



RESEARCH ARTICLE

INTERVENTION STRATEGIES AND THEIR EFFECTS ON PERFORMANCE OF COMMUNICATION DISORDER LEARNERS IN MAINSTREAM PRIMARY SCHOOLS

¹Paul Kipkorir Mutai and ^{2,*}Gilbert Kipkoech Tonui

¹Maasai Mara University, P.O Box 861, Narok

²Moi University, P.O Box, 3900, Eldoret

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ABSTRACT

The purpose of this study was to evaluate intervention strategies and their effects on performance communication disorder learners in mainstream primary schools in Kericho County, Kenya. A descriptive survey research design was adopted in a population which comprised of class three learners. Stratified sampling was conducted followed by simple random sampling were used to select the sample where 384 learners and 48 teachers and head teachers were selected. A face to face interview with class teachers and questionnaires for teachers and learners was used to collect the data for the study. Internal consistency was used to test for the reliability using the Cronbach reliability index. For this study the instruments achieved an alpha reliability coefficient of 0.733 and therefore acceptable as appropriate for use in further analysis. Data analysis was done using both descriptive and inferential statistics with aid of SPSS computer package. Content analysis was used in processing of qualitative data from the open ended questions while multivariate regression model was used to determine the relative importance of each of the variables with respect to educational performance of learners with communication disorders. Then study findings were presented using frequency tables and figures. The results of the study indicated teachers integrate learners with CD with the learners without CD in their sitting position and discussion groups. However, teachers need to be given more skills on interventions of CD learners in mainstream classrooms in order to give all the learners an equal chance of participating and attaining high achievement in their academics. The findings are useful to the Special Needs Education and its various organs in formulating appropriate mechanisms that will ensure that performance of CD learners is significantly improved for assurance of quality to learners, parents, teachers and other stakeholders.

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INTRODUCTION

A communication disability (CD) is an impairment in the ability to receive, send, process, and comprehend concepts or verbal, nonverbal and graphic symbol systems. A communication disability may be evident in the processes of hearing, language, and/or speech. A communication disability may range in severity from mild to profound. It may be developmental or acquired. Individuals may demonstrate one or any combination of communication disabilities. A communication disability may result in a primary disability or it may be secondary to other disabilities (American Speech-Language-Hearing Association, 1993).

Intervention Strategies

Literature on communication and learning supports the idea that sharing and communicating information with peers or adults increases the potential for learning and retaining

*Corresponding author: Gilbert Kipkoech Tonui,
Moi University, P.O Box, 3900, Eldoret.

information (Glozman, 1987). Sharing notes or ideas in study groups or discussions is often considered more effective than simply studying or learning individually. Communicating information in order to learn requires the use of appropriate social-communication skills to express one's ideas and absorb those of others (Greenwood *et al.*, 2002). Children with communication disorders and weak social communication skills are again at a disadvantage to benefit from sharing and communicating educational information (Mwihaki, 2003). Therefore teachers are needed to providing support in the classroom related to what an individual is doing with the speech-language pathologist (Hammer, 2009). Collaboration between the speech-language pathologist, classroom teacher, and family is needed in order to develop and support meaningful and effective interventions. The communication within this team should be seamless. The speech-language pathologist is in charge of what therapies are used and should communicate practice activities or strategies for teachers and parents to utilize during their time with the child. A child with communication disorders needs continuity throughout the avenues of his daily interactions with others in order to make

