



# Effect of Provision of Teaching and Learning Resources on Implementation of Inclusive Education in Public Primary Schools in Nandi County, Kenya

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**Abstract:** *This study examined the effect of the provision of teaching and learning resources on the implementation of inclusive education in public primary schools in Nandi County, Kenya. The study adopted explanatory survey design using mixed method approach. The target population was primary school headteachers, Teachers, and Sub-County Directors. There are 831 headteachers, 4156 teachers, and 6 sub-county directors of education respectively in Nandi County. The sample size comprised of 62 headteachers, 308 teachers, and 6 Sub-County Directors of Education, giving a total of 376 respondents. Interviews and questionnaires were used to collect data. Data were collected through structured questionnaires, interviews, and document analysis. Descriptive statistics were used to analyze the data, while inferential statistics, including correlation analysis, were employed to examine relationships between resource provision and the effectiveness of inclusive education. The findings revealed that the provision of instructional resources significantly influenced the successful implementation of inclusive education, with the majority of respondents (78%) reporting that resource availability positively impacted their ability to deliver inclusive education. However, challenges such as insufficient specialized materials, inadequate teacher training, and limited infrastructure were identified as barriers. The correlation analysis showed a significant positive relationship ( $r = 0.72$ ) between the adequacy of resources and the effective implementation of inclusive education. The study concluded that enhancing resource provision, involving stakeholders, and adopting ICT tools were critical to improving inclusive education practices. The recommendations included increasing resource allocation, strengthening teacher capacity, and fostering greater collaboration among stakeholders.*

**Keywords:** *Teaching and learning resources, Implementation, inclusive education, public primary schools, Nandi County.*

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## 1. Introduction

Inclusive education is a transformative approach that aims to address and respond to the diverse needs of learners by ensuring their participation and achievement in a common learning environment. The provision of adequate teaching and learning resources is critical in achieving this goal, as

it facilitates the accommodation of various learning needs, particularly for learners with disabilities (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2020). Globally, the focus on inclusivity in education underscores the need for strategic investments in educational infrastructure, teaching materials, and assistive technologies to ensure equitable learning opportunities (World Bank, 2021). Despite global efforts, disparities in

resource availability persist, particularly between developed and developing nations. These disparities significantly affect the implementation of inclusive education, particularly in low-resource settings (Graham & Slee, 2018). Developed countries have made significant strides in implementing inclusive education through the provision of adequate teaching and learning resources. For instance, Finland, renowned for its inclusive education policies, integrates extensive use of assistive technologies and tailored teaching materials to accommodate diverse learner needs (Sahlberg, 2021). In Finland, inclusive classrooms are supported by highly trained teachers who access state-provided resources to ensure that learners with disabilities participate fully in the education system (European Agency for Special Needs and Inclusive Education, 2020).

The United States also serves as a leading example of resource allocation in inclusive education. Through the Individuals with Disabilities Education Act (IDEA), schools receive funding to procure specialized instructional materials, adaptive devices, and assistive technologies for learners with disabilities (US Department of Education, 2020). This legislation has facilitated equal learning opportunities by addressing the unique needs of students with disabilities (Smith & Tyler, 2021). In Canada, inclusive education is embedded in policies that ensure schools are equipped with both physical resources, such as accessible classrooms, and instructional resources like learning software tailored to different disabilities (Inclusive Education Canada, 2019). Additionally, government support for professional development enhances teachers' ability to utilize these resources effectively (Savolainen et al., 2021). Australia exemplifies best practices in inclusive education, with substantial investments in teaching aids, assistive devices, and inclusive curriculum designs under its Disability Standards for Education 2005 (Forlin et al., 2021). Australian schools benefit from federal funding to procure learning resources that meet diverse student needs, fostering inclusion across primary education settings (Department of Education, Skills, and Employment, 2020). The United Kingdom's approach highlights the importance of adequate resource allocation. Under the Special Educational Needs and Disability (SEND) Code of Practice, schools are required to provide necessary resources, including learning materials and assistive technologies, to ensure all learners achieve equitable education outcomes (UK Department for Education, 2021).

