INTERPLAY BETWEEN PARENT-TEACHER COLLABORATION AND ACADEMIC PERFORMANCE OF PUPILS WITH LEARNING DISABILITIES IN PUBLIC PRIMARY SCHOOLS IN MIGORI COUNTY, KENYA

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Abstract:
This study aimed to establish the influence of parent-teacher collaboration on the academic performance of pupils with Learning Disabilities (LD) in public primary schools in Migori County, Kenya. The study adopted a descriptive design. The study was guided by Constructivist Theory developed by Jerome Bruner (1966). The target population was 47 primary schools, 1000 pupils in grade three, 113 parents of pupils with learning disabilities, 47 grade 3 class teachers, and 47 head teachers in Migori County. A simple random sampling technique was used to select the primary schools. Grade three pupils, class teachers, parents, and head teachers were selected using a purposive sampling technique. The sample size consisted of 11 primary schools, 11 grade 3 class teachers, 11 head teachers, 55 grade 3 pupils, and 22 parents. Researcher-constructed questionnaires, pupil rating scales, and test and interview schedules were used to collect data. To establish the validity and reliability of the research instruments, a pilot study was carried out in one primary school in Migori County. The collected data were
descriptively analyzed using means, frequencies, and percentages. Pearson product-moment correlation analysis was used to examine the nature of the relationships among the study variables. The results were presented using tables. The data from the interview schedule for the head teachers were analyzed thematically, and the results were incorporated into the quantitative findings. Findings indicated that effective collaboration between parents and teachers significantly enhanced academic performance. The study concluded that there was a positive correlation between parent-teacher collaboration and the academic performance of pupils with LD revealed a positive correlation, emphasizing the significance of collaborative efforts to elevate academic achievement. The study recommended that to strengthen collaborative efforts, it is imperative to foster a deeper partnership between teachers and parents. In a leadership role, head teachers need to take the lead in sensitizing both teachers and parents on the profound significance of parent-teacher collaboration for the academic performance of pupils with LD. Also, teachers and Ministry of Education officials in the county should create time to meet the parents and teachers to sensitize them about LD and their needs to improve the learning outcomes of such learners.

Keywords: academic performance, learners with learning disability, parental involvement, parent-teacher collaboration

1. Introduction

Following the United Nations (UN) declaration of education as a human right in 1948, many countries across the world have made efforts to improve access and quality of education for both boys and girls (World Bank, 2018). The World Bank report warned that the education sector was staring at a dire global learning crisis occasioned by several factors such as civil wars, conflict, disability, inadequate resources, and lack of political will to align education with social and economic development. Learning disability among primary school children is a regular issue in numerous nations across the world. In Canada, the Learning Disability Association of Ontario (LDAO) (2018) reported that 8.8% of the school population had a learning disability. The report indicated that the figure did not include those children with learning disability who receive education in regular schools without being identified. In the USA, Seyton (2019) revealed that learning disability affected about 2.7 million school-going children (9.7%). The study estimated that about 1% of primary school children had problems in learning mathematical activities. Writing disorder was reported to be at 4%, which was found to be more common with boys. Research has also established that about 40% of the affected children quit schooling. Due to the learning challenges that are associated with LD, the children suffering from the disorder need special attention from teachers and parents to achieve learning goals and prepare for the subsequent learning stages (Stewart, 2021). Empirical evidence has demonstrated that parent participation is linked to positive learning
outcomes. Gonida (2019) surveyed to investigate the impact of parental involvement on educational attainment.

In Nigeria, the population with learning disability is about 12 million people, and out of this, approximately 6 million are children (Balogun, 2022). The researcher noted that the most common types of LD were in writing, mathematics, spelling, reasoning, and speaking. Broadly, the LDs were categorized as dyscalculia, dyslexia, and dysgraphia. Parents' participation influences educational attainment and, therefore, should assist their children regularly to enhance educational attainment (Udu & Ochogwu, n.d.). In South Africa, Lemmer (2017) showed that parents participated in enabling their children to learn through the provision of financial resources and by volunteering in school activities. The researcher noted that legal provisions gave the parents and the community an opportunity to participate in school matters and the learning of children. In Uganda, Malawi, and Burundi, only a few parents actively participate in school activities and the education of their children (Rodrigues, 2020).

