

Effectiveness of Co-Teaching Strategy on English Composition Performance among Standard Seven Learners with Hearing Impairment in Nairobi City County, Kenya

By

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Abstract

The purpose of this article is to examine the effectiveness of co-teaching strategy English composition performance among Standard Seven learners with hearing impairment in Nairobi City County, Kenya. The performance of learners with hearing impairment in English composition has been poor and some researches has linked it to many factors among them teaching strategies. However, this article will specifically look at how co-teaching is a factor in the performance of English composition by these learners. The article is grounded on Knowles' theory of learning guides. The study employed a quasi-experimental research design with a sample population of 30 participants. Data was collected through composition writing tests, in-depth interview guide, structured and unstructured questionnaires, and a document analysis guide. Quantitative data was analysed using a Statistical Package for the Social Sciences (SPSS), descriptive statistics and T-test. Qualitative data from the interviews was transcribed, reconstructed, and collapsed into emerging themes. Analysed data was presented in narration form and direct quotations. The study findings showed that co-teaching was effective for better and quick improvement of English composition writing by learners with hearing impairment. A one-sample t-test was performed to compare the mean co-teaching strategy against the Pre-Written test mean. The mean value of Pre-written test ($M = 3.262$, $SD = .791$) was not significantly different than the co-teaching strategy; $t(17) = .498$, $p = .001$. The study concluded that through co-teaching teachers balanced individual and group needs in a better way. The co-teaching method also ensured that the teachers adapt instructional materials, providing timely feedback, and encouraging peer collaboration. The study recommended that teachers be exposed to in-service training on how to carry out co-teaching for better results in the study area.

Key Words: Co-Teaching, English Composition, Strategy, Learners, Hearing Impaired, Kenya

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Introduction

English is universally accepted in many countries as a mode of communication. It is the only language in the world taken as a lingua franca, and that is how it has made international communication possible (Wang, 2018). English language has more vocabulary as compared to any other language. It has an estimated two million words and a good foundation for building on literature. English can be spoken by one in every seven human beings in the world. Also, majority of the books in the world and almost three out of four international emails are written in English (Awori, 2010; Chabari & Awori, 2017). Article 7(2) of the Kenyan 2010 Constitution makes English an official language of the Republic and it is therefore trained as from primary, secondary and continues till the tertiary level (The Constitution of Kenya, 2010). Given these facts, mastery of English language is critical in the existing education systems in the world as well as in Kenya (Binita, 2012). Equally, learners with hearing impairment need to know English to communicate, read, and write.

The pedagogy employed by the teacher is significant in catapulting performance in any subject. For instance, a learner may like or hate the subject if the strategy employed is not comprehensible. In addition, learners' performance may change positively or negatively based on the teaching strategy employed on a given topic. According to Otieno (2018), the success of learning and writing English compositions for learners with Hearing Impairment (H.I) is hinged on careful selection of lesson delivery tool, the teacher preparation and feedback from learners with the same problem. For this reason, a teaching strategy needs to be adequate to harmonize learning for the realization of the excellent performance of the learner.

Co-teaching assists in the social development of learners with disabilities and increases their reading achievement. A special educator may be helpful in the identification of specific learning needs. Most of the time, co-teaching is used to assist with the inclusion of learners who have mild mental retardation, behaviour disorders, and disabilities in learning in the United Kingdom (Friend & Hurley-Chamberlin, 2017). The regular teacher is the main teacher while the special teacher is the co-teacher. The main teacher gives a topic of discussion and guidelines on the expected topic. The teacher highlights the introduction, body, summary and conclusion. The co-teacher goes round assisting and guiding learners to write according to the main teacher's instructions, assists in moulding handwriting and controlling the class. This strategy lacks in Kenya due to shortage of human resources.

There are well-established reasons why learners with hearing impairment do not perform better in composition writing as compared to their peers without hearing problems. Clark, Gilbert, and Anderson (2011) postulate that signing, writing and reading English while establishing a language for communication purposes is found difficult for learners with hearing impairment. Gudyanga (2014) supports this notion as Kihingi (2008) and Munyua (2009)

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observe that barriers to good performance in academics for learners with hearing impairment include learners' inability to communicate. The scholars argue that learning settings faced with communication challenges present difficulties to learners with hearing impairment. Their findings contradict those of Yabbi (2013) and Saitoti (2005), who attribute poor performance to socio-economic and cultural challenges in their researches.