In contrast, many developing countries face significant challenges in the provision of teaching and learning resources for inclusive education. Nigeria, for example, struggles with resource inadequacies that hinder the effective implementation of inclusive education policies

(Ademokoya et al., 2022). Public schools often lack assistive devices and learning aids necessary for accommodating learners with disabilities (Adeniran & Hassan, 2021). India, despite progressive policies like the Rights of Persons with Disabilities Act 2016, faces resource constraints that affect the quality of inclusive education (Sharma & Loreman, 2020). Schools often lack specialized teaching materials and equipment, resulting in the marginalization of learners with special needs (Rao et al., 2021). South Africa has made efforts through its White Paper 6 on Inclusive Education to allocate resources for inclusive learning, yet challenges remain in under-resourced rural schools (Department of Basic Education, 2020). The lack of adequate funding for assistive devices and training materials impedes the full realization of inclusive education (Engelbrecht et al., 2021). Uganda, under the Universal Primary Education (UPE) program, has attempted to promote inclusivity by integrating resource provisions for learners with special needs. However, insufficient resources, coupled with high pupil-to-teacher ratios, continue to pose significant barriers (Nabirye & Musoke, 2020). In Tanzania, inclusive education initiatives under the Education Sector Development Plan face challenges in resourcing rural schools with necessary teaching aids and adaptive technologies (UNICEF, 2021). While policies are in place, their implementation is hindered by limited budget allocations (Mkonongwa, 2021).

In Kenya, the implementation of inclusive education is guided by the Special Needs Education (SNE) Policy Framework (Ministry of Education, 2018). However, resource inadequacies remain a major challenge, particularly in public primary schools. Many schools lack essential teaching aids, specialized instructional materials, and assistive technologies to support learners with special needs (Mugo et al., 2022). The Basic Education Act 2013 emphasizes equitable access to resources, but its implementation is often limited by budgetary constraints (Kibutu & Muthama, 2020). Efforts to provide resources through donor funding and government initiatives, such as the provision of Braille materials and hearing aids, have seen some success. However, these interventions often fail to reach rural schools where the need is greatest (Mutua et al., 2021). The teacher training curriculum also requires enhancement to equip educators with skills to utilize these resources effectively (Njoka et al., 2021).

In Nandi County, the implementation of inclusive education faces similar challenges. Resource inadequacies, such as a lack of adaptive learning materials and assistive devices, limit access for learners with disabilities (Koech et al., 2022). The county government, in collaboration with the Ministry of Education, has initiated programs to improve resource availability, including funding for

teaching aids and teacher training workshops (Chepkemai et al., 2021). However, these efforts are often hampered by logistical challenges and insufficient funding. For instance, rural schools in Nandi County frequently report shortages of basic teaching resources, leaving many learners with special needs excluded from the mainstream education system (Mutai et al., 2022). Addressing these gaps is critical to achieving equitable education outcomes for all learners in the county.

## 1.2 Research hypothesis

The following hypothesis guided this study:

**H<sub>01</sub>:** Provision of teaching and learning resources has no significant effect on implementation of inclusive education in public primary schools in Nandi County, Kenya.

## 2. Literature Review

The provision of teaching and learning resources plays a critical role in implementing inclusive education worldwide. Past studies have extensively explored the availability and utilization of these resources, particularly in inclusive educational settings. Researchers emphasize that teaching resources such as assistive technologies, adaptive curriculum materials, and teacher training are essential in ensuring that learners with special needs can participate fully in educational activities (UNESCO, 2020). The implications of such studies are far-reaching, as they inform policy formulation, resource allocation, and teacher development programs, ultimately enhancing inclusivity (World Bank, 2021). In developed countries, numerous studies have demonstrated the significance of resource provision in promoting inclusive education. These studies highlight how countries like the United States, Finland, Canada, the United Kingdom, and Australia have implemented strategic initiatives to ensure that learners with disabilities access quality education (Sahlberg, 2021). The findings reveal varying approaches to addressing the challenges of inclusivity, ranging from robust legal frameworks to advanced assistive technologies and teacher capacity-building programs (Savolainen et al., 2021).

