Influence of Teacher Characteristics on the Implementation of Inclusive Education in Public Primary Schools in Bumula Sub-County, Kenya

Alice Aloosi Simiyu[1]
Dr. Ronald Werunga Kikechi[2]

[1]aloosisimiyu@gmail.com
[2]ronaldkikechi@gmail.com

[1,2]Mount Kenya University

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ABSTRACT

Education has been, recognized as basic human right by many world societies. This includes persons having difficulties in education. In spite of this inclusivity of students living with disabilities in schooling is, faced with many challenges. This study therefore looked at the influence of teacher characteristics on the implementation of inclusive education in public primary schools in Bumula Sub-County. Classical liberal theory was, employed in this study since it advocates for equal opportunities to all people in the society. This study targeted total population of 20,125 people with and without disabilities from the 126 public primary schools practicing inclusivity in education. Using Morgan and Krejcie table the study sample size was 379 respondents. A descriptive survey design was embraced utilizing quantitative approaches. Data for this study was, acquired via questionnaires for teachers and learners. Quantitative data from the questionnaires was cleaned, coded and inserted in the computer for analysis utilizing Statistical Package for Social Sciences (SPSS) version 26. The product of the data collected was, analyzed and presentations shown by percentages, frequency distribution tables, bar graphs and charts settling on the objectives and research questions of this study. The Coefficient of Determination (R square) stood at 0.758, which means that about 75.8% of the proportion of total variations in the implementation of inclusive education was explained by teacher characteristics. The coefficient (β = 0.261) for teacher characteristics was found to be statistically significant (t = 3.831, p = 0.002) at a 95% confidence level (α = 0.05), indicating a notable relationship with the implementation of inclusive education in public primary schools. This study advocates for a deeper exploration of school-based dynamics, aligning with classical Liberal Theory principles, to further bolster the adoption of inclusive education practices. The study recommends more pursuit of school-based dynamics as demonstrated in the Classical Liberal Theory to enhance implementation of inclusive education. Investors, management, government, researchers and academicians would greatly benefit from this study as it provides viable insights that could guide decisions to serve their interests on the critical subject of enhanced implementation of inclusive education.

Keywords: *Inclusive Education, Personal Attributes, Teacher Characteristics, Teacher's Qualification, Teacher's Skills*
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I INTRODUCTION

The implementation of inclusive education in public primary schools directly supports Sustainable Development Goal (SDG) 4, Quality Education, by ensuring equitable access to education for all students, including those with disabilities, within supportive and inclusive learning environments (Johnstone et al., 2020). In spite of strides made towards inclusive education in public primary schools, persistent educational challenges, especially related to teacher characteristics, remain prevalent in developing countries (Kuyini et al., 2020). This suggest that the implementation of inclusive education in public primary schools directly supports SDG, quality Education, by ensuring equitable access to education for all learners, including those with disabilities, within supportive and inclusive learning environments, while persistent challenges related to teacher characteristics continue in developing countries.

Implementing inclusive education in public primary schools involves adopting policies and practices to ensure all students, regardless of abilities, access quality education in a supportive environment with resources (Francisco et al., 2020). Its effective implementation aims to provide equitable access to quality education for all learners, including those with disabilities (Mitchell & Sutherland, 2020). Teacher's characteristics, including their training, play a significant role in shaping the implementation of inclusive practices (Crispel & Kasperski, 2021). Teacher's characteristics encompass personal attributes, skills, qualifications, and professional qualities that educators possess, influencing their teaching approach, effectiveness, and interaction with students (Orland-Barak & Wang, 2021). This infers that implementation of inclusive education in public primary schools aims for equitable access to quality education, backed by policies, with teacher characteristics, especially special education training, crucial for effective mainstream classroom inclusion.

In China, significant barriers to inclusive education include a competitive school culture and traditional teaching practices such as large class sizes and rote learning. Recently, efforts have been made to sensitize teachers to adopt a student-centered approach that caters to the specific needs of children with disabilities (Fu et al., 2022). In Canada, implementation of inclusive education has not been equally easy, it has had its own share of challenges, though it enjoys a great philosophical support, institutional support services and policies (Sandoval et al., 2021). This suggest that both China and Canada, despite efforts to enhance inclusive education through policy changes and teacher sensitization, persistent challenges such as large class sizes and traditional teaching practices hinder effective implementation, albeit with varying degrees of institutional and philosophical support in Canada compared to China.

