

Influence of Parental Communication with Teachers on Learning Outcomes of Learners with Hearing Impairment in Public Special Primary Schools in Kisumu Central County, Kenya

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ABSTRACT

Numerous research conducted globally have demonstrated a significant correlation between increased parental involvement and improved academic performance in children with hearing impairment. Involving parents is essential for offering assistance and creating an ideal learning environment. This study therefore, examined the influence of parental communication with teachers on the learning outcomes of learners with hearing impairment in public special primary schools in Kisumu Central County, Kenya. The sociocultural theory of learning served as the study foundation, highlighting the influence of social interactions and cultural environment on learning and development. The study utilised a concurrent embedded research design and included a total target population of 673 individuals, comprising of 45 executive members of the Parents Teachers Association (PTA), 550 learners with hearing impairment, 75 teachers and 3 headteachers from public special primary schools in Kisumu County. A sample size of 248 respondents was obtained utilising Krejcie and Morgan table for sampling, 17 PTA executive members of the Parents Teachers Association (PTA), 201 learners with hearing impairments, 27 teachers and 3 headteachers. The PTA executive members and teachers were selected by simple random selection, while the headteachers were picked through the use of purposeful sampling. Learners with hearing impairment were selected through stratified sampling technique basing on grade levels, then followed by a simple random sampling. Structured questionnaires were given to teachers as part of data gathering techniques, and head teachers and PTA members were interviewed. The test-retest reliability technique was utilised to evaluate the validity and reliability of the research instruments. The results showed a Cronbach's alpha correlation coefficient of 0.70, which was considered suitable for the study. Quantitative procedures included frequency, mean, and standard deviation, whereas qualitative techniques comprised theme analysis and coding. This dual-method approach gave a comprehensive picture of parental communication, expanding insights and interpreting results. The findings showed that promoting good communication between parents and teachers improves learning outcomes for hearing-impaired learners, emphasising the importance of confidence, support and inclusion in offering fair educational opportunities. The recommendations included techniques for strengthening communication practices to assist the educational growth of learners with hearing impairments.

Keywords: Academic Achievements, Educational Development, Hearing Impairment, Learning Outcomes, Parental Communication

I INTRODUCTION

Education is a fundamental right and an essential component of human growth, influencing the futures of individuals and nations. Inclusive education, which guarantees that all students, including those with disabilities, have access to excellent education, is critical to attaining educational fairness. Hearing impairment offers distinct problems that can greatly damage a learner's academic performance and social development, according to the World Health Organisation (WHO, 2021). Learners with hearing impairments frequently have difficulty communicating, socialising, and using standard educational materials. These difficulties demand specialised assistance and initiatives to ensure that they obtain a decent education. Parental participation is one of the most important elements that might impact these learners' academic results. Parents active involvement in their children's education has been found to improve academic success, motivation, and general well-being (Akellot & Bangirana, 2019). Parental engagement may take numerous forms, such as attending school meetings, assisting with homework, talking with teachers and pushing for necessary educational resources and accommodations. For learners who have hearing impairments, parental participation can be particularly vital, as parents can give additional help in communication, reinforce learning at home and cooperate with teachers to customise educational practices to their children's individual needs (Forrester & Steele, 2018).

Facilitating good communication between parents and teachers is critical for moulding the academic performance of learners with hearing impairments, particularly in Israel's unique educational environment. Recent

study has highlighted the complex relationship between parental participation, communication strategies and academic accomplishment in this environment. Cohen (2020) emphasises the importance of collaborative partnerships between parents and teachers, which allow for individualised educational approaches that suit individual requirements. Similarly, Levy et al., (2019) stress the importance of technology-assisted communication, such as augmentative and alternative communication (AAC) systems, in closing communication gaps and increasing academic engagement. Avrahami et al., (2021) provide insights on cultural factors, emphasising the necessity of knowing varied cultural norms in order to allow successful communication between parents, teachers and children. Feldman and Shemesh (2022) study on the changing landscape of parental involvement in Israel education demonstrates a dynamic interaction of communication strategies, parental responsibilities and educational results.

Adeyemo and Adeyemo (2020) study conducted in Nigeria demonstrates the transforming influence of parent-teacher communication on the academic development of learners with hearing impairments. Their research emphasises the need of regular updates, progress discussions, and collaborative strategies in promoting favourable outcomes. Furthermore, Okoli and Chukwuebuka (2019) emphasise the empowering impacts of communication programmes that teach parents of children with hearing impairments about effective support tactics and communication approaches. These efforts also give instructors information into individual learning requirements and encourage an inclusive classroom environment.