In Finland, research by Sahlberg (2021) underscores the pivotal role of the Finnish National Core Curriculum in integrating teaching resources to support diverse learners. The study found that schools receive government-funded assistive technologies and adaptive materials, enabling teachers to tailor education to individual needs. This approach implies that resource allocation is crucial for achieving equity in education and fostering inclusion for all learners. In the United States, a study conducted by

Smith and Tyler (2021) evaluated the impact of the Individuals with Disabilities Education Act (IDEA) on resource provision in public schools. The research revealed that IDEA funding enabled the purchase of specialized instructional materials, adaptive devices, and professional development programs for teachers. These findings suggest that legal mandates and dedicated funding streams are essential to operationalizing inclusive education policies effectively. A Canadian study by Inclusive Education Canada (2019) examined the availability and utilization of teaching resources in inclusive classrooms. The study found that most schools provided physical accommodations, such as accessible classrooms, alongside specialized learning software tailored to specific disabilities. The implications of this study point to the importance of integrating physical and instructional resources to create an inclusive learning environment.

In the United Kingdom, research by the UK Department for Education (2021) focused on the implementation of the Special Educational Needs and Disability (SEND) Code of Practice. The findings indicated that schools offering targeted resources, including Braille materials and hearing aids, significantly improved educational outcomes for learners with disabilities. This suggests that structured policies paired with resource investment can address educational inequalities effectively. Australian research by Forlin et al. (2021) explored the Disability Standards for Education and their role in resourcing inclusive education. The study found that federal funding facilitated the procurement of learning aids, assistive devices, and inclusive curriculum designs, enhancing accessibility in schools. The findings imply that policy alignment with resource allocation is critical for fostering an inclusive educational framework. Collectively, these studies provide data on how developed countries have achieved significant milestones in inclusive education through effective resource provision. The findings imply that a combination of robust policies, sufficient funding, and innovative approaches to resource allocation can bridge the gap in educational equity. Furthermore, these studies suggest that developing countries can draw valuable lessons from the experiences of developed nations to inform their resource allocation strategies (UNESCO, 2020; World Bank, 2021). Despite the progress in developed countries, the studies also reveal persistent challenges such as unequal distribution of resources across schools and a lack of teacher training in using assistive technologies (Sahlberg, 2021; Savolainen et al., 2021). These findings imply the need for ongoing evaluation and adaptation of inclusive education practices to ensure sustainability and effectiveness.

In developing countries, the provision of teaching and learning resources has emerged as a critical factor in the

successful implementation of inclusive education. Studies have shown that access to appropriate resources significantly enhances educational outcomes for children with disabilities, yet challenges related to resource allocation, teacher training, and infrastructure remain widespread. Research has highlighted the importance of adapting existing resources to meet the needs of diverse learners in these contexts, pointing out that an inclusive education system requires comprehensive planning, significant financial investment, and strong policy commitment (UNICEF, 2021). Furthermore, these studies reveal that while some developing countries are making strides, there is often a mismatch between policy and practice, leading to disparities in resource distribution (World Bank, 2022). A study conducted in India by Sharma et al. (2021) evaluated the role of resources in implementing inclusive education in rural schools. The study found that while there was a significant push towards inclusive education, the lack of teaching materials, assistive devices, and trained teachers hindered progress. The research concluded that the absence of resources in rural areas, coupled with a lack of ongoing professional development, prevented teachers from effectively supporting students with disabilities. These findings imply that for inclusive education to be successfully implemented, both physical resources and capacity-building efforts for educators are crucial.