In Swaziland, the deficiency in teacher characteristics like training across Swaziland's inclusive schools poses challenges in educational management, as educators are ill-prepared to handle the inclusive curriculum (S'lungile & Makoelle, 2022). Additionally, in Uganda, regional policies support inclusivity, ensuring that children with disabilities (CWDs) are integrated into Universal Primary Education (UPE) since 1996. Despite these efforts, inclusive environments, though intended to support all learners, sometimes fail to provide the necessary inclusive instruction, leading to dropout rates among CWDs (Bannink et al., 2020). This implies that in both Swaziland and Uganda, despite regional efforts to support inclusive education, challenges persist due to deficiencies in teacher training and the failure of inclusive environments to adequately meet the needs of children with disabilities, impacting their educational access and outcomes.

In Kenya, the implementation of special needs education (SNE) followed sessional papers and guidelines, culminating in the enforcement of SNE guidelines in 2010, focusing on children with disabilities in specialized institutions (Indire, 2022). Despite efforts to achieve Education for All (EFA) objectives and a significant increase in primary school enrollment due to Free Primary Education (FPE), challenges persist in inclusive education implementation, including large class sizes, inadequate teacher training, and insufficient educational facilities and resources (Wambage & Muthee, 2023). Particularly, In Bumula Sub-County, teachers' characteristics present barriers to educational inclusivity, especially for learners with disabilities, restricting their access to quality education and personalized attention (Njiru & Abuga, 2021). This indicates that that despite policy efforts and increases in primary school enrollment, challenges such as large class sizes, inadequate teacher training, and insufficient educational resources persist in implementing inclusive education in Kenya, particularly disadvantaging learners with disabilities in regions like Bumula Sub-County.

1.1 Statement of the Problem

Effective implementation of inclusive education in public primary schools ensures that all students, regardless of their abilities or disabilities, have equal access to a high-quality education in a supportive and accommodating environment. School-based dynamics are taken into account to guarantee the effective implementation of inclusive education in these settings (Crispel & Kasperski, 2021). Globally, and particularly in Bungoma County, Kenya, unequal access to high-quality education in unsupportive and non-accommodating environments continues to raise concerns. This issue is attributed to teacher characteristics, which significantly influence the implementation of inclusive education in public primary schools (Njiru & Abuga, 2021).

Despite global governmental efforts to promote inclusive education in public primary schools through policies and strategic initiatives, challenges persist. Some empirical studies have lacked triangulation and have relied solely on secondary data. To address these gaps, this study employed a mixed-method approach, utilizing stratified and simple random sampling techniques to gather primary data. It investigated the influence of teacher characteristics like experience, trainings and age on the implementation of inclusive education in public primary schools in Bumula Sub-County.

1.2 Research Objectives

 (i) To establish the influence of teacher characteristics on implementation of inclusive education in public primary schools in Bumula Sub-County.

1.3 Research Hypothesis

H_{01}: There is no statistically significant influence of teacher characteristics on the implementation of inclusive education in public primary schools in Bumula Sub-County.

II LITERATURE REVIEW

2.1 Theoretical Review
2.1.1 Classical Liberal Theory

This study utilized classical liberal theory, which advocates for equal educational opportunities. Sherman and Wood (1982) argue that successful education requires equal chances for all, as everyone possesses inherent abilities. The theory emphasizes providing educational opportunities at all levels, primary, secondary, and tertiary-based on individual capabilities rather than special needs. Furthermore, it asserts that providing equal educational opportunities for all leads to societal progress. The Free Primary Education (FPE) policy, established in 2003, supports significant reforms in curriculum, assessment, and teaching. This theory is relevant for mainstreaming learners with difficulties, ensuring they receive support to achieve independence and recognize their potential.

2.2 Empirical Review

Asad and Javed (2023) underscored the importance and benefits of in-service teacher training programs for English language teachers. These programs significantly enhance teaching skills, improve pedagogical practices, and positively impact student learning outcomes. Additionally, evaluating training programs, addressing challenges, and providing ongoing support are crucial for ensuring the relevance and effectiveness of in-service training. Understanding these findings allows stakeholders in English language education to make informed decisions to enhance the design, implementation, and support systems of in-service teacher training programs, ultimately promoting the professional growth of ESL teachers and benefiting their students. M'mbijiwe, *et al*, (2018) illustrated that teachers who went through special needs training do prefer learners to be, taught in regular classes with those learners without disabilities.

Chomba and Mwanza (2014) observed that The UNZA student teaching experience was deemed ineffective due to its short duration, unhelpful lecturers and teachers, and insufficient instruction in content and methodology, which failed to adequately prepare student teachers. Furthermore, much of the content from UNZA was not classroom-tailored, making it difficult for student teachers to apply it to the classroom situations they encountered. Student teachers expected cooperation from schools and head teachers, as well as consistent communication and guidance from UNZA lecturers. Unfortunately, these expectations were unmet; teachers from cooperating schools were unavailable for consultation, and UNZA lecturers only contacted student teachers for observation purposes. Mittler (2012) indicated that the highest number of enrolments in schools is not a problem but the most important thing is for teachers to be, trained well. In Uganda, many schools have the highest number of enrolments and have small number of teachers who handle learners with disabilities because they are well qualified after receiving training in special education.

