

Effect of Head teachers' Acquisition of Teaching and Learning Resources on Implementation of Inclusive Education in Public Primary Schools in Nairobi City County.

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ABSTRACT

The study investigated the effect of head teachers' acquisition of teaching and learning resources on inclusive education implementation to determine their management initiatives for resources mobilization to effectively implement inclusive education for diverse learners. Descriptive survey was applied. Questionnaires were administered to 71 head teachers and 297 teachers, supplemented by document analysis. Interview was used on eight Quality Assurance Standards Officers (QASOs) and four Education Assessment Resource Centre Officers (EARCs). Quantitative data was coded, analysed using descriptive statistics, and presented in frequency tables and bar graphs. Qualitative data was coded, transcribed and presented in narrative form. Both quantitative and qualitative data findings were discussed in juxtaposition with confirming or refuting the research evidence and reinforcing the interpretation. Chi-square was used to test the relationship between the independent variable: head teachers' acquisition of teaching and learning resources versus dependent

variable: implementation of inclusive education. It was confirmed that there was relationship between head teachers' acquisition of teaching and learning resources with inclusive education implementation. However, majority of head teachers lacked competencies to effectively acquire adequate resources, referenced by head teachers and teachers on mobility aids, 43.7% and 51.2%; visual aids, 78.9% and 73.4%; hearing aids, 70.4% and 61.8%. This effected on low enrolment of diverse learners. Therefore, head teachers should solicit for expertise skills on infrastructural development, procurement and acquisition of resources. Thus, the need for the study to fill the gaps in order to ensure equity to all learners' access and learning outcomes in education.

Key words: Teaching and learning resources, Implementation, Inclusive education.

1. INTRODUCTION

Specialized teaching and learning resources is a key factor for implementing inclusive education, and also improves achievement of learners with special needs (Alquraini & Gut, 2012; Swedish Institute of Assistive Technology, 2013). Department for International Development (2007) opines that teaching and learning resources comprise of three components: material resources, physical facilities and human resources. While the national governments have the primary responsibility to provide resources, all other related stakeholders including schools, communities, parents and service providers need to consider acquisition, and capacity to manage teaching and learning resources (World Health Organization, 2010).

Blank and Simon (2014), Brent (2014), Leithwood and Louis (2012) postulate that head teachers' management initiatives entail acquiring education

resources, facilitating professional development for teachers, communication and collaboration with the community. Thus, their management initiatives influence learners' achievements (Jensen, Hunter, Sonnemann & Burns, 2012). However, there is scanty research that directly links these initiatives with inclusive education for outcomes of learners with special needs (Edmunds & Macmillan, 2010; Feng & Sass, 2012). Mariga, McConkey and Myezwa (2014) argue that unlike developed countries, developing countries have not yet put in place guidelines on how schools can involve stakeholders such as parents and partnerships to mobilize resources for diverse learning; thus, learners with special needs are denied access and participation in learning.

The Special Needs Education Policy (Republic of Kenya, 2009) emphasizes on provision of specialized teaching and learning resources as one of the key

initiatives for implementing inclusive education.

However, Njoka et al (2012) and Irungu (2014), argue that the inclusive education initiatives implemented by head teachers do not enhance implementation of inclusive education. For instance, there were 222,700 learners with special needs of primary school going age (Kenya Institute of Special Education[KISE], 2018) and only 48.6% of these learners attended school, but 51.4% did not (Republic of Kenya, 2018; KISE, 2018). In Nairobi City County, there were 105,727 learners with special needs of school going age, but a paltry 1.8% enrolled in primary schools (Nairobi County Taskforce Education Report, 2015). The Department for International Development (2015) and National Special Needs Education Survey Report (Republic of Kenya, 2014b, 2018) revealed that learners with special needs were being denied access in primary schools due to lack of resources and specialized teachers despite that resource

allocation for Special Needs Education was 948 million compared to 18,627 million for Free Primary Education.

2. STATEMENT OF THE PROBLEM

It is estimated that in low income countries 90% of learners with special needs are denied access to school due to lack of teaching and learning resources, thus hindering their learning outcomes and development (Eide & Oderud, 2009; UNICEF, 2014a; UNESCO, 2015). In Kenya, there has been a decline in enrolment of these learners from 78% in 2007 to 52.3% in 2017, attributed to failure by head teachers and stakeholders to initiate resource, infrastructural and Special Needs Education interventions in primary schools (Njoka et al., 2012; KISE, 2018). The findings of UNICEF (2014d) and SNE Policy Review Data Collection Report (Ministry of Education, 2016) established that learners with special needs require 2 to 2.5 times more specialized resources for their education than their peers.