Wambui (2017) notes that inappropriate instructional strategies, low motivation of teachers, and significant communication challenges, including the language of instruction do not favour learners with hearing impairment. These are vectors of poor performance when it comes to academics, and English composition writing inclusive. The researcher recommends the teacher's intervention as learners with hearing impairment also have difficulties in comprehending written words. They also develop writing skills slowly as compared to learners with good hearing. They score less on tests because of their inability to contextualize the language and construct sentences. Therefore, teachers must find the best teaching strategy to enable learners to perform well in their national examinations. Given this background, our study sought to investigate the effectiveness of selected teaching strategies on English composition performance among learners having hearing impairment in primary schools/units in Nairobi City County.

Statement of the Problem

According to article 43(1) of the Constitution of Kenya, every person has a right to education (Constitution of Kenya, 2010). Special education is important for human capital development. It prepares individuals to be self-reliant (Sessional Paper of 2005). Article 4(a) of Basic Education Act, states that, every child has a right to compulsory and free education (Education Act, 2013). Learners with H.I have therefore a right to be taught well and succeed in English composition writing not only for their own individual development but for societal development of human capital. The ultimate success of learning writing English composition is therefore perhaps hinged on the teaching strategies employed by teachers. Learners with hearing impairment need competent and efficient teachers who will apply appropriate strategies coupled with infusion of modern working tools and technology in teaching English composition.

For Learners with H.I, English language acquisition is more often assessed through written language since they have a problem with the spoken language. The aforementioned assessment tool poses a challenge to learners with H.I. since their signed language is different from spoken language. Their signed language (KSL) has a different language structure of Object, Subject, Verb (OSV) such as *MOTHER MINE MARKET GO* compared to the regular English grammar that follows the Subject, Verb, Object (SVO) such as *My mother is going to the market*. Kodiango and Syomwene, (2016) argue that two structures confuse learners with their hearing impaired and many a time affects their composition writing thus making them to be penalized in their National Examination (KCPE).

The National Performance of English composition for learners with H.I. in Kenya remains poor (K.I.C.D. 2017). It implies that other crucial factors related to English composition writing such as effective teaching strategies, adequate physical facilities, adequate human and teaching resources and motivation for both the learners and the teachers deter learners' performance. This needs to be studied in the Kenyan context. Although the government has devised several strategies for teacher capacity building, such as in-servicing teachers in teaching

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English language, revising and improving the curriculum to enhance learner's performances, their efforts have been futile in that, performances in English composition for this kind of learners still lags behind with Schools/Units in Nairobi scoring the following in the subject: In 2020, units White, Blue and Red in Nairobi scored a mean of 34.05, 42.88 and 30.5 respectively.

Specific Objective

- (a) Assess the extent to which Co-teaching strategy affects English composition performance among learners having hearing impairment in Nairobi City County.

Hypothesis

The hypothesis for the study was a null hypothesis:

H₀¹: There is no significant relationship between Co-teaching Strategy and English Composition performance among Standard Seven Learners with Hearing Impairment.

Literature Review on Co-teaching

Thousand, Villa, and Nevin (2004) describe "co-teaching" as, two teachers who share a teaching platform for students in a similar classroom. Co-teaching is achieved in varied ways, mainly based on educators and schools (Leppo, Cawthon, & Bond, 2013). It is primarily based on encouraging learners to improve their language and develop content for a sustainable and exciting learning experience.

In New Jersey, (Ramly, 2021) performed a large-scale survey of college districts. Data collected found out that teachers hooked up: (a) co-teaching becomes a valued teaching method with shared benefits, (b) co-teachers have installation and maintain specific duties, (c) teachers' education must consist of co-teaching talents, and (d) several of the college-primarily based helps getting used and have been now no longer as beneficial as anticipated. Rice and Zigmond (2022) *Co-Teaching in Middle School Classrooms Under Routine Conditions in Australia and North America*. The researcher used time sampling methods. While the current study used purposive sampling method. Australian and American teachers said similar ideals linked to the fee of college-extensive recognition, the advantages of co-teaching, the need for expert and private compatibility and the placement of unique schooling educators.

