

Assessing and Teaching Reading to Pupils with Reading Disabilities in Nyeri and Nairobi Districts-Kenya: The Teachers' Opinion

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Abstract

The study aimed at finding out whether teachers can identify the courses of reading disabilities in learners. It intended to establish whether teachers have adequate knowledge of identifying learners with reading disabilities, determine the proportion of non-readers in grade five. It also investigated the existing methods and materials teachers use in teaching and remediating reading including the difficulties teachers encounter when teaching. Finally, the study aimed at finding out whether there are any gender differences in learners with reading disabilities. This study adopted both qualitative and quantitative research approaches where mixed method designs were used for collecting and analyzing data for both teachers and learners. The study embarked on interviews for learners by use of structured questionnaires. Learners were also assessed to determine the level of reading ability. The study also used semi-structured questionnaires for teachers. A focus group interview was also held with teachers in the study. The study was conducted in Central and Nairobi provinces where Nyeri and Nairobi districts respectively were used. Purposive sampling was used to select the provinces, districts, divisions, primary schools, populations and the target groups, in this case of the teachers and learners. This was based on KCPE results analysis for 2006, the division that performed best overall in Nairobi and the poorest performing division in Nairobi from KCPE results, 2006. Nyeri District was representative of rural primary schools and therefore, the municipality and one rural division was selected. In this case, Nyeri municipality division and Othaya division. There were four schools selected from each of the four divisions, giving a total of 16 schools from both Nairobi and Nyeri. In each school, 15 pupils were purposively selected from the list of those learners scoring 250 marks and below from their end of standard 5 examinations. If the learners were more than 15 scoring 250 marks and below, the researcher used random sampling. A total of 240 learners were the sample for the study, streams were not considered in the study. All teachers who taught English to the learners in the study, in class in 2007, were in the study. All the class teachers of grade five in 2007 of not the English teacher were also included in the study. A total of 34 teachers participated in the study. There were five types of instruments namely: questionnaires for teachers, questionnaires for learners, assessment tools for reading – wood list A to E, passage 1 to 4; checklist on reading errors and learners' reading attitude survey. Statistical Package for Social Sciences (SPSS) was used to analyze quantitative data from the assessment tools, questionnaires for learners, and reading attitude survey. All the hypotheses were tested at $P=0.05$ Pearson product moment correlation coefficient was used to measure the strength and direction of the relationship between the different variables. Multiple regression analysis and chi-square test were also used. Teachers' questionnaire was analyzed through descriptive research. The following results were obtained based on the objectives, questions and hypotheses of the study: The teachers assessed their learners reading ability but they did not use proper methods of assessment;

teachers were able to identify children who could not read at class level as non-performers but not able to identify the specific reading difficulties. Non-readers ranged from 0 to 27.1% for Nairobi and 0 to 53.6% in Nyeri; almost half of the teachers in the study did not either teach reading or they did not know the methods to use in teaching reading. The study indicated that there were more boys (103) than girls (78) who could not read. The study concluded that: teacher training syllabus on reading whether in mother tongue, Kiswahili or English be adequately developed to cater for individual learners and equip the teachers with methods for teaching reading adequately. More time be given to teaching reading, assessing reading and remediating reading disabilities both at the primary teacher education colleges and at primary schools; reading in an ongoing process and therefore it is recommended that reading be taught all through primary levels. (standard 1 to 8) and be within the developmental states of reading; reading readiness curriculum be developed for early childhood and at primary levels. Such policy should ensure smooth transition of learners' movement from home, preschool and primary schools. Finally the study recommended adequate development of teacher training syllabus on reading in mother tongue English or Kiswahili more time, reading be taught continuously from standard 1 to 8 and smooth transition for learners' movement from home, pre-school and primary schools.

