

Influence of Instructional Resources on the Sustainability of Hundred Percent Transition Policy in Secondary Schools in Bungoma County, Kenya

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ABSTRACT

This study purposed to establish the influence of instructional resources on the sustainability of hundred percent transition policy in public secondary schools in Bungoma County. The study adopted descriptive survey research design. Data was collected using a questionnaire and interview schedule. The population of the study consisted of 440 Principals and 1,320 secondary school teachers. The sample size of 132 of teachers was selected using of ten percent of the teachers while 44 principals were selected using purposive sampling. The findings of the study showed that the schools lacked adequate instructional resources to cater for the ballooning number of students. The study recommends that the government should avail adequate instructional resources in the schools for effective implementation of the hundred percent transition policy.

KEYWORDS: *Implementation, Instructional Resources, Sustainability, Transition Policy*

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1. INTRODUCTION

Ngaroga (2007) discusses educating and learning supplies as things, which can be obtained within environment of the school, gathered, or purchased. Within secondary schools, this assets incorporate resources for teachers, for example, dusters, chalk, note pads, boards, course readings, reference books, apparatus as well as laboratory chemicals, ICT services, chalkboard rulers and mathematics construction materials, geography maps, registers, calculators, balls, and different games stuff among others.

Instructional materials such as visual and non-visual aid, objects or devices can enhance teaching learning process (Isola, 2010). They encourage the productivity of teachers, strengthen the success of students and make learning more enjoyable, practical, rational and attractive (Olayinka, 2016). Set books are primary conduit for delivering content knowledge, guiding teachers through the syllabus content and ordering of instruction (UNESCO, 2010). Adequacy of teaching

and learning recourses enable smooth delivery of content as well as promote the motivation of both the teachers and the students. The lack of access or inadequacy of educational materials is a significant cause of school system inefficiencies and poor student performance in schools (Abdu-Raheem, 2011, Murillo, 2011). Ndabi (1985) research on the relationship between school features and academic achievement of students showed that students who had the required set books in all subjects taught appeared to do better than students in schools with a comparatively high incidence of textbook shortages.

Johan (2004) stated that education results in schools are connected closely to sufficiency as well as usage of resources for instructing and learning. Studies by Mbaria (2006) have shown that schooling and learning assets are high in well performing schools than in low-performing schools, and there is a huge distinction in the accessibility of services in well-performing schools and low-performing schools. Asiago, (2018),

did an investigation on administrative elements impacting education quality in public secondary schools in Kitui, Kisii and Nairobi Counties. The investigation discoveries demonstrated that most organizations are confronted with difficulties, for example, absence of sufficient offices such as libraries and deficient instructional materials and these elements will in general negatively affect the nature of graduates created. Reading material is one of the educational inputs that have the best effect on learning accomplishment. Orodho et al (2013) found out that difficulties of accessibility as well as ampleness of resources of learning adversely influenced teacher viability in utilization of teaching techniques just as emphasis on individual student. This could also interfere with the smooth implementation of the school programs hence poor implementation of the 100 percent transition policy in public secondary schools.

A study by Lockheed and Verspoor (1999) reported that accessibility of set books and other instructional materials had a reliably affirmative influence on students' accomplishment. On the other hand, Olembo & Cameroon (1986), suggested that school principals are facing growing institutional difficulties, consisting of inadequate as well as badly constructed buildings; books shortage, reference materials, apparatus and equipment, absence of suitable school furniture principally desks, poor or sometimes non-existent maintenance as well as repairs, over-stuffed classes and poor infrastructure among others. Deficiency of these resources possibly will interfere with the smooth running of the school programs, hence poor implementation of the 100 percent transition policy. Javier and Marcella (2011) did an examination in primary schools in Latin America to investigate whether school infrastructure and resources do matter. The findings were that adequacy of set books and revision materials in the library had the highest impact on academic performance. Then again, inadequacy of school infrastructure and resources could impact negatively on the process of implementing the 100 percent policy. A study by the British Columbia Teachers Federation (BCTF, 2012), found that a significant relationship existed between well stocked libraries and students achievements. Well stocked libraries have adequate teaching and learning resources like revision materials, reference books and text books which help the students to do their individual studies in the library. Therefore, the research intended to find out to what extent the adequacy of material resources influenced the implementation of the 100% transition policy in public secondary schools in Bungoma County, Kenya.

