

Influence of Teachers' Characteristics on Teaching and Learning Management for Pupils with Intellectual Disability in Special Schools, Meru County

Esther Kaario M'birithu^{1}, Severina Mwirichia¹, Paul Maku Gichohi¹*

¹ *Kenya Methodist University, PO Box 267-60200, Meru, Kenya*

*Correspondence email: estherkirema@yahoo.com

Abstract

Effective teaching and learning for pupils with intellectual disabilities (ID) is essential for socioeconomic development. However, educational opportunities and support for such pupils are limited in Kenya, leading to their exclusion and decreased academic achievement. Despite the presence of special schools aimed at serving intellectually disabled learners in Meru County, challenges persist in providing quality education tailored to the needs of pupils with intellectual disabilities. This study investigates the impact of teachers' characteristics on teaching and learning management for pupils with intellectual disabilities in special schools in Meru County, drawing upon Vygotsky's theory. The research employs a mixed-methods approach, utilizing a cross-sectional descriptive survey design. The target population included four special schools, 45 teachers, 4 head teachers, 387 parents, 4 Sub-County Directors of Education, and 4 Teachers' Service Commission Sub-County Directors as observation units. From this population, a sample size of 45 teachers, 32 parents, four head teachers, four Sub-County Directors of Education, and four Teachers' Service Commission Sub-County Directors was proportionally and randomly selected. Data collection tools included questionnaires, focus group discussions, and interviews, with validity and reliability of the tools ensured. The findings indicated that teachers' qualifications and competencies positively influence teaching and learning management for learners with intellectual disabilities. Consequently, the study concludes that teachers' characteristics, competencies, and attitudes significantly impact the quality of teaching and learning management for pupils with intellectual disabilities in special schools in Meru County, Kenya. Factors such as academic qualifications, experience, differentiated instruction skills, communication techniques, behaviour management, collaboration, assessment, and advocacy collectively influence educational experiences for learners with intellectual disabilities. The study recommends that the Teachers Service Commission prioritize recruiting highly qualified and experienced teachers in special education schools, and further invest in specialized training programs to enhance teachers' competencies in implementing individualized learning practices for intellectually disabled learners.

Keywords: *Intellectual disabilities, teachers' characteristics, curriculum alignment, inclusion, special schools*

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1.0 Introduction

Effective teaching and learning for pupils with intellectual disabilities (ID) is significant for acquiring speaking, reading and writing skills. Proper management of teaching and learning for pupils with intellectual disabilities opens opportunities for developing independence, self-esteem, academic performance and enhancing cognitive development (Lee et al., 2015; Tarantino et al., 2022). The need for proper management of teaching and learning among learners with intellectual disabilities which require preparedness, teacher's characteristics, school environment, teaching curriculum, school culture, teachers' attitudes, instructional delivery modes, assistive technology, and infrastructure cannot be emphasized (Hutzler et al., 2019; Tarantino et al., 2022; Guralnick, 2017).

Intellectual disability is a neurodevelopmental disorder that affects and delays a child's adaptation and cognitive functioning (Luckasson & Tassé, 2021). Intellectual disabilities are categorized into four levels: mild, moderate, severe and profound intellectual disabilities (Luckasson & Tassé, 2021). Intellectual disabilities are primarily caused by genetic factors such as Downy syndrome (AlRawi & AlKahtani, 2022). It may also be caused by environmental factors such as brain infections, alcoholism, malnutrition, and trauma during birth, severe childhood diseases, and poisoning (AlRawi & AlKahtani, 2022; Graham et al., 2017). In special primary schools, teaching and learning management is globally emphasized to ensure that learners with ID challenges

gain the independence they deserve. This is in line with policies and frameworks such as the Individuals with Disabilities Education Act (IDEA), and the Universal Design for Learning (UDL), which ensure individualized learning, engaging teaching methodologies, flexible curriculum, technology and infrastructure are in place for educating students with intellectual disabilities (AlRawi & AlKahtani, 2022). Inclusive education for all policies has also taken room to offer equal opportunities to pupils regardless of the type or nature of disability (Bjorn et al., 2016). Teaching and learning management refers to implementing programs, strategies, practices, individualized curriculum and competent human resources to offer standardized individualized learning to pupils with special needs (Ohba & Malenya, 2022). A conducive learning environment is typified by appropriate technology, physical resources, infrastructure, as well as proper special classroom management practices and techniques that ensure all learners understand the concept being taught. Creating a conducive learning environment through appropriate technology, physical resources, infrastructure, and unique classroom management practices and techniques ensures that all learners understand the concepts being taught.