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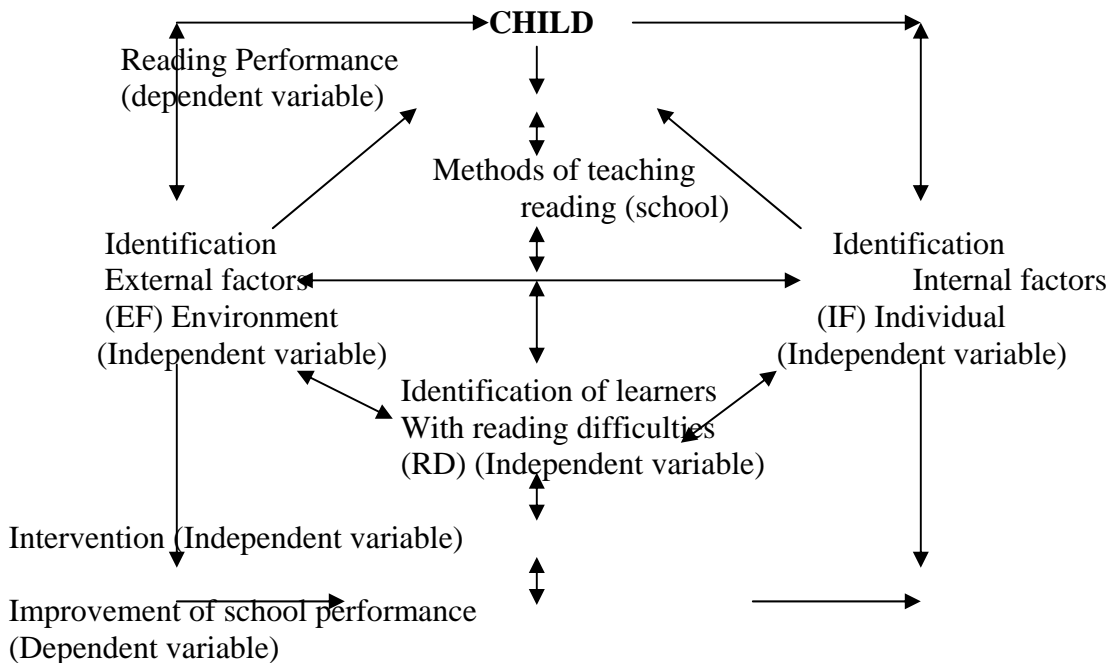
Reading disabilities is an area of concern to many educators both locally and globally. It is one of the basic skills taught to children during the early years of primary school especially in the first three years, grades one to three, yet for unexplained reasons, they are unable to use reading as a tool for learning new information, ideas, attitudes and values from grade four onwards (Lerner 2006). Kirk, Gallagher and Anastasiow (2003), add that becoming a skilled reader is very important in the society and one who is not skilled in reading is at a greatly disadvantaged both in school and the workplace. According to Mercer (1997), between 10% - 15% and Lerner 17.5% of general school going children have reading difficulties even long after passing through the initial learning stages. Such children do not use their reading skills as a tool to gather information and to improve their academic skills.

According to Carmine, Silbert & Kameeni (1997), reading difficulties are the principal cause of failure in school. It is also important to note that children's entire development stages such as cognitive, personality, emotional and social are positively influenced by having better reading ability levels, which in turn gives them a good understanding of various domains of knowledge in life. Reading experiences strongly influence a learner's self image and feeling of competency, furthermore, reading failure can lead to misbehavior, anxiety and lack of motivation (Mercer and Mercer 2001). Teachers should therefore be in a position to assess pupil's problems including those of reading from a holistic point of view in order to help such children manage academically in school (Dreikurs & Grunwald & Pepper 1998).

In Kenya, where so much emphasis is placed on passing examinations quite a number of children may be disadvantaged especially if they are poor readers. Sessional paper No. 1 of 2005 has shown a concern of a cumulative dropout rate in primary education as high as 37% and repetition rate of 14%. The study was set to find out whether lack of proper assessment and poor teaching of reading has any contribution to this high level of dropouts.