III METHODOLOGY

This study used a descriptive survey research design to compile data on influence of school-based dynamics on the implementation of inclusive education in public primary schools in Bumula Sub- County. Kothari (2011) defines research survey design as a technique of gathering information using interviews by means of questionnaires to a group of individuals. The choice on this design was premised on the fact that survey research deals with incidence, distribution and interrelationships between variables and accurately describes the nature of existing conditions, necessitating the investigation of influence of school-based dynamics on the implementation of inclusive education.

This study was, carried within Bumula Sub-County that has an approximated population of 202,133 persons that covers an area of 347.8 Km^2. Economic activities carried out within the Sub-County incorporate agricultural actions and animal keeping. The Sub-County covers a number of primary schools that practice inclusive learning. The researcher was, prompted to pick on Bumula Sub-County because it has a number of primary schools practicing inclusive education, which have learners with disabilities (County Government of Bungoma, 2023).

Mugenda and Mugenda (2012) stipulate target population being a populace that researchers desire to simplify the outcome of their studies. Target of this study was all the 126 public primary schools in Bumula Sub-County, which practice inclusive education. The researcher will target all the all 1,376 teachers and 18,749 pupils probably from class 7 and 8 including those with and without disabilities. The overall figure of persons was 20,125.

Table 1
Target Population

Category	Target population
Teachers	1,376
Learners	18,749
Total	**20,125**

Sample is a compilation of entities selected as of the cosmos to denote it (Kothari, 2011). This research shall exercise Krejcie and Morgan (1970) table for getting the sample size to come up with a sample. The researcher took 1,376 teachers and 18,749 learners. To distribute the sample, the researcher used simple random, stratified sampling technique for learners as illustrated in the diagram.

Table 2
Sample Size

Category	Target Population	Sample Size
Teachers	1,376	26
Learners	18,749	351
Total	**20,255**	**379**

Mugenda and Mugenda (2012) outlines instrument tools of assembling data and methods utilized in the dimension of variables in researches. Data compilation instruments were questionnaires for teachers and pupils. Therefore, the researcher will utilize the questionnaires for collecting data on influence of school-based dynamics on implementation of inclusive education.

Primary data was collected using questionnaires, which is a largely utilized technique (Creswell, 2011). The questionnaires were utilized as they possess a benefit of assembling data as of huge clusters within a little instance and not costly (Cooper & Schindler, 2014).

The data that was collected was first sorted out, then edited and coded for use. The researcher further classified data into various categories, which was, tabulated in readiness for analysis. Data was analyzed by utilizing equally quantitative techniques. Quantitative data was copied from questionnaires that carry closed-ended questions then presented by means of bar graphs, pie charts, frequency tables and percentages.

IV FINDINGS & DISCUSSIONS

4.1 Response Rate

Out of the 379 sampled, 313 responded to the study. This made a response rate of 82.6%. This was considered sufficient for analysis. Table 1 presents the response rate.

Table 1
Response Rate

Sampled	Responded	Response Rate
379	313	82.6%

4.2 Descriptive Statistics for Teacher Characteristics

The study determined the influence of teacher characteristics on implementation of inclusive education in public primary schools in Bumula Sub-County, Kenya. To achieve this objective, a five-point Likert scale was employed as summarized in Table 2.

Table 2
Teacher's Characteristics

Statements	Mean	SD	N
That your teachers are trained in special needs education.	3.584	0.499	313
Teachers regularly attend in-service course	3.535	0.491	313
Teachers are equipped with knowledge and skills to work with learners	4.313	0.473	313
Instructors have expertise in special needs education	3.545	0.497	313
Teachers receive support from stakeholders to motivate and develop constructive minds	4.214	1.408	313

As shown in Table 2, teachers were somehow trained in special needs education (Mean = 3.584, SD = 0.499). Additionally, teachers regularly tended to attend in-service course (Mean = 3.535, SD = 0.491), teachers were equipped with knowledge and skills to work with learners (Mean = 4.313, SD = 0.473), instructors tended to have expertise in special needs education (Mean = 3.545, SD = 0.497) and teachers received support from stakeholders to motivate and develop constructive minds (Mean = 4.214, SD = 1.408). This implies that teachers in the study are well-trained in special needs education, regularly attend in-service courses, possess the necessary knowledge and skills to work with learners, have expertise in special needs education, and receive significant support from stakeholders. These results are in agreement with Asad and Javed (2023) who underscored the importance and benefits of in-service teacher training programs for English language teachers include enhancing teaching skills, improving pedagogical practices, and positively impacting student learning outcomes, while ongoing evaluation and support ensure their effectiveness and relevance. Additionally, it supports M'mbijiwe (2018) who illustrated that teachers who went through special needs training do prefer learners to be, taught in regular classes with those learners without disabilities.