In Brazil, research by Farias and Silva (2020) examined the role of teaching resources in inclusive classrooms. The study found that while Brazil had national policies for inclusive education, resource provision remained inconsistent across regions. Schools in urban areas had better access to teaching aids and materials, while rural schools often lacked basic resources, such as accessible curriculum materials and specialized assistive technologies. The study concluded that equitable distribution of resources is critical for inclusive education policies to have a meaningful impact. This suggests that governmental policies should focus on reducing regional disparities to ensure that all students have access to the necessary resources for learning. In the Philippines, a study by Santos and De Guzman (2020) examined how the provision of teaching materials impacted the effectiveness of inclusive education. The research found that the availability of specialized teaching aids, such as text-to-speech software and assistive devices, significantly improved the learning experiences of children with disabilities. However, the study also highlighted that these resources were often only available in urban areas, leaving rural schools underserved. The findings suggested that equitable distribution of resources and targeted interventions in underserved areas were essential to achieving true inclusion.

In South Africa, a study by Ntuli et al. (2020) investigated the challenges faced by schools in providing resources for inclusive education. The research found that although inclusive education policies were well-established, resource provision was inadequate in many schools, particularly in disadvantaged areas. The study highlighted the need for schools to receive better funding for specialized resources, such as Braille books, sign language interpreters, and learning software for students with specific needs. The implications of this study suggest that addressing funding gaps and improving resource allocation in under-resourced areas is essential for ensuring that inclusive education practices are truly inclusive. In Ghana, a study by Osei and Amponsah (2020) assessed the effectiveness of resource provision in inclusive education programs. The research found that many schools lacked the basic infrastructure and materials to support children with disabilities. Teachers also reported receiving little training on how to use assistive devices or adapt their teaching methods for students with different learning needs. The study concluded that teacher education and resource provision should go hand in hand to ensure that inclusive education policies can be implemented effectively. The findings imply that professional development is as critical as material resources in promoting inclusion.

A similar study conducted in Uganda by Kizito and Mulindwa (2021) explored the impact of resource provision on inclusive education in the country's public schools. The study revealed that while there was a political commitment to inclusive education, the actual provision of resources such as special education materials and trained personnel was inconsistent. Many schools lacked trained teachers who could implement inclusive teaching strategies, and specialized resources like wheelchairs and hearing aids were often unavailable. The study implied that national policies should prioritize both resource allocation and teacher training to ensure that schools are equipped to meet the needs of all learners. In Nigeria, a study by Ibrahim et al. (2021) assessed the provision of resources for inclusive education in both urban and rural areas. The study found that while urban schools had access to a wide range of teaching resources, rural schools faced significant challenges due to limited access to specialized teaching materials and assistive technologies. Teachers also reported a lack of training in the use of these resources. The study concluded that for inclusive education to be successful, there must be a concerted effort to provide resources equitably across regions and to ensure that teachers are adequately trained to use them. The implications of this study highlight the need for targeted resource allocation in rural areas and the importance of teacher professional development.

In a similar vein, a study conducted in Tanzania by Mwinuka (2020) evaluated how the availability of teaching and learning resources affected the implementation of inclusive education in Tanzanian public schools. The study found that although there was national support for inclusive education, the lack of specialized resources such as adaptive textbooks, speech therapy tools, and mobility aids was a significant barrier to success. The research concluded that schools in both urban and rural areas needed more substantial investment in resources to make inclusive education a reality. The study implied that governments should ensure that resource allocation is consistent and that local schools are equipped with the materials they need to implement inclusive education effectively. In Kenya, the implementation of inclusive education has seen significant progress, but challenges related to the provision of teaching and learning resources persist. A study by Muthia and Nyamu (2021) found that while the government has made strides in creating inclusive education policies, many public primary schools still lack the necessary resources such as assistive devices, specialized learning materials, and appropriately trained staff to support children with disabilities. These gaps in resource provision have hindered the effective inclusion of children with special needs in the classroom, with schools in rural areas facing more significant challenges than those in urban settings. The study concluded that for inclusive education to be successful in Kenya, there is a need for targeted investment in resource allocation, teacher training, and infrastructure, particularly in underserved areas.