use of the strategies and techniques he learns in therapy; if he never uses them in authentic situations, then the purpose of therapy is defeated (Fleming, Miller and Wright, 2001). Using the literature on young children and adults, teachers can use aspects of the treatments described regularly in the classroom as deemed appropriate to improve outcomes for elementary learners. Music and rhythmic speech can be utilized when learners read passages chorally as a class or when learners sing songs, even if those songs are not academic. Choral reading and singing are ways to incorporate all learners and still aid those with communication disorders in developing appropriate rate and rhythm. Cueing systems and self-awareness can play a part in the general education classroom for elementary learners with communication disorders if they are part of the treatment implemented by the speech language pathologist. For instance, teachers could act as encouragers of various cues during class and could provide feedback related to errors when appropriate during class. Seating the learners closer to the teacher may also be preferable to provide for quick connection. Researchers of young children and adults mentioned above suggest the use of cueing systems and encourage self-awareness to aid the individual in realizing the current and desired actions (Stuart, Wright, Grigor and Howey, 2002). Communication skills are an aspect that general elementary teachers can also incorporate based on the research provided. Communication can be achieved in different ways in the classroom, and, depending on the learners, may be implemented in various ways (Stuart, Wright, Grigor and Howey, 2002). Alternate forms of communication suggested for use with adults include communication books, drawing systems, and gestural systems. Each of these could be practiced and utilized as a regular part of the classroom in order to help a learners with communication disorders to be unlimited by speech challenges; conversely, a teacher would not want to discourage a learners' speech. Role play and practicing conversational language, like less-formalized script training, could be implemented in the classroom as well. Learners could practice together and work as partners, perhaps as a station or center activity. Elementary learners tend to enjoy interacting with one another, even if they are given specific role play guidelines.

Conversation partners may be an option depending on the grade level of learners' and speech skills of the learners with communication disabilities in the classroom. Modeling, repetition, and word familiarization can be addressed by elementary teachers in a way that aids learners with communication disorders in the general education setting. Modeling via the "I do, we do, you do" strategy, suggested by ASHA (2007), is beneficial for many learners, regardless of communication disorders classification; however, in reference to learners with communication disorders, this modeling strategy allows for the teacher to determine the pace and support given at each stage. If more repetition is necessary, then the teacher can incorporate more practice according to need. For learners who need additional experiences with words, teachers can modify multi-sensory approaches, recommended for children and adults, like the integrated phonological approach and the semantic feature analysis approach. Both approaches utilize visuals, repetition, and a playful atmosphere. The more learners believe that practice is fun or a game, the more they will likely enjoy and engage in it. All of the suggestions provided based on the literature available on young

children and adults are best accompanied by more classroom management related tips provided by Bahr, Velleman, and Ziegler (1999). Examining the relationships between the teacher, speech language pathologist, and learners provides insight as to how to make it all work. For instance, all learners need to feel valued and comfortable in their classroom environment. Creating a classroom community that promotes learning for all learners regardless of ability by teaching them to respect one another will encourage learners to feel valued and comfortable. Establishing trusting relationships is also another task pertinent to aiding elementary learners with communication disorders because when a learner trusts those who can help them, they are generally more open to receive the help. For children whose communication disorder is combined with disabilities in other areas of development, it is recommended that interventions address all affected areas rather than just focusing on communication in isolation. For learners with a developmental disorder diagnosed at birth, intervention for communication should begin immediately. As early as birth to 3 months of age, there may be a need to initiate oral-motor or feeding therapy or intervention for a hearing impairment.

As early as 4 to 6 months of age, it is recommended that behavioral techniques be used to increase the frequency and variety of vocalizations. In addition, it is important to start training parents and other caregivers for such procedures. Modifying intervention strategies when children have additional disabilities, it is important to be aware that particular communication treatment strategies may have to be modified when the child's communication disorder is combined with other disabilities (Greenwood, Walker, and Utley, 2002). Reciprocity, responsively, joint attention, and rhythm may be harder to establish and sustain a child whose communication is impacted by other areas of development or medical issues. It is important to be conscious that the expected rate of progress in communication may be dissimilar for a child who has additional areas of impairment. Strategies which might help in setting up the communication environment for children with a communication disorder and other developmental problems include the following: adapting materials, equipment, and lessons to the developmental level of the child, adapting the home and/or therapy environment so the child has to solve problems or reinforce skills to do what he or she wants to do, gearing the level of stimulation in the environment to the individual learning style of the child, using preparatory physical or sensory stimulation or alerting activities prior to or during language stimulation, presenting learning material in small increments (through the use of task analysis) and providing sensory, emotional, or physical supports, presenting language-related concepts concretely, repetitiously, and/or with multi-sensory input through the use of sensory cues, which may need to be dramatic or exaggerated (such as large visual pictures, tactile or auditory cues), setting up predictable schedules to help a child transition from one activity to another, and including parent and peer interactions as part of the communication environment in order to help foster generalization of communication skills (Gillon, 2002). Teachers need to form strategies to enhance communication of learners with CD. The teachers also need to guide practice with a gradual release of responsibility so that learners eventually make the strategies their own. However, there is also evidence to suggest that if we delay intervention until nine years of age,