Nevertheless, Gathumbi, Ayot, Kimemia and Ondigi (2015) study revealed that 69% and 68% of head teachers and teachers felt that the teaching and learning resources were unsuitable and inadequate for the learners in Kenya. In Nairobi City County, parents lamented over lack of specialized teachers in schools. It is indicated that only 3.6% of teachers had specialized skills, and chose to teach in special schools where they are given incentives. This is contrasted with Kitui and Mombasa, which had 15.1% and 16.5% respectively (Republic of Kenya, 2014). Therefore, it was of essence to determine the effect of head teachers' acquisition of teaching and learning resources on implementation of inclusive education in public primary schools in Nairobi City County.

3. OBJECTIVE OF THE STUDY

The objectives of the study were to:

i.) Establish the adequacy of head teachers' acquisition teaching and learning resources for implementing inclusive education in public primary schools in Nairobi City County.

ii.) Determine the effectiveness of head teachers' acquisition of teaching and learning resources on the implementation of inclusive education in public primary schools in Nairobi. City County.

4. RESEARCH HYPOTHESIS

The following hypothesis was formulated to guide the study:

Ho₁: There is no significant relationship between head teachers' acquisition of teaching and learning resources with implementation of inclusive education in public primary schools in Nairobi City County.

5. RELATED LITERATURE REVIEW

Jensen, Hunter, Sonnemann and Burns (2012) study on effective school leadership practices and learners' achievement reveal that management initiatives such as acquiring resources support for teachers' professional development communication and schools community partnerships influence learners achievements. In Thailand, for example, head teachers acquire appropriate and quality specialized resources for learners with special needs (UNESCO, 2015).

Nonetheless, this is not directly related to inclusive education for learners with special needs outcomes (Pazey & Cole, 2013). Mariga, McConkey and Myezwa (2014) study revealed that in United States and United Kingdom, the policy guidance commits schools, parents and other stakeholders to collaborate in installing ramps, adapting toilets and other facilities to enable diverse learners' access to learning.

Contrastingly, in low-income or developing countries the lack of policy guidance has posed the challenge of lack of adequate resources for inclusive education. Whereas donors such as The National Fund for the Disable in Kenya provide specialized resources at affordable cost to schools, it is estimated that only five percent of these learners obtain the resources (WHO, 2012; UNESCO, 2015). In the financial year 2017/2018, the MoE disbursed capitation grant to 108,221 learners with special needs, each received KShs. 1420 and additional KShs.2300 for assistive devices.

However, inadequate specialized teachers, lack of appropriate resources and weak coordination between various stakeholders hindered implementation of inclusive education (Republic of Kenya, 2014b; 2016; 2018).

Njoka et al. (2012) research on inclusive and equitable basic education in Kenya revealed that Embakasi Sub-county of Nairobi City County, schools were allocated 50% of funds to resource and infrastructure for special needs education. However, the implementation of this intervention score was at 41% compared to FPE at 100% because head teachers were dissatisfied with the capitation for infrastructure. Thus, learners with special needs continued to drop out of school due to unfriendly learning environments. Several studies in Kenya revealed that head teachers rarely purchased specialized resources despite the government's capitation made to schools and NGOs provision of financial aid to implement inclusive education (Buhere, Ndiku & Kindiki, 2014; Nairobi County Taskforce Education Report, 2015).

Therefore, it was prudent to establish how head teachers acquire specialized resources in primary schools in Nairobi City County to fully implement inclusive education for diverse learners.

6. RESEARCH METHODOLOGY

A descriptive survey design was employed in this study. Creswell (2012) postulates that through this design a researcher is able to evaluate policy issues and programs, using questionnaires and interviews, and statistically analyze data to test research hypotheses. The target population had 4546 constituents from 203 public primary schools in Nairobi City County. Probability and non-probability sampling procedures were utilized to determine the sample size. First, cluster sampling was used whereby a list of sub-counties was drawn within four strata comprising of 203 schools, with each stratum containing a special school. In the second sampling stage, a list of primary schools from each sub-county was used to stratify the schools based on these categories: regular, mainstreamed and special schools.