In addition, a study by Mutua et al. (2020) highlighted that the availability of resources such as Braille books, hearing aids, and specialized teaching materials in Kenyan schools is still limited. Teachers, particularly in rural areas, have reported insufficient professional development opportunities in inclusive teaching practices, which has negatively impacted their ability to support learners with disabilities effectively. The research suggested that inclusive education in Kenya would require more robust policy enforcement and resource allocation at both the national and local levels. This includes better training for educators, provision of adequate learning materials, and infrastructural improvements in schools to ensure that learners with disabilities have equal opportunities to succeed in education. These findings emphasize the need for a more coordinated effort between the government, non-governmental organizations, and communities to address these resource gaps and ensure the effective implementation of inclusive education policies across the country. Collectively, these studies illustrate the central role of teaching and learning resources in enabling inclusive education in developing countries. While some progress has been made, significant challenges remain, especially in rural areas. The findings consistently point to the need for improved resource allocation, better

distribution of materials across regions, and comprehensive teacher training to ensure that inclusive education is fully realized. These studies imply that while policy frameworks for inclusion exist, the implementation of these policies often fails due to resource shortages, highlighting the need for a more focused approach to addressing these gaps.

### 3. Methodology

This study adopted explanatory survey design using mixed method approach. The target population was primary school headteachers, Teachers, and Sub-County Directors of education in Nandi County. There are 831 headteachers, 4156 teachers, and 6 sub-county directors of education respectively in Nandi County. Using Krejcie and Morgan Sample size determination formulae, and purposive sampling methods, a sample size comprised of 62 headteachers, 308 teachers, and 6 Sub-County Directors of Education giving a total of 376 respondents. Stratified and simple random sampling techniques was used to select headteachers and teachers, while purposive sampling technique was used to sample Sub-County Directors of Education. Interviews and questionnaires were used to collect data. Data was analyzed using descriptive and inferential statistics. Multiple regression was used to test the set hypotheses while qualitative data from interview schedules was thematically analyzed and presented in line with the research objective.

### 4. Results and Discussion

#### 4.1 Effect of Instructional resources on implementation of inclusive Education in Public Primary Schools

The purpose of this study was to access the effect of provision of teaching and learning resources on implementation of inclusive education in public primary schools in Nandi county, Kenya. The respondents were asked to rate on a five-point Likert scale their level of agreement on several statements describing the instructional resources used in the improvement in public primary schools in Nandi County and their response were summarized in Table 1.

**Table 1: Instructional Resource**

	SA		A		UD		D		SD		Mean	SD
	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>	<b>Freq</b>	<b>%</b>		
The school ensures a reasonable text book –pupil ratio for all learners	47	15.6	118	39.1	21	7.0	79	26.2	37	12.3	3.20	1.32
Pupils with disability are consulted	19	6.3	55	18.2	47	15.6	98	32.5	83	27.5	2.43	1.24
Teachers make requisitions on which instructional materials to procure for Learners with Disabilities (LWD)	24	7.9	112	37.1	48	15.9	63	20.9	55	18.2	2.96	1.28
The SIMC is involved in key decision-making on purchase of instructional materials	33	10.9	98	32.5	34	11.3	69	22.8	68	22.5	2.86	1.37
The orders for LWD instructional materials done following manual guidelines	27	8.9	104	34.4	43	14.2	73	24.2	55	18.2	2.92	1.29
Instructional materials for LWD are delivered and stamped in the presence of key stakeholders	24	7.9	97	32.1	48	15.9	74	24.5	59	19.5	2.84	1.28
LWD have guidelines on how to take care of materials	35	11.6	98	32.5	49	16.2	64	21.2	56	18.5	2.97	1.32
The LWD instructional materials issued are register and well maintained	30	9.9	112	37.1	33	10.9	70	23.2	57	18.9	2.96	1.33
Replacement policy on instructional materials for LWD is always adhered to	23	7.6	93	30.8	41	13.6	77	25.5	68	22.5	2.76	1.31
Parents are involved in decisions on instructional materials for all learners	40	13.2	107	35.4	30	9.9	77	25.5	48	15.9	3.05	1.33
ICT resources, e.g. computers are used to facilitate teaching and learning for all learners and are integrated in teaching-learning processes	48	15.9	99	32.8	26	8.6	69	22.8	60	19.9	3.02	1.41
Mean											2.91	0.96