According to Dieker and Murawski (2012), there are 5 versions of the co-coaching approach: the first is lead and support. The strategy entails one teacher directing and teaching the pupils while the co-teacher gives valuable resources to facilitate the learning process. The second is station teaching. This approach divides pupils into blended companies and groups at study room stations with different teachers. The third, parallel teaching, involves teachers collectively teaching the students in turns. However, every teacher might also give tests and awards to the pupils. The fourth is alternative method of co-teaching: One teacher teaches a small group of pupils. The teacher teaches and re-teaches, or improve pupil's understanding of the subject matter, whereas the extra teacher educates the larger group. Finally, team teaching both divides the making plans and guidance of pupils similarly in a coordinated fashion.

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Albahusain (2022) found out that Co-teaching at elementary level contributes to better performance. In an interview, one of the teachers surveyed and was responsible for pull-out English as a Second Language (ESL) teacher for five years in a foundation school confessed that switching to co-teaching gave the best results. The respondent explained, "When teachers work together and combine their efforts, every learner improves". Other improvement noticed include better outcomes for learners learning, full participation for all learners in the classroom, and improved feelings of self-efficacy for the teachers since it fosters collaboration.

Ramly (2021) investigated "*Co-Teaching Approaches: Hearing Impaired Students in Mainstream Class*". The scholar identified that a type of co-coaching tactics had been applied in rural teaching websites. The study revealed that co-teaching had a distinct stage. It was done over one year, during which teaching strategy was under observation. All the pupils' instructors taking part in the rural teaching adopted the One Teaching/One Assisting version during their teaching. The learners' teacher and the assisting teacher led the sessions' teaching. The teaching was organized in such a way that the assisting teacher and the principal teacher mutually deliberated on the subject's instructions. They divided topics among themselves based on their favourite topics. The result was excellent, and the strategy addressed the problem of the same instructor's fame because each instructor took an active role in the academic presentation. The study was done within one year while our study was carried out within 3 months.

Bovill *et al.* (2016) investigated the co-teaching alternative approach. The study was conducted among 130 college students. They administered experimental research design to determine the effectiveness of the co-teaching alternative approach where a few students were assembled for the test after going through the training with the co-teaching alternative approach. The study showed that the strategy brings out maximum teaching skills among teachers as they take turns in teaching. Besides, it proved a powerful technique for college students, enhancing class participation. Ngozi and Akudolu (2015) used a similar approach for deaf pupils. The scholars observed that the strategy enabled the teachers to do pre-coaching, re-coaching, and making visual-image changes for the deaf or learners with difficulty in hearing. It enhanced students' mastering skills and content processing demand, enabling them to have extra time for leisure.

Bovill, Cook-Sather, Felten, Millard, and Moore-Cherry (2016) explain that institutional policy can affect co-teaching effectiveness. For instance, they are incorporating new applications into a faculty, making the adjustment that sought to make changes in faculty. The action may influence the teacher's attitudes and corporation with the co-teacher and, in turn, influence how teaching is done. In addition, it was observed that bringing a new teacher may influence a learner's academic performance if the initial teacher is friendly. It takes time for pupils to become fond of the new teacher.

In co-taught classrooms, newcomers are given top-notch training with suitable resorts from the viewpoints of a teacher (Albahusain, 2022). Heisler and Thousand (2021) state that teachers handling learners with disability have circumvented the co-teaching approach. The scholar notes that it is never appreciated by the learners living with disability. In addition, the scholar argues that co-teaching is good for youngsters who do not meet the standards for special schooling but have mastering capabilities. All pupils take advantage of instructors in the school

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room and the extraordinary talents that every educator passes over, be it specialized mastering strategies and methods or content material.

Co-teaching complements various teaching strategies which can assist learners living with disabilities. It improves their classroom engagement and overall performance (Albahusain, 2022). In addition, partners produce a unique learning experience due to shared dedication, which reduces instructor isolation and uncertainty, enhancing learning and effectiveness (Peng, 2019). The strategy advocates elucidate that there is task satisfaction among teachers, school morale, and empowerment commonly felt by the teachers who teach using the strategy (Stortenbecker, 2021). Freedman (2010) observed that the benefit is that it inspires the teacher to give their best and boost the best in their training. The studies have supported the adulation prompting more studies to be done.