Where there was no special school within a sub-county, it was identified from a neighbouring sub-county as a substitute. Out of the 4325 teachers and 203 head teachers, 400 teachers and 102 head teachers were selected randomly. This is based on Gay, Mills and Ariasian (2006, 2009) sample size derivation of 50 per cent for smaller population below 500 for head teachers, and 400 sample size if the population is around/beyond 5000 for teachers; whereas, a census was employed on the nine QASOs and nine officers from EARCs. Therefore, sample size was 520.

Two sets of questionnaires were designed for head teachers and teachers, interview guides were used on QASOs and EARC officers to collect data; while, document analysis guides were used to cross-check the documents. The instruments return rates were 71(69.6%) and 297(74.3%) for head teachers and teachers' eight (88.9%) and four (100%) for QASO and EARC officers, respectively.

Babbie (1989) in Best and Kahn (2006) suggest that a 50% response rate is adequate, while 60% and 70% are good and very good, respectively.

Face validity was enhanced by consulting the study supervisors and peers in the School of Education to review the tools on appearance, appropriateness of wording, content, and format of items. Pilot test was conducted on the instruments involving five percent of the sample size. Baker (1994) generally recommends between 10-20% of the sample size. However, Billingham, Whitehead and Julious (2013) argue that a formal sample size for pilot studies may not be necessary. Cronbach's alpha was employed to test the reliability of the instruments. The following reliability indexes were met: head teachers questionnaires, 0.876 and 0.926; teachers' questionnaires, 0.900 and 0.934; QASOs and EARCs interview guides, 1.00 and 1.000; document analysis guide, 0.945 and 0.960.

Quantitative data was coded, analyzed using descriptive statistics, and presented in frequency tables and graphs.

Qualitative data was analyzed in themes, and presented in narrative form. Both quantitative and qualitative findings were interpreted and discussed in juxtaposition by confirming, reinforcing, and refuting research evidence as appropriate. Chi-square (χ^2) test was employed to test the null hypothesis, H_0 : there is no significant relationship between head teachers' acquisition of teaching and learning resources with the implementation of inclusive education. If the calculated value is greater than the critical value, the null hypothesis is rejected, and vice versa. Head teachers' acquisition of teaching and learning resources was conceptualized in their ability or competency to obtain or acquire certain levels of adequacy of itemized resources: mobility, visual and hearing aids for the common categories of learners; namely, physical, visual and hearing. Implementation of inclusive education was factored in the enrolment rates of learners with special needs. The results analyses were presented in chi-square statistical tables.

7. RESULTS FINDINGS

Adequacy of head teachers’ acquisition of teaching and learning resources for implementing inclusive education

The level of adequacy of teaching and learning resources for the physical impairment in sampled schools is shown in Figure 1.

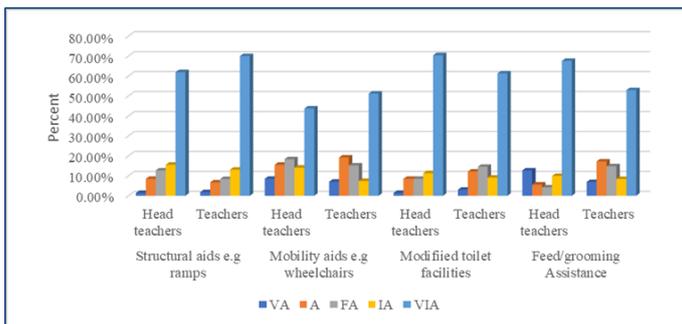


Figure 1. Level of adequacy of teaching and learning resources for learners with physical impairments

Legend. N = 71;297 percentage(%) =percentage of head teachers and teachers responses on level of adequacy of teaching and learning resources for learners with physical impairments in public primary schools in Nairobi City County.

The findings in Figure 1 revealed that majority of head teachers and teachers strongly felt that the resources were very inadequate for the physical impairments as illustrated: structural aids 61.9% and 70% teachers; mobility aids, 43.7% and 51.2%; modified toilet, 70.4% and 61.3%; feeding and grooming assistance, 67.6% and 52.9%. On the other hand, very few of the respondents were contented with the resources for the physical impairments as

indicated: structural aids, 12.7% and 8.4%; mobility aids, 18.3% and 15.2%; modified toilets, 8.5 percent and 14.5%; feeding and grooming assistance, 12.7% and 17.2%. Figure 2 displays head teachers and teachers’ responses on the level of adequacy of teaching and learning resources for learners with visual impairments.