approximately 75 percent of the children continue to have difficulties learning to communicate throughout high school (Shoho, Katims, and Wilks, 1997). Successful intervention need teachers to understand the communication processes and instruction, think diagnostically, and use this information on an ongoing basis to inform instruction. Struggling communicators require multi-level, flexible, small-group instruction balanced with whole-class instruction in which the teacher models and explicitly teaches communication strategies. One-size instruction does not fit all children. Writing is the most difficult form of language development. It requires at standard three teachers start generating thoughts and ideas, and converting them into written words that can be formulated into coherent sentences that include: spelling, punctuation, and capitalization. The sentences must be interrelated and connected in order to convey meaning (Shoho *et al.* 1997). Learners who have communication disabilities have great difficulties with the writing process. For most of these learners, their writing difficulties are due to problems with lower level transcription skills (spelling, handwriting) rather than higher level composing skills (generation of ideas, editing, revising, organization) (Shoho *et al.* 1997). There are traditional methods that help which involve one to-one teaching with a teacher, doing some extra exercises and giving more time in written examinations. However, it has not been easy to attain this goal due to the high number of learners in classrooms hence making it difficult for teachers to offer education on a one-to-one basis for those children with special needs. Therefore Interventions must be started as soon as possible before the problem gets out of hand.

This programme is a computer based learning game which helps the child to become fluent in letter sound connections. This game is now widely used and other language versions of the game have been tested. According to research evidence, it is very difficult to catch up or become fluent communicator once learners lag behind in the language based skills of reading unless intensive measures are put in place (Runo, 2012). Early intervention is very cardinal as it can help in ameliorating the problem rather than waiting until it is too late. There is need to know the causes of communication difficulties before intervening. It is very difficult for a problem to be solved without understanding its cause. For example, if it is found that the cause of the communication difficulty is lack of phonological awareness and skills in alphabetical coding, there is need for teachers to be trained on the letter-sound correspondence methods of teaching which are based on alphabetical codes (Reid, Gonzalez, Nordness, Trout and Epstein, 2004). When learners with communication disabilities have difficulties with the higher level skills, it is usually because the lower level transcription skills are not automatized. Also, learners who struggle with transcription skills are devoting much time and energy to this lower level skill, using up their attention resources that could be directed at the more complex tasks of composing and revising (Silverman, 2007). Phonological and orthographic skills interact in a reciprocal manner through the development of learning how to spell. That is, children rely on both the sound system (phonology) of a language as well as spelling patterns (orthography) to spell words (Dyck, and Piek, 2010). The sound-to-letter correspondence rules are an effective and powerful means to spelling “regular” words. For “irregular” words, knowledge of spelling patterns and specific word memory are important.

Explicit training in phonological skills and spelling pattern structures needs to be carried out. It is important to teach learners how to spell. According to Silverman, (2007), spelling must be interconnected with all aspects of language learning and have a distinct place in the language arts program. A strong background in phonemic awareness (the ability to focus on and manipulate sounds in spoken words) and phonics skills (the ability to make relationships between the letters of written language and the sounds of spoken language) is definitely necessary to assist learners in spelling (Reid, Gonzalez, Nordness, Trout and Epstein, 2004). The phonics skills learners use to decode words will also help them to encode or spell words. In fact, research has shown that spelling instruction can be used to teach or enhance beginning communicators (Shoho *et al.*, 1997) because spelling provides learners with a concrete example of how letters can represent the phonemes in words. The production of correct sound-letter correspondences in spelling engages phonemic processing at the highest level. Through writing, learners learn to see the patterns in phonemic content rather than as arbitrary sequences of letters. Practice in using the alphabetic strategy to spell by writing helps learners transfer this strategy to reading (Runo, 2001). Due to the close relationship between communication and spelling, effective spelling instruction integrates key skills across both communication and writing so that the development of these skills occurs in a reciprocal and facilitative manner. The primary goal of spelling instruction should be to instill the logic and organization of the spelling system and to help learners become proficient and fluent in spelling words (Silverman, 2007).