According to Smith (2002), learning is a complex action that includes interaction of understudies' inspiration, actual facilities, teaching resources, and demands for education and school program expertise. In this way, access to TLR advances the skill of schools when they are the basic instruments in the understudies that yield great academic performance. Resources for materials, human resources, e.g. teachers as well as subordinate personnel, and physical offices, e.g. libraries, labs and research spaces, are important resources that can be accessed for teaching and learning. Munguti (2009), found a very strong positive significant link amid instructional resources a scholarly performance. As Munguti suggested, schools supplied a larger amount of resources delivered in a better way than schools that are not well invested. This validated the Wakoli (2016) report that tuition-based schools operated in a manner that is better than publicly funded schools because of the quality and scope of teaching and learning materials. Munguti further similarly emphasizes that the quantity and quality of learning and teaching resources impact understudy performance. The writer noticed that establishments with satisfactory facilities, for example, reading material have a high possibility of performing better in assessment than ineffectively prepared ones. Therefore, bad performance may possibly be credited to lacking materials for educating as well as learning and equipment. Inadequate learning as well as teaching materials as well as equipment may be attributed to poor performance.

TLR aid improves access and instructive effects as understudies are less likely to be absent from schools that have intriguing, meaningful and significant opportunities for them. For good teaching of the learning method, these services should be offered in schools in terms of quality and quantity. Several studies have been carried out on effects of educational resources on education. Momoh (2010), undertook an inquiry into the effect of teaching services on the performance of understudies in West Africa School Certificate Examinations (WASCE). With the means available for teaching, the achievements of understudies in WASCE were established. He inferred that physical resources greatly influence the achievement of understudy as they facilitate the learning of dynamic thoughts and ideas and undermine repetitive learning. If TLR fails schooling, it is compromised and this is ultimately expressed in low academic performance, problematic attitudes, high dropout rates, insufficient motivation for teachers and missed educational goals. Disregarding the different known advantages of secondary education, a significant number of the developing nations actually

think that it's a challenge to give the essential teaching and learning resources for instructing and learning principally because of the restricted public assets and the contending choices. Onyango (2008), brings up that great number of understudies selected following the presentation of FPE, has achieved issues of short textbook proportions, stuffed study rooms as well as low sitting trends, which impact primary school attendance. Secondary schools could also have a similar concern with adoption of the FSE.

Smith (2002), sees that resources accessibility, for example, desks, course books, and chalkboards was noticed to affect students' interest in education. They give simple access during instructing and learning cycle. Kenya goes through a similar predicament. Kenyan schools are not similarly provided with the educating and learning assets however the Kenyan government, under the FSE initiative, gives the understudies in state funded schools equivalent measure of cash. Eshiwani (1981), sees that book sharing brings down the confidence as well as drive among understudies. It has capability to prompt not finishing of training system or bad performance prompting reiteration of classes. Murald (1998), underpins via this opinion by bringing up insufficient instructing and learning helps, absence of instructor framework and sexual insensitivity, study room elements can work against an understudy. Secondary schools may offer a variety of resources to improve student academic success. In the education system, student support is described as those practices that improve schools' ability to adapt to diversity as well as the problems faced by their pupils, staff as well as lectures as a whole (Kerr and Nelson, 2010). Student assistance has been referred to by numerous scholars (Clarke, 2001; Delgado, 2001; Gartin, 2002; Burden, 2005), including: mentoring, counselling, coaching, advice and instruction and tutoring. In addition, students can obtain instructional assistance by supplementary classes, remedial lessons, reading laboratories, which can be supported by a trained and committed person who shares the school's mission.

Wilson (2004:74) points out that 'school culture would explain the balance between individual learning and social needs. 'The teachers still try to help them, but with lots of intentions, students come to classes. These should be supported by a trained and devoted citizen who shares the mission of the school.

