

## **The Influence of Curriculum on Teaching and Learning Management for Pupils with Intellectual Disability in Special Schools, Meru County, Kenya**

*Esther Kaario M'birithu<sup>1\*</sup>, Severina Mwirichia<sup>1</sup>, Paul Maku Gichohi<sup>1</sup>*

<sup>1</sup> Kenya Methodist University, PO Box 267-60200, Meru, Kenya

\*Correspondence email: [estherkirema@yahoo.com](mailto:estherkirema@yahoo.com)

### **Abstract**

Effective teaching and learning for pupils with intellectual disabilities (ID) is vital in promoting socio-economic development in Kenya. However, pupils with intellectual disabilities are neglected, resulting in exclusion and reduced academic achievement. Although special schools exist in Meru County to serve these pupils, providing quality, tailored-made teaching and learning remains challenging in spite of the comprehensive education policies supporting disability mainstreaming. This study investigated how curriculum influences teaching and learning management for intellectually disabled pupils in special schools in Meru County. Guided by bioecological theory, the study utilized a mixed-methods approach with a cross-sectional descriptive survey design. The target population included 45 teachers, four head teachers, 387 parents, 4 Sub-County Directors of Education, and 4 Teachers' Service Commission Sub-County Directors across four special schools in Meru County. Proportionate random sampling technique selected 45 teachers, 32 parents, four head teachers, 4 Sub-County Directors of Education, and 4 Teachers' Service Commission Sub-County Directors as the sample. Data was collected using questionnaires, focus group discussions, and interviews, with validity and reliability testing of the tools. The results revealed a significant perception gap regarding the alignment of the curriculum with intellectually disabled pupils' needs, indicating a need to better understand their challenges. The study highlights a significant perception gap regarding alignment of the current curriculum with the unique needs and capabilities of pupils with intellectual disabilities in special schools in Meru County. Results emphasize the necessity for a flexible, inclusive curriculum informed by principles of Universal Design for Learning, expert collaboration, and ongoing curriculum evaluation to promote special education practices. The study recommends the Ministry of Education to review Kenya's special education policies and curriculum to ensure alignment with the unique learning needs of intellectually disabled pupils.

**Keywords:** *Intellectual disabilities, curriculum alignment, instructional strategies, curriculum resources*

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## **1.0 Introduction**

Education is regarded as an inalienable right; hence, its acquisition is a significant achievement. Proper management of teaching and learning for pupils with intellectual disabilities opens opportunities for developing individual independence, self-esteem, academic performance, and cognition (Lee et al., 2015; Tarantino et al., 2022). For proper management of teaching and learning among learners with intellectual disabilities, there is need for preparedness with regard to policies, teacher competencies, school environment, the curriculum, school culture, teachers' attitudes, instructional delivery modes, assistive technology, and infrastructure (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 majorly caused by genetic factors such as Downy syndrome (AlRawi & AlKahtani, 2022). They may also be caused by environmental factors such as brain infections, alcoholism, malnutrition, trauma during birth, severe childhood diseases, and poisoning (AlRawi & AlKahtani, 2022).

In special primary schools, management of teaching and learning is emphasized to ensure that learners with ID challenges gain the independence they deserve. This emphasis is founded on policies and frameworks such as the Individuals with

Disabilities Education Act (IDEA) and Universal Design for Learning (UDL), which ensure individualized learning, engaging teaching methodologies, flexible curriculum, technology, and infrastructure are in place (AlRawi & AlKahtani, 2022). Inclusive education for all has also offered equal opportunities to pupils regardless of the type or nature of disability (Bjorn et al., 2016). Teaching and learning management refers to implementation of programs, strategies, practices, individualized curricula, and deployment of competent human resources to offer standardized and individualized learning to pupils with special needs (Ohba & Malenya, 2022).

Policies and standard frameworks for special needs education have been established across the globe. For instance, in the US, Finland, China, and Canada, policies such as response to intervention framework and the Every Student Succeeds Act have taken root to ensure learners with ID have equal opportunities to access education (Bjorn et al., 2016; Monahan et al., 2020). Despite the policies put in place, teaching and learning for disabled pupils has continued to experience challenges (Agran et al., 2019; Wehmeyer, 2001). In Africa, countries such as Ghana, Zambia, Botswana, Uganda, Tanzania, Nigeria, and South Africa have reported challenges in teaching and learning among pupils with special needs (Okyere et al., 2019; Otukile-Mongwaketse et al., 2016). The challenges were attributable to the existing teaching and learning curricula, a 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. Government's intervention is manifest in special needs inclusion policy, and the Salamanca Statement and Framework for Action of 1994 (Obara, 2019). Another substantive framework that has continued the push for equity in education is the Free Primary Education (FPE), which began to be implemented by the Kenyan government in 2003. FPE aims to achieve Education for All (EFA) initiative. However, even as the government seeks to achieve EFA, effective teaching and learning of pupils with ID remains a challenge.