Ultimately the aim of spelling instruction should be to assist learners to become competent, independent spellers thereby freeing up attention resources for higher level written expression skills (composing, ideas generation, and organization). The spelling characteristics of older learners who are poor spellers tend to be similar to those of younger non-learning disabled learners (Reid, Gonzalez, Nordness, Trout and Epstein, 2004). What distinguishes spellers with communication disabilities is that they continue to have difficulties with some very specific phonemic processing skills. For example, they have persistent difficulties spelling words that contain liquids (/l/ and /r/) and nasals (/m/, /n/), particularly following vowels and in any non-initial position (WROK/work, KID/kind, SEFE/self). The assistance of a speech-language pathologist would be invaluable in helping to analyze the nature of communication difficulties of the older learners with a communication disability and to plan programs accordingly (Dyck, and Piek, 2010). When planning instructional interventions for the CD learners, it is important to remember that learners with poor spelling skills require more time and more intensive amounts of study to learn spellings. It will be important then, to either reduce the number of words to be learned per day or week compared to good spellers, or present daily subsets of a smaller number of words (Silverman 2007). Learners who are poor communicators also need to be afforded many opportunities to practice writing words (Dyck, and Piek, 2010). Learners with communication disabilities need as many as 40 opportunities to write a word correctly before they remember it. Silverman further recommends that a given lesson should include 80 percent old information and 20 percent new information so that words or communication patterns are revisited and restudied and a

criterion of mastery is met over a period of time (Reid, Gonzalez, Nordness, Trout and Epstein, 2004). This distributed practice in spelling is important given the commonly observed tendency of poor communicators to forget a word that they previously communicated correctly, particularly if they are using this word in text-level writing (Dyck and Piek, 2010). Ultimately, learners with CD need basic practice and intervention in phonological awareness and the alphabetic principle as well as with morphology and meaning. Communication instruction typically consists of memorizing words, word analysis, and sorting activities within the context of balanced, authentic communication and writing activities. Given the importance of lower level transcription skills to the writing process, learning to write letters efficiently is not a trivial task for young children (Runo, 2001). General interventions that have been proven to be effective for improving communication skills include direct instruction components of modelling/ demonstration, prompting, correcting errors, providing plenty of opportunities to respond, repeated practice, and shaping and reinforcing responses. As each instructional component is systematically implemented, pupil performance is monitored. Components that facilitate progress remain in a pupil's program while components that produce minimal or no effects are removed.

Because children whose development is affected in multiple areas require multiple services, it is important to: use an interdisciplinary team approach, involving those professionals with expertise in the child's specific developmental problems as well as the child's primary health care provider if appropriate, coordinate services so interventions are not fragmented and parents are not put in the role of coordinating their child's services (for example, if services are provided by more than one professional, have joint planning for intervention goals, methods, and schedules as well as regular communication about progress) (Trout, Nordness, Pierce and Epstein, 2003). Research regarding elementary aged learners with communication disorders and formalized strategies for general elementary teachers to use in the classroom are still in need. The need for information regarding elementary learners with communication disorders is pertinent (Bullis and Yovanoff, 2006). This current study intends to find out incidences and prevalence of children with communication disorders and the effect on their education in mainstream primary schools in Kericho County, Kenya.

Research Design

A descriptive survey research design was adopted in this study. A descriptive research design is considered to be the most appropriate approach for this study because it describes existing situation, of prevalence of children with communication disorders (Price, 2000). A descriptive research design not only concerns itself with the current status of things but also focuses on a group of subjects, as the present study focused on a group of about 2500 primary school learners in Kericho County was evaluated in view of communication disorders.

Study Area

This study was carried out in Kericho County, one of the 47 Counties of Kenya. It is bordered by Kisumu County on the

west, Nyamira County on the south-west, and Bomet County to the South-East, Nakuru County to the east, Baringo County to the north and Uasin Gishu County to the North-West. Kericho County was selected out of 47 counties of Kenya because it is thought to have the highest number of learners with communication disorders. The researcher observed this upward trend when working with educational assessment and Resource centre in the year 2005-2010.