Chabari (2017) observed several teaching strategies in the study, *Strategies Used in Teaching Written English Language to learners with Hearing Impairment in Meru County, Kenya*. However, teachers lacked superior knowledge of a co-teaching process that would improve writing amongst learners facing the challenge of hearing. The research was conducted among instructors of English, learners having hearing impairment, and the school head teacher, totalling to 14 participants. Meru was determined as the best locality for surveying, while that on the ground was done in Nairobi City County and targeted 30 participants. Our study focused on co-teaching as a strategy and the other two selected teaching strategies, namely group and peer teaching strategies.

Co-teaching has been confined to observations, survey research, case research and reviews done by teachers concerned (Dieker, 2016). The National Study of Inclusive Education (Ramly, 2021) confirmed that the exercise of inclusion is spreading in schools with the adoption of co-teaching. One could assume volumes of the best research on inclusion methods, including co-teaching. However, best-posted studies are yet to be heard. "Comprehensive application opinions of inclusion are rare. Only scholars with disabilities are evaluated regularly.

Most of the studies on co-teaching have been anecdotal. Example, Albahusain (2022) led a co-teaching study at Midwest United States (US), the study was carried out over a period of three-year in elementary school. It analysed teachers' viewpoints on co-teaching and its effect on English language as a Second Language (ESL) learners' improved in reading. The results show that instructors found this a positive approach to teaching and ESL learners` continued to improve with co-teaching in the classroom.

Marks and Eilam (2017) observed that teachers who engage in co-teaching strategies often face challenges related to time management and balancing the needs of diverse learners. These time constraints can affect the amount of attention and support teachers are able to dedicate to individual learner's compositions, potentially impacting learners' performance. The other challenge with co-teaching is that a partnership with unique teaching skills and content material may overshadow the other instructor. It prevents collective popular teaching among them. According to Friend and Cook (2007), this problem can be addressed by combining hearing learners with those without hearing.

A study by Aristizábal, Cano, Collazos, Solano, and Slegers (2017) on co-teaching among LHI in lower primary school grade 3 pupils, found that troubles for instructors are clustered around the three most important areas when using co-teaching strategy: roles and

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responsibilities, results and the character of collaboration. Motivation in the collaborative process itself and the positive outcomes of inclusive co-teaching is a challenge. Conflict can arise among teachers during co-teaching, the student teacher and institution teacher. Aristizábal, Cano, Collazos, Solano, and Slegers (2017) observe that there have been disagreement outcomes regarding the effectiveness of co-teaching. It requires the instructors to be well versed with skills in teaching for quality results if not it is bound to fail.