Mentoring services or drop-in offices employed by students or other community volunteers may be beneficial in schools with scarce funding and heavy psychologist caseloads (Schneider, 2006). Assessment data, starting in form one, as part of a concerted early warning initiative that recognizes failing pupils. As

part of a concerted early warning system, therapy can be accompanied by appraisal results, starting with form one, which recognizes troubled students and ensuring that they receive the extra assistance they need (The Education Trust, 2005). School relations are the way teachers take care of students as people, according to Blum & Libbey (2004), in order to drive them to see the value of education. Instructing and learning resources structure a point of convergence of consideration, excite interest, captivate the students' creative mind, save energy as well as time, and advance maintenance and great memory. Bungoma region schools do not have sufficient teaching learning assets. Relying on the position of shortcomings, the examiner set out to consider the influence of providing of teaching and learning resources on sustainability of hundred percent (100%) transition policy in public secondary schools within the County.

2. METHODOLOGY

2.1. Research Design

In this study, a descriptive survey research design was utilized. According to Mugenda & Mugenda (2012), in preliminary and exploratory studies, descriptive survey research designs are used to help researchers to collect, present, summarize as well as analyze information for clarity purposes. Mugenda & Mugenda (2012), further acknowledges that identifying and documenting the way things are is a descriptive research aim. The design was adopted because it was intended to produce statistical information on school factors and sustainability of hundred percent transition policy in public secondary schools in Bungoma County. Since the researcher gathered data and reported how things were without altering any variables, the research fitted into the descriptive survey research design provisions.

2.2. Sample Size and Sampling Technique

A sample is a term referring to a portion of the population target chosen to represent it in a procedural manner (Mugenda & Mugenda, 2012). The sample entailed of 44 public secondary schools selected out of 440 secondary schools using ten percent as postulated by Mugenda & Mugenda (2009). Therefore, 44 Principals and 132 Teachers were selected out of 1,320 teachers. Stratified sampling was used to categorize the selected schools into boy schools, girl schools and mixed schools and therefore 44 schools (10%) out of 440 schools in the County of which 10 schools were boy schools, 10 girls' schools and 24 mixed schools. This was in accordance with the 10-50 percent sample size requirement by Mugenda & Mugenda (2012). The principals included in the

study were those from the 44 schools chosen. The sample comprised three teachers from each of chosen schools. Since the researcher targeted class

teachers and/or teachers who had been in the school for at least two years, the identification of the three teachers was by purpose sampling.

Table 3.1 below illustrates the sample size and sampling technique.

Table 3.1: Sample Size and Sampling Technique

Category	Target Population	Sample Size	Percentage	Sampling Technique
Principals	440	44	10	Purposive sampling
Teachers	1320	132	10	10%
Total	1760	176	10	

Source: Field Data 2020

2.3. Instruments of Data Collection

Questionnaires and interview schedules were the key instruments of data collection for this study. The questionnaire was used for the gathering of data because it provided substantial administration incentives. It also provided an even incentive to vast numbers of persons concurrently and provided a simple data accumulation to the inquiry. Mugenda & Mugenda, (2003) claim that questionnaires allow respondents the right to share their thoughts or opinions and to make recommendations as well. Anonymity helped to generate more candid responses. To gather qualitative as well as quantitative information from teachers, both open and close-ended questionnaires were utilized

The teachers' questionnaire contained four parts. Part one gathered the teachers' background statistics. One of the other three parts collected data relating to the workload of teachers, tools for learning and teaching, and physical facilities. The questionnaire contained open-ended as well as close-ended elements. The questionnaire obtained information which was compared to documentary evidences to support the study findings where the opinion of teachers was sought. The questionnaires were administered by the researcher and research assistants on scheduled days.

The interview was conducted with 44 Principals drawn across the 44 public secondary schools in Bungoma County. The interview schedule yielded information on teachers' workload, resources for learning as well as teaching and physical facilities and how they have an influence on the sustainability of hundred percent transition policy in public secondary schools in the study area. The questionnaire was utilized for data collection. The researcher conducted interviews on appointed days.

Document analysis was also used to collect data. Document analysis is a social science methodology for the study of communication content. It is the study of recorded human communication, such as websites, pictures, laws, and other records (Mugenda & Mugenda, 2003). In this study enrolment registers were used to find the number of pupils who sat for Kenya Certificate of Primary Examination and students admitted in form one from 2017-2020 from the County Education Office.

3. Results and Discussion

3.1. Instructional Resources and Sustainability of Hundred Percent Transition Policy

The teachers were asked to determine the influence of instructional resources on of hundred percent transition policy in public secondary schools in Bungoma County. To analyze the data and examine the relationship between teaching and learning resources and sustainability of hundred percent transition policy, descriptive statistics for each question was calculated, in addition to Chi-Square and Principal Component Analysis.