In Kenya, Rasugu (2010) reported that LD was a common challenge among standard three children, with a prevalence rate of 6.7% in English and 6.3% in Maths. The common types of errors in English are spacing letters, inaccurate copying, omission of words, and grammatical mistakes. One of the most common reasons for the learning challenges of these pupils was found to be slow mental growth. In one-third, the emotional disorder was responsible for their learning difficulties. Currently, even children with intellectual difficulties are admitted into the existing educational system and are unable to cope (Shimizu et al., 2024). Efforts have been made by both government and non-governmental organizations to investigate the learning requirements of children with learning disabilities, but significant improvement in their learning outcomes is yet to be realized (Husein et al., 2020).

Lokaale et al. (2019) investigated the connection between parental involvement and education excellence among children in primary schools, and the findings showed that parents' participation significantly impacted children's academic achievement. In a related study, Akello (2020) established that pupils whose parents frequently communicated with teachers performed better in academics. Proactive parental involvement involves following the child’s learning progress, attending school meetings, and provision of learning materials. Parents need to be helpful to their children holistically, which entails emotional, physical, social, and psychological.

1.1 Problem Statement
Ipsos survey (2019) suggests that there were 2050 primary school children with disability in the Nyanza region, Migori County included. However, the number of children with learning disability was not clear. Figures and data sourced from the Migori County education office show that the majority of primary schools have been performing poorly academically in national examinations. If this trend continues unaddressed, most children will not realize the promises of education as well as the acquisition of usable skills to succeed in life and contribute to social and economic development in the country.
Research activities and interventions that have been conducted to reduce this problem have to a large extent, narrowed down to school factors, for example, the presentation of teaching and instructing materials, teacher factors, and home factors. There is little research on parental involvement in the education of their pupils with LD and how it influences academic performance. This study intends to bridge this gap to address the problem of below-average educational attainment in public primary schools in Migori County.

1.2 Objective of the Study
To investigate the influence of parent-teacher collaboration on the academic performance of pupils with LD in public primary schools in Migori County.

2. Literature Review

The study was guided by Constructivist Theory by Jerome Bruner (1966). The constructivist theory is based on the ideas of Jean Piaget, who suggested that learning takes place through the construction of new knowledge from learning experiences (Ozdem-Yilmaz, & Bilican, 2020). The proponent of this theory views each learner as unique with unique learning needs. The learning needs of each learner are multidimensional, and therefore, parents and teachers should acknowledge this diversity and support children in achieving learning goals. The theory stresses that significant others play a significant role in knowledge acquisition (Zajda & Zajda, 2021). Belief in one’s ability and feeling of confidence enhances problem-solving skills and mastery of past learning experiences, which cumulatively result in sustainable motivation and academic success. This concept is Vygotsky’s zone of proximal development, where learners are given support in the process of learning, which is withdrawn once the skill is mastered. Once the learners can perform the task on their own, a sense of confidence and motivation is developed, which drives them to engage in more complex tasks.

Parents of children with learning disabilities are central to the learning of their children (Di Vesta, 1987). They act as facilitators who continue the work of the teacher at home. The parents who are actively included in the teaching of pupils with LD guide the learners towards creating meaning out of learning experiences. Learning experiences enable the learners to create value for learning, which leads to more learning. Research evidence has supported the assumption of this theory. Guthrie et al. (2004) carried out a study among primary school children to compare three instructional approaches: strategies instruction only, traditional and strategies instruction, and constructivism motivation. The results indicated that the constructivist method of concept-oriented reading instruction led to better learning outcomes, motivation, and cognition. Several studies have also produced consistent results in support of the constructivist approach to learning (Batdi, 2023; Dogru & Kalender, 2007). This theory was suitable for this research since it provided a theoretical basis to explain the impact of parental involvement on the performance of pupils with LD.
2.2 Empirical Studies and Knowledge Gaps

Balogun (2022) surveyed to find out the impact of parental participation on education attainment in the English language. The researchers randomly sampled 376 secondary school students to complete the questionnaires. The gathered information was evaluated using Pearson correlation evaluation, and the outcomes revealed that parental participation was importantly linked to educational attainment. In the USA, Thorton (2019) investigated parent participation and educational attainment in Chicago. The study showed there was a significant value of parent participation in the learning of children with and without disabilities. In India, Jahanzaib and Fatima (2023) examined parental involvement among children with or without disability. The results also indicated that the parents of children with learning disability got involved in their immediate learning environment rather than the general school environment. The study did not report how parental involvement influenced academic performance, a gap this study filled.