Theoretical Framework

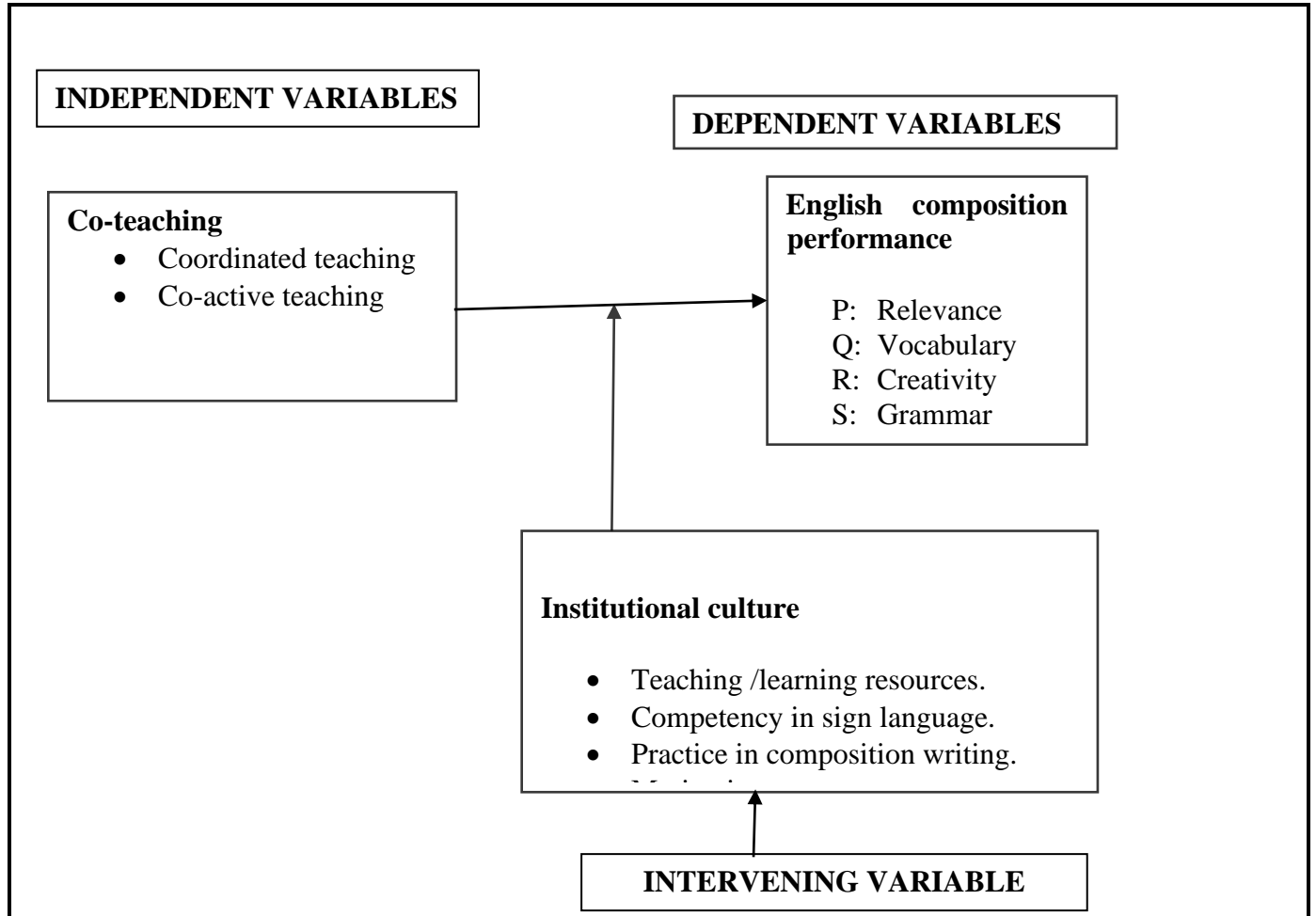
This article is grounded on Knowles' Theory as advanced by Donahue (2015). The theory has five central tenets namely Self-concept, learner's experiences, readiness to learn, orientation to learning and motivation of learners. According to Darden (2014), teaching strategies should be learner-centred with the teacher facilitating and managing the learners in line with the five tenets of this theory. This theory calls for learner centred methods of teaching that are relevant, self-directed, and self-motivated. Scholars have recommended that teaching strategies such as co-teaching which are child-centred and relate to the learner's environment.

In as much as this theory is relevant and applicable in the teaching and learning environment, critics argue that lack of experience in cognition among learners with hearing impairment could jeopardize its application in teaching strategies (Yonge, 2013). Kodiango and Syomwene (2016) concur with the notion that H.I learners are rarely able to use their cognitive ability to relate to their life experiences, thus find it difficult to write composition and answer comprehension questions. The scholars further explain that learners with hearing impairment lack motivation due to inability to speak the language they use as the theory suggests. However, the theory still remains relevant since it guided the current study which acknowledges that teachers' teaching strategies are essential in all learners' education.

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Conceptual Framework

Figure 1.1: Relationship between variables



Source: Researcher's Creation, 2021

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Research Methodology

A quasi-experimental research design was employed in this study. The research design allowed the researcher to measure the dependent variable before and after introducing the treatment (Prince, Jhangiani & Chiang, 2015). The difference between the scores indicated the change after treatment. The researcher administered quasi-experimental design utilizing both pre-tests and post tests to determine the change. According to Krishnan (2022), the method has the benefit of allowing the researcher to evaluate the scores of the dependent variable before and after intervention without engaging a control group.

The design was relevant because it allowed the investigator to measure learners' performance in English composition writing before treatment and then compared the differences after treatment. Qualitative data was collected using pre-tests and post-tests results. The pre-test allowed the investigator to collect data before treatment. After the introduction of the three teaching strategies, the investigator requested teachers to carry out pre-test and post-test to the selected sample to assess if the intervention had resulted to improved educational outcome among the learners.

The design allowed the investigator to acquire information concerning the status of the real existing instructing strategies concerning learners' performances, especially by analysing the current systems concerning English composition writing. The researcher found the design most applicable as it was applied to the whole class of learners without dividing them into two groups as this would have made the controlled group to lag behind while teaching the experiment group which is unethical. The researcher used quasi experimental design to enable her evaluate the treatment effectiveness.