### ***Statement of the Problem***

Effective teaching and learning for pupils with intellectual disabilities (ID) fosters socioeconomic development. In Kenya, there are limited educational opportunities and support for pupils with intellectual disabilities, resulting in their exclusion and reduced academic achievement. To address this challenge, the government of Kenya developed a policy on disability inclusion to enhance disability mainstreaming and the implementation of an accommodative school environment (Obara, 2019). Moreover, the Kenya Institute for Special Needs Education was established to equip special needs teachers with knowledge and competencies to manage teaching and learning in special schools (Mwabili et al., 2020). Through the Ministry of Education, the government further allocates funds for upgrading infrastructure, purchasing information resources, and fostering effective education management for learners with intellectual

disabilities (Mwabili et al., 2020). While special schools exist to serve intellectually challenged pupils, in Meru County, there remains challenges in providing quality teaching and learning, which is tailored to the needs of intellectually disabled learners, the existence of the aforementioned government policies notwithstanding. Notably, practical teaching and learning management in special schools is yet to be achieved, as evidenced by unpleasant educational experiences of pupils with intellectual disabilities (Gatuura et al., 2023). This study sought to address this gap by examining the influence of curriculum on teaching and learning management for pupils with intellectual disabilities in special schools in Meru County, Kenya.

*“A curriculum that effectively manages teaching and learning for learners with ID should be flexible, inclusive, adaptive, resource-backed, universally accepted and regularly revised by expert stakeholders.”*

### ***Purpose of the Study***

The study's primary purpose was to investigate the influence of curriculum on teaching and learning management for pupils with intellectual disabilities in special schools in Meru County, Kenya.

### ***Research Hypothesis***

- i. HO<sub>1</sub>: The curriculum does not significantly influence teaching and learning management for pupils with intellectual disabilities in special schools in Meru County, Kenya.

### ***Literature Review***

Curriculum refers to a combination of well-organized, selected, criticized, moderated, evaluated, and integrative educational experiences that an institution utilizes to meet the, cognitive, communication, and intellectual needs of learners, as well as their employability skills (Mulenga, 2018). The study was based on the bioecological theory of development, which is traced to Urie Bronfenbrenner, who, in 1998, developed it to explain how children achieve cognitive development (Bronfenbrenner, 2005). This theory addresses the curriculum for managing teaching and learning for learners with intellectual disabilities in special schools in Meru County. The special schools can copy the ideas and adopt elements that Bronfenbrenner's theory covers so as to provide a conducive environment that supports pupils with intellectual disabilities.

Learners with intellectual disabilities have problems understanding, remembering, and concentrating in classroom. In developed countries, measures and practices are implemented to ensure effective teaching and learning, and management of learners with ID. These measures include student support, talented learner support, curriculum design, curriculum coherence, pedagogy issues, multisensory learning approaches, and differentiated instruction delivery (Bondie et al., 2019; Whitley et al., 2019). In Africa, low-income countries indicate an existing

challenge of inclusive education in the curriculum, affecting the teaching and learning management of pupils with ID. The existing difficulties are suggested to be remedied through classroom management practices and the development of an appropriate curriculum (Matovu, 2019; Majoko, 2019). In Kenya, there is a challenge in implementation of an individualized curriculum for managing learners with special needs (Mwabili, 2020).

### **2.0 Materials and Methods**

The study utilized a mixed-methods approach, employing both quantitative and qualitative techniques. A cross-sectional survey design was used. The target population included 479 pupils with intellectual disabilities across four special schools in Meru County, 387 parents ID pupils, 4 Sub-County Directors of Education, 4 Teachers' Service Commission Sub-County Directors, and 45 specially trained teachers. Through simple random sampling technique, a sample size of four head teachers, 45 teachers, 32 parents, 4 Ministry of Education sub-county Directors, and 4 Teachers Service Commission Sub-County Directors was obtained. Data was collected using questionnaires, interviews, and focus group discussions. A pilot study was conducted at Nuu Special School in Mwingi East Sub-County, Kitui County. Validity and reliability testing of the instruments was carried out through content, construct, and face validity measures, and computing Cronbach's alpha coefficients using SPSS. Quantitative data was analyzed using Spearman correlation, regression analysis, percentages, means, and

standard deviations. Qualitative data underwent thematic and content analysis.

