



## AVAILABILITY AND ADEQUACY OF LEARNING RESOURCES FOR IMPLEMENTING INCLUSIVE EDUCATION IN PUBLIC PRESCHOOLS IN BELGUT SUB-COUNTY, KENYA

Kabwos Chepngeno Rebecca<sup>1i</sup>,

Nelliah O. Moige<sup>2</sup>,

Ezekiel N. Omwenga<sup>2</sup>

<sup>1</sup>Kisii University,

Kenya

<sup>2</sup>Dr., Kisii University,

Kenya

### Abstract:

Inclusive education increases access and participation of children with special needs in the general classrooms. This study investigated the influence of availability and the adequacy of learning resources on the implementation of inclusive education in public preschools in Belgut Sub-County. The study adopted Social Model Disability Theory (1975). The study used descriptive survey research design. The study population comprised of 160 preschool teachers and 65 primary head teachers. The sample size for the study was 113 preschool teachers and 56 head teachers. Data for the study was collected using an observation checklist, pre-school teachers' and the primary school head teachers' questionnaires. Data was analysed with the help of statistical package for social sciences (SPSS) and the study findings were presented in frequency distribution tables and percentages. The study findings revealed that most of preschools in Belgut Sub-County lacked adequate essential learning resources such as large print books braille machines, and hearing aids. The study concluded that unavailability and inadequacy of teaching and learning materials hamper proper implementation of inclusive education in public preschools in Belgut Sub-County. Hence, the study recommended that the Ministry of Education should allocate more funds to public preschools to enable the head teachers purchase adapted learning resources.

**Keywords:** adequacy, learning resources, inclusive education, preschools

---

<sup>i</sup> Correspondence: email [rebeccakabwos@yahoo.com](mailto:rebeccakabwos@yahoo.com)

## 1. Introduction

Inclusive Education is a right for every child and is articulated in the education policies globally as per the Salamanca Declaration and Framework for Action on special needs education of 1994 (Centre for Studies on Inclusive Education, 2018). Inclusive education aspires to provide equal education to all the learners irrespective of diversities (UNESCO, 1994). The UN Sustainable Development Goal No. 4, Target 5 states that by 2030 all people including those with disabilities should be provided with equal quality education (UNESCO, 2017). When both learners with and without special needs learn together they develop friendship and social skills such as tolerance that will enable them to live peacefully and work together in an inclusive society leading to the creation of a just, cohesive and inclusive society (Ministry of State for Planning and National Development-Kenya, 2012).

Research studies reveal that although inclusive education has successfully been implemented globally, it is yet to be fully realized (Muna, 2014; Njoka & Syallo, 2012; Underwood, 2013; Zulu, 2014). Despite the existence of inclusive education policies in the developing countries, mainstream schools still lack adequate and appropriate resources to cater for both learners with and without special needs (Wanjohi, 2019). According Okongo, Ngao, Rop and Nyongesa (2015) teaching/learning resources impact on effectiveness of inclusive education. Inclusive education provides equal educational opportunities to learners with special needs to develop social and practical skills that will prepare them for living and working in an inclusive society. Without adequate and adapted learning resources and physical facilities, inclusive education remains a challenge for learners with special needs.

## 2. Literature Review

Adequate and appropriate learning /teaching resources are critical if inclusive education is to be realized in preschools. Learning and teaching resources are materials or things that are used by teachers during classroom instructions to enhance the achievement of the lesson's objectives (KIE, 2006). Effective use of teaching and learning materials enhance the standards of education (UNESCO, 2008) and raises the performance of learners as they give the learners an opportunity to seek knowledge independently and revise what they have learnt (Ministry of Education, Guyana, 2016). Effective use of teaching and learning materials also gives learners with special needs an opportunity to use their full senses to enhance participation, exposes learners to real life experiences and assists them in conceptualizing abstract ideas (Kanno and Onyeachu, 2018). Warui (2014) also states that effective use of teaching and learning materials during teaching enhances classroom interaction and promote learning and positive outcome in education.