With free primary education in place now in Kenya since January 2003, over 7.6 million (Kenya Times, November 6, 2006) children are now attending primary school and of course an increase in the number of children per class to be taught by one teacher. Taking the estimates of Mercer (1997) of 10% to 15% and Lerner (2006) of 17.5%, Kenya could be having staggering figures of children with reading disabilities ranging between **760,000** to **1,140,000** or **1,330,000** on the higher estimates. The study assumed that these children had reading disabilities due to various causes and that teachers' failure to assess such learners with reading disabilities and failure to give adequate intervention measures in the classroom situation has made the above numbers to keep escalating.

Conceptual Framework and Review of Related Literature on Reading Disabilities



Source: Researcher

Reading Disabilities (RD) can result from Internal Factors (IF) such as Perceptual Deficits (PD), Language and Culture (LC), Cognitive (C) and Intrinsic Motivation (IM). The External Factors (EF) include: Educational (E), Socio-Economic (SE) and Extrinsic Motivation (EM).

This conceptual framework is based on the social systems perspective developed by Bronfenbrenner who believed that the ecological contexts or settings in which an individual develops are nested, one inside the other. A learner's ability to read and perform well in school may be related to the nature of the relationship between the learners, home in this case, conditions in the home environment and the school and the methods used in teaching such a learner. The individual must have the ability to reciprocate with environment and vice versa. Bronfenbrenner uses terms such as ontogenic systems to mean the individual's cognitive, language, social and learning aspects.

In this study, internal factors were based on ontogenic systems, then microsystem is the reaction from the relationship of the learner and the teacher (external factors) and the relationship of the learner and the parent-home and teacher-school, while the exosystem talks of achievement related to socio-economic status and other factors that may affect reading ability of the learners. The

conceptual framework is also strengthened by cognitive and reading developmental theories by Piaget (cited in Myers 1989) and Chall (1983) respectively. The study selected these theories because all teachers teaching reading must have full knowledge of each developmental stage in order not to “push” the learner but to give the content materials that are commensurate to the learner’s ability.

Piaget’s stages of cognitive development from concrete operational thought to formal operational thought was useful in this study because the learners are already in grade 5. The learners in grade 5 which is the main focus of this study are between 11 and 12 years and according to Piaget, learners at this stage are assumed to have logical operations that are interrelated and reversible. The learners acquire basic logical ways of reasoning at concrete level where the child can now read, understand and interpret what he/she is reading. According to Piaget’s theory, mental development progresses as a result of learners’ interactions with their surroundings. The role of the educator is to provide material and appropriate opportunities in which learners can interact.

The theoretical framework in this study was based on the stages of reading development given by Chall (1983). According to Chall, there are six stages of reading development (0-5). Stage three, which is the main focus of this study is from classes four to eight (nine to fourteen year olds). This stage is unique in that the learner reads for learning, in other words the learner uses reading as a tool, while stages 0 – 2, the child learns to read. At this stage, the child learns new information, ideas, attitudes and values. He/she grows in background knowledge, word meaning and cognitive abilities. Reading at this stage is essentially for facts and the reader typically comprehends from a singular viewpoint.

Research Design

This study adopted both qualitative and quantitative research approaches. This mixed methods design, presents procedures for collecting, analyzing and linking both quantitative and qualitative data in a single study (Creswell, 2005). The combination of both forms of data provides a better understanding of the variables under study concerned with finding out:

1. Teachers’ knowledge of identifying learners with reading disabilities.
2. The existing methods/approaches used in teaching reading.
3. Whether teachers carry out any interventions strategies with learners who have reading disabilities.

Location of the Study

The study was conducted in two districts, namely, Nairobi and Nyeri. Nairobi being a cosmopolitan province has different peoples, who have immigrated from all over searching for jobs and better lives. All racial and ethnic groups and levels are found in Nairobi as a city and capital of Kenya. The characteristics of learners might be different from those of rural due to the nature of the city’s multi-ethnic languages. Also, the language of instruction in Nairobi is Kiswahili as opposed to rural areas. Dagoretti Division was selected to represent low performing divisions as per 2006 KCPE grades and Westlands Division to represent higher performing grades was reflected in 2006 KCPE results.