Target Population

In this study, learners with Hearing Impairment, Head teachers and Teachers in H.I schools in Nairobi were targeted. The total target population for the study was 180 participants. The participants were selected from a population encompassing Aga Khan, Racecourse, Njathaini, Joseph Kang'ethe, Dagoreti, Thawabu, Martin Luther, and Wangu schools.

Sample size and Sampling Techniques

The study employed non-probability sampling techniques. Purposive sampling techniques were employed to sample schools, teachers, head teaches in schools and learners to participate in the study. A sample size of 32 participants were chosen to take part in the study. The sample size was drawn from 3 schools that met the criteria set by the researcher. All the heads heading the three sampled schools were selected. Given a limited number of respondents, the researcher chose to include all teachers responsible for teaching English composition in Standard Seven from each school, totalling to three teachers. To obtain the sample size, all 26 class seven learners in three schools were purposively sampled. The information on sample size and sampling technique is demonstrated in Table 1 below.

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Table 1 Sample size

School	No of Trs	HT	No of Trs of English	Total School Population	Class 7 learners	Sample technique	T/sample
Joseph Kang'ethe special unit for H. I	5	1	1	35	6	Purposive	8
Aga khan unit	5	1	1	65	12	Purposive	14
Racecourse unit	4	1	1	45	8	Purposive	9
Total	14	3	3	145	26		32

Source: Field Data, 2022

Data collection Instruments

The researcher employed the following research instruments: written tests from past Kenya National Examinations Council (KNEC) papers, questionnaires, an interview guide, document analysis guide and participant observations.

Study Findings on Co-Teaching Strategy

The study found out that teachers rarely use co-teaching in their profession. The learners indicated that they find co-teaching enjoyable and yielding good results. However, when teachers were asked how they find it as a strategy of teaching English composition writing, one of the teachers commented that it does not help build vocabulary for learners with hearing impairment.

Teacher C responded:

It does not help much. Since most of the words are always vocabularies to learners with hearing impairment (Teacher C, unit Yellow 2021).

The study found out that the availability of teachers affects co-teaching. Teachers teaching English were few, as a result the head teacher found it difficult to assign more than one teacher per class to teach English, this was revealed through an interview with the head teacher. Besides, teachers lack some training to handle learners with hearing impairment. For instance, in the three units, the head teachers had Masters degrees. But, had not attended any special training courses in SNE, which made it hard to allow the teachers to engage in co-teaching strategy. On the contrary, most of the teachers teaching composition writing had attended special education training with a number of seven trained in the area of hearing impairment and five trained in the area of special needs thus making a total of twelve teachers trained in the area of SNE. Table 4.20 presents data on frequency of co-teaching in English composition.

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The study examined how regular; learners were taught with more than one teacher at the same time. Learners were asked how frequent they were taught by more than one teacher. Table 4.20 presents data of learners' on how frequent they were taught by one teacher. Their responses were as follows: never 6 (25%), rarely 11 (45.8 %) and sometimes 7 (29.2%).

Table 2: Frequency of co-teaching in English composition writing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	6	25.0	25.0	25.0
	Rarely	11	45.8	45.8	70.8
	Sometimes	7	29.2	29.2	100.0
	Total	24	100.0	100.0	

Source: Field Data, 2021

These findings indicate that, despite the vivid evidence of the benefit of co-teaching, teachers rarely use it to teach composition writing to learners with hearing impaired.

The examined the experience of learners when taught by more than one teacher at ago. They were asked their experiences when taught by more than one teacher. Learner's responses on their experiences were compiled in Table 4.21:

Table 4.21: Learners experience when taught by more than one teacher

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very interesting	13	54.2	54.2	54.2
	Interesting	8	33.3	33.3	87.5
	Not interesting	3	12.5	12.5	100.0
	Total	24	100.0	100.0	

Source: Field Data, 2021

The researcher taught with the regular teacher to observe learners' behaviour. The learners felt very excited during the lesson and were active and attentive. Learners indicated that they were able to learn better and understand well when taught by more than one teacher. Their responses were as follows: Very interesting 13 (54.2%) Interesting 8 (33.3%) and Not interesting 3 (12.5%). Further, examination was carried out to determine if there could be an improvement if co-teaching was implemented. The Table 3 shows the result.