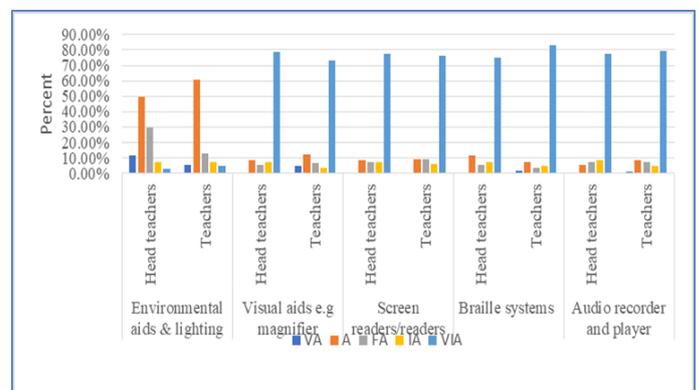


Figure 2. Level of adequacy of teaching and learning resources for learners with visual impairments

Legend. N = 71;297 percentage(%) =percentage of head teachers and teacher responses on level of adequacy of teaching and learning resources for learners with special needs in public primary schools in Nairobi City County.

From the findings in Figure 2, majority of head teachers and teachers representing 49.3% and 60.6% were contented that at least there was enough lighting in classrooms.

However, other resources for visual impairments were strongly discontented by both head teachers and teachers as illustrated: visual aids, 78.9% and 73.4%; readers/screen readers 77.5% and 76.1%; braille systems 74.7% and 83.2%; audio recorder and player registered 77.5% and 79.4%. The responses of head teachers and teachers on the level of adequacy of teaching and learning resources for the hearing/speech impairments are presented in Figure 3.

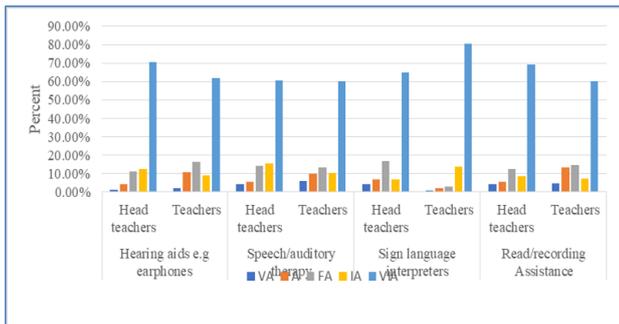


Figure 3. Level of adequacy of teaching and learning resources for learners with hearing/speech impairments
 Legend. N = 71;297 percentage(%) =percentage of head teachers and teachers responses on level of adequacy of teaching and learning resources for hearing/speech impairments.

From the findings in Figure 3, generally, on hearing aids, head teachers and teachers accounting for 70.4% and 61.8% were highly convinced that the resources were very inadequate.

Nonetheless, it is indicated that only 11.3% and 16.5% of the same respondents felt that the resources were fairly adequate.

Effectiveness of head teachers’ acquisition of teaching and learning resources for implementing inclusive education

The responses of both head teachers and teachers on the effect of head teachers acquisition of specialized teaching and learning resources for implementing inclusive education is shown in Figure 4 below.

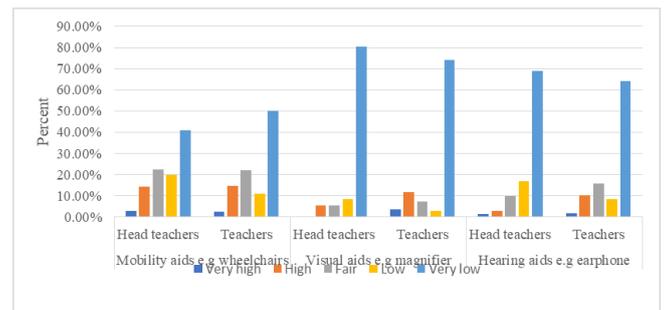


Figure Error! No text of specified style in document.. Responses on effect of teaching and learning resources on enrolment rates of learners with special needs
 Legend. N = 71;297 percentage(%) =percentage of head teachers and teachers responses on effect of teaching and learning resources on enrolment rates of learners with special needs in public primary schools in Nairobi City County.