To begin with, descriptive results of the study are shown in Table 1

Table 1. Descriptive Statistics on Instructional Resources

Instructional resources	N	Minimum	Maximum	Mean	Std. Deviation
Adequacy of Textbooks	120	1.00	5.00	1.4167	.49507
Adequacy of Revision	120	1.00	5.00	1.3333	.47338
Adequacy of Laboratory apparatus	120	1.00	5.00	2.3333	1.36790
Availability of teaching and learning resources	120	1.00	5.00	2.4583	1.50012
Valid N (listwise)	120				

Researcher's own data (2020)

The study in Table 1 revealed that the study schools lacked enough set books to cater for the high number of students as shown by a mean of 1.4167 which was beneath the average mean of 3.0, indicating that there is a need of set books to enable the sustainability of the hundred percent transition policy in the study schools. The

findings concurred with earlier findings that opined that availability of school set books is fundamental for secondary schools to realize the objectives of education (UNESCO, 2016). Inadequate set books pose a threat to the learning potential of the learners. This has adverse effect on assignment completion, individual study habits and the general well-being of the learners. Adequacies of set books enable smooth delivery of content as well as promote the motivation of both the teachers and the students.

The findings further showed that the schools did not have adequate revision materials as indicated by a mean of 1.3333 which was below the average mean of 3.0. This was attributed to the increase of students due to the enactment of the hundred percent transition policy in the study schools. A study by Johan (2014) states that education outcomes in schools are closely linked to adequacy and utilization of revision materials. Studies by Mbaria (2006) shows that revision resources were shown to be greater in higher performing schools than in low-performing schools and there was a significant difference in the availability of revision materials in higher-performing schools and low-performing schools. Therefore for proper sustainability of the hundred percent transition policy, there is need for the study schools to acquire more revision materials for the students' academic improvement.

The study further indicated by a mean of 2.3333 to lack of adequate laboratories in the study schools which was below the average mean of 3.0. This finding is in line with other findings by Asiago (2018), who undertook a research study on administrative aspects prompting quality of education in public secondary schools in Kitui, Kisii and Nairobi Counties. The results of the study showed that most institutions face challenges such as lack of sufficient facilities such as libraries and insufficient teaching materials, and these variables appear to have a negative influence on the output of produced graduates. Set books are one of the educational inputs that have the greatest influence on learning achievement. Therefore for effective implementation of hundred percent transition policy schools need to improve on their material infrastructure.

The study lastly indicated that unavailability of instructional resources influenced sustainability of hundred percent transition policy with a mean of 2.4583 which was below the average mean of 3.0. All the responses to set of questions received a lower mean as compared to the average mean indicating that the teaching and learning resources were inadequate in the study schools. The findings were in agreement with the qualitative data obtained from the Principals which pointed to a general lack of resources like set books for learning, laboratory apparatus, libraries, materials for revision, computer laboratories as well as resource persons. Therefore the findings indicate that the inadequate instructional resources was more likely to compromise the sustainability of the hundred percent transition policy in the study schools. The findings were in agreement with earlier studies by Onyango (2008), who notes that the high number of students enrolled since the Free Primary Education enactment has created problems with low textbook proportions, overcrowding classes and bad sitting habits influencing primary school attendance. With the advent of the FSE, high schools may also have the same concern. Smith (2002), states that it has been observed that the provision of tools such as set books, desks, and blackboards has had an impact on the involvement of students in school. During the teaching and learning process, they have easy access. Kenya is faced with the same dilemma. Schools in Kenya are not equally provided with teaching and learning materials, while Kenya's government gives equivalent sums of money to students in public schools through the FSE scheme. Eshiwani (1981), perceives that the exchange of books decreases student interest as well as morale. This may contribute to the inability to complete the school curriculum or low success that leads to class repetition. This opinion is reinforced by Murald (1998), argued that insufficient classroom factors will work against a pupil by finding out inadequate instruction and learning aids, lack of instructor programs and gender insensitivity.

In addition, the relationship between instructional resources and sustainability of the hundred percent transition policy in public secondary schools in Bungoma County was analyzed using Chi-Square. The results for instructional resources are indicated in Table 2.