Nyeri, on the other hand, has representation of rural schools in the nation because the medium of instruction is mother tongue. In Nyeri, the two divisions that were selected included Nyeri

Municipality and Othaya. The rural districts use mother-tongue as a medium of instruction and yet they sit the same national examination like other learners in Nairobi.

Target Population

The target population of this study comprised 2,413 teachers, 103,569 learners from 232 schools in Nyeri, while those from Nairobi were 4,231 teachers, 196,059 learners from 193 schools. All the grade five learners from Nyeri were 17,383 in 2006 in Nyeri while those in Nairobi were 26,025 learners.

Sampling Techniques

In this study, several sampling techniques were used to arrive at the study sample. The techniques used included; purposive, convenient and stratified random sampling.

(i) Divisions and schools in the study

Purposive and convenient sampling techniques were used respectively to arrive at the four divisions and the sixteen schools for the study. Purposive sampling was used by the researcher to select the divisions involved, selecting the samples using set criteria. In this case, the KCPE results analysis of 2006 were used to select the division that performed best (Westlands) all over and the poorest (Dagoretti) performing division in Nairobi. Two divisions, out of eight, were selected in Nairobi schools namely, Highridge, Hospital Hill, Kilimani and Milimani. Nyeri divisions were purposively selected as municipality representing urban-rural and Othaya representing rural.

Schools in the four divisions were conveniently selected due to the time and financial constraints. In this study, the sixteen schools sampled were somehow accessible due to their distances from each other with only a few that required many hours of traveling to reach them.

(ii) Teachers in the study

Purposive sampling technique was used to select the teachers who taught English to the learners in the study in 2006. The grade 5 class teachers were also selected for the study if they were not the same as the English teachers. These two groups were better placed to know their learners' reading difficulties because of more contact hours with learners and or dealing with learners' progress records.

The teachers were briefed on reading difficulties and non-performing learners. They were also asked to provide the progress records of grade 5 of year 2006, to be used as a tool for selecting learners in the study. Teachers were informed that only those learners had an overall score of 250 and below out of a score of 500 were required for the study. They were also requested to fill in questionnaires.

(iii) Learners

Stratified random sampling and simple random sampling were used to arrive at the sample for learners in the study. Stratified random sampling involves dividing the study population into homogeneous sub-groups and then taking simple random sample in each sub-group.

In this study, grade five learners who had scored 250 marks and below out of the total 500 over marks in primary school subjects were stratified as a sub-group with certain homogeneity due to their poor performance. This is a group which probably is condemned by teachers and the

prediction of their school performance including KCPE is more less negative than positive. Simple random sampling was used to select learners in this lowly scoring group.

Sample Size

The sample for the study comprised two hundred and forty (240) standard five learners and thirty-four (34) teachers in sixteen schools, eight from Nairobi and eight from Nyeri districts. This is shown in figure 3.1 below

Table 1: Sample size

District	Division	Primary School	English teacher or Class teacher	No. of Children scoring 250 marks and below in a school	
Nairobi	Westlands	Hospital Hill	1	15	
		Highridge	2	15	
		Kilimani	2	15	
		Milimani	1	15	
	Dagoretti	Toi	1	15	
		Joseph	1	15	
		Kang'ethe	3	15	
		Jamhuri	3	15	
		Ndurarua	4	15	
Nyeri	Municipality	DEB-Muslim	2	15	
		Temple Road	2	15	
		Nyamachaki	5	15	
		Kamuyu	1	15	
	Othaya	Munainani	2	15	
		Thunguri	2	15	
		Gitundu	1	15	
		Ruruguti	2	15	
Total: 2	4	16	34	240	

Nairobi was chosen because of its urban setup where it was felt it is a representative of an area where most of the factors like language spoken at home and school would be similar. It was felt that it would give a proper sample of the reading situation in Kenyan urban areas. Nyeri, on the other hand, represented a rural setup where most of the factors like mother-tongue would play a significant role on learning of reading skills. The schools chosen were representative of poor and good KCPE performing schools as per KCPE 2006 analysis.