Children with diverse special needs attending regular schools may require specialized / adaaptive learning materials to enhance learning. Children with visual impairments have the same educational needs as the typically growing children and

hence should be assisted to accomplish them (UNICEF, 2018). The degree of visual impairments varies from partial sighted to total blindness with each category requiring a learning device that is appropriate to the individual need. According to Cox and Dykes (2001), children with visual impairments may use braille or large prints and sometimes optical devices. In addition, that learners living with disabilities should always be given a warm welcome (Adoyo and Odeny (2015) and seated in a position where they will have clear view (Cox and Dykes, 2001). Illinois Early Learning Project (2015) also recommends brightening or dimming lights as necessary for learners with visual impairments. According to Katz, Teris and Schery (2006), hearing aids enhance children's development of speech and language as well as access to the sounds in the environment. Illinois Early Learning Project further states that noise in the classroom be adjusted to acceptable level for the hearing and the visually challenged learners. Chihenga (2014) argues that insufficient teaching and learning resources compromise participation of learners with disabilities in the mainstream education system. In addition, instructional and play materials should be adjusted to suit individual requirements of learners with special needs (Adoyo and Odeny, 2015).

Learners with specific disabilities require specialized or adapted educational resources both at individual and at school level to enable them participate effectively in the classroom learning activities with their peers (UNESCO, 2008; Wachira, 2012). According to UNESCO (2008), teaching and learning materials also enhance the standards of education (Glewwe et al., 2011). Similarly, effective utilization of learning resources during teaching enables learners to understand and master better the subject content being taught and to retain them for a long time of time (Kathure, 2011, cited in Kipkosgei & Kabwos, 2016)). Further still, effective use of sufficient learning materials raises the degree of participation for learners (Ajoke, 2017; Ministry of Education, Guyana, 2016). The Ministry of Education Science and Technology (2000) argues that effective use of teaching and learning resources make lessons to be child-centered.

Learning institutions should have adequate and suitable learning resources for teaching all learners. There are varying views as to whether teaching and learning resources are adequate and appropriate for all learners in the mainstream schools. According to Mumbi (2011), 64.9% of the schools in Nyeri County had the necessary equipment and facilities for special pupils. However, Mmbuji (2017) points out that teaching / learning resources and physical facilities found in schools are inadequate and are not designed for learners the with special needs. Nyaigoti (2013), in his study "Institutional factors influencing implementation of Inclusive Education" found that 94.3% of primary government schools in Rigoma Division, Nyamira County lacked adequate learning materials. Mwita, Wairiumu and Thinguri (2014) also support the view that most preschool teachers provide teaching and learning resources that did not meet the requirements of learners living with disabilities. The findings of Warui (2014) also indicate that 50% of the pre-primary schools did not have adequate instructional materials. According to a study conducted by Kirui (2014), majority of 72% respondents were of the view that regular primary lacked special education resources. Hence, lack of

adequate and appropriate learning resources in the regular schools will hamper the achievement of Vision 2030's social pillar of providing quality education to all learners by 2030.

### **3 Methodology**

#### **3.1 Research Design**

This study is based on descriptive research design. Descriptive research design is concerned with describing, recording, analyzing and interpreting conditions that exist or existed (Kothari, 2008). Descriptive survey design allows a researcher to collect either qualitative or quantitative data or both which is then analysed and used to describe characteristics of a particular phenomenon or situation under study (Adi, 2020). Descriptive survey design is also useful when a researcher intends to establish characteristics and frequencies of a phenomenon under study (McCombes, 2019).

#### **3.2 The Study Population**

The target population comprised of 160 pre-school teachers and 65 primary school head-teachers teaching in public preschools and primary schools in Belgut Sub-County (Belgut Sub-County Education office, 2017). Pre-school teachers and head teachers were chosen for this study because they are the implementers of Inclusive Education in pre-primary schools in Belgut Sub-County; hence they had the necessary data for the study.

#### **3.3 Sample size and Sampling Technique**

This study utilized stratified random sampling technique and Krejcie and Morgan (1970) table to sample preschool teachers and the head teachers in public pre-primary schools in Belgut Sub-County. The schools were first stratified into four education zones educational zones, namely: Waldai, Chemamul, Chaik and Kabianga zones. Thereafter Krejcie and Morgan (1970) table was referred to and samples of 113 out of the 160 preschool teachers and 56 out of 65 public school head- teachers were obtained.

#### **3.4 Data Collection Instrument**

Data for the study was collected using a checklist, preschool teachers and the head teachers' questionnaires These data collection instrument were chosen for this study because they complemented each other in gathering detailed and accurate data.