**Source: Field data, 2024**

Most of the teachers 165(54.7%) agreed that school ensures a reasonable text book –pupil ratio for all learners, while 116(38.5%) disagree and 21(7%) undecided. Majority of the teachers 181(60%) disagreed that pupils with disability are consulted on which books to buy, with 47(15.6%) undecided and 74(24.5%) agree. At least 136(45%) of the teachers agreed that teachers make requisitions on which instructional materials to procure for LWD, while 118(39.1%) disagree and 48(15.9%) undecided. At least 137(45.3%) of the teachers disagreed that the School Instructional Material Committee (SIMC) is involved in key decision-making on purchase of instructional materials for LWD, with 131(43.4%) agree and 34(11.3%) were undecided. At least 131(43.3%) of the teachers agreed that orders for LWD instructional materials done following guidelines in the manual, with 128(42.4%) disagreed and 43(14.2%) undecided. At least 133(44%) of the teachers disagreed that instructional materials for LWD are delivered and stamped in the presence of key stakeholders, with 121(40%) agreed and 48(15.9%) were undecided. From the study 133(44.1%) of the teachers agreed that LWD have guidelines on how to take care of instructional materials, with 120(39.7%) disagree and 49(16.2%) were undecided. At least 142(47%) of the teachers agreed that LWD instructional materials issued are register and well maintained, while 127(42.1%) disagree and 33(10.9%) undecided.

Majority of the teachers 145(48%) disagreed that replacement policy on instructional materials for LWD is always adhered to, with 116(38.4%) agree and 41(13.6%) were undecided. Most of the teachers 147(48.6%) agreed that parents are involved in decisions on instructional materials for all learners, with 125(41.4%) disagreed and 30(9.9%) undecided. At least 147(48.7%) agreed that ICT

resources, e.g. computers are used to facilitate teaching and learning for all learners and are integrated in teaching-learning processes, with 129(32.7%) disagreed and 26(8.6%) undecided. From the findings of the study, it was noted that the mean of 11 statements used to measure instructional resource had a mean range of between the 2.43 and 3.20, with an overall mean of 2.91. This shows that majority of the respondents were undecided on the statements that were used to measure the influence of instructional resources on implementation of inclusive education. Similarly, the standard deviation of majority of the items ranged between 1.24 and 1.37. It was deduced that the responses to the instructional resource items were not deviating much. From the interviews the Sub county Director of Education agreed that the provision of teaching and learning resources was crucial in the implementation of inclusive education in public primary schools in Nandi County. The availability of adequate teaching and learning resources made learning to take place by encouraging learners to continue participating in classroom activities.

## **4.2 Instruction Resource Factor Analysis**

Instruction resource statements was subjected to factor analysis and two components with Eigen values greater than 1 were extracted which cumulatively explained 63.331% of variance as shown in (Table 2). The instruction resource indicated that the KMO was 0.926 and the Bartlett's Test of sphericity was significant ( $p < .05$ ) and chi square (1827.355). No statements were deleted and all the statements retained, computed and renamed resource for further analysis.

**Table 2: Rotated Component Matrix for Instruction resource**

	Component	
	1	2
The school ensures a reasonable text book –pupil ratio for all learners		.637
Pupils with disability are consulted on which books to buy	.572	
Teachers make requisitions on which instructional materials to procure for LWD	.711	
The SIMC is involved in key decision-making on purchase of instructional materials for LWD	.803	
The orders for LWD instructional materials done following guidelines in the manual	.833	
Instructional materials for LWD are delivered and stamped in the presence of key stakeholders	.766	
LWD have guidelines on how to take care of instructional materials	.855	
The LWD instructional materials issued are register and well maintained	.764	
Replacement policy on instructional materials for LWD is always adhered to	.659	
Parents are involved in decisions on instructional materials for all learners		.717
ICT resources, e.g. computers are used to facilitate teaching and learning for all learners and are integrated in teaching-learning processes		.847
KMO	.926	
Approx. Chi-Square	1827.355	
Bartlett's Test of Sphericity (P<0.001) df=55		
Eigenvalues	5.917	1.049
% of Variance (63.331)	42.689	20.642

