The external control of organisations: A resource dependence perspective. Harper & Row. <http://bitly.ws/AWIS>
- Revelian, S., & Tibategeza, E. R. (2022). Effective implementation of inclusive education in enhancing quality education in public primary schools in Tanzania: The role of school culture. *International Journal of Humanities and Education Development (IJHED)*, 4(1), 190-199. <https://doi.org/10.22161/jhed.4.1.19>
- Robert, I. A., & Owan, V. J. (2019). Students' perception of teachers effectiveness and learning outcomes in Mathematics and Economics in secondary schools of Cross River State, Nigeria. *International Journal of Contemporary Social Science Education (IJCSSE)*, 2(1), 157-165. <https://bit.ly/2VbLzfK>
- Singh, J. D. (2016). Inclusive education in India: Concept, need and challenges. *Scholarly Research Journal for Humanity Science and English Language*, 3(13), 3222-32. <https://bit.ly/2VruePo>
- Ukpabio, U. E., & Ekere, S. C. O. (2018). Innovative management for inclusive education in Nigerian secondary schools. *International Journal of Educational Development*, 22(3), 99-108. <http://bitly.ws/B3vy>
- UNICEF. (2022). UNICEF warns of Nigerian education crisis as world celebrates International Day of Education amid COVID-19 concerns. <http://bitly.ws/ARuf>
- Voannews (2022). 18.5 Million Nigerian children are out of school. <http://bitly.ws/B3w3>
- Warnes, E., Done, E. J., & Knowler, H. (2022). Mainstream teachers' concerns about inclusive education for children with special educational needs and disabilities in England under pre-pandemic conditions. *Journal of Research in Special Educational Needs*, 22(1), 31-43. <https://doi.org/10.1111/1471-3802.12525>