### **3.0 Results and Discussion**

The reliability test was conducted, and Cronbach's Alpha coefficient was computed. A Cronbach's alpha coefficient of 0.711, which is above 0.7 and hence 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 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 an overall 88.7% 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 disabilities 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 of the study. The findings agreed 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 teachers had adequate knowledge of the influence of teacher characteristics on the teaching and learning of primary school learners with intellectual disabilities.

#### ***Teaching and Learning Management for Pupils with Intellectual Disabilities***

Teaching and learning management for pupils with intellectual problems was the study's dependent variable. Descriptive results on this variable were obtained by presenting items measuring teaching and learning management aspects, and asking respondents to rate the items on a 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<br>f(%) | D<br>f(%) | MA<br>f(%) | A<br>f(%) | SA<br>f(%) | Mea<br>n | Std<br>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 a diverse perception of teachers on the school's infrastructure, with 15(35%) of respondents agreeing. However, a higher percentage of 19(48%) disagreed, with a moderate mean of 2.9 and a notable standard deviation of 1.42, suggesting a diverse view. 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 better support pupils with intellectual disabilities. While a majority of teachers, 14(35%), agree with the adoption of individualized learning, the high percentage, 23(53%) of disagreement raises concerns.

The results further indicate a 24(55%) disagreement 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. In this one, 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 the 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. The Sub-County Director of Education said, “*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 management of learning for pupils with intellectual disabilities in special schools requires a thoughtful and inclusive approach.

***Curriculum and Teaching and Learning Management***

The respondents were asked whether the education system in Kenya, planned as a program for all pupils, should be used for pupils with intellectual disabilities. The

majority (60%) of teachers felt that the current education systems in Kenya should not be used for pupils with intellectual disabilities. In comparison, 40% noted that the system was appropriate for pupils with intellectual disabilities. The results imply that most teachers do not consider the current education system appropriate in teaching and learning of pupils with intellectual disabilities. According to Ohba and Malenya (2022), curriculum directly impacts how, what, which and who of the teaching and learning management in special primary schools. Table 4.16 shows results of the effect of classroom size on teaching and learning management.

The respondents were further asked to rate items that measure the aspects of the curriculum on a Likert scale. The results are presented in Table 2.

**Table 2**

*Descriptive results on curriculum*

| Statements on curriculum (N=40)                                  | SD<br>f(%) | D<br>f(%) | MA<br>f(%) | A<br>f(%) | SA<br>f(%) | Mea<br>n | Std<br>dev |
|------------------------------------------------------------------|------------|-----------|------------|-----------|------------|----------|------------|
| • The curriculum we use is pupils oriented                       | 7(18%)     | 11(28%)   | 12(30%)    | 8(20%)    | 2(5%)      | 2.6      | 1.06       |
| • Assessment of curriculum delivery is well spelt out            | 2(5%)      | 5(13%)    | 13(33%)    | 15(38%)   | 5(13%)     | 3.4      | 1.01       |
| • The curriculum promotes individualized learning programs       | 4(10%)     | 5(12.5%)  | 11(27.5%)  | 13(32.5%) | 7(17.5%)   | 2.6      | 1.21       |
| • The curriculum has standardized assessment mechanisms          | 4(10%)     | 6(15%)    | 14(35%)    | 10(25%)   | 6(15%)     | 3.2      | 1.16       |
| • The curriculum specifies the instructional delivery approaches | 2(5%)      | 5(13%)    | 16(40%)    | 13(33%)   | 4(10%)     | 3.3      | 1.14       |
| • The curriculum specifies material resources                    | 8(20%)     | 11(28%)   | 13(33%)    | 7(18%)    | 1(3%)      | 2.5      | 1.21       |
| • The curriculum promotes differentiated learning approaches     | 9(23%)     | 16(40%)   | 6(15%)     | 7(18%)    | 2(5%)      | 2.4      | 1.08       |

|                                                                                              |        |        |         |         |        |     |      |
|----------------------------------------------------------------------------------------------|--------|--------|---------|---------|--------|-----|------|
| • The curriculum emphasizes attention to intellectual, cognitive and behavioural development | 1(3%)  | 6(15%) | 11(28%) | 13(33%) | 9(23%) | 3.5 | 1.06 |
| • The curriculum promotes the growing independence of a learner                              | 6(15%) | 9(23%) | 13(33%) | 10(25%) | 2(5%)  | 2.8 | 1.03 |

