Influence of Coaching Behaviour Modification Practices on Reinforcement of Reading Abilities Among Dyslexic Learners In Kenya

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Abstract:- Reading ability is essential for success in school as reading skills are utilized in all areas of academic subjects. Reading in English is an essential feature of Kenya's education pathwayThe study investigated theinfluence of coaching behaviour modification practices on reinforcement of reading ability among learners with dyslexia in public primary schools in Kenya. The study was informed by Skinner's theory of reinforcement. Mixed methods research design was used to find out how behaviour modification practices affected the reading ability of the learners with dyslexia. Quantitative research and qualitative research approaches were used to collect and analyze data from the learners. From the target population of 708 learners and 387 teachers, a sample size of 229 learners and 54 English language teachers were selected for the study.To obtain a sample for the study, purposive, saturation and random sampling methods were used in selection of schools, learners, teachers and school allocation to the groups respectively. Reliability of the research instruments was done by use of internal consistency technique where Cronbach's alpha was usedand a reliability coefficient of above 0.6 was obtained. Descriptive and inferential statisticaltechniques were used to analyze quantitative data.SPSS statistical Packageversion 22 assisted in data analysis. The study found a significant positive relationship between variables coaching(r=0.435, n=204, p<.05) and) and reinforced reading ability. The study recommended that teachers should use coaching behavior modification practices to improve the reading ability of the learners with dyslexia condition.

Keywords:- Dyslexia, coaching, behaviour modification, reading ability.

I. INTRODUCTION

Reading as a subject is concerned with the ability of a learner to put what he has read inprint into action (Kucukoglu, 2012).The International DyslexiaAssociation (IDA) 2017), describes dyslexia condition as a specific learning difficulty in whichlearners have problems with poor spelling and decoding abilities.According to theKenya Dyslexia Organization, Dyslexia is a nervous-based languagedeficiency which interferes with the way a student organizes, uses and processes language (IDA, 2017).The Dyslexia International (2018) reports that nearly 10 percent of the globalpopulation (over seven million) has some form of dyslexia. Estimates of scholars in Kenya also puts it at about 10 percent of Kenya'sschool-going children and in a class of around 40 students ,4 are suspected to be dyslexic(Symthe et.al 2004).In other findings,it isestimated that between 70 and 80 percent of learning disabilities around the worldemanate from dyslexia, making the condition the most prevalent form of learningdisabilities (Shaywitz, 2008).Dyslexia is a condition linked with language learning and affects the learner's ability toread, write or spell words regardless of their age, language or intelligence. The conditioncan affect learners of all cadres irrespective of low, average or high intelligence (IDA,2017).

According to Runo(2010), most teachers lack sufficient skills and resources to help them teach and assess learners with reading difficulties. Under such circumstances, it is highly likely that the problems experienced by the learner with dyslexia go unnoticed or receive inappropriate instruction. .Kochung' (2009)concurs with Runo (2010) by stating that lack of teachers trained to handle the needs of leaners with dyslexia leaves a gap in theEducation of these learners as their needs are not fully met in the Education system thusmany are left behind Symptoms associated with dyslexia include pausing or stuttering and sluggish and labored and/or inaccurate reading, deprived spelling,writing, interpreting of words and doing mathematical calculations (IDA, 2009).A study by Darwesh, Elserogy,Khalifa, Gabra & Gafour (2020) in Egypt, reported 60% of dyslexia learners experienceheightened depression, solitary behaviour, functioning problems, anxiety and panic attacksymptoms. They also have problems in how they reason and relate socially, have attention difficulty, and have lawless and aggressive behaviour.Dyslexia Association in Australia (2014), teachers need special training to enable them accurately identify learners who are struggling with dyslexia condition to improve their reading skills.

A. Theoretical Basis of the study

This research was informed by the Skinner's theory of Reinforcement (Skinner, 2011). Skinner's reinforcement theory argues that reinforcement can be used with behaviour modification practices to strengthen behaviours of organisms.The theory talks of reinforcement used to reward a reading activity that progresses toward the anticipated end.This affirms the assertions of the theory.

B. Importance of the Problem

A few studies conducted in Kenya by Cheruiyot et al. (2015), Kiongo (2013), Ondieki (2013) and Runo (2010), are in agreement that learners with dyslexia are found in public primary schools in Kenya.Despite the fact that many studies have been carried out to strategize on how to remediatethe reading ability of dyslexics, the problem is still unsolved. Very few studies haveaddressed the problem among primary school pupils by using coaching behaviour modification.