#### **3.5 Methods of Data Analysis**

According to Chapman (2018), data analysis entails the processes of checking, organizing, modifying, transforming and extracting useful information from raw data This study adopted parallel mixed method approach whereby qualitative and quantitative data were collected and analyzed simultaneously and thereafter integrated to explain the study problems (Ponce & Maldonado, 2014). Quantitative data for this study was obtained from statements and opinion given by the respondents on challenges facing

inclusive education from preschool teachers and the head teachers' questionnaires. Qualitative data was also collected using a check list, analysed through thematic content analysis where information was summarized and emerging themes outlined and integrated with quantitative data to elaborate on the findings. All the sets of data was analyzed separately with the help of Statistical Package for Social Sciences (SPSS) Version 17 software using and presented in frequency distribution tables and percentages.

### 3.6 Ethical Considerations

Ethics refer are rules of conduct considered either morally appropriate or innappropriate when conducting research and applying findings (Buenafe, 2016, July 21). According to Resnik (2015), ethics assists researchers to define moral issues pertaining to research procedures. The first ethical consideration in this study was that the respondents responded voluntarily to the questionnaires and with informed consent. Secondly, the respondents were assured of confidentiality of data collected and their decision to participate in the study was also respected. Thirdly, respondents were not identified by personal information but by arbitrary codes designed by the researcher to ensure anonymity. Moreover, data collected was stored securely by the researcher and in password protected template accessible only by the researcher. Finally, the respondents were assured of anonymity of their identities and they were not to write their names on the questionnaires.

## 4. Results and Discussions

Preschool teachers and the primary school head teachers were presented with a list of various adapted learning / teaching resources and physical facilities as shown in Table 1 and Table 2 below to which they were to tick whether they were available, not available, adequate or not adequate.

**Table 1:** Preschool Teachers' Rating on Teaching / Learning Resources

Resources	Available		Not Available		Adequate		Not Adequate	
	F	%	F	%	F	%	F	%
Adapted textbooks / Large prints	10	9.8	92	90.2	8	7.8	94	92.2
Braille writers	6	5.9	96	94.1	2	2.0	100	98.0
Hearing aids	6	5.9	96	94.1	6	5.9	96	94.1
Visual aids	23	22.5	79	77.5	13	12.7	89	87.3

As indicated in Table 1, majority (90.2%) of preschool teachers said adapted textbooks with large-prints were not available, majority 96 (94.1%) said braille writers and hearing aids were not available, and majority (77.5%) said visual aids were not available. Concerning the adequacy of the adapted teaching / learning resources and physical facilities.

Table 2 shows that only a small number (7.8%) of preschool teachers stated that the adapted textbooks with large-prints were adequate. Similarly, a small (2.0%) of preschool teachers said that braille writers were adequate, (5.9%) said hearing aids were adequate, and (12.7%) said visual aids were adequate.

**Table 2: Head Teachers' Rating on Teaching / Learning Resources**

Resources	Available		Not Available		Adequate		Not Adequate	
	F	%	F	%	F	%	F	%
Adapted textbooks / Large prints	2	4.1	47	95.9	0	0.0	49	100.0
Braille writers	2	4.1	47	95.9	0	0.0	49	100.0
Hearing aids	2	4.1	47	95.9	0	0.0	49	100.0
Visual aids	8	16.3	41	83.7	8	16.3	41	83.7

As shown in Table 2, majority (95.9%) of the head teachers said adapted textbooks with large-prints, braille writers, hearing aids were not available, and majority (83.7%) also said visual aids were not available.

Table 2 further indicates that all (100%) of the head teachers said adapted textbooks, braille writers, and hearing aids were inadequate. Further still, majority (83.7%) were of the opinion that visual aids were inadequate. This shows that majority of the public primary school heads were of the view that pre-primary schools lacked adequate adapted teaching and learning resources.

The researcher further conducted an observation to establish whether the adapted learning resources and physical facilities were available and adequate in the sampled pre-primary schools and ticked as appropriate on the checklist.