Research Instruments

The instruments consisted of five items namely: Teacher questionnaires and checklist on reading errors.

Data Analysis

The data collected were coded using the Statistical Package for Social Sciences (SPSS). SPSS allowed for use of both descriptive and inferential analyses to give a general picture about the central tendencies of each variable and also make comparisons among the variables. Most of the data about teachers were analyzed using descriptive statistics alone.

Results and Discussion

Sample description was analyzed and presented using frequency and percentage tables, coupled with figures along such demographic variables as age, gender, and teachers' professional levels, among others.

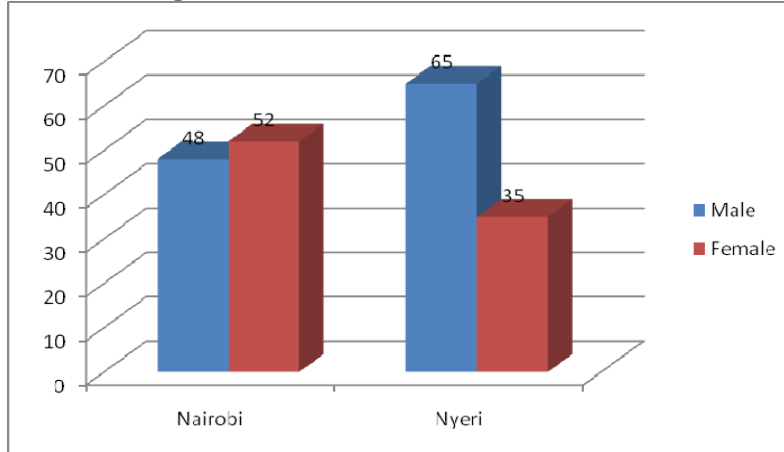
Demographic Characteristics of Learners

The demographic characteristics of learners were analyzed along gender, age, number of siblings and position in the family.

Gender of Learners

Nyeri district had the highest number of boys and in the whole study there were more boys than girls. Figure 4.1 summarizes the gender distribution of learners in the two districts.

Figure 1 Gender distribution Districts



Age of learners

The mean age of the learners in the study was 12 years with the youngest at 10 years and the oldest at 17 years. Table 2 analyzes the age distribution of learners who participated in the study.

Table 2 Age distribution of learners by years and Districts

Scores	Districts	
	Nairobi	Nyeri
Mean	12.43	12.63
Median	12.00	12.50

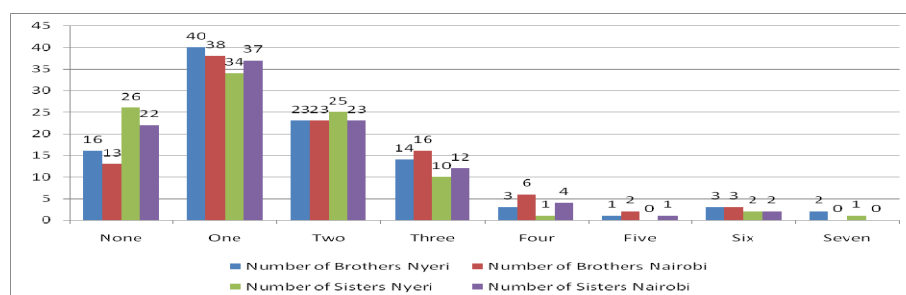
Mode	12	12
Std. Deviation	1.128	1.101
Skewness	1.173	1.523
Minimum	10	11
Maximum	17	18

The mean score for age in Nairobi is 12.43 years, with the youngest learners being 10 years and the oldest 17 years. It may be assumed that several learners had repeated grades especially those above 13 years in that KCPE candidates should be within a mean score of 13 years. On the other hand, the age range for Nyeri learners is between 11 and 18 years. The mean score for age for Nyeri is 12.63 which is higher than that of Nairobi. Majority of the learners were within 12 and 13 years of age. Learners between 14 and 18 years could have repeated grades.