Figure 4 revealed that majority of respondents posted higher negative scores on the effect of head teachers’ acquisition of teaching and learning resources on the implementation of inclusive education.

For instance, on mobility aids, were 40.8% and 50.1%; visual aids, 80.3% and 74.1%; hearing aids, 69% and 64% of head teachers and teachers respectively. Very few head teachers 22.5% and 21.9% teachers thought that mobility aids had effect on learners with special needs enrolment; apparently, in some special and integrated schools.

8. DISCUSSION AND ANALYSIS

Adequacy of head teachers' acquisition of teaching and learning resources for implementing inclusive education

The analysis of the findings on structural aids indicated that 12.7% and 8.4 per cent of head teachers and teachers contented that structural aids for the physical impairments were fairly adequate. However, 61.9% and 70% of the same respondents strongly dissented that these resources were very inadequate. Similarly, Buhere and Ochieng (2013) study found out that a scanty 16.7% of the schools had ramps, 83.3% had staircases that remained inaccessible to these learners.

Irungu (2014) study revealed that only 17.6% of the head teachers had constructed ramps as infrastructural development. In addition, the National Special Needs Survey (Republic of Kenya, 2014^b), assent that school resources such as ramps, pavements, doors, toilets, wheelchairs, mouth sticks and seats are unadapted and dysfunctional. For instance, only 28% regular, 37.8% integrated and 58.6% special schools had adapted the school environments.

On mobility aids, significant positive scores of 18.3% and 19.2% for head teachers and teachers agreed that schools had acquired mobility resources for the physical impairment. However, higher negative scores of 43.7% and 51.2% of the same respondents felt that the resources were very inadequate. In support to these findings, Buhere and Ochieng (2013) study indicated that 37.5% (3) teachers agreed that head teachers collaborate with partners to acquire assistive devices and wheel chairs.

Contrastingly, Irungu (2014) study found out that only 17.9% of the respondents indicated that the classrooms had mobility aids such as, grab bars and wheelchair accessible entrances; nonetheless, 11.2% and 8.8 per cent respectively had invested in individualized desks and other adaptive equipment. The findings on modified toilets in Figure 1 indicated that a meagre 8.5 per cent and 12.1% of head teachers and teachers were contented with modified toilet facilities for diverse learners with physical impairments; however, significant higher negative of scores of 70.4% and 51.2% of the same respondents were very contentious with the inadequacy of the resources. In retrospect to these findings, Irungu (2014) study indicated that a smaller proportion of 32% of head teachers had built disability compliant toilets. These findings are evidenced by QASO officer 2 who reported:

Adequacy depends on the school, whether special/unit that receives additional funding from donors, and the number of learners. For example, in Parklands Primary, they receive adequate wheel chairs and feeding assistance. Some schools with visual impairment are given large prints for

learning and exams but still not adequate. Mostly, schools rely on government funding, but it is inadequate for infrastructural development and instructional materials for them.

The findings on feeding and grooming assistance from Figure 1 revealed positive scores of 12.7% and 6.9 per cent of head teachers and teachers who were strongly convinced it was very adequate. However, higher negative scores accounting for 67.6% of head teachers and 52.9% of teachers had strong contrary opinion. These findings are related to Irungu (2014) study which revealed that 34.4% of head teachers had introduced some form of feeding programme. These findings suggest that few schools, represented by 12.7% and 6.9% of head teachers and teachers, mostly from few integrated and special schools had initiated resourceful support services for feeding and grooming in their schools; however, majority of the schools, particularly regular schools had not acquired grooming and feeding resources.

On resources for visual impairments, majority of head teachers and teachers were strongly disconcerted as illustrated: visual aids, 78.9% and 73.4%; readers/screen readers 77.5% and 76.1%; braille systems 74.7% and 83.2%; audio recorder and player registered 77.5% and 79.4%. Juma and Malasi (2018) study found out that vision therapists and regular teachers rarely conducted assessment of learners with visual impairments in schools; thus, such cases go unnoticed. This trend implies that visual aids for visual impairment were very inadequate and had not been prioritized in the acquisition of resources in majority of schools. These findings corroborate with Buhere and Ochieng (2013) study that found out that 84% of learners did not have learning materials including braille and books for learners with visual impairments. Saebones et al. (2015) opines that only 5-15% of learners have access to visual aids such as braille.