Countries across the globe have established policies and standard frameworks for special needs education. For instance, in the US, Finland, China and Canada, policies such as the response to intervention framework, and the Every Student Succeeds Act have taken root to ensure learners with ID have equal opportunities for access to education (Bjorn

et al., 2016; Monahan et al., 2020). However, despite the policies put in place, teaching and learning for disabled pupils has continued to experience challenges (Agran et al., 2019; Wehmeyer, 2019).

In Africa, countries such as Ghana, Zambia, Botswana, Uganda, Tanzania, Nigeria and South Africa are reporting challenges in teaching and learning among pupils with special needs (Okyerere et al., 2019; Otukile-Mongwaketse et al., 2016). These challenges are related to the influence of existing teaching and learning curricula, lack of individualized education programs, inadequate teaching and learning resources, teaching staff competencies, and negative attitudes by school stakeholders.

Locally, the government of Kenya has put effort in ensuring that school environments are conducive for learners with disabilities. These efforts are observable in the special needs inclusion policy and the Salamanca Statement and Framework for Action 1994 (Obara, 2019). Another substantive framework that has continued the push for equity in access to education is the Free Primary Education (FPE) that was declared by the state in 2003. It aims to achieve Education for All (EFA) initiative. However, effective teaching and learning of pupils with ID has not been achieved.

Statement of the Problem

Effective teaching and learning for pupils with intellectual disabilities (ID) promotes socio-economic development in Kenya. However, educational opportunities and support for this forgotten group have been limited, leading to exclusion and reduced

academic achievement. The Kenyan government has implemented an inclusive education policy and accommodative school environments (Obara, 2019). The Kenya Institute for Special Needs Education was also established to train teachers to manage instruction in special schools (Mwabili et al., 2020). The Ministry of Education also allocates funds to upgrade infrastructure, purchase resources, and promote effective education management for intellectually disabled learners in special schools (Mwabili et al., 2020). While special schools exist to serve intellectually challenged pupils, quality teaching and learning tailored to their needs remains a challenge despite policy and support measures. This challenge is evidenced by dissatisfying educational experiences for intellectually disabled pupils (Gatuura et al., 2023). The study sought to address this gap by examining how teachers' characteristics influence teaching and learning management for intellectually disabled pupils in special schools in Meru County, Kenya.



“Proper management of teaching and learning for pupils with intellectual disabilities opens opportunities for developing independence, self-esteem, academic performance and enhancing cognitive development”

Purpose of the Study

The study sought to investigate the influence of teachers’ characteristics on teaching and

learning management for pupils with intellectual disabilities in special schools in Meru County, Kenya.

Research Hypothesis

HO₁: Teachers' characteristics do not significantly influence teaching and learning management for pupils with intellectual disability in special schools in Meru County, Kenya.

Literature Review

Teachers' characteristics refer to a range of inborn and acquired traits, knowledge, communication abilities, competencies, experience, professionalism, belief systems and attitudes, which aggregately influence teaching and learning (Goldman et al., 2017). The study was anchored on Vygotsky's theory developed in 1943 by Lev Vygotsky. The theory describes how culture and people reinforce cognitive development among children. Vygotsky's theory informs how children with intellectual disabilities can be facilitated to acquire knowledge and develop mentally and intellectually through education, teaching, and training. It substantiates the need for teacher characteristics to improve teaching and learning in special primary schools.

Teacher's characteristics address teaching and learning management for pupils with intellectual disabilities by ensuring acquisition of adequate information (Algahtani, 2017). Scholars across the globe have investigated the impact of teachers' attitudes on teaching and learning. For instance, in Australia, Garrad et al. (2019) reported that teachers' attitudes determined the success of inclusive education. However,

Garrad et al. (2019) found a weak correlation between teachers' attitudes and experience, and professional development aspects of teachers.