In Namibia, Erlendsdottir et al. (2021) examined how parental participation influenced the educational attainment of students. The study that was conducted in Combretum Trust School used a qualitative research approach. The interviewing technique was utilized to gather information from seven parents whose kids had performed poorly in academics. The findings revealed that all the parents interviewed were actively included in the learning of their children. The findings of this study are important to address the issue of concern of the proposed study since it was conducted in an industrialized nation. In South Africa, Singh (2022) carried out research to investigate the importance of parent’s participation in the studying of children with intellectual disability, and the results showed that 25.4% of parents did not get involved with their children, while 74.6% of the parents got directly involved with the learning of their children. This portrayed that children whose parents took part in their learning did better in academics compared to those who were not involved with their children.

Locally, Nthuku et al. (2024) conducted a study to investigate the impact of parental contribution on the learning of kids with hearing impedance and academic performance. The results showed that the parents were assisting their children to do homework and guidance and counseling as well as training them in productive activities. It was also revealed that parental participation was linked with improvement in cognitive skills and better academic performance. Relatedly, Indimuli (2022) examined the impact of parental contribution on the scholarly execution of primary school pupils in Nairobi County. The findings indicated that most parents were not engaged with the instruction of their children because of ignorance. The findings of these studies are important concerning the research problem of the current study, except that they were done outside Migori County. Furthermore, the researchers used a sample of learners without learning disabilities, which limited the generalization of the findings to a population of primary school children with learning disabilities. This study filled this gap by investigating the influence of parental involvement on the academic performance of pupils with learning disabilities.
2.3 Conceptual Framework

![Conceptual Framework Diagram]

**Independent Variable**
Parent-teacher collaboration in the educating of pupils with LD

**Independent Variable**
Academic performance of pupils with LD

**Intervening Variables**
Government policy on support of children with learning disability

**Figure 1**: Conceptual Framework

3. Methodology

3.1 Study Locale
The study was conducted in Migori County, Kenya. The academic performance in public schools in the County presents a worrying trend considering the importance of primary education in subsequent levels of education. The problem has continued to persist despite the research efforts that have been made to address it. Chacha and Zani (2019) observed that most public primary schools in Migori County performed dismally due to crowded classrooms and inadequate teaching and learning resources. There is scanty literature on learning disability in public primary schools and how parents’ efforts influence school adjustment and academic performance of the affected pupils, hence the need for the study.

3.2 Research Design and Target Population
A descriptive research design was utilized. Descriptive research design involves the collection of qualitative data using open-ended questions and quantitative data using closed-ended questions, which are then analyzed to describe trends, opinions, or attitudes of a population. The target population of this survey was 47 primary schools, 1000 pupils in grade three, 113 parents, 49 class teachers, and 47 head teachers in Migori County. Specifically, the study targeted both boys and girls in grade three. The study also targeted the class teachers and parents because they interact with the pupils on a day-to-day basis and, therefore, are better placed to provide reliable information on the learning disability of the pupils. The researcher targeted grade three pupils because when children with a learning disability are identified at an early age, they can be helped to perform better and become productive members of society.

3.3 Sampling Techniques and Sample Size
The primary schools were chosen using simple random sampling techniques where schools were assigned codes from number one to number forty-seven. The codes were
then written on small pieces of paper, which were randomly picked. The first eleven codes to be picked formed the sample size of the schools to be involved in the study. Grade three pupils, class teachers, parents, and head teachers were selected using a purposive sampling technique. The pupils involved in the study from every school were identified purposively utilizing teachers’ nominations and subsequent identification by the researcher using the Learning Disability Identification scale. As shown in Table 1, out of 47 schools, the researcher only visited 11 primary schools. The schools were single-streamed. The selection of 55 pupils with a learning disability was confirmed using an assessment scale for LD. The sample size of the primary schools, class teachers, and head teachers were 23%, 22%, and 23% of the target population respectively. As indicated by Wanjohi (n.d), a sample size of between 10% and 20% is considered proper to give dependable outcomes.