Further analysis of the findings on environmental aids for visual impairments in

Figure 2, revealed that very significant positive scores, 49.3% and 60.6% for head teachers and teachers, felt that the lighting was adequate in schools. Negative scores of seven per cent and 7.1 per cent of the same respondents felt that the lighting was inadequate. This suggests that majority of the schools were connected to the electricity grid. This is attested to the findings that most of the schools across the country were connected to electricity on needs-based; for instance, special schools at 94.6%, integrated 84.6% and regular 83.4%. Nevertheless, it was reported that a number of schools with special needs were using pressure lamps and lanterns for lighting (Republic of Kenya, 2014^b).

The findings on visual aids indicated that only 8.5 per cent and 12% of head teachers and teachers assented that these resources were adequate. A vast proportion, 78.9% and 73.4% were contentious over the inadequacy of visual aids in the schools.

For instance, there were only 14.1% mobility aids, 12.7% visual aids and 15.5% hearing aids available records in schools. Republic of Kenya (2018^a; 2018^b) cite the lack of records for learners with special needs as hindrance to provision and acquisition of specialized resources.

Effectiveness of head teachers' acquisition of teaching and learning resources on inclusive education implementation

The findings in Figure 4 revealed that both head teachers and teachers posted high negative scores on the effect of resources on inclusive education implementation as illustrated: mobility aids, 40.8% and 50.1%; visual aids, 80.3% and 74.1%; hearing aids, 69% and 64%. The ramification of these findings is that majority of head teachers lacked the competencies to effectively acquiring adequate teaching and learning resources for diverse learners' learning; hence, effecting negatively on the learners enrolment and access in schools. Deon (2008) study established that lack of resources for learners with special needs has a stronger effect on non-enrolment in school than either gender or class.

It is estimated that 90% of learners with special needs in low-income countries are not enrolled in primary schools; while, only five per cent complete primary school (Peters, 2003; UNICEF, 2014). EARC officer 1 was at pains to explain:

Lack of adequate resources in terms of both physical and human, for we are only four EARC officers serving the whole of Nairobi City County, and one resource centre at City Primary, has constrained capacity to identify, assess and place the learners in special schools/units, not even talking about regular schools.

Relationship between head teachers acquisition of teaching and learning resources with implementation of inclusive education

The null hypothesis tested was: 'there is no significant relationship between head teachers' acquisition of teaching and learning resource with implementation of inclusive education.' The independent variable was factored in head teachers' acquisition of hearing and visual aids, and the dependent variable was manifested in enrolment rates of learners with the special needs.

The null hypothesis tests and results are presented in chi-square statistical tables.

Tables 2, 3 and 4 show the statistical results of chi-square tests.

Table 2. Chi- square results* mobility aids vis-à-vis enrolment rates

Chi-square test

		Value		df
<i>Asymp.sig</i>				
Pearson Chi-square		30.648 ^a	16	.015
Likelihood Ratio		23.928	1	
Linear-by-linear Association		2.801		.091
N of valid cases		71		.094

a. 21 cells (84.0%) have expected count less than 5. The minimum expected count is .06.

Table 3. Chi- square results* visual aids vis-à-vis enrolment rates

Chi-square test

		Value		df
<i>Asymp.sig</i>				
Pearson Chi-square		14.581 ^a	9	.103
Likelihood Ratio		11.532	9	
Linear-by-linear Association		1.687	1	.241
N of valid cases		71		.194

a. 14 cells (87.5%) have expected count less than 5. The minimum expected count is .24. **Table Error! No text of specified style in document.. Chi- square results* hearing aids vis-à-vis enrolment rates Chi-square test**

		Value		df
<i>Asymp.sig</i>				
Pearson Chi-square		39.914 ^a	16	.001
Likelihood Ratio		16.326	16	
Linear-by-linear Association		1.468	1	.430
N of valid cases		71		.226

a. 22 cells (88.7%) have expected count less than 5. The minimum expected count is .03.

The chi-square results findings show that the calculated values are greater than the critical values; thus, there was statistically significant relationship between head teachers' acquisition of adequate teaching and learning resources with implementation of inclusive education, in public primary schools in Nairobi City County.