Sampling Technique

Sampling is a procedure of selecting part of a population on which research can be conducted, which ensures that conclusions from the study can be generalized to the entire population. Simple random sampling procedure was adopted here as this ensured that each item was selected entirely on the basis of chance. Every item in the population had an equal chance of being included in the sample, and all possible samples of a given size are equally likely to be selected, (Fraenkel and Wallen, 2000). All the subjects got an equal chance of being selected as respondents. The schools register at the county office was used as the sampling frame and the ballot method where the assigned school numbers were written on small pieces of papers, folded, shuffled in a basket and then picked without replacement was used to select the sample for the schools. The first eight numbers picked each representing a school, participated in the study. To select the 384 respondents from the county, the county was divided into 6 categories based on the sub-counties. An equal number of 64 learners were selected from each sub county to form the sample population for the learners. Eight learners were selected from each school that was chosen. The class three teachers were selected purposively to help in identifying 4 boys and 4 girls with CD who filled the questionnaires with the assurance of their confidentiality.

Sample Size

A sample is a set of individuals selected from the target population. The degree of representativeness of a sample refers to how closely the sample mirrors the population (Gravetta and Forzano, 2006). Kerlinger (1973) indicates that sample size, 10% of the target population is large enough so long as it allows for reliable data analysis and by cross tabulation provides desired level of accuracy in estimates of large population and allow for testing for significance of differences between estimates; in other words, the sample size depends on what one wants to know, the purpose of the study, what is at stake, what will be useful, what will have credibility and what can be done with available time and resource.

Reliability of Research Instruments

The reliability of the questionnaires helps to establish whether the questionnaires are able to provide similar results if a different sample is selected from the same population. This was tested by use of alpha reliability index which helps to test the internal consistency of the questionnaire. This method is most appropriate because it helps to save on time since the questionnaires are only tested once. The questionnaires were coded and with aid of the computer package, Statistical Package for Social Sciences (SPSS), the alpha index was computed.

According to Sekaran (2005), if the Cronbach’s alpha index is less than 0.6, it means that the instruments has a low reliability and thus open for some errors. If the alpha index value is above 0.7, the instrument has acceptable reliability. The internal consistency reliability coefficient (Cronbach’s alpha) for the scales used in this study are all well above the level of 0.7, acceptable for the analysis purpose. The study established the alpha reliability index as 0.733 which was therefore accepted as appropriate for this study, table 3. The Kuder Richardson Formula (KR21) is commonly used for determining the internal consistency reliability index.

That is;

$$KR21 \text{ reliability coefficient} = \frac{K}{K-1} \left[\frac{1-MK-M}{K(SD)^2} \right]$$

Where K=Number of items on the test

M= Mean of the set of test score

SD= Standard deviation of set of test score

However, for this study the alpha index was determined by use of SPSS software that has an internal formula for calculating the reliability.

Validity of Research Instruments

This refers to the ability of a research instrument to measure what it purports to measure (Ingule, Rono and Ndambuki, 1996). Validity of the research instruments used in this study was enhanced through the application of content validity procedures. Mugenda and Mugenda (1999) stated that content validity is a matter of judgment by professionals or experts in a particular field. An instrument is said to be valid if it measures what it is designed to measure (Orodho, 2008). This was done to ensure that all possible items that should be used in measuring the concept under study were included. The researcher requested two experts from the Department of Special Education at Kenyatta University who are well versed in the area being studied. The two experts were given the questionnaires to rate the 75 items. The experts were required to rate the items for readability, clarity and comprehensiveness. The ratings were compared for relevance. Content validity was then determined using the results from the ratings, where the Coefficient of validity index (CVI) was computed. The formula used by (Amin 2005) was employed.

$$\text{Coefficient of validity index (CVI)} = \frac{\text{Total agreement on every relevant judgment} \times 100}{\text{Total number of items in the questionnaire}}$$

A CVI of 0.6 and above will be accepted meaning that the instrument will be valid. The suggestions of experts who reviewed and judged the questionnaire items as either relevant or irrelevant to the study was cross tabulated using the validity table. The findings for 75 question items were presented in table 3.2.