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

**Source:** Field data, 2024

On the provision of teaching and learning resources in Nandi county, the study found that the school ensures a reasonable text book –pupil ratio for all learners, teachers sometimes make requisitions on which instructional materials to procure for LWD. UNESCO (2004c) points out that the learners must be provided with learning materials in formats that meet their individual needs. Orders for LWD instructional materials were sometimes done following guidelines in the manual. Republic of Kenya (2012) ascertains that children with special needs often need specialized aids to move about, to read and write or to hear. LWD have guidelines on how to take care of instructional materials and LWD instructional materials issued were sometimes register and well maintained. Parents were involved in decisions on instructional materials for all learners and ICT resources, e.g. computers are used to facilitate teaching and learning for all learners and are rarely integrated in teaching-learning processes. In an inclusive setting, learners would require other resources over and above what is provided by the school. The pupils with disability were consulted on which books to buy and SIMC were not involved in key decision-making on purchase of instructional materials for LWD. Instructional

materials for LWD are delivered and stamped in the presence of key stakeholders, replacement policy on instructional materials for LWD is not always adhered to. This agrees with Moodley (2002) that in order for the learners to be active participants in the learning and teaching process, institutions must ensure that teaching and learning materials are used as well as made available to all the learners with special needs according to their needs.

### 4.3 Correlation analysis on Instruction Resources and implementation of inclusive education

Pearson’s moment correlation was used to establish the influence of instruction resources on implementation of inclusive education. It was appropriate because all the variables were in interval scale. There was a significant positive relationship between instruction resources on implementation of inclusive education in public primary schools in Nandi county ( $r= 0.515, p =0.000$ ). An increase in instructional resources led to more implementation of inclusive education in public primary schools in Nandi county as shown in Table 3.



**Table 3: Correlation between Instruction Resources and Implementation of Inclusive Education**

Inclusive	Pearson Correlation	Inclusive	Resources
	Sig. (2-tailed)	1	
Resources	Pearson Correlation	.515**	1
	Sig. (2-tailed)	.000	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=302

Source: Field data, 2024

#### 4.4 H<sub>01</sub>: Provision of teaching and learning resources of has no significant effect on implementation of inclusive education in public primary schools in Nandi County, Kenya

A linear regression model was used to explore the influence of instructional resource on implementation of

inclusive education. The R<sup>2</sup> represented the measure of variability in implementation of inclusive education that instructional resource is accounted for. From the model, (R<sup>2</sup> = .266) shows that instructional resource account for 26.6% variation in implementation of inclusive education. The instructional resource predictor used in the model captured the variation in the implementation of inclusive education. The change statistics were used to test whether the change in adjusted R<sup>2</sup> is significant using the F-ratio as shown in Table 4. The model caused adjusted R<sup>2</sup> to change from zero to .266 and this change gave rise to an F- ratio of 108.505, which is significant at a probability of .05.

**Table 4: Model Summary on instructional resource and implementation of inclusive education**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. Change	F
1	.515 <sup>a</sup>	.266	.263	.63653	.266	108.505	1	300	.000	

a. Predictors: (Constant), Resources

Source: Field data, 2024

Based on the regression model, the coefficient of determination (R squared) of 26.6% showed that 26.6% of the variation in implementation of inclusive education can be explained by instructional resource. The instructional resource explained the variation in implementation of inclusive education by 26.6% the remaining percentage can be explained by other factors excluded from the model.

The analysis of variance was used to test whether the model could significantly fit in predicting the outcome than using the mean as shown in (Table 5). The regression model with instructional resource as a predictor was significant (F=108.505, p value =0.001) shows that there is a significant relationship between instructional resource and implementation of inclusive education.