9. IMPLICATIONS

The implications of the study were reached from the findings as per the two objectives of the study:

- i.) Majority of schools had acquired inadequate teaching and learning resources for learners with special needs, as referenced by head teachers and teachers on structural aids, 61.9% and 70%; visual aids, 78.9% and 73.4%; hearing aids, 70.4% and 61.8%. Thus, diverse learners could not access teaching and learning resources, which negatively affected their learning outcomes.
- ii.) Head teachers lacked the competencies to effectively obtain adequate teaching and learning resources; hence, effected on low enrolment of diverse learners, and derailed inclusive education implementation in majority of the schools. It was indicated that majority of head teachers and teachers posted high negative scores on: mobility aids, 40.8% and 50.1%; visual aids, 80.3% and 74.1%; hearing aids, 69% and 64%.

LIMITATION AND STUDY FORWARD

The study confined itself to three main categories of schools: regular, integrated and special schools, with focus on three categories of learners with special needs, physical, visual and hearing impairments.

The study could be re-redesigned to investigate the effect of institutional factors on inclusive education implementation.

ACKNOWLEDGEMENT

The principal author self-financed the research, and assisted by co-authors in correcting and editing the draft work.

AUTHORS CONTRIBUTION

The principal author conducted the research and writing the draft work under the supervisory guidance of the co-authors.

REFERENCE

1. Alquraini, T. & Gut, D.(2012). Critical components of successful inclusion of students with severe disabilities: literature review. *International Journal of Special Education*, 27 (1), 42-59.
2. Baker, T.I. (1994). *Doing social research* (2nd ed.). New York: McGraw-Hill
3. Billingham, S., Whitehead, A.L. and Julious, S.A. (2013). An audit of sample Sizes for pilot and feasibility trials. *United Kingdom Clinical Research Network Database, BMC Medical Research Methodology*, 13 (104), 1-6.
4. Blank, W.R. & Simon, M.D. (2014). Leadership for all students: planning for more inclusive schools practices. *International Journal of Educational leadership preparation*, 9(2), 153-172.
5. Buhere, P., & Ochieng, P. (2013). Usage of selected resources for inclusive education in mainstream primary schools: Issues and challenges from a Kenyan perspective. *Problems of Management in the 21st Century*, 8, 16-24
6. Buhere, P., Ndiku, J. & Kindiki, J. (2014). Inclusive education and school culture: Integration issues for mainstreaming primary schools in Kenya. *International Journal of Education and Research*, 1(5), 423-432
7. Convention on the Rights of Persons with Disabilities (2006). New York: United Nations
8. Creswell, J.W. (2012). *Educational research: planning, conducting and evaluating quantitative and qualitative research* (4th ed.). London: Pearson Research.

9. Department for International Development (2015). *Assessing inclusive education for children with disabilities in Kenya: global campaign for education*. United Kingdom: DFID UK.
10. Deon, F. (2008). Disability, poverty and schooling in developing countries: results from 14 household surveys. *World Bank Economic Review*, 22(1), 141-163
11. Edmunds, A., & Macmillan, R. (2010). *Leadership for inclusion: a practical guide*. Rotterdam, Netherlands: Sense Publishers.
12. Feng, L., & Sass, T. (2012). *Competing risks analysis of dropout and educational attainment of students with disabilities* (Working Paper No.12-09). Georgia; Georgia State University.
13. Gathumbi, A., Ayot, H., Kimemia, J. and Ondigi, S. (2015). Teachers and school administrators preparedness in handling students with special needs in Kenya. *Journal of Education and Practice*, 6(24), 129-138.
14. Gay, L.R., Mills, G.E. & Ariasian, P. (2006). *Educational research: Competencies for analysis and applications. (8th ed.)*. New Jersey: Pearson Prentice Hall, Upper Saddle River.
15. Gay, L.R., Mills, G.E. & Ariasian, P. (2009). *Educational research: Competencies for analysis and applications. (9th ed.)*. Columbus, OH: Pearson Prentice Hall, Upper Saddle River.
16. Jensen, B. and J. Reichl. (2011). *Better teacher appraisal and feedback: Improving performance*. Melbourne: Grattan Institute.
17. Juma, S. and Malasi, F. (2018). The role of EARC in promoting inclusive education in Kenya. *International Journal of Science and Research*, 7(1), 885-889.
18. International Organization for Standardization (2011). *Assistive products for persons with disability: classification and terminology*. Geneva: International Organization for Standardization.
19. Irungu, J.M. (2014). *Influence of head teacher leadership development on implementation of inclusive education in public primary schools in Kiambu County, Kenya* [Unpublished doctoral thesis]. University of Nairobi-Nairobi.
20. Mariga, L., McConkey, R. & Myezwa, H. (2014). *Inclusive education in low-income countries: a resource book for teacher-educators, parents, trainers and community development workers*. Cape Town: Atlas Alliance and Disability Innovations Africa.
21. Ministry of Education. (2016). *SNE Policy Review Data Collection Report (2016)*. Nairobi.
22. Nairobi City County. (2015). *Taskforce education report*. Nairobi.
23. Njoka, E., Riechi, A., Obiero, C., Kemunto, E., Muraya, D., Ongoto, J. & Ameyia, D. (2012) *Towards inclusive and equitable basic education system: Kenya's Experience*. Ouagadougou, Burkina Faso: ADEA.
24. Paze, B. L., & Yates, J. R. (2012). Conceptual and historical foundations of special education administration. In J. B. Crockett, B. S. Billingsley, & M. L. Boscardin (Eds.), *Handbook of leadership and administration for special education* (2nd ed., pp. 17-36). Taylor & Francis.