The results in Table 2 indicate that pupil-oriented nature of the curriculum elicited mixed options, with only 10(25%) expressing agreement, 12(30%) indicating moderate agreement, and 46% disagreeing (M = 2.6, SD = 1.06). This divergence suggests a perception gap regarding the alignment of the curriculum with the needs and characteristics of pupils with intellectual disabilities. Participants generally concurred that the assessment of curriculum delivery is well-defined, as evidenced by a substantial 20(50%) agreeing, 13(33%) expressing moderate agreement, and only 7(18%) disagreeing (M = 3.4, SD = 1.01). Emphasis on intellectual, cognitive, and behavioral development within the curriculum was widely acknowledged, with 22(56%) in agreement, 11(28%) moderately agreeing, and only 7(18%) in disagreement (M = 3.5, SD = 1.06). However, the dissenting view of 7(18%) and 11(28%) who moderately agreed raises concerns about the comprehensiveness of the curriculum in addressing the holistic needs of pupils with intellectual disabilities. The findings reveal varying perceptions among teachers regarding the aspects investigated in the study. While there is consensus on certain factors, such as clarity in assessment and instructional delivery and individualized learning programs, there are divergent opinions on the pupil-oriented nature of the curriculum, specification of material resources; and curriculum-promoting differentiated learning approaches

and learners' independence. The above results imply that curriculum is critical in the teaching and learning management of pupils with intellectual disabilities. The findings mirror those of Alice (2018) who emphasized the need to implement individualized education for learners with special needs in both special and inclusive settings.

The study presents the results from interview guide for Directors, TSC and Ministry of Education; and head teachers. The Directors, TSC Ministry of Education and head teachers were asked to suggest measures that should be taken to make the Kenyan curriculum inclusive. Respondents recommended reviewing the Kenyan education systems to include the teaching and learning of pupils with intellectual disabilities. It is essential to align the system to the needs of learners with intellectual disabilities. In particular, the focus should be on providing adequate and relevant teaching and learning materials and facilities to special schools. According to Alice (2018), there is a need to implement individualized education for learners with special needs in both special and inclusive settings. Further, the Director Ministry of Education urged for a curriculum that fosters the holistic development of a learner. The director said, “*Such a curriculum should not only focus on academic aspects but also social, emotional, and physical aspects of learners with intellectual disabilities.*” Head teachers further underlined the need to



partner with and collaborate with parents, caregivers, and community organizations to create a holistic support system for learners with intellectual disabilities.

The study further asked parents in focus group discussions to state whether learners with intellectual disabilities benefit from the Kenyan curriculum. The participants expressed disappointment with the Kenyan curriculum, particularly its lack of touch with the needs of pupils with intellectual disabilities. According to the participants, Kenyan system of education requires thorough review to make it all-inclusive. The findings concur with McLachlan et al. (2018) claim that curriculum assessment and

implementation practices were necessary to deliver quality education. Concerning the availability of facilities to support curriculum delivery for learners with intellectual disabilities, participants expressed frustrations that the government had failed to prioritize inclusive education as evidenced by little allocation of resources to special schools, hence difficulties in developing necessary infrastructure and support facilities for learners with intellectual disabilities.

***Testing of Hypothesis***

A correlation analysis was conducted to test the study's hypothesis, and the results are shown in Table 3.

**Table 3**

*Correlation analysis results in curriculum*

|            |                     | Teaching and learning management |
|------------|---------------------|----------------------------------|
| Curriculum | Pearson Correlation | .567**                           |
|            | Sig. (2-tailed)     | .000                             |
|            | N                   | 40                               |

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

The findings indicate that curriculum had a positive and significant relationship with teaching and learning management for pupils with intellectual disability ( $r = .567, p = .000 < .05$ ). The results denote that change in curriculum is accompanied by change in teaching and learning management for pupils with intellectual disability in the same direction. The null hypothesis was rejected based on these results, implying that curriculum has a significant relationship with teaching and learning management for pupils with intellectual disability in special schools in Meru County, Kenya. The findings are

consistent with McLachlan et al. (2018) conclusion that curriculum assessment and implementation practices are necessary to deliver quality education.

**4.0 Conclusion**

The study reveals a significant perception gap concerning aligning the current curriculum with the unique needs and capabilities of pupils with intellectual disabilities in special schools in Meru County, Kenya. While the curriculum positively correlates with teaching and learning management, gaps exist in fostering

differentiated instruction, accommodating individual needs through education plans, specifying required resources, and promoting learner independence. These findings highlight the need for a flexible, inclusive curriculum that applies Universal Design for learning principles, collaborates with experts, and undergoes regular review and adaptation. The study concluded that tailoring the curriculum to the requirements of intellectually disabled pupils through continuous evaluation and enhancement is

imperative for effective teaching and learning management, and for promotion of special education practices in Meru County.

## 5.0 Recommendations

The study recommended the need for the government of Kenya, through the Ministry of Education to review education policy relating to special needs learners. There is need to ensure that education system meets the needs of learners with intellectual disability.

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