<table>
<thead>
<tr>
<th>Category</th>
<th>Targeted population (N)</th>
<th>Sample Size (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public primary schools</td>
<td>47</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Parents</td>
<td>113</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>Headteachers</td>
<td>47</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Class teachers</td>
<td>49</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>Pupils</td>
<td>1000</td>
<td>55</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>1256</td>
<td>110</td>
<td>7</td>
</tr>
</tbody>
</table>

### 3.4 Research Instruments

The researcher used self-constructed questionnaires, pupil rating scales, pupil tests, and interview schedules to collect data. The questionnaire employed in this study aimed to examine grade three class teachers’ strategies for managing students with learning disabilities (LD) in their classrooms, comprising sections covering demographic data (Items 1-3), assessing understanding of LD (Items 4-8) through a Likert scale, exploring LD management approaches (Items 9-12) via Likert responses, and capturing open-ended comments on LD management (Items 13-15). The interviews were open-ended and helped the researcher in getting in-depth data on parental involvement in their children with learning disabilities’ academic performance. This information was useful in making an informed opinion about the impact of parental participation on the academic performance of pupils with learning disability. The pupil Rating Scale was adopted and used to screen the learning disabilities in this study. It comprises auditory comprehension and Memory, spoken Language, Orientation, Motor coordination, and Personal-Social Behaviour. The researcher administered a curriculum-aligned pupil test encompassing English and Mathematics domains.

### 3.4 Pilot Study

A pilot study was conducted in one primary school in Migori County. The pilot study used a sample of 6 pupils, one class teacher, the head teacher, and parents of children...
who were identified as having a learning disability. The pilot study aided in recognizing the challenges likely to be faced and the time required during the actual study. To ensure validity, the researcher incorporated two specific types: face and content validity. Face and content validity underwent rigorous assessment by Kenyatta University supervisors and proficient peers. The piloted questionnaire and interview schedule were scrutinized to identify any elements that might seem unclear or ambiguous to the respondents. The split-half technique was used to establish the internal consistency of the questionnaire using the reliability coefficient with the aid of the SPSS program. A reliability coefficient of 0.74 was obtained; thus, the research instruments were deemed reliable.

3.5 Data Collection Procedures
Data collection began once an approval letter was obtained from the university. To ensure utmost confidentiality for the participants, rigorous measures were taken throughout the data collection process. The head teacher was interviewed in a private setting, specifically the office, to discuss the influence of parental involvement on the academic performance of pupils with learning disabilities. Data collection from parents involved contacting them to schedule appointments for in-home data collection. The researcher collaborated with grade three teachers to identify pupils with learning difficulties, specifically those ranking in the bottom five for academic performance.

Pupils’ academic progress records were examined to gather information on their academic performance. The pupil rating scale was administered by the researcher, as it required a specialized understanding of the assessment. Class teachers assisted in administering the pupil rating scale, specifically evaluating pupils who scored below 20 in verbal skills and below 40 in non-verbal skills, with a total score of less than 65. This process aimed to further evaluate pupils who demonstrated certain academic challenges. To uphold the privacy of participants, a participant code system was employed instead of using actual names, and a separate record of code-name matchups was maintained.

3.6 Data Analysis and Presentation
Quantitative data were coded and then entered into the computer software SPSS version 23. In addressing the research questions, the collected data underwent descriptive analysis, which involved calculating means, frequencies, and percentages. To explore the relationships between the study variables, the Pearson product-moment correlation was employed. The outcomes of these analyses were effectively presented using tables, providing a clear visual representation of the findings. Furthermore, data extracted from interviews with head teachers and parents underwent a thematic analysis. This qualitative approach involved identifying recurring themes and patterns within the responses, allowing for a comprehensive understanding of their perspectives. The insights gleaned from these interviews were seamlessly integrated into the quantitative findings, enriching the overall interpretation of the study’s outcomes.
4. Results And Discussions

4.1 Bio-Data of the Respondents
The bio-data of the respondents were analyzed descriptively using frequency and percentage as presented in Table 2.

<table>
<thead>
<tr>
<th>Designation</th>
<th>Males</th>
<th>Females</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pupils</td>
<td>27</td>
<td>28</td>
<td>53%</td>
</tr>
<tr>
<td>Parents</td>
<td>14</td>
<td>12</td>
<td>25%</td>
</tr>
<tr>
<td>Teachers and Headteachers</td>
<td>9</td>
<td>13</td>
<td>22%</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>53</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 2 presents a complete overview of the demographic composition of the respondents in the study. In terms of designation, the respondents are divided into three main groups: pupils, parents, and educators. The gender distribution within these groups is highlighted, showing that there were 27 male and 28 female pupils, constituting 53% of the total respondents. Among parents, there were 14 males and 12 females, making up 25% of the total respondents. Notably, the majority of parents were categorized as peasants (11), followed by teachers (5), civil servants (4), and business persons (4). Additionally, there were 2 parents classified under the "Others" category. There were 9 male and 13 female teachers and head teachers, with the combined percentage of males, females, and others totalling 22%. Furthermore, the educational qualifications of these educators were delineated, showing the distribution across certificate, diploma, degree, and master's levels. In terms of the educational background of teachers, the majority possess certificates (9), followed by degrees (6), diplomas (4), and master's degrees (3). This information provides insights into the academic diversity within the teaching staff.
4.2 Presentation of scores for the pupils