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Co-Teaching Descriptive Statistics

Table 3: Co-teaching test results

	N	Minimum	Maximum	Mean	Std. Deviation
Co-Teaching Strategy	18	8	20	15.22	3.919
Relevance	18	3	9	6.00	1.847
Vocabulary	18	3	7	4.44	1.199
Creativity	18	1	5	3.06	1.056
Grammar	18	1	3	1.72	.669
Valid N (list wise)	18				

Legend: Relevance = 20, Vocabulary = 10, Creativity =5, Grammar =5 and Total = 40

Source: Field Data, 2021

The researcher asked the regular teachers to test learners after assisting in teaching. The outcome revealed that general writing composition performance was slightly better than the pre-test assessment. Relevance (M=6.00, SD=1.847), Vocabulary (M=4.44, SD=1.199), Creativity (M=3.06, SD= 1.056) and Grammar M=1.72, SD=0.66). This indicates that using co-teaching strategy yields better results.

To further determine the impact of co-teaching strategy on the English composition writing performance, a paired sample T-test was administered alongside a pre-written test, and the findings are as in Table 4 and Table 5.

Co-Teaching Paired Samples Statistics

Table 4: Co-teaching paired sample statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-written test	11.53	17	3.262	.791
	Co-Teaching Strategy	15.00	17	3.921	.951

Source: Field Data, 2021

A one-sample t-test was carried out to compare the mean of co-teaching strategy against the Pre-Written test mean. From Table 4.23, the mean value of Pre-written test (M = 3.262, SD = .791) was not significantly different from the co-teaching strategy: Table 4.24, $t(17) = .498$, $p = .001$. This result reveals that, learners with hearing impairment’s performance will significantly differ if co-teaching strategy is used. However, this could be even better if the strategy is used for a long period of time. Findings confirm Heisler and Thousand (2021) study which consents that co-coaching strategy is collaborative. The scholars describe the technique as a unique strategy that inspires learning amongst those with disabilities. Murawski (2012) has defined co-teaching as “substantively different” from a solo-taught elegance with remote services. Our study found out that co-teaching is significant in handling learners with hearing impairment. The findings conform with Becker (2021) study which found out that co-coaching was significant in teaching learners in particular and regular schools as a way of mainstreaming.

To further assess the presence of a correlation, a paired-sample correlation analysis was conducted. The data provided in Table 5 sheds light on the paired sample correlations and differences between pre-written test scores and the scores achieved through the implementation of the Co-Teaching Strategy.

Table 5: Paired sample correlations

		N	Correlation	Sig.					
Pair 1	Pre-written test & Co-Teaching Strategy	17	.498	.042					
		Paired Differences							
			95% Confidence Interval of the Difference	Sig. (2-tailed)					
		Std. Deviation	Lower Upper						
Pair 1	Pre-written test - Co-Teaching Strategy	3.471	3.642	.883	-5.343	1.598	-3.929	16	.001

Source: Field Data, 2021

An in-depth analysis and interpretation of these findings are elaborated upon below:

The calculated correlation coefficient of 0.498, observed between pre-written test scores and Co-Teaching Strategy scores, indicates a moderately positive correlation. This implies that there is a tendency for these scores to increase in tandem, signifying a positive relationship. It's noteworthy, however, that this correlation, while evident, does not exhibit exceptional strength.

On average, learners displayed improved performance when the Co-Teaching Strategy was employed, as evidenced by an average difference of 3.471 points. Nevertheless, there was notable variability in these performance differences, as indicated by a standard deviation of 3.642. This variability underscores the fact that individual responses to the Co-Teaching Strategy varied among participants.

To examine the statistical importance of the score differences, a paired-samples t-test was executed. The resulting t-value of -3.929, along with a p-value of 0.001, signifies a statistically significant difference between the scores obtained from pre-written test and those achieved through Co-Teaching Strategy.

These findings reveal that the Co-Teaching had positive impact on learners' English composition performance. Learners generally exhibited improved performance when this strategy was employed, compared to their performance in the pre-written test. While the moderate positive correlation indicates a relationship between the two sets of scores, it is essential to acknowledge that various other factors may also influence learner performance. Consequently, further exploration and researches are warranted to gain more understanding of specific facts of Co-Teaching Strategy which contribute to this improvement. Also, identifying areas for potential refinement within the strategy may prove beneficial for enhancing its overall effectiveness.