**Table 5: Analysis of Variance on instructional resource and implementation of inclusive education**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.963	1	43.963	108.505	.000 <sup>b</sup>
	Residual	121.551	300	.405		
	Total	165.514	301			

a. Dependent Variable: Inclusive

b. Predictors: (Constant), Resources

Source: Field data, 2024

## 4.5 Coefficients of Instructional resource and implementation of inclusive education

In addition, the  $\beta$  coefficients for instructional resource as independent variable were generated from the model, in order to test the hypotheses under study. The t-test was used as a measure to identify whether the instructional resource predictor was making a significant contribution to the model. Table 6 shows the estimates of  $\beta$ -value and

gives contribution of the predictor to the model. The  $\beta$ -value for instructional resource had a positive coefficient, depicting positive relationship with implementation of inclusive education as summarized in the model as:

$$Y = 2.164 + 0.400X_3 + \epsilon$$

..... Equation 4.3

**Where:** Y = Inclusive education,  $X_3$  = instructional resource,  $\epsilon$  = error term

**Table 6: Instructional resource and implementation of inclusive education coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.164	.117		18.434	.000
	Resources	.400	.038	.515	10.417	.000

a. Dependent Variable: Inclusive

**Source: Field data, 2024**

From the findings the t-test associated with  $\beta$ -values was significant and the instructional resource as the predictor was making a significant contribution to the model. The study hypothesized that there is no significant influence of instructional resource on implementation of inclusive education. The study findings depicted that there was a positive significant relationship between instructional resource and implementation of inclusive education ( $\beta_3=0.400$  and p value  $<0.05$ ). An increase in instructional resource leads to an improvement of implementation of inclusive education. The null hypothesis (**H<sub>01</sub>**) was rejected. The instructional resource had a significant influence on implementation of inclusive education. This agrees with Olufemi, (2015) that when appropriate instructional materials are used learners get fully involved in the learning process. This finding agrees with Moodley (2002) that in order for the learners to be active participants in the learning and teaching process, institutions must ensure that teaching and learning materials are used as well as made available to all the learners with special needs according to their needs. Eleweke & Rodda, (2002) that simple teaching resources could normally be produced locally, such as maps, charts and other illustrative devices are not available in many educational institutions in developing countries.

## 5. Conclusion and Recommendations

### 5.1 Conclusion

The findings of the study revealed a significant positive relationship between the provision of teaching and learning resources and the implementation of inclusive education in public primary schools in Nandi County, Kenya. The results showed that instructional resources accounted for 26.6% of the variation in the implementation of inclusive education, as indicated by the R-squared value ( $R^2 = 0.266$ ). The regression analysis further established that an increase in instructional resources positively influences the implementation of inclusive education, with a standardized  $\beta$ -coefficient of 0.515 and a significant p-value ( $p < 0.05$ ). This suggests that enhancing the availability and utilization of instructional resources leads to better implementation outcomes in inclusive education settings. The study rejected the null hypothesis ( $H_0$ ) that provision of teaching and learning resources has no significant effect on the implementation of inclusive education.

### 5.2 Recommendations

The study suggested the following recommendations

1. There is a need to ensure an adequate supply of teaching and learning resources tailored to the

needs of learners with disabilities (LWD). Schools should prioritize maintaining a reasonable textbook-to-pupil ratio and invest in specialized instructional materials to enhance inclusivity.

2. Schools should involve all key stakeholders, including the School Instructional Material Committee (SIMC), parents, and LWD themselves, in decision-making processes related to the selection, procurement, and distribution of instructional resources.
3. Schools should adhere to clear guidelines and policies for procuring, issuing, and maintaining instructional materials. Regular training and capacity-building programs for teachers and school administrators can ensure that these guidelines are effectively implemented.
4. There is a need to integrate information and communication technology (ICT) in teaching and learning processes, particularly for LWD. This can be achieved by providing accessible ICT tools and training teachers to effectively use these resources to enhance inclusive education.

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