More studies on the impact of teachers' characteristics on the learning management of pupils with intellectual disabilities are needed in African countries. Mangope (2017) and Okreye et al. (2019) conducted studies in Botswana and Ghana respectively, noting that the government cherished education for all. However, their studies observed that teachers failed to differentiate instruction and systematic instructional delivery procedures like progressing, chain, prompting, as well as backward and forward teaching criteria. In Kenya, teacher preparedness in teaching learners with disabilities has been explored by Gathumbi et al. (2015) and M'mbijiwe et al. (2018), who noted that learners with disabilities receive poor education due to unpreparedness by both the teacher and the school administration.

2.0 Materials and Methods

The study adopted a mixed-method research approach and a cross-sectional survey research design. It targeted 4 special schools for pupils with intellectual disabilities in Meru County, 479 pupils with intellectual disability and 387 parents. The study also involved 4 Sub-County Directors of Education, 4 Teachers Service Commission Sub-County Directors, and 45 specially trained teachers. Out of these, 4 head teachers, 45 teachers, 32 parents, 4 MOE Sub-County Directors and 4 TSC Sub-County directors were sampled through simple random sampling techniques. The research instruments incorporated in the

study included questionnaires, interviews and focus group discussions. A pre-test was conducted in the Nuu special school in Mwingi East Sub-County, Kitui County. The study ascertained the research instruments' content, construct and face validity. Reliability was confirmed by computing Cronbach's alpha coefficients in SPSS. Quantitative data was analyzed through Spearman correlation and regression analysis. The percentages, mean, and standard deviation were computed. Thematic and content analysis were applied to qualitative data.

3.0 Results and Discussion

The reliability test was conducted, and Cronbach's Alpha coefficient of 0.728 was computed. A Cronbach's Alpha coefficient above 0.7 is considered satisfactory for the study.

Response Rate

Forty-five questionnaires were administered to teachers, out of which 40 were considered for analysis in the study. This represented an 88% response rate. Four interview guides were administered to Sub-County Directors and 4 four head teachers. The interviews recorded a 100% response rate. The study targeted 32 parents in the focused group discussion, out of which 25 turned up for FGD, representing a 78.1% response rate. This translated to 88.7% overall response rate for the study.

Demographic Information

The study's findings on the demographic characteristics of respondents noted that there were more female teachers, 28(70%), than male teachers, 12(30%). This implied that more women are involved in teaching children with intellectual disability compared to men. The study further noted that half of the teachers had diplomas, 12(30%) had certificates, and 8(20%) had undergraduate degrees. This implied that the respondents had adequate knowledge to provide information required in the study. Further, the findings agree with Alahmadi and El Keshky (2019), who assert that knowledge is a prerequisite for enhancing learner management and engagement. On teaching experience, 16(40%) respondents reported below five years and 6-10 years of experience, respectively. Further, 8(20%) indicated 11-15 years of teaching experience. This meant that the teachers had adequate knowledge of the influence of teacher characteristics on teaching and learning of pupils with intellectual disabilities in primary schools.

Teaching and Learning Management for Pupils with Intellectual Disabilities

This was the study's dependent variable. Descriptive results on the variable were obtained by presenting items measuring teaching and learning management aspects, and asking respondents to rate these items on a five point Likert scale. The results are presented in Table 1.

Table 1

Descriptive results on teaching and learning management

Statements on teaching and learning management (N=40)	SD f(%)	D f(%)	MA f(%)	A f(%)	SA f(%)	Mean	Std dev
• Our school has the required infrastructure	5(13%)	14(35%)	7(18%)	8(20%)	6(15%)	2.9	1.42
• Our school has adopted assistive technology	7(18%)	13(33%)	9(23%)	7(18%)	4(10%)	2.7	1.03
• Our school has adopted individualized learning	8(15%)	15(38%)	8(20%)	6(15%)	3(8%)	2.5	1.11
• Teachers use differentiated pedagogies	8(15%)	16(40%)	8(20%)	6(15%)	2(5%)	2.4	1.14
• Teachers use multi-sensory teaching methods	7(18%)	13(33%)	9(23%)	7(18%)	4(10%)	2.7	1.18
• The learning environment is conducive for learners with intellectual disabilities	3(8%)	6(15%)	9(23%)	15(38%)	7(18%)	3.4	1.08
• Our school has adopted standardized assessment tools	2(5%)	5(13%)	7(18%)	16(40%)	10(25%)	3.6	1.19
• Teaching and learning materials are adequate	5(10%)	10(25%)	11(28%)	8(20%)	6(15%)	3.0	1.03
• Most learners with intellectual disability belong to single parents	2(5%)	7(17.5%)	2(5%)	12(30%)	17(42.5%)	3.8	1.17
• Many people associate disability with curses and witchcraft	4(10%)	3(8%)	4(10%)	10(25%)	19(48%)	3.9	1.22
• Most parents prefer to educate non-disabled children	1(3%)	10(25%)	2(5%)	11(28%)	16(40%)	3.7	1.10
• Stigma forces parents to hide children with intellectual disability	2(5%)	8(20%)	3(8%)	13(33%)	14(35%)	3.7	1.14