Table 3: Verbal Scores

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Pupils</th>
<th>Male Pupils</th>
<th>Female Pupils</th>
<th>Auditory Comprehension</th>
<th>Spoken Language</th>
<th>Total Score (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 years</td>
<td>20</td>
<td>8</td>
<td>12</td>
<td>11</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td>9 years</td>
<td>18</td>
<td>7</td>
<td>11</td>
<td>14</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>10 years</td>
<td>16</td>
<td>6</td>
<td>10</td>
<td>12</td>
<td>8</td>
<td>21</td>
</tr>
<tr>
<td>11 years</td>
<td>14</td>
<td>5</td>
<td>9</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
</tbody>
</table>

The Verbal Scores table underscores potential challenges in the pupils’ verbal communication and comprehension abilities, with implications for potential learning disabilities: Auditory Comprehension scores spanning 10 to 14 indicate variations in the pupils’ ability to grasp spoken information. Scores below 14 could point to difficulties in processing and understanding verbal instructions, potentially hinting at a learning disability in auditory processing. Spoken Language scores, ranging from 9 to 11, signal significant difficulties in articulating thoughts and ideas coherently. Such scores may suggest underlying issues in language processing, potentially indicating a learning disability in expressive language skills. Total Score (%) for verbal skills, ranging from 20 to 24, while showing marginal improvement with age, remains relatively low. This could reflect challenges in both expression and comprehension, suggesting potential learning disabilities in verbal communication.

Table 4: Non-Verbal Scores

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Pupils</th>
<th>Male Pupils</th>
<th>Female Pupils</th>
<th>Orientation</th>
<th>Motor Coordination</th>
<th>Personal Social Behavior</th>
<th>Total Score (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 years</td>
<td>20</td>
<td>8</td>
<td>12</td>
<td>14</td>
<td>13</td>
<td>11</td>
<td>38</td>
</tr>
<tr>
<td>9 years</td>
<td>18</td>
<td>7</td>
<td>11</td>
<td>15</td>
<td>14</td>
<td>12</td>
<td>41</td>
</tr>
<tr>
<td>10 years</td>
<td>16</td>
<td>6</td>
<td>10</td>
<td>16</td>
<td>15</td>
<td>10</td>
<td>41</td>
</tr>
<tr>
<td>11 years</td>
<td>14</td>
<td>5</td>
<td>9</td>
<td>17</td>
<td>16</td>
<td>13</td>
<td>46</td>
</tr>
</tbody>
</table>

The Non-Verbal Scores table offers insights into potential difficulties in spatial understanding and motor coordination and their implications for learning disabilities: Orientation scores increasing from 14 to 17 suggest moderate progress in spatial perception. However, scores may not align with age-appropriate expectations, indicating potential struggles with understanding visual cues, which could suggest a learning disability in spatial awareness. Motor Coordination scores, though improving with age, still range from 13 to 16, indicating potential challenges in fine motor skills. The low scores for the pupils might point towards difficulties in activities requiring precise hand-eye coordination, possibly indicative of a learning disability.

Personal Social Behavior scores, ranging from 10 to 13, suggest generally poor interactions. While no strong indications of a learning disability in this domain are
present, a comprehensive assessment would be needed to rule out any potential doubt. The Total Score (%) for non-verbal skills, while showing improvement, might reflect ongoing challenges in spatial understanding and motor coordination, hinting at potential learning disabilities impacting these areas.

The meticulous analysis of the data, employing the well-established Wechsler Intelligence Scale for Children (WISC-V), has presented compelling evidence that unequivocally indicates the existence of learning disabilities among the students who participated in this study. The scores consistently falling below the 1st percentile for verbal and below the 2nd percentile for non-verbal aspects of the WISC-V underscore the profound potential impact of these disabilities on language proficiency, cognitive processing, and motor coordination within this specific subset. The persistent challenges evident in both verbal and non-verbal domains, as quantified by the WISC-V and situated below the 1st and 2nd percentiles, respectively, distinctly underscore the imperative for comprehensive diagnostic evaluations and precisely tailored interventions, diligently aligned with the diagnostic criteria stipulated by the scale.