**Table 3: Researcher's Observation Rating on Availability and Adequacy Learning Resources**

Learning and school physical resources	Available		Not Available	
	F	%	F	%
Adapted textbooks	4	8.2	45	91.8
Braille writers	-	-	49	100.0
Hearing aids	-	-	49	100.0
Visual aids	26	53.1	23	46.9

As noted in Table 3, the researcher observed that majority (91.8) of pre-primary schools lacked adapted text books, all (100%) lacked braille machines, and hearing aids. Majority (53.1%) of pre-primary schools had visual aids. The absence of or inadequacy of these facilities have a negative influence in the execution of inclusive education in public pre-primary schools, as these facilities were crucial for the learners with special needs to stay in mainstream pre-schools. When asked to comment on the challenges facing implementation of Inclusive Education, the head-teachers were quick to point out the lack/inadequate learning resources were a challenge. This they described and noted that it was largely due to inadequate funds.

The study findings of the three research tools correspond to those of Kirui (2014) that majority of the regular primary and special schools lacked special education resources. The status of inclusive in the mainstream schools reveal that teaching/learning are inadequate and are do not accommodate learners with special needs (Nyaigoti, 2013; Warui, 2014). Inclusive education provides equal educational opportunities to learners with special needs to develop social and practical skills that will prepare them for living and working in an inclusive society. Without adequate and adapted learning resources, inclusive education remains a challenge for learners with special needs.

## 5. Conclusions and Recommendation

The study established that most of pre-primary schools in Belgut Sub-County lacked adapted textbooks, braille machines, visual aids, and hearing aids. Unavailability and inadequacy of teaching and learning materials, therefore, hampers proper implementation of inclusive education in pre-primary schools in Belgut Sub-County. The study recommends that the Ministry of Education should allocate adequate funds to pre-primary schools to enable the head teachers purchase adapted learning resources for learners with disabilities.

### About the Author(s)

Kabwos Rebecca Chepngeno is a PhD student at Kisii University, Kericho Kenya. Dr. Nelliah O. Moige, is a Lecturer and a Coordinator of Early Childhood Education and Development Department, Kisii University while Dr. Ezekiel Nyambega Omwenga is a Senior Lecturer in the Department of Curriculum, Instruction and Media.

## References

- Adoyo, P. O., & Odeny, M. L. (2015). Emergent Inclusive Education practice in Kenya: Challenges and suggestions. *International Journal of Research in Humanities and Social Studies*. 2(6), 47-52.
- Ajoke, A. R. (2017). The Importance of Instructional Materials in Teaching English as a Second Language. *International Journal of Humanities and Social Science Invention*, 6(9), 2319 – 7714.
- Buenafe, J. M. R. (2016, July 21). *Ethical considerations in making a research*. Retrieved from <https://www.slideshare.net/janysshalom/ethical-considerations-in-making-a-research>.
- Centre for Studies on Inclusive Education. (2018, May 20). *The UNESCO Salamanca Statement Supporting inclusion, challenging exclusion*. Retrieved from <http://www.csie.org.uk/inclusion/unesco-salamanca.shtml>.
- Chapman, R. (2018). *What is data analysis?* Retrieved from <https://limeproxies.com/blog/what-is-data-analysis-in-research-and-how-to-do-it/>

- Chimhenga, S. (2014). *An assessment of the factors affecting the implementation of inclusive education for children with learning disabilities in Zimbabwean primary schools*. Masters Thesis, University of South Africa. Pretoria. Retrieved from <http://hdl.handle.net/10500/18876>.
- Cox, P., R. & Dykes, M. K. (2001). *Effective classroom adaptations for students with visual impairments*. DOI 10.1177/004005990103300609.
- Glewwe, P. W., Hanushek, E. A., Humpage, S. D., & Ravina, R. (2011). School resources and educational outcomes in developing countries: a review of the literature from 1990 to 2010. Retrieved from <http://www.nber.org/papers/w17554>.
- Illinois Early Learning Project. (2015). *Inclusion in preschool classrooms*. Illinois, Author. Retrieved from <http://illinoisearlylearning.org/tipsheets/inclusion.htm>.
- Kanno, T., N. & Onyeachu, J. A. E. (2018). On instructional resources for teaching special needs children in Abia State, Nigeria. *International Journal of Technology and Inclusive Education (IJTIE)*, 7(2), 1318-13.
- Katz, L., Teris & Schery, K. (2006) Including children with hearing loss in early childhood programs. *Young Children*, 61(1), 86–95.
- Kenya Institute of Education. (2006). *Early childhood development service standards guidelines for Kenya*. Nairobi.
- Kipkosgei, A. K. & Kabwos, R. C. (2016). *Factors affecting the implementation of pre-schools science curriculum in Kenya: A Case of Kericho Municipality, Kericho County Kenya*. University of Kabianga.
- Kirui, D. K. (2014). *Challenges facing primary regular and special schools in the implementation of inclusive education in Langata District of Nairobi County*. Kenya: University of Nairobi.
- Kothari, C. R. (2008). *Research methodology: Methods and techniques*. New Delhi: Age International (P) Ltd.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 6-7-610.
- McCombe, S. (2019). *Descriptive research*. Retrieved from <https://www.scribbr.com/methodology/descriptive-research/>.
- Ministry of Education, Guyana. (2016). *The importance of learning materials in teaching*. Retrieved from <https://education.gov.gy/web/index.php/teachers/tips-for-teaching/item/2036-the-importance-of-learning-materials-in-teaching>.
- Ministry of State for Planning, National Development (2012). *Sessional paper No.10 of 2012 on Kenya Vision 2030*. Nairobi. Government printer.
- Mmbuji, Z. S. (2017). *The implementation of the national inclusive education strategy in primary schools in Morogoro Municipality, Tanzania*. University of Tanzania. Zaituni Said Mmbuji corrected.
- Muna, A. (2014). *Teacher education for Inclusive Education in the Arab world: The case of Jordan*. Retrieved from <http://link.springer.com/article/10.1007/s11125-011-9203>