25. Pearson, K. (1948). *Early statistical papers*. Cambridge, England: University Press
26. Peters, S. (2003). *Achieving education for all by including those with disabilities and special needs*. Washington, DC: World Bank Disability Group.
27. Rau Barriga, S. (2010). Breaking through the silence: HIV and the deaf. *Huffington Post*. Retrieved February 7, 2017, from http://www.huffingtonpost.com/shant-harau-barriga/breaking-through-the-sile_b_790689.html
28. Republic of Kenya. (2009). *The National Special Needs Education Policy Framework*. Nairobi: Government Printers.
29. Republic of Kenya. (2010a). *The constitution of Kenya*. Nairobi: Government Printers.
30. Republic of Kenya. (2014). *National Special Needs Education Survey Report*. Nairobi: Government Printers.
31. Republic of Kenya. (2015a). *Basic Education Regulations. Legal Notice No.39*. Nairobi: Government Printers.
32. Republic of Kenya. (2015b). *Public Procurement and Asset Disposal Act*. Nairobi: Government Printers.
33. Republic of Kenya (2016). *Education sector report 2017/18-2019/20*. Nairobi: Government Printers.
34. Republic of Kenya. (2018). *Sector policy for learners and trainees with disabilities*. Nairobi: Government Printers.
35. Ssenkaba, S. (2017). Inclusive education: the missing link. *New Vision*. https://www.newvision.co.ug/new_vision/news/1443873/inclusive-education-missing-link
36. Soukup, J. H., Wehmeyer, M. L., Bashinski, S. M., & Boviard J. A. (2007). Classroom variables and access to the general curriculum for students with disabilities. *Exceptional Children, 74(1)*, 101-120.
37. Swedish Institute of Assistive Technology (2013). *Technology support in school. A socioeconomic analysis of youth, failures in school and the labour market*. Stockholm.
38. UNESCO. (2015). *Education for all national review report: Kenya*. Paris: United Nations.
39. UNICEF. (2007). *Implementation of the Convention on the Rights of the Child*. Paris: United Nations.
40. UNICEF. (2014a). *Global initiative on out-of-school children: South Asia regional study*. Retrieved July 15, 2016, from https://www.unicef.org/education/files/SouthAsia_OOSCI_Study_Executive_Summary_26Jan_14Final.pdf
41. UNICEF. (2014d). *Financing of inclusive education: Webinar 8— Companion technical booklet*. Retrieved August 8, 2016, from http://www.inclusive-education.org/sites/default/files/uploads/booklets/IE_Webinar_Booklet_8.pdf
42. UNICEF.(2015). *Assistive technology for children with disabilities: creating opportunities for education, inclusion and participation*. Geneva: WHO.
43. World Health Organization (2010). *CBR guidelines: health component*. Geneva.

44. World Health Organization. (2012, June, 9). *Assistive devices/ technologies: what WHO is doing*: <http://www.who.int/disabilities/technology/activities/en/#>.