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Moreover, our study examined the test scores after co-teaching strategy, the findings are shown in Table 6:

Table 6: Test scores

Test score out of 40		Frequency	Percent
Valid	8	1	5.6
	9	4	22.2
	10	4	22.2
	11	1	5.6
	12	3	16.7
	13	1	5.6
	14	1	5.6
	18	1	5.6
	20	1	5.6
	Total	17	94.4
Missing	System	1	5.6
Total		18	100.0

Source: Field Data, 2021

Hypothesis Testing

HO1: There was no significant relationship between teaching Strategies' Effectiveness on the performance of English composition among Standard Seven Learners having Hearing Impairment. The null hypothesis in the research was used to determine whether there was a relationship between teaching strategies and improved English composition writing performance among learners with hearing impairment. In ascertaining the relationship, Pearson product moment correlation was utilized. The findings are as follows:

Table 7: Pearson product moment correlation

Subject Mean	Composition	Score
Correlation score	Pearson correlation	1
.341**	sig.(2-tailed)	.000
Subject Mean	Pearson correlation	.341**
1	sig.(2-tailed)	.000

** Correlation is significant at the 0.01 level (2-tailed) (Source Field Data, 2021).

Source: Field Data, 2021

The study results revealed that there was a strong and positive relationship of ($r=.341, P<0.01$). The results revealed that teaching strategies influenced composition scores. The findings

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concluded with study findings by Gudyanga (2014) and McMaster and Lynn (2016), who established that teaching strategies like pairing weak learners with bright learners, promotes inclusive learning and enhances performance.

Summary of Findings

Despite the vivid evidence of the benefit of co-teaching, teachers rarely use it for English composition writing. The study found out that the availability of teachers influences co-teaching. Scarcity of teachers was noted. The head teachers reported that they find it challenging to assign two teachers to teach the subject due to inadequate human resources. In the Co-teaching experiment, learners felt excited, attentive and active during the lesson. Learners indicated that they could learn and understand better when two teachers teach them. The findings indicate that using co-teaching strategy yielded better results.

A one-sample t-test was performed to compare the mean of co-teaching strategy against the Pre-Written test mean. The mean value of Pre-written test ($M = 3.262$, $SD = .791$) was not significantly different from the co-teaching strategy: $t(17) = .498$, $p = .001$. This result indicates that if the co-teaching strategy is used to teach composition writing, there will be a significant difference in learners' performances.

Conclusion

Based on the results, our study concludes that peer-assisted strategy, group teaching, and co-teaching are participatory strategies. All can produce good results. However, peer-assisted strategy and group teaching strategy can only produce better results after a long period of time and co-teaching is the most effective strategy, which can yield better results. Both teaching strategies are profitable to learners with hearing impairment. Our study concludes that, due to lack of awareness among the teachers, they could not diversify several teaching strategies. The teachers also have a negative attitude towards participatory teaching techniques. They assume that they consume a lot of time.

Due to lack of frequent writing practice in composition, some learners had developed a negative attitude towards English composition writing. This was observed when they were asked to state if writing composition is essential. The current teaching strategies and inadequate teaching staff could be partially blamed for the current poor performance in English composition writing

Recommendations

Objective three sought to assess how co-teaching strategy affects the English composition writing performance among Standard Seven learners with hearing impairment in Nairobi City County. The findings reveal that learners were rarely taught by more than one teacher. Lack of enough human resource hindered the implementation of the strategy. Learners enjoyed being taught by more than one teacher. A post-test carried out after employing co-teaching revealed that general writing composition performance was better than the pre-test assessment. The co-teaching strategy proved ineffective due to lack of enough human power. Hence, it is

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recommended that the government and crucial stakeholders of learners with hearing impairment should ensure enough human resources to handle their education effectively.

The study also recommends that teachers should constantly undertake professional development such as in-service and short training on emerging strategies in teaching English composition writing. Above all the government should regularly initiate training for teachers on how to teach composition writing to learners with hearing impairment. Our study recommends using a co-teaching strategy as a quick way to enhance learners' performance in composition writing within a short period of time. Other recommendations are, teachers have to incorporate different strategies in teaching composition writing. Productive strategies should be given more attention when teaching composition writing to learners with hearing impairment.

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