

Students Completion Rates: Implications for Teaching and Learning Resources in Secondary Schools in Kenya

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Abstract

This study provided a critical appraisal of the effect teaching and learning resources on students' completion rates in secondary schools in Kenya. The main objective of the study was to investigate the influence of teaching and learning resources on students' completion rates in secondary in schools in Kenya. The study examined the role played by bench marks on instructional materials in influencing students' completion rates. The paper also assessed the role played instructional materials in promotion of students' completion rates. The paper further investigated the availability of teaching and learning resources. Particular attention is given to the availability and utility of teaching and learning resources that affect completion rates of students. This study was guided by the systems and benchmarking theories. Systems theory was advanced by Ludwig von Bertalanffy (1968). He emphasized that systems are open and interact with their environments to acquire qualitatively properties. Systems theory focuses on the arrangement of relations between the parts which connect them into a whole. It focused on teaching and learning resources and how changes can impact on the completion rates of students. Benchmarking theory, as advanced by Watson (1993) is established upon the performance comparisons and gaps realized in performance process. Benchmarking approach performs the same function as performance gap analysis. In this context, benchmarking determines the performance gaps with respect to generation and utilization within the management system. The paper adopted document analysis method. This was drawn from international and local studies on students' completion rates. The study further adopted the mixed method approach. Descriptive survey design was used to collect data from one set of questionnaires. The reliability was estimated through use of Cranach's Alpha Coefficient using Statistical Package for Social Sciences (SPSS) version 20.0. The target population comprised of head teachers, teachers and students in secondary schools. Using the sampling guide developed by Krejcie and Morgan (1970), a sample size of 24 head teachers and 120 teachers and 240 students was selected. The total sample size for the study was 384. This conformed to the confidence Interval of 0.05, confidence level of 95 percent which is a Z-score of 1.96 and standard of deviation of 0.5. The study findings revealed that teaching and learning resources were crucial for achieving high completion rates in secondary schools in Kenya. It was therefore concluded from the findings that teaching and learning resources contribute to a great extent the students' completion rates in secondary schools in Kenya. Findings of the study are significant to Kenya in particular and sub Saharan Africa in general, as they would assist to redress challenges of quality education arising from constrained learning and teaching resources. The findings might help the policy formulators formulate education policies and the legal framework which are skewed towards students' completion rates. The policy implementers would understand and appreciate education policies that contribute to students' completion rates in secondary schools. The study is significant to the field of comparative and International education, since it provides data on what the Kenyan government is doing in promoting the students' completion rates in secondary schools. The entire education stakeholders would understand how to redress issues of teaching and learning resources. This study is significant to the field of comparative and International education, since it provides data on how teaching and learning resources impact on students' completion rates in secondary schools in Kenya.

Keywords: Completion rates, learning resources, pedagogical practices, Secondary education,

The Study Objectives

The objectives of this study were to;

1. Determine effect of teaching and learning resources on completion rates in Secondary schools.
2. Investigate availability teaching and learning resources in Kenyan Secondary schools
3. Assess the extent to which teaching and learning resources influence students' completion rates

Hypothesis: H₀; Teaching and learning resources do not significantly influence students' completion rates in secondary schools

1.1 Introduction

Students enroll in secondary school in great numbers and drop out along the way leading to low levels of completion rates. Completion rates of students' academic career are used as a measure of internal efficiency and quality output in education. In developed nations, this has been possible through improvement of facilities and resources in educational institutions. Most western countries like the USA, Japan and Europe have achieved their economic power by pursuing the careers of students that complete their studies. An education system in any country is established as a result of the determination of the broader aims of education, which are in line with the

aspirations of the countries. A school, in economic terms is an industry which transforms a given quality of inputs into required outputs. Okumbe (2001) notes that secondary schools fail to produce quality and quantity output due to numerous factors within the school environment. The issue of student completion rate in secondary schools has been given first priority in various countries across the global for instance in the United States of America, there is variation in students completion rate across various states, such that, In some parts of America, the completion of students in some schools has been quite demanding. This has contributed a lot in the increased research studies in the American education. According to Martin & Halperin (2006) the reports on high school completion and incomplete secondary school education conducted in region across American States have concluded that approximately two thirds of final year students in their system of education get to complete their studies four years later than the expected period. In Canada, completion of high school education has been able to increase by about 11 percentages in the year 1997 and 2010 respectively, this is because the government of Canada has put completion of students' education as the first priority. Further, the education system has certainly encouraged "stay in school" programs, but broader economic and social factors have been more important than policy in contributing to Canada's impressive performance on completion (Conference Board of Canada, 2013).

In Sub Sahara Africa, completion of secondary education is generally high for males as compared to female. A report provided by UNICEF (2012) indicated that most of the region (21 percent young women and 28 percent of young men) have completed secondary school. Kenya is one of the countries included in this reflection as a country in the education sector. Despite the steady growth in completion rate in both primary and secondary schools in Kenya, there are still a high number of students not completing their education. In Kenya, students' completion rates in their respective careers has not been looked at seriously and the factors responsible for these has been attributed to socio- economic factors, school based factors, poor administrative leadership and effective administrative leadership is capable of inspiring and motivating even the most ineffective student to strive towards attaining the academic potentials. Students who do not complete their studies usually end up frustrated and disappointed in life. According to Magondu (2011) the issue of completion rate in high secondary school and low transition rates remain some of the major challenges facing the education sector in Kenya. A study by KIPPRA (2006) shows that the survival rate from Form 1 to Form4 is above 20 per cent, while those who survive from Form1 to university is 1.69 per cent. This is a worrying trend bearing in mind that by 2015, the country was expected to meet the call for Education for All. Students not completing secondary education in Meru County have been a major problem. The issue of resources, school administration and school curriculum has affected the learning progress of students in schools (Meru Education Annual Report, 2012). The number of students incompleting rates in public secondary schools is higher compared to private secondary schools and therefore poses an academic concern. Therefore it is necessary for a study to focus on teaching and learning resources influencing students' completion rates in public and private secondary schools.

1.2 Teaching and Learning Resources.

Teaching and learning resources have an influential role on student's completion rate. According to Enos (2003), under the free secondary education programme, every student is entitled to