Table 1.1 Validity Test

		EXPERT ONE		
		Relevant	Not relevant	Total
EXPERT TWO	Relevant	53	11	64
	Not relevant	8	3	11
Total		61	14	75

Source: Adopted from (Amin 2005)

For this study the Coefficient of validity index was computed as;

$$CVI = \frac{\text{Sum of agreement on every relevant judgment} \times 100}{\text{Total number of items in the questionnaire}}$$

$$= 64 / 75 = 0.833. \text{ Hence this was accepted for the study.}$$

According to Amin (2005) a Coefficient of validity index of 0.6 and above is acceptable for the instruments to have content validity.

Interventions Strategies Teachers used on learners with CD

This objective focused on intervention strategies used by teachers to support learners with CD in mainstream public primary schools. The respondents were the teachers and the head teachers who were required to respond to various statements by either agreeing or disagreeing on a 5 likert scale in regard to teacher’s attitude. During analysis strongly disagree and disagree were combined to disagree while strongly agree and agree were also combined to agree. The findings are presented in Table 4.5 where D = disagree N = not sure and A = agreed. When the teachers and head teachers were asked to comment on the intervention strategies they used to support learners’ with CD, majority of the respondents 48 (100%) agreed and agreed respectfully with the statement that they had guidelines, give specifications on communication disorders to be used by the media, educational institutions, individuals and the general public in supporting learners with CD. A similar response was noted on promotion and development on use of alternative communication systems for persons with communication disorders, 48(100%) agreed with the statement. On whether the teachers promote the development and use of standard sign language while enhancing availability of information in these modes of communication in educational and other institutions most of the respondents 45 (73%) agreed and 3 (7%) were not sure of the statement.

It was also noted that majority of the respondents 48(100%) agreed that they assisted stake holders involved in the industry to reduce the cost of availing information to persons with communication disorders through the reduction of taxes on information and communication equipment. Similarly, most of the respondents 35 (73%) agreed while 13 (27%) disagreed that they facilitated and provided incentives to public and private broadcasters and other media outlets, universities, research institutions and libraries to encourage provision of user friendly information to persons with communication disorders. These findings agree with Greenwood *et al* (2002) who noted that communicating information in order to learn requires the use of appropriate social-communication skills to express one’s ideas and absorb those of others. Children with communication disorders and weak social communication skills are again at a disadvantage to benefit from sharing and communicating educational information. Not only are group situations difficult, but children with communication disorders facing difficulties with academic success due to their interpretations of their own abilities. Learners with social-communication impairments are likely to have low self-concepts and less motivation to achieve because of past failure (Windsor, 1995). Teachers’ awareness of differentiation needs and their responses to the differentiation questions in terms of principles and practices of teaching were observed during the study.

Table 1.2. Intervention Strategies used by Teachers to support learners with CD

Statement	D	N	A	Mean	Std Dev
Provide guidelines on communication disorders for use by the media, educational institutions, individuals and the general public.	0.0 (0)	0.0 (0)	48 (100)	3.0	1.0
Promote the development and use of standard sign language while enhancing availability of information in these modes of communication in educational and other institutions.	0.0 (0)	3 (7)	45 (73)	2.9	1.4
Facilitate and provide incentives to public and private broadcasters and other media outlets, universities, research institutions and libraries to encourage provision of user friendly information to persons with communication disorders.	0.0 (0)	3 (7)	45 (73)	2.9	1.4
Require educators and employers to provide assistive communication equipment, such as talking computers and tape recorders, to learners and employees with communication disorders.	0.0 (0)	0.0 (0)	48 (100)	3.0	1.0
Make adaptation of ICT equipment mandatory in educational and other service provider institutions.	0.0 (0)	0.0 (0)	48 (100)	3.0	1.0
Ensure that all teachers learn and apply techniques and methods of communication appropriate to learners with communication disorders.	13 (27)	0.0 (0)	35 (73)	2.5	1.9
Sensitize entire communities within learning institutions and the general public on the need to learn communication techniques used by learners with communication disorders. Average	0.0 (0)	0.0 (0)	48 (100)	3.0 2.9	1.0 1.2