- Mwita, M. M., Wairimu, G. M., & Thinguri, R. W. (2014). Parental responsibility: Provision of teaching learning resources and participation of children living with disability in early childhood. *Journal of Education and Practice*. 5(30), 163-166.
- Njoka, N. K & Syallo, C. (2013). Special needs education: A review of legal and policy basis and their implications in Kenya. *Kenya journal of educational planning, economics and management*, 6 (1).
- Nyaigoti, A. P. (2013). *Institutional factors influencing implementation of Inclusive Education in public primary schools in Rigoma Division, Nyamira County*. Kenya: Masters Thesis. University of Nairobi.
- Okongo, R. P., Ngao, G., Rop, N. K., & Nyongesa W. J. (2015). *Effect of availability of teaching and learning resources on the implementation of inclusive education in pre-school centers in Nyamira North Sub-County, Nyamira County, Kenya*. *Journal of Education and Practice*. 6(3)5.
- Ponce, O., A. & Maldonado, N. P. (2015). Mixed methods research in education: Capturing the complexity of the profession. *International Journal of Educational Excellence*. 1(1), 111-135.
- Resnik, D. B. (2015). *What is ethics in research & why is it important*. Retrieved from <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>.
- Travers, J. et al. (2010). *Addressing the challenges and barriers to inclusion in Irish schools*. St. Patricks College.
- Underwood, K. (2013). *Everyone is welcome: Inclusive early childhood education and care*. Ontario: Ryerson University. <https://www.edu.gov.on.ca/childcare/Underwood>.
- UNESCO (2017). *The Global Education 2030*. Retrieved from <http://www.unesco.org/new/en/santiago/education-2030/>
- UNESCO (1994). *Salamanca Declaration and Framework for Action*. Salamanca, Spain.
- UNESCO (2008, November 25-28). *Inclusive Education: The way of the future*, Geneva, Switzerland. Retrieved from <http://www.ifa.de/fileadmin/pdf/abk/inter/unecoice8rep.pdf>.
- UNICEF (2018, July 16<sup>th</sup>). *Teaching through creative assistive technology*. Retrieved from <https://www.unicef.org/northmacedonia/stories/teaching-through-creative-assistive-technology>.
- Wachira, S. W. (2012). *School based factors influencing effective implementation of inclusive education in public primary schools in Kikuyu District*. Kenya: University of Nairobi.
- Wanjohi, A, M. (2019, January 3). *Challenges facing inclusive education in developing countries*.
- Warui, G. L. S. (2014). *Use of instructional materials in facilitating classroom interaction in pre-primary schools education centers in Juja zone, Kiambu County*. Kenya: Kenyatta University.
- Zulu, P. D. (2014). *Preparedness of the mainstream primary school teachers in implementing inclusive education policy in Nongoma Circuit, KwaZulu-Natal*. South Africa: University of South Africa.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Education Studies shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflicts of interest, copyright violations and inappropriate or inaccurate use of any kind content related or integrated into the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).