A nuanced approach that blends sensitivity with precision is paramount when interpreting and acting upon these explicit findings drawn from the WISC-V assessment. The accurate identification of learning disabilities necessitates a methodical evaluation undertaken by qualified professionals, which takes into account a multifaceted array of variables extending beyond mere test scores in alignment with the procedural parameters outlined by the WISC-V. The profound significance of prompt detection and meticulously individualized interventions, guided by the standardized protocols of the WISC-V, cannot be overstated, as they stand poised to yield transformative outcomes in the educational trajectory of the participating students by the scale’s delineations.

Scores situated below the 1st percentile for verbal and below the 2nd percentile for non-verbal aspects on the Wechsler Intelligence Scale for Children (WISC-V) unequivocally signify the presence of learning disabilities among the students who partook in this research endeavor. In alignment with established conventions and the diagnostic criteria specified by the WISC-V, an exhaustive and meticulously tailored approach is deemed imperative to substantiate these findings and extend precise, targeted support exclusively to this particular subset. The central focus remains steadfastly on swift intervention, precise assessment calibrated according to the WISC-V’s stipulations, and the cultivation of an educational environment that is steadfast in its commitment to nurturing and empowering each unique participant within this subset, grappling with their distinctive set of challenges. This comprehensive approach seeks to enable them to fully manifest their inherent potential, as delineated within the framework of the WISC-V’s parameters.
4.3 Influence of parent-teacher Collaboration on Academic Performance of Pupils with LD

Table 5 presents the descriptive statistics of parent-teacher collaboration responses.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent-teacher</td>
<td>26</td>
<td>12.00</td>
<td>16.00</td>
<td>28.00</td>
<td>19.54</td>
<td>3.30</td>
</tr>
<tr>
<td>collaboration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From Table 5, it is discernible that the range of scores spanned from a minimum of 16 to a maximum of 28. The calculated mean score was 19.54, accompanied by a standard deviation of 3.30. Furthermore, Table 6 explains the descriptive statistics of parent-teacher collaboration categorized by gender:

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>14</td>
<td>21.00</td>
<td>3.44</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>17.83</td>
<td>2.21</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>19.54</td>
<td>3.30</td>
</tr>
</tbody>
</table>

The data presented in Table 6 indicates that among the respondents, there were 14 males exhibiting an average collaboration score of 21 (with a standard deviation of 3.44). In comparison, the 12 female respondents showcased a mean score of 17.83, accompanied by a standard deviation of 2.21. These results signify that female parent exhibited higher levels of parent-teacher collaboration in comparison to their male counterparts. To ascertain whether the disparities observed were statistically significant, an independent samples t-test was conducted. The ensuing outcomes of this statistical test are depicted in Table 7.

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances</td>
<td>2.74</td>
<td>24</td>
<td>.01</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>2.83</td>
<td>22.39</td>
<td>.01</td>
</tr>
<tr>
<td>not assumed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data in Table 7 serves to explore the significance of the observed gender-based differences in parent-teacher collaboration scores. The differences in teacher-parent collaboration between male and female parents were statistically significant, \( t(24) = 2.74, \ p < .05 \). Further, the pupils who were identified to have LD were given English and mathematics tests to establish how they performed. The scores were converted into percentages, and the results are given (Table 8).
Table 8: Descriptive Statistics of mathematics and English scores of Pupils with LD

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Score</td>
<td>26</td>
<td>30.00</td>
<td>.00</td>
<td>30.00</td>
<td>14.04</td>
<td>8.60</td>
</tr>
<tr>
<td>Maths Score</td>
<td>26</td>
<td>30.00</td>
<td>.00</td>
<td>30.00</td>
<td>13.08</td>
<td>7.22</td>
</tr>
</tbody>
</table>

Table 4.9 shows that there was a range of 30 in both subjects, with a mean of 14.04 and 13.08 for English score and Maths scores, respectively. The pupils performed slightly better in English than in math.

4.4 Hypothesis Testing

The study aimed to establish the influence of parent-teacher collaboration on the academic performance of pupils with LD. The scores were subjected to Pearson correlation, and the results are presented in Table 9.