Parental communication in the context of education for Kenyan learners with hearing impairment is critical for creating a positive learning environment. The Kenya Institute of Special Education (KISE) emphasises the importance of family involvement in the educational system, citing its role in improving these children educational experiences. However, constraints such as insufficient resources and a lack of awareness about inclusive education techniques continue to prevent successful parental engagement (Kenya Institute of Special Education (KISE, 2021). Okumu and Mwathi (2019) highlight the lack of research on parental engagement in the Kenyan setting, highlighting the necessity for more studies to fill this gap. Effective parental communication includes contacts with teachers, involvement in school events and homework aid at home, all of which contribute to building a favourable learning environment for children with hearing impairments (KISE, 2021).

1.1 Statement of the Problem

All students, including those with hearing impairments, may succeed academically if they have access to the needed resources and assistance. According to research, including a meta-analysis by Moeller and Osberger (2014), early intervention and quality education can considerably enhance the academic performance of children with hearing impairments when compared to their hearing peers. However, despite the prospect of academic achievement for learners with hearing impairment, educational outcomes at public special primary schools in Kisumu County fell short of those achieved by regular learners. According to Nyabuto and Ochieng (2020), this difference originates from the learners' inadequate resources, social stigma and prejudice, which impedes their capacity to fully participate in the learning process. Addressing these issues through parental engagement, awareness campaigns and resource allocation might assist reduce the gap between their learning outcomes and those of regular learners. Therefore, this study looked at the influence of parental communication on learning outcomes of learners with hearing impairment in public special primary schools in Kisumu County, Kenya

1.2 Research Objective

To examine the influence of parental communication with teachers on learning outcomes of learners with hearing impairment in public special primary schools in Kisumu central County, Kenya.

II LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Sociocultural Theory

This study used the sociocultural theory of learning, which was first proposed by Lev Vygotsky in the early 20th century (Vygotsky, 1978) and later expanded by scholars such as Jerome Bruner (Bruner, 1996) and Michael Cole (Cole, 1971). Learning, according to this theory, is a social process rooted within a cultural environment, where learners' growth is impacted by interactions and talks with persons whom Vygotsky refers to as "significant others". Family members, instructors, and classmates are some of the significant individuals with whom students interact and learn a lot. The proposed theory, therefore, is pertinent to the current study because it gives a framework for understanding how parental participation could affect the educational achievement of individuals with hearing impairment.

2.2 Empirical Review

Hearing impairment, commonly known as hearing loss or deafness, ranges from partial to total loss of hearing in one or both ears and affects 466 million people globally according to World Health Organisation (WHO, 2021). It is characterised according to kind and severity, with conductive hearing loss caused by difficulties in the outer or middle ear, sensorineural hearing loss caused by inner ear damage, and mixed hearing loss combining the two (American Speech-Language-Hearing Association, 2021). There are two types: congenital, which is present at birth owing to genetic reasons and acquired, which develops later in life as a result of numerous causes. Hearing loss has serious repercussions, impairing communication, relationships and increasing social isolation. In children, it has an influence on academic achievement, mental health and speech development. Adults with hearing loss have fewer job prospects and a worse quality living. Despite these obstacles, improvements in audiology, such as hearing aids and cochlear implants, present prospects for improved hearing and communication (World Federation of the Deaf, 2021), emphasising the critical relationship between hearing loss and academic accomplishment.

III. METHODOLOGY

The study used a concurrent embedded research design. Creswell and Plano Clark (2017) describe an embedded research design as combining quantitative and qualitative data collection and analysis to provide full insights into the relationship between parental communication with teachers and learning outcomes. This technique enables a full grasp of the issue by systematically studying occurrences and providing both depth and validity through supplemental data categories. The study was carried out in Kisumu County, Kenya, which has a population of around 1,155,574 individuals according to the Kenya Population and Housing Census (2019). According to the Kenya National Bureau of Statistics (KNBS) (2019), Kisumu County was chosen because it concentrated special primary schools catering to children with hearing impairments, which have approximately 1,000 enrolled learners. According to Creswell (2014), a population is a group of people or items who share common traits. The study targeted 45 Parents teachers Association (PTA) executive committee members, 3 Headteachers, 75 teachers, and 550 learners with hearing impairment, yielding a total of 673 individuals as indicated in table 1.

Table 1

Target Population

Target group	Total population
PTA executive committee members	45
Headteachers	3
Teachers	75
Learners with Hearing Impairment	550
Total	673

Falex (2018) defines a sample as a fraction of a population chosen to represent the entire population and collect data for drawing conclusions. The sample size for this study was determined using the Krejcie and Morgan (1970) table, with a target population of 673 persons. According to the table, the computed sample size was 248. The sample size was proportionately distributed throughout the sampled categories, as stated in Table 2.