Number of Siblings

Majority of learners in both Nyeri (74%) and Nairobi (75%) had only one sibling meaning the families were small. Figure 2 presents an analysis of number of siblings.

Figure 2 Number of siblings by districts and gender



From the figure, it can be observed that families may mean more and higher expectations and therefore, the children do not perform. Both Nyeri and Nairobi had majority of learners performing at 250 marks and below as first borns, Nyeri having the highest percentage(43%). The high percentages of poor readers given in figures 3 had one or two siblings and being first or second ordinal birth positioning may lead one to reason out that these learners were not getting adequate opportunities to socialize and also that there was too much pressure to perform better from parents.

Demographic Characteristics of Teachers

The study had 34 teachers purposefully sampled from the 16 schools used for the study, 8 schools from Nyeri and 8 from Nairobi. Only those teachers who taught English or were class teachers grade five in 2006 were involved in the study. The 34 teachers used in the study were asked to give the qualifications they attained at their colleges. This was crucial in that it gave the indication of the level of preparedness and professionalism in their career. The qualifications of the teachers in the study were as indicated in figure 4 below.

Qualification

The professional qualifications ranged from BA-Special Education (biases on Learning Disabilities and Mental Retardation), MA-Special Education (biases on Learning Disabilities and Mental Retardation) and candidate for PhD in Reading Disabilities.

The professional qualifications ranged from P3 to B.Ed. One of the teachers was not even trained. Majority of the teachers are trained in various methods of teaching learners and therefore, it is also expected that they were also trained to teach reading.

Methods of Reading Assessment

Several questions were given to the teachers in the area of assessment in reading. The questions were categorized as general and specific. The general questions whether teachers assess learners at all, how often they assess the learners in reading using the continuous assessment tests (CATs), description of methods they use in assessing reading ability in pupils and the characteristics of good and poor readers, the proportion of learners with reading disabilities and the impact of reading disabilities on other subjects. The specific questions asked were testing; ability to identify specific reading errors in individual learners and prediction of performance of individual learners in reading. Qualitative and quantitative statistical data were obtained from the teachers' questionnaires and checklist on reading errors respectively, to indicate whether teachers had full knowledge of identifying learners with reading disabilities in specific skill areas. The results of teachers' responses and learners' data are analyzed below.

From the teachers' responses, 88% assessed learners' reading ability, while 6% did not. Another 6% left the space blank. This is a good indication that the teachers voluntarily assess learners' reading abilities. Over half (55%) of the teachers in the study tested their learners weekly, 18% monthly, 12% termly, 3% yearly while 12% left the space blank indicating they were not sure or they do not assess at all. These data support the data above in figure 5 (a) where 88% of teachers assess learners' reading ability, but there is a problem with frequency of testing which is too low as indicated in figure 5 (b) If at all 73% (55% plus 18%) of the teachers, assess learners' reading ability at least monthly, the learners in the study since teachers would have identified such learners for interventions.

According to Heilman *et al.*, (1985) effective reading teachers employ ongoing diagnosis of a learners' reading development and also provides opportunities for the pupils to practice and apply skills in meaningful context. For teachers to be effective, they should assess the learners often and within the lessons they teach, give feedback and maintain a high level of pupil involvement in learning.

Proportion of Non-readers in Grade Five According to Teachers

In Nairobi District, there were 39 boys who could not read at grade five level while in Nyeri District 64 could not read at grade five level at the time of the study. The girls were more than boys according to the information given by teachers. Nyeri District however, had the highest number of learners who could not read passages and sentences with a frequency of 108 and 85 respectively. From the figure above, learners from Nyeri District had more reading problems when compared to those from Nairobi District. This is confirmed by a study conducted by Callaway, Jerrolds, and Gwaltney (1974) which claimed that learners who came from homes with extensive accounts of reading materials rated highest in reading and language achievements. Maybe learners from Nairobi had less reading problems because they are constantly encouraged to read and also because of availability of more reading materials in Nairobi District. Furthermore, Nairobi District being an urban district, have a variety of reading materials than Nyeri District which is rural.