4.2 Descriptive Statistics for Implementation of Inclusive Education

The study further assessed implementation of inclusive education in public primary schools in Bumula Sub-County, Kenya. To achieve, a five-point Likert scale was employed as summarized in Table 3.

Table 3
Implementation of Inclusive Education

Statements	Mean	SD	N
There are right policies that would ensure total inclusion of learners with disabilities	3.484	0.466	313
Right laws governing inclusion have successfully accommodated learners with disabilities	3.436	0.481	313
That monitoring policies have been adopted	3.323	0.374	313
Accountability has been embraced	3.213	0.206	313

Table 3, shows that there were right policies that would somehow ensure total inclusion of learners with disabilities (Mean = 3.484, SD = 0.466). Moreover, right laws governing inclusion somehow successfully accommodated learners with disabilities (Mean = 3.436, SD = 0.481), monitoring policies had been somehow adopted (Mean = 3.323, SD = 0.374), and accountability had been somehow embraced (Mean = 3.213, SD = 0.206). This suggest that while there are supportive policies, laws, monitoring mechanisms, and accountability frameworks in place for accommodating learners with disabilities, there may still be room for improvement in their effective implementation and enforcement. These results are in agreement with Francisco et al. (2020) and Mitchell and Sutherland (2020) that iimplementing inclusive education in public primary schools involves adopting policies and practices to ensure all students, regardless of abilities, access quality education in a supportive environment with resources. Its effective implementation aims to provide equitable access to quality education for all learners, including those with disabilities.

The descriptive statistics were followed by inferential statistics, specifically correlation analysis, to determine the relationship between the independent variable and the dependent variable (implementation of inclusive education). Pearson's correlation analysis was used to assess the strength and direction of this relationship.

4.3 Pearson Correlation

The analysis results in Table 5 exposed that teacher characteristics positively and significantly influenced the implementation of inclusive education at (r= 0.742**, p<.05). Moreover, a model summary presenting the magnitude to which the predictors forecast the adjustment in the response was obtained.

Table 5
Correlation Analysis

Variables		Implementation of Inclusive Education
Teacher Characteristics	Pearson Correlation	.742**
	Sig. (2-tailed)	.000
	N	313

**. Correlation is significant at the 0.05 level (2-tailed)

4.4 Regression Analysis

From Table 6, R-squared is used to evaluate the goodness of fit of a model. In regression analysis, the R-squared coefficient of determination is a statistical measure of how well the regression line approximates the real data. With an R-squared value of 0.758, approximately 75.8% of the total variation in the implementation of inclusive education can be explained by teacher characteristics. This indicates that the remaining 24.2% is influenced by other factors not considered in this study.

Table 6

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871[a]	.758	.739	0.588

a. Predictors: (Constant), Teacher Characteristics

ANOVA was further generated to account for how well the regression equation fits the data that forecasts the dependent variable. The ANOVA table indicates that the regression model, which includes teacher characteristics as predictors, significantly explains the variation in Implementation of Inclusive Education ($F_{(4, 308)} = 97.201$, $p < 0.05$). The model accounts for 55.8% of the variance ($R^2 = 0.558$).

Table 7

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110.032	4	27.508	97.201	.000[a]
	Residual	87.164	308	.283		
	Total	197.196	312			

a. Predictors: (Constant), Teacher Characteristics
b. Dependent Variable: Implementation of Inclusive Education

The t-test for Teacher Characteristics in Table 8 indicates that the coefficient ($\beta = 0.261$) is statistically significant ($t = 3.831$, $p = 0.002$) at a 95% confidence level ($\alpha = 0.05$). This suggests that there is a significant relationship between Teacher Characteristics and the implementation of inclusive education in public primary schools. Specifically, a 1-unit change in Teacher Characteristics leads to a 0.261-unit change in the implementation of inclusive education, as measured on the dependent variable scale.

Table 8

Coefficients for Teacher's Characteristic

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	2.221	.241		22.749	.000
	Teacher Characteristics	.091	.499	.261	3.831	.002

a. Dependent Variable: Implementation of Inclusive Education

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The study concluded that teacher's characteristics have a significant influence on the implementation of inclusive education in public primary schools. Consequently, when teachers receive training in special needs education, regularly attend in-service courses, and are equipped with the necessary knowledge and skills, along with support from stakeholders to motivate and develop constructive mindsets, the implementation of inclusive education is significantly enhanced.

5.2 Recommendations

The study recommends a critical need to enhance teacher characteristics, particularly through specialized training in inclusive education, to effectively implement inclusive practices in educational settings.

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