Table 2

Sampling Grid

Target group	Total population	Sample size	% of Total Samples
PTA executive committee members	45	17	6.85
Headteachers	3	3	1.21
Teachers	75	27	10.89
Learners with Hearing Impairment	550	201	81.05
Total	673	248	100

The study used questionnaires to gather information from teachers. Creswell (2014) describes questionnaires as written collections of questions used to collect data. These questionnaires featured standardised questions and Likert scale items aimed to investigate teacher perceptions of parental communication with teachers and its impact on learners learning outcomes. The study's goal was to acquire significant information on the effect of parental communication on the academic success of learners with hearing impairment by investigating the opinions of teachers utilising questionnaires. Data analysis was carried out methodically after data collection where questionnaire replies

were thoroughly edited, organised and coded depending on the answers provided by respondents. Open-ended replies were coded using content analysis and then presented descriptively. The quantitative analysis was performed using SPSS version 28. Descriptive statistics (such as frequencies, percentages and measures of central tendency) were used to answer research questions about the study. The triangulation of findings from quantitative studies provided study validity and dependability whereby the results were clearly presented utilising tables, charts and narratives.

IV FINDINGS & DISCUSSIONS

4.1 Response Rate

Out of 248 sampled, 221 replied to the questionnaires, yielding a response rate of (89.11%), which was judged sufficient for the analysis, as shown in table 3.

Table 3:

Response Rate

Sampled	Responded	Response Rate
248	221	89.11

4.2 Descriptive Statistics for Parental Communication with Teachers

The study sought to examine the influence of parental communication with teachers on learning outcomes of learners with hearing impairment in public special primary schools in Kisumu central County, Kenya. The statements were rated on a scale as presented in table 4.

Table 4

Parental Communication with Teachers

Statement	Min	Max	Mean	Std. Dev.
Regular attendance of Parent-Teacher Meetings impacts students' learning outcomes	1.00	5.00	3.2986	1.24369
Teachers find Parent-Teacher Meetings beneficial for gauging students' learning outcomes	1.00	5.00	3.2534	1.27174
Parent-Teacher Meetings assist in recognizing areas for learning achievement	1.00	5.00	3.2805	1.28028
Learners learning outcomes is influenced by the frequency of Parent-Teacher Meetings.	1.00	5.00	3.3439	1.28251
Clear feedback from teachers impacts learners learning outcomes.	1.00	5.00	3.5068	1.29552
Timely responses to communications affect learners' academic progress.	1.00	5.00	3.4932	1.30251
Open communication with teachers influences learners learning outcomes.	1.00	5.00	2.8054	1.32568
Providing multiple communication channels enhances parental involvement and learners learning outcomes.	1.00	5.00	3.4253	1.28632
Clear awareness of communication channels impacts learners learning outcomes	1.00	5.00	3.4434	1.29780
Effective communication about academic performance expectations influences students' progress.	1.00	5.00	2.9548	1.38424

N=221

As indicated in the table, the study Mean averages demonstrate substantial relationships between parental contact with instructors and learning results among students with hearing impairments in Kisumu County, Kenya. For example, active engagement in school events (mean = 3.2986, SD = 1.24369) and parental attendance (mean = 3.2534, SD = 1.27174) improve academic success. Similarly, good communication about planned school events (mean = 3.4253; SD = 1.28632) and school facilitation of family engagement (mean = 3.4434; SD = 1.29780) are linked to better learning outcomes. The findings are consistent with Cohen (2020) and Levy et al.,(2019), who highlight the benefits of collaborative collaborations and technology-assisted communication in increasing academic achievement. Avrahami et al. (2021) emphasise the beneficial influence of culturally aware parental participation in extracurricular activities, which is consistent with the study findings on the relationship between such engagement (mean = 3.2805, SD = 1.28028) and learning outcomes. Feldman and Shemesh (2022) also emphasise the significance of parental engagement in organising extracurricular activities (mean = 3.3439, SD = 1.28251) and awareness of available programmes (mean = 3.5068, SD = 1.29552) in boosting learning outcomes. Studies from Nigeria, including Adeyemo and Adeyemo (2020) and Okoli and Chukwuebuka (2019), reinforce these findings, pointing out the transformative



effect of the efficient parent-teacher communication and support for school programmes on academic development among learners with hearing impairment.

4.2.1 Descriptive Statistics for Learning Outcomes

The study sought to examine the influence of learning outcomes of learners with hearing impairment in public special primary schools in Kisumu central County, Kenya. The statements were rated on a scale as presented in table 5.

Table 5
Parental Communication with Teachers

Statement	Min	Max	Mean	Std. Dev.
Improved Scores in all subjects influences learners learning outcomes	1.00	5.00	3.82	0.94
Completion of assignments influences learners learning outcomes	1.00	5.00	4.15	0.72
Task Completion (e.g., projects, homework) influences learning outcomes	1.00	5.00	3.95	0.83

N=221

Table 5 shows that numerous factors have a favourable effect on learning outcomes on children with hearing impairment in public special primary schools in Kisumu Central County. Completing assignments had the highest mean rating ($M = 4.15$, $SD = 0.72$), suggesting that respondents strongly believe that it contributes considerably to better learning outcomes. Similarly, increased scores across all participants ($M = 3.82$, $SD = 0.94$) and task completion ($M = 3.95$, $SD = 0.83$) were rated positively, but with slightly lower mean ratings. These findings highlight the perceived relevance of assignment completion in improving educational outcomes of learners with hearing impairment in the local school setting. These findings are consistent with previous studies emphasising the importance of task completion and assignment submission in learning outcomes by (Jones et al., 2018).

After extensively analysing the research variable characteristics, the study used inferential analysis to interpret the results. Pearson Product-Moment Correlation was used in the study to investigate the relationship between the variables. Parental communication with teachers correlates significantly with school-related activities ($r = .897$, $p < .001$) and decision-making involvement ($r = .863$, $p < .001$). Parental engagement in decision-making is strongly linked to school activity participation ($r = .858$, $p < .001$). Parents with Kenya Sign Language (KSL) abilities have a substantial link with communication with teachers ($r = .863$, $p < .001$), engagement in school activities ($r = .860$, $p < .001$), and decision-making ($r = .864$, $p < .001$). These findings show that more parental involvement in these areas is strongly connected with improved learning outcomes for learners with hearing impairment. The outcomes are indicated in table 6.

Table 6
Correlation Analysis

		Parental communication with teachers
parental communication with teachers	Pearson Correlation	1
	Sig. (2-tailed)	
	N	221

Table 6 shows a substantial positive association between the variables. Parental communication with teachers was examined using Pearson correlation, which assesses the strength and direction of the association between variables. The correlation coefficient (r) of 1 implies a perfect positive connection, implying that if parental communication with teachers grows, some component of learning outcomes may improve. The statistical significance (Sig. 2-tailed) indicates whether this link is likely attributable to chance. Utilising a sample size (N) of 221 participants, the research gives strong insights into how parental communication effects educational results, emphasising its potential relevance in supporting learning outcomes and supporting strategies for learners with hearing impairment in public special primary schools in Kisumu County, Kenya.

To test the significance of dimension differences, ANOVA with Friedman's Test was used. The Friedman's Chi-Square value of 217.188, with a significance level (Sig) of .000, suggests a very significant difference between the items tested. Kendall's coefficient of concordance ($W = .049$) indicates poor yet non-random agreement in item ranks. The Grand Mean of 30.1256 summarises the average score across all questions and participants and the findings are shown in Table 7.

Table 7*ANOVA with Friedman's Test*

		Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig
Between People		62543.812	220	284.290		
Within People	Between Items	3564.528 ^a	3	1188.176	217.188	.000
	Residual	7316.722	660	11.086		
	Total	10881.250	663	16.412		
Total		73425.062	883	83.154		
Grand Mean = 30.1256						

a. Kendall's coefficient of concordance $W = .049$.

Table 7 displays the results of ANOVA using Friedman's Test, which examines variation within and between participants. The Sum of Squares Between People is 62543.812 with 220 degrees of freedom (df), resulting in a Mean Square of 284.290. Within People, the Between Items Sum of Squares is 3564.528 with 3 df, yielding a Mean Square of 1188.176. Friedman's Chi-Square value is 217.188, suggesting a very significant difference between the items tested (Sig = .000). The study also contains a Residual Sum of Squares among persons of 7316.722 with 660 df, as well as a Total Sum of Squares of 10881.250 for all subjects and objects. The Grand Mean (30.1256) summarises the average score across participants and items. Kendall's coefficient of concordance, $W = .049$, indicates weak yet non-random agreement in rankings of the tested items.

V CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The study concluded that parental communication with teachers regarding school activities improves learning outcomes for learners with hearing impairment. As a result, creating collaborative partnerships between parents and teachers through efficient communication channels is critical to supporting learners' academic outcomes. This emphasises the importance of parental participation in educational settings, emphasising the necessity for organised communication techniques to maximise assistance to learners with hearing impairment in attaining their academic potential.

5.2 Recommendations

The study recommends that the Ministry of Education provides clear standards and norms to promote successful communication between parents and teachers, especially readily available paths as well as technologically driven platforms.

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