Table 2: Chi-Square Correlation on Instructional Resources and Sustainability of Hundred Percent Transition Policy

	Adequacy of Set books	Adequacy of Revision Materials	Adequacy of Laboratory	Availability of Teaching and learning resources
Chi-Square	32.333^a	33.333^a	47.667^b	42.750^b
df	1	1	4	4
Asymp. Sig.	.068	.000	.000	.000

About 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0

Table 2 shows that the relationship between instructional resources and sustainability of hundred percent transition policy was positive and statistically significant at $p < 0.001$ significance level. The obtained chi-square values of adequacy of set books 32.333^a, adequacy of revision materials 33.333^a, adequacy of laboratories 47.667^b, and adequacy of instructional resources 42.750^b, were all above the minimum expected cell frequency of 24.0. The study therefore concludes that there was statistically significant association between instructional resources and sustainability of the hundred percent transition policy in public secondary schools in Bungoma County. Therefore, instructional resources improve the sustainability of the hundred percent transition policy. The findings inferred that the availability of instructional resources was more likely to positively influence the sustainability of the hundred percent transition policy in the study schools.

The results of the research were in line with a study by Orodho *et al* (2013), who found that the problems of accessibility and adequacy of material tools were found to have a detrimental influence on teacher productivity in the use of teaching methods as well as on individual learners, which might also conflict with the smooth delivery of education services, rendering the 100% transition pledge of public secondary schools improperly enforced.

A study by Lockheed and Verspoor (2019), reported that availability of set books and other instructional materials had a consistently positive effect on students' achievement. On the other hand, Olembo & Cameroon (2016), indicated that school principals face increasing administrative Challenges that include insufficient and poorly designed buildings; lack of books, reference materials, equipment and appliances, lack of adequate school furniture, including desks, weak or often nonexistent maintenance and repairs, overcrowded classrooms and poor infrastructure, among others. Shortage of these resources could interfere with the smooth running of the school programs, hence poor implementation of the 100 percent transition policy

In the same way, Ngaroga (2017), argues that learning and teaching resources should be obtained, acquired or purchased in the school setting. These tools include teacher equipment in high schools, like chalk, notebooks, dusters, boards, dusters, reference books, set books, laboratory chemicals as well as apparatus, ICT services, blackboard rulers and mathematics building materials, geography charts, calculators, registers, storage facilities, balls, and other sports, among others. Teaching and learning resources form a focal point of attention, arouse interest, stimulate the learners' imagination, save time and energy, and promote retention and good memory and therefore they must be available and used in schools for sustenance of the educational goals.

Furthermore, teachers' responses on instructional resources and sustainability of a hundred percent transition policy were analyzed using Principal Component Analysis to find the variable with highest variance and findings are illustrated in Table 3.

Table 3. Principal Component Analysis on Instructional Resources and Sustainability of Hundred Percent Transition Policy

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Adequacy of textbooks	3.614	90.344	90.344	3.614	90.344	90.344
Adequacy of revision resources	.241	6.036	96.381			
Adequacy of laboratory apparatus	.125	3.116	99.497			
Availability of teaching and learning resources	.020	.503	100.000			

Researcher's own data, (2020)

The findings in Table 3 showed that principle component analysis indicate that adequacy of set books in the school contribute the highest variability to the data with regard to sustainability of hundred percent transition policy by 90.344% variance. Moreover, 6.0366% variance was adequacy of revision materials, while a 3.116 variance for adequacy of laboratory chemicals and .503 for unavailability of teaching and learning resources.

The study findings are in agreement with earlier studies by Javier and Marcella (2011) whose study in primary schools in Latin America investigated whether school infrastructure and material resources do matter. The findings were that adequacy of set books and revision materials in the library had the highest effect on academic

performance. On the other hand, inadequacy of school infrastructure and material resources could impact negatively on the process of implementing the 100 percent policy. A study by the British Columbia Teachers Federation (BCTF, 2012) found that a significant relationship existed between well stocked libraries and students achievements. Well stocked libraries have adequate teaching and learning resources like revision materials, reference books and text books which help the students to do their individual studies in the library.

4. Conclusions

The study concludes that the availability of instructional resources in the schools positively influences the sustainability of the hundred percent transition policy

Recommendations

The government should strive to equip the schools with relevant instructional resources to boost the sustainability of the hundred percent transition policy in the Kenyan public secondary schools.

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