Among other strategies that were evaluated were facilitation of access to public communication and information service points by persons with communication disorders 48(100%) of the teachers agreed, use of Technology and techniques appropriate to learners with communication disorders in their training curriculum 48(100%) and Sensitize entire communities within learning institutions and the general public on the need to learn communication techniques used by learners with communication disorders with a response of 48(100%) . Similarly, Ensuring that teacher training institutions and other institutions training SNE personnel incorporate Information and Communication in their training 37(77%), This supports the work of Greenwood *et al.*, (2002) that teachers in mainstream schools have appropriate strategies that they use in facilitating education among both the learners with special needs and the other able learners. The opinion on intervention strategies used by teachers to support learners with CD was sought and disagree opinion was assigned a score of 1, neutral a score of 2 and agree was assigned a score of 3. The average mean score was calculated and recorded in the table below.

Table 1.3. Intervention Strategies used to support learners with CD

Statement	Teachers	
	\bar{X}	SD
Intervention Strategies used support learners with CD	2.9	1.2

Since 1 SD is 1.2, and a mean of 2.9 on average, intervention strategies used to support learners with CD implies that 68% of the scores on this test fall between 1.7 and 4.1. To get this range, 1 SD (1.0) was added to the mean (2.9), and took 1 SD away from the mean. Therefore, out of a total score of 3, it means that almost all the teachers reported that they intervention strategies to support learners with CD. In regard to the strategies used in the schools to accommodate the learners with CD, the teachers indicated that, it entails the preparation of schoolmates and community members at large in understanding the learner with CD. The most critical component of developing communication strategies to support communication in a pupil with CD is teacher's knowledge. Teachers must begin with an understanding of the pupil's communication abilities and this might require a complete change of attitude by the teachers towards the learners with CD. The respondents noted that there is need to collaborate with other institutions such as public and private broadcasters and other media outlets, universities, research institutions and libraries to encourage provision of user friendly information to persons with communication disorders.

There is also need for educators and other stakeholders to provide supportive equipment to enhance the teaching of learners with CD in primary schools. The study has also noted that using ICT facilities enhances the teaching of learners with CD. ICT assists the teachers to know how well to coordinate the sign language used in the teaching of learners with CD. Some teachers work under difficult circumstances such as, too many learners in classes, erratic pupil attendance and others. Hence when learners are too many in a classroom, it may become difficult for the teacher to give individual attention especially to those who may be lagging behind. The use of ICT will therefore help these teachers to effectively assist the learners with CD to follow up with the lesson effectively without the teachers having to repeat the entire lesson over again. A teacher may have the required skills in teaching communication, but it becomes difficult for him/her to teach effectively if the necessary teaching and learning materials are not in place. Though the teachers have indicated that they give attention to learners with CD this strategy is hampered a lot by the poor staffing levels at the schools. Because of the large classes and the few teachers, they have to attend to more than one class hence being overburdened and unable to provide extra care to the learners with CD.

For the teachers to effectively manage and enhance the learning for the learners with CD there is need to have more instructional time for pupil, need for effective collaboration between the schools and the stakeholders who include the learners, the teachers, the parents and the government at large. There is need for carefully planned assessments that will allow continual monitoring of the teachers and the pupil's response. Through an effective monitoring and evaluation programs, modifications of the various strategies could lead to more improved teaching methods that are supported by research, considerable attention to the learning materials and equipments used, with a focus on captivating texts that will help capture the attention of the learners with CD. It is the school's responsibility to provide for each pupil the appropriate level of support to reach his or her potential in learning. The results have indicated that some learners still need additional supports from both the teachers and their peers for their success. This calls for the teachers to consider supplemental techniques only when effective and adapted instruction has failed to resolve learners with CD. Since, it has been noted that teachers lack the skills and may sometimes have a poor attitude towards learners with CD, an effective technique requires that teachers recognize as early as possible those learners who are experiencing CDs, tailor instruction to address their needs, and

provide for supplementary instruction when necessary. This study notes that intervention strategies that are begun when learners are still in lower classes have a much better chance of success than interventions begun later in upper classes. In this way, CDs can be tackled before they become entrenched and before repeated failures affect pupil's motivation and compound their CDs. By lower classes, all schools should have in place for learners a process that allows for the timely implementation of instruction following continuous assessment; hence this formed the basis for the current study. Once a teacher recognizes that a learner is experiencing CD, the teacher and the pupil must have access to diagnostic assessment services, specialized interventions, and appropriate instruction.