C. Relevant Scholarship

Coaching entails a relationship where a person called a coach supports a learner or client in achieving a specific personal or professional goal (Skinner, 2011).Coaching also involves use of new teaching methods to support learning (Devine, Meyers & Hosemand, 2013). A study by Duchaine, Kristine and Fredrick (2011) in the U.S.A, explored howteacher coaching with performance feedback on behaviour specific praise is used in mathematics ininclusion classrooms. The study used an experimental method employing a multiple baseline across teachers' design. The study was conducted in three inclusion residential high school classrooms in a cosmopolitan area of a southeastern city in the U.S.A. Participants were 3teachers. The teacher participants included two female and one male teacher. The teacher training, teacher coaching was only done before every third session with data on their performancenoted after each session. Teacher coaching was then reduced to everythird sequence rather than after every session. The three teachers collaborated in three different ninth grade Math inclusion classes for learners who were redoing the ninth grade after performing poorly in maththe previous school year. The learners weretaught daily for 90 minutes using the U.S.A math curriculum.Coaching in maths was done daily with the three teachers alternating between the classes for a period of 14weeks. Data was collected by direct observations and through open–ended questionnaires.

The findings indicated that an improved classroom performance in solvingmathematical problems, volunteering to demonstration on how to solve problems. Further results indicated that praise encouraged learners to work hardand seeing others rewarded aroused learning interest.Heineke (2013), in the U.S.A, investigated coaching discourse used to support teachers'professional learning. The study employed one to one coaching method. Four teachers'dyads were used in the study. The participants were randomly assigned to the participatingdyads. The study was carried by using 18 tape-recorded coaching sessions between thecoaches and the teachers. Data was collected through use of semi-structured interviews toexamine the one-on-one coaching interactions between the coach and the teacher. Dataanalysis was done by interpretive analysis. The study established that coaching can lead toimproved teacher learning.

D. Objectives of the study

To determine the influence of coaching behaviour modification practice on reinforcement of reading abilities among learners with Dyslexia in public primaryschools in Changamwe Sub-County in Kenya.

E. Research Hypothesis

In order to carry out the investigation, the following hypothesis was formulated

Ho1: There is no statistically significant influence of coaching behaviour modification practice on reinforcement of reading abilities among learners with dyslexia in Changamwe Sub-County.

II. METHOD

The researcher used Explanatory Sequential mixed methods research design. In Mixed methods research, design, researchers collect and analyze quantitative and qualitative data within a single study to answer their research question. This type of research can help provide a more complete picture than a study where either a quantitative or qualitative research design is used.In Explanatory sequential design, Quantitative data is collected and analyzed first, before qualitative data is collected and analyzed. The two sub-sets of data are then combined to get a clear picture of the problem under study.The subjects of study were identified and screened by teachers before the researcher usedthe Bangor Dyslexia Test to confirm if indeed the learners had dyslexia characteristics as outlined by (Miles, 1997).Internal consistency of the learners' questionnaire was ascertained by use of Cronbach's alpha. According to Mugenda and Mugenda (2003),a coefficient of 0.60is of adequate reliability while coefficient of 0.70 and above indicates that the instrumenthas a high inter-item consistency reliability standardCoaching had a co-efficient of 0.682 showing high reliability of the instrument. Coaching behaviour modification was done by the Coaching behaviour modification practice was done by a teacher acting as a coach in classand demonstrating howtoread the words by sounding the words out to the learners for 3 months. Daily reading activities were picked from one part of the booklabeled' dyslexia workbook' by Morris (2012) .The teacher then demonstrated to them howto read the words before being assigned to read them out on their own and observationswere made scores on their reading proficiency put in a scoresheet.

A. Population and Sampling of the Study

The population of the study comprised of upper primary learners from 4 government schools in Changamwe Sub County,Mombasa County. In the study, purposive sampling was used to identify dyslexia learners, saturated sampling was used to identify the teachers of English and random sampling was used to place the learners in 4 groups. A total of 229learners constituted the sampling group. Consequently 54 teachers of English participated in the study.

B. Data Collection Tools

The Bangor dyslexia test was used to identify learners who had dyslexia symptoms. A pre-reading and a post- test reading test was also used. A learner's questionnaire was also used where they rated how their teachers used the coaching behaviour modification practice. The statistical analysis of data was done using SPSS version21.

C. Reliability Analysis

Reliability is when the research instrument gives consistent results (Kothari, 2004). The consistency of the results can be improved by standardizingthe conditions under which a measurement takes place. The subjects of study were identified and screened by teachersbefore the Bangor Dyslexia Test was used to confirm dyslexic characteristics. The questionnaires were pilot-tested in two of the non-sampled schools. A Test- Retest method was used to test for reliability among 20 pupils consisting of 10females and 10 males within a span of two weeks. Internal consistency techniques of Cronbach's Alpha were used. Acoefficient of 0.6-0.7 is commonly agreed as acceptable although a reliability coefficient of 0.8 or higher is alwayspreferred (Mugenda & Mugenda, 2003).The learner's questionnaire's coefficient was 0.682 showing it was reliable.

D. Participant's characteristics

The participants were upper primary dyslexic learners from classes 5-8 purposively selected from 4 of the 20 schools in theSub-county.54 teachers of English also participated in the study.

a) Sample Size

The researcher purposively selected a sample of 229 dyslexic learners from 4 public primary schools with a population of 708 dyslexic learners in 20 schools and 54 teachers of English.

b) Research Design

Explanatory Sequential mixed methods research design According to Creswell (2014), mixed methods allow a researcher toexplain the phenomenon in a better way than if one approach was used.