Methods Teachers Use to Assess Learners' Reading Abilities

From the findings, only 3 (9%) assessed their children through observation but the observation technique was not explained. Seven (21%) assessed by giving oral questions. Five (15%) had the

learners read and as they listened. None of those methods or strategies given by the teachers were explained, an indication that the answers may have been guessed. Eight (23%) did not respond to the question meaning perhaps they did not have any methods they used.

On methods and materials used in teaching, the following responses were recorded: 11.2% used flash cards, sound, modeling word, individual/silent groups while 11% did not respond. Twenty six (76%) teachers taught reading, 3 (9%) did not and 5 (15%) did not respond. Results on level of confidence in teaching indicated that 9(25%) were very confident, 20 (58.8%) were confident, 1 (2.9%) not confident, 1 (2.9%) unsure and 3(8.8%) did not respond.

Teachers taught in their colleges enumerated several methods. Out of the many methods cited by the teachers, only 5 (61%) are actual methods of teaching reading, while the remaining 39% are non-existing methods as follows: phonics/phonetic had the highest rating of 18(24%), followed by whole word 11(14%), look and say 8(11%), alphabetic method 6(8%) and finally language experience 3 (4%). The rest of the “methods” were teacher creation such as sounds rated at 5(7%), flash cards 3 (4%) individual 2 (3%) among others.

Looking at the responses by teachers on methods taught at their colleges, one would wonder whether some were really taught, or whether they have forgotten what they learnt in colleges. The data actually show that the teachers have scanty information on the actual methods of teaching reading.

Intervention Strategies Used Against Reading Disabilities

Teachers were asked to indicate whether they carried out any intervention with learners who have reading disabilities. Thirty teachers gave the answer as yes while 4 left the space blank. They were also asked to give the strategies they use to remediate reading disabilities in learners. Among the strategies cited are; use of ability grouping (about 18%), giving story books / magazines to learners, identification of weak learners (over 12%) and use of peer teaching (about 5%). Others were varying methods of teaching, creating interest and advising parents to help. These responses, are good but are generally weak for a serious remedial program. This may mean that teachers are not trained in intervention methods.

Interventional Strategies Used by Teachers and Those that Worked

From the responses given by the teachers, the strategies they gave could work if they had full knowledge of proper remedial teaching and if they were given support. Such strategies that the teachers used are; use of supplementary materials (about 30%), encouraging parents to assist (over 20%) and allocation of more time about (15%). From the table below, there are some strategies that the teachers used but did not work; such were allocation of more time, creating interest in the learners and encouraging parents to assist.

Consultation of Resource Persons

From the responses given by the teachers, 17 (50%) said they consulted other professionals, 12 (35.3%) said they do not consult at all, while 5 (14.7%) did not respond. From the teacher’s responses, it may appear like there is little collaboration or consultation among them on methods. Only 4 (11.8%) teachers get adequate help, while 24 (70.5%) get little or no help at all. Further, the teachers said that they need assistance in the methods of teaching; the number of learners be reduced; they needed more materials; they needed more time for teaching reading and that they needed specialist to work with poor readers.

Conclusion

The study concluded that: teacher training syllabus on reading whether in mother tongue, Kiswahili or English be adequately developed to cater for individual learners and equip the teachers with methods for teaching reading adequately. More time be given to teaching reading, assessing reading and remediating reading disabilities both at the primary teacher education colleges and at primary schools.

Recommendation

The study recommends that reading be taught all through primary levels (standard 1 to 8) and be within the developmental states of reading; reading readiness curriculum be developed for early childhood and at primary levels. Such a policy should ensure smooth transition of learners' movement from home, preschool and primary schools. Finally, the study recommends adequate development of teacher training syllabus on reading in mother tongue, English or Kiswahili.

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