The results show diversity in perception of teachers on the school's infrastructure, with 15(35%) agreeing. However, a high percentage of 19(48%) disagreed, at a moderate mean of 2.9 and a notable standard deviation of 1.42, suggesting a diversity of views. The school may need to address concerns related to infrastructure to enhance the overall learning environment. This could involve seeking feedback from stakeholders to identify specific areas of improvement and prioritizing infrastructure development initiatives. The findings reveal a low level of

agreement, 11(28%), regarding adopting assistive technology, with a substantial 21(51%) expressing disagreement. With this finding, the school needs to focus on integrating and promoting assistive technology to support pupils with intellectual disabilities. While a majority of teachers, 14(35%), agree with the adoption of individualized learning, a high percentage, 23(53%) of disagreement raises concerns. The results further indicate a disagreement by 24(55%) that teachers use differentiated pedagogies, which is of great concern. Only

8(20%) agreed with the assertion. Another area of concern was the use of multi-sensory teaching methods. Half of the respondents, 20(50%), expressed disagreement that teachers use multi-sensory teaching methods, with 11(28%) expressing agreement. The preceding results imply that teaching and learning management for pupils with intellectual disabilities is influenced by factors related to teachers' characteristics.

During an interview, the head teachers were asked to explain the strategic issues inhibiting effective teaching and learning management for pupils with intellectual disability in special schools. From the responses gathered, the study noted that special schools often face resource constraints, including funding, specialized personnel, and appropriate teaching materials. One of the respondents stated that *“Lack of essential resources can hinder the implementation of individualized education plans and limit access to necessary support services.”* This calls for training staff and teachers in specialized instructional strategies and interventions for pupils with intellectual disabilities. The results from FGD with parents noted that teaching and managing learning for pupils with intellectual

disabilities in special schools requires a thoughtful and inclusive approach.

Teacher’s Characteristics and Teaching and Learning Management

The study investigated the training of teachers in handling pupils with intellectual disabilities. All the teachers (100%) noted that they have undergone special needs education training. Further, they indicated that they had been trained in various areas, indicating they were equipped with the necessary skills to handle special needs pupils. The study further stated half of the teachers focused on teaching methodologies, while the other half focused on inclusion and types of disabilities. The findings agree with those of Mohammed and Hlalele (2023), who emphasized the importance of teacher training and development.

The respondents were asked to rate items that measure teachers' characteristics on a Likert scale. The main aspects measured included teachers' education and experience, competencies and skills, teaching methodologies, interpersonal skills, empathy and patience. The results are presented in Table 2.

Table 2

Descriptive results on teachers’ characteristics

	SD	D	MA	A	SA	M	Std Dev
Statements on teachers’ characteristics (N = 40)	f(%)	f(%)	f(%)	f(%)	f(%)		
Individualized education plans help learners with Physical Disabilities,	1(2.5%)	6(15%)	3(7.5%)	6(15%)	24(60%)	3.1	1.1
Materials used in the teaching and learning	2(5%)	7(17.5%)	7(17.5%)	3(7.5%)	21(52.5%)	2.8	1.4

process to suit learners with Intellectual Disabilities?