III. RESULTS

Table 1: Learners percentage Response on Coaching Behaviour Modification Practice (n=204)

Indicators	1	2	3	4	5	Mean	SD
My English language teacher is experienced and uses varied styles in teaching to make us understand.	0.0	0.0	39.2	51.0	9.8	4.13	0.77
Our teacher always creates a conducive environment that is friendly to us during learning.	2.0	3.4	11.3	52.5	30.9	3.12	0.85
When you answer any question correctly the teachers praise you immediately	0.0	1.0	40.2	48.5	10.3	3.97	0.85
Our teacher works together with us during the lessons and allows us to ask questions on things we do not understand.	0.0	1.0	31.4	49.0	18.6	3.20	0.75
The teacher always gives individual attention to each learner during the lesson.	20.0	20.4	27.9	23.2	8.4	2.64	0.82
Mean average coaching behaviour modification practice						3.42	0.61

Table 1: Learners percentage Response on Coaching Behaviour Modification Practice (n=204)

Source: Study data (2019)

The findings of the study established that English language teachers in primary schools in Changamwe Sub-County, mostly (mean =3.42; SD=0.61), employ coaching behaviour modification practice during the lessons to enhance reading skills among the learners with Dyslexia.

A. Testing Hypothesis

H_01: There is no statistically significant influence of coaching behaviour modification practices on reading abilities among public primary school learners with dyslexia in Changamwe Sub-County.

To establish whether coaching behaviour modification practice had influence on reading abilities among primary school learners with dyslexia in public primary schools, the null hypothesis was tested using a hierarchical linear regression analysis. The responses on coaching behaviour modification practice were used as the independent variable, while the learners score on posttest exams was used as the dependent variable. To remove the effect of group of the respondents, a hierarchical regression analysis was run in SPSS as shown in Table 2.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.330[a]	.109	.104	10.004	.109	24.603	1	202	.000
2	.738[b]	.544	.540	7.173	.435	191.986	1	201	.000

Table 2: Model Summary - Coaching Behaviour Modification Practice on Reading Abilities among Learners with Dyslexia

a. Predictors: (Constant), Group
b. Predictors: (Constant), Group, Coaching behaviour modification practice

In Table 2, the variable in block 1 is the group of the respondent which was controlled for, while block 2 represents the predictor variable (the level of coaching behaviour practices) together with their interactions and the control variable.This implies that the level of coaching behaviour practices alone accounted for 43.5% of the variability in reading abilities among the primary school learners with dyslexia.

B. Results from inferential statistics

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2462.461	1	2462.461	24.603	.000[b]
	Residual	20217.828	202	100.088		
	Total	22680.289	203			
2	Regression	12339.504	2	6169.752	119.925	.000[c]
	Residual	10340.785	201	51.447		
	Total	22680.289	203			

Table 3: ANOVA – Influence of Coaching Behaviour Modification Practice on Reading Abilities among Learners with Dyslexia

a. Dependent Variable: Posttest

b. Predictors: (Constant), Group

c. Predictors: (Constant), Group, Coaching behaviour modification practice

Model 2 in the ANOVA results output reveals that, the model statistically significantly predicts reading abilities among the primary school learners with dyslexia, F (2, 201) = 119.925, $p < .05$. This implies that the null hypothesis was rejected. It was therefore concluded that there is statistically significant influence of coaching behaviour modification practices on reading abilities among learners with dyslexia.

IV. DISCUSSION

The objective of the study was to determine the influence of coaching behaviour modification practice on reinforcement of reading abilities among learners with dyslexia in public primary schools.The study established that more than a half of the learners with dyslexia were coached in reading activities. Further, the study findings indicated that the teachers of English used reinforcement alongside coaching.Inferential statistics, evidence from observed measurements revealed that there was a statistically significant relationship between coaching and reading ability.The findings agree with those of Feagans, Kainz, Hedrick, Ginsberg, and Amendum (2013) in Carolina, which found that live webcam coaching can help early elementary classroom teachers provide effective knowledgetraining for struggling readers. The findings of the study are consistent with those ofByington (2013) which investigated effects of literacy coaching and pre-schools teacher implementation of literacy instructional practices in kindergarten classes and reported an improved performance in(Phonological Awareness, Reading, Vocabulary, Inscription, and Oral Language/Extended Conversations) when coaching was used. The findings of the study however differ with those of Aliyu (2019) on teacher coaching and reported that teachers rarely used coaching hence the need for refresher courses to improve instructional practices in the classrooms.

A. Limitations of the study

The study was conducted in Changamwe Sub-County in Mombasa County which is among the 210 Sub-Counties in Kenya (2010 constitution), the findings may not reflect what is found in the other Sub-Counties due to difference in locality, age and language.

B. Recommendations of the Study

The teachers in the state owned elementary schools should be sensitized to use coaching behaviour modification practices in offering appropriate intervention measures in reading to help learners with dyslexia condition.

C. Conclusions

The study found that there was a statistically significant influence between coaching behaviour modification and reinforced reading behaviouramong learners with dyslexia condition.

D. Acknowledgement

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