The intensity or duration of the strategy should be based on comprehensive assessment. There should be seamless continuity between general classroom instruction and strategies, and a high degree of cooperation among qualified staff who are serving the same children. The staff should spend the vast majority of their time planning for and delivering instruction directly to pupil. All children need effective opportunities to develop their communication skills in mainstream settings and where settings are struggling to provide these opportunities support training will be required. Learners who fail to progress at the expected rate in effective settings will require further evidence informed targeted or specialist support which is timely and monitored and needs to be based on principles that have been shown to be effective. Social disadvantage has its impact very early in schooling. Learners from the most disadvantaged backgrounds may need additional support in early years to ensure a secure foundation for communication and literacy development. The findings of this study revealed that more efforts are needed for teaching learners with CD in Kericho County. Overall teachers hold a positive attitude towards inclusion of learners with CD. However, collaboration between the mainstream and special education teachers is important. Workshops should be conducted regarding teaching learners with CD. Provision of adequate resources to inclusive classes is also recommended. Inclusion requires support by school administrators, principals, parents, teachers and learners.

Conclusion

Based on the findings and discussions thereof, this study points out that school's policies on learners with CD, the teachers' attitudes toward learners with CD, interventions strategies used by teachers to support learners with CD all have an effect on educational performance of the learners with CD. This study concludes that an important step to enhancing the effectiveness of mainstreaming is to establishing a school policy. It is noted that without an effective school policy that will fully support the plight of the learners with special needs, efforts to mainstream will not produce appropriate results. In relation to attitude, intervention and strategies used by teachers, the study concludes that, attitude is everything for inclusion to be effective. Mainstreaming can only work best for the SN learners if the teachers can work effectively on their attitude. This study established that most teachers have a very good attitude to support mainstreaming. This indicates that learners with CD can only perform academically if the teachers can effectively embrace them.

This study also concludes that academic performance of learners with special needs can be enhanced by establishing and implementing effective strategies to support their performance. It was noted that by integrating the learners with the other pupils was an effective strategy to encourage them to feel motivated and compete effectively. This therefore indicates that having effective strategies will enhance performance of learners with communication disorders among public primary schools. All this efforts calls for the teachers to be well equipped with skills and knowledge to handle the SN learners in the mainstream schools.

Recommendation

The findings of the study led to the following recommendations

- School systems needs to be aware that social disadvantage has its impact very early in schooling. Learners from the most disadvantaged backgrounds may need additional support in early years to ensure a secure foundation for communication and literacy development.
- A systematic approach to providing effective communication environments in school provides the basis for supporting teaching and learning and for providing more targeted and specialist interventions when required for learners most in need of additional resources and support.
- This study results highlight the importance of considering individual learners' strengths and needs and use this to personalize learning and educational plans.
- Counties and schools should be mindful of their duties under the equalities act and should monitor the representation of learners with various disabilities.
- When choosing an intervention method or approach, it is important for the professional providing the intervention to think about the individual characteristics of the child, and the child's stage of language development.
- More directive interventions may be appropriate for some children, particularly at the beginning stages of treatment. Directive intervention can be very effective in eliciting initial structures of speech or gesture.
- Naturalistic interventions may be more helpful than directive interventions in increasing spontaneous language and generalization to non-treatment settings.
- It is recommended that intervention methods advance from a more directive towards a more naturalistic focus. This is important as some functional aspects of language cannot be established through directive intervention and need to be learned using more naturalistic approaches.
- Methods for developing and embedding evidence based practice.
- It is important to establish why, despite their lower levels of language and academic performance, learners with CD are likely to attract more resources than general education learners.

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