Materials used in the teaching and learning

process to suit learners with Intellectual Disabilities

Teachers are caring and respect the pupils with ID

Teachers have a sense of ownership and

responsibility

Teachers collectively brainstorm on resolutions to provide effective learning

2(5%)	6(15%)	4(10%)	14(35%)	14(35%)	2.5	1.4
2(5%)	3(7.5%)	13(32.5%)	4(10%)	18(45%)	2.6	1.2
4(10%)	4(10%)	7(17.5%)	4(10%)	21(52.5%)	2.7	1.4
2(5%)	3(7.5%)	13(32.5%)	4(10%)	18(45%)	2.6	1.4

The results show that most teachers 60% (n = 24) strongly agreed (SA) that individualized education plans help learners with physical disabilities. This suggests a high consensus among teachers regarding the efficacy of tailored educational plans for this particular group. The results imply a need for continued support for IEP development and implementation. Regarding materials used to accommodate learners with intellectual disabilities, a substantial percentage (52.5%, n = 21) strongly agreed that materials were appropriately adapted. However, there is a noteworthy discrepancy in the distribution of responses, indicating varied opinions among teachers. The results imply the necessity for professional development and teachers' training sessions focusing on effective material adaptation strategies. This finding corroborates Van der Merwe et al. (2020) who argued that apart from in-born traits, teacher characteristics can also be attained through professional development and cumulative experience on the job. The majority (52.5%, n = 21) strongly agreed that teachers have a sense of ownership and responsibility in educating students with disabilities. These results are consistent with

those reported by Colclasure et al. (2019), who also described the significant role of individual care and teacher patience in affecting learners' understanding and acquisition of knowledge.

The study obtained results from TSC, education directors, and head-teacher interview guides. The respondents were asked to state the qualifications they consider when posting teachers to special schools in Meru County. The response from education directors indicated that teachers' academic qualifications was a key consideration before posting teachers to special schools. One of the directors remarked, "*A teacher posted in special school must have evidence of special needs education qualification*". Additionally, the respondent noted that experience is essential in teachers' recruitment and posting in special schools. The findings are consistent with Kurniawati et al.'s (2017) that the power of professional and competence development among teachers is essential in improving instructional delivery, teacher attitudes towards learners with disabilities, and teaching strategies. The head teachers further noted that teachers' competencies played a

vital role in the teaching and learning management of pupils with intellectual disabilities. In focus group discussions, parents were asked to indicate the type of teacher they would prefer to teach their children. All the participants indicated that they like their children to be taught by specially trained teachers. According to the focus group discussion, specially trained teachers have the right skills and knowledge

to handle pupils with intellectual disabilities. Therefore, pupils are better off taught by qualified teachers. According to Al Hazmi and Ahmad (2018), there is need to upgrade teachers' skills and instructional know-how to effectively implement universal design for learning practices. The null hypothesis was tested by conducting a correlation analysis and results presented in Table 3.

Table 3

Correlation between teachers' characteristics

		Teaching and learning management
Teachers' characteristics	Pearson Correlation	.670**
	Sig. (2-tailed)	.000
	N	40

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

The findings indicate that teachers' characteristics had a positive and significant relationship with teaching and learning management for pupils with intellectual disability ($r = .670, p = .000 < .05$). This result denote that change in teachers' characteristics is accompanied by change in teaching and learning management for pupils with intellectual disability. Based on the results, the null hypothesis was rejected, implying that teachers' characteristics have a significant relationship with teaching and learning management for pupils with intellectual disability in special schools in Meru County, Kenya. The findings agree with Garrad et al. (2019) who noted that teacher attitudes determined the success of inclusive education.

4.0 Conclusion

The study demonstrates that teachers' characteristics, competencies, and attitudes profoundly influence the quality of teaching and learning management for pupils with intellectual disabilities in special schools in Meru County, Kenya. In particular, teachers' academic qualifications, years of experience, skills in differentiated instruction and curriculum adaptation, communication techniques, behaviour management, collaboration, assessment, and advocacy collectively shape compelling educational experiences for intellectually disabled learners. While areas for continued professional development exist, the findings underscore the vital role teachers play in meeting this population's unique learning needs. The results highlight that recruiting qualified and experienced teachers, and

providing them with ongoing training and peer support in managing pupils with diverse intellectual abilities is key to enhancing special education and promoting inclusion special schools in Meru County.

5.0 Recommendations

The study recommends that the Teachers Service Commission prioritize recruiting and placing teachers with strong academic qualifications and relevant experience in special education for teaching roles in

schools for intellectually disabled pupils. Additionally, the TSC should invest in specialized training programs focused on building teachers' competencies in implementing inclusive and individualized learning practices tailored to the needs of students with intellectual disabilities. Ensuring teachers are well-prepared through initial recruitment and ongoing professional development can also improve educational outcomes for intellectually disabled pupils in special schools in Meru County.

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