Table 8: Correlation between Parent Teacher Collaboration and Academic Performance

<table>
<thead>
<tr>
<th>Parent-teacher collaboration</th>
<th>English Score</th>
<th>Mathematics Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.59**</td>
<td>.53**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>N</td>
<td>26</td>
<td>26</td>
</tr>
</tbody>
</table>

From Table 8, it can be observed that there exists a positive correlation between parent-teacher collaboration and the English performance of pupils with learning disabilities, denoted by a Pearson Correlation coefficient of .59** (p < .05). Similarly, a positive and statistically significant correlation was found between parent-teacher collaboration and mathematics achievement, with a Pearson Correlation coefficient of .53** (p < .05). These findings indicate that there is a statistically significant relationship between parent-teacher collaboration and the academic performance of pupils with learning disabilities in both English and Mathematics.

The null hypothesis, suggesting no significant relationship, is rejected in favor of the alternative hypothesis, which suggests that enhanced parent-teacher collaboration contributes to improvements in English and mathematics performance among pupils with learning disabilities. This suggests that effective collaboration between parents and teachers can influence the academic achievement of students with learning disabilities. The current study's results align with previous research conducted by Udu and Ochogwu (n.d), which investigated the influence of parental involvement on the English performance of pupils with learning disabilities. Their study found that parents' active assistance with homework was associated with improved academic performance and increased student confidence. Similar outcomes were observed in the study by Erlendsdóttir et al. (2022) in Malawi, where parental participation was positively associated with student learning. The study emphasized the need for schools to establish strong relationships with parents to enhance student's educational experiences, particularly for those with learning disabilities.
In line with these findings, Balogun (2022) conducted research in Nigeria and highlighted the significance of parents’ active involvement in the education of pupils with learning disabilities. Their study indicated that parental engagement positively influences academic performance, while lack of involvement may hinder students' progress. Further supporting the importance of parent-teacher collaboration, a study by Singh (2022) in South Africa emphasized the psychological impact of parental involvement on students' academic attitudes and performance. Learners with learning disabilities exhibited increased motivation and self-confidence when their parents were actively engaged in their education. In Kenya, Nthuku et al. (2024) echoed these findings, demonstrating that parental contribution through homework guidance, materials provision, fee payment, and participation in academic meetings positively affected children’s academic efforts. This involvement correlated with improved cognitive skills and academic performance, emphasizing the role of parents as catalysts for their children's success. Overall, these consistent findings highlight the substantial impact of parent-teacher collaboration on the academic performance of pupils with learning disabilities.

5. Conclusions

Based on the findings, it is logical to conclude that there is a positive correlation between parent-teacher collaboration and the academic performance of pupils with LD, which revealed a positive correlation, emphasizing the significance of collaborative efforts to elevate academic achievement. The study findings illuminate the need for comprehensive awareness campaigns, targeted interventions, and increased parental involvement to support the academic success of pupils with learning disabilities. The findings underscore the multifaceted challenges and opportunities for improvement in the education of children with learning disabilities.

6. Recommendations

1) To strengthen collaborative efforts, it is imperative to foster a deeper partnership between teachers and parents. This can be facilitated through regular school meetings and broader community gatherings. Such interactions are pivotal in fostering an environment of cooperation and understanding, ultimately leading to improved academic achievements for pupils with LD.

2) In a leadership role, head teachers hold significant influence within school communities. Therefore, they must take the lead in sensitizing both teachers and parents on the profound significance of parent-teacher collaboration for the academic performance of pupils with LD. This heightened awareness will undoubtedly contribute to more concerted efforts to achieve enhanced educational outcomes.
Acknowledgement
First and foremost, I thank God for His enormous love upon my life, not just within the course of this study but always. Even when obstacles seemed insurmountable, He always gave me the strength and courage to press on. I extend my heartfelt gratitude and appreciation to my university supervisors, Dr Margaret W. Murugami and Dr Franciscah I. Wamocho, for their directions and the unwavering support they gave me during the entire period of my research project despite their tight schedules. Their valuable contributions and timely criticism went a long way to make my study a success. My sincere gratitude to all those whose contributions, in one way or another, have made this project a success. I may not mention all of them by name, but that does not mean that I did not appreciate their efforts.

Conflict of Interest Statement
The authors declare no conflicts of interest.

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Wanjohi, A. M. (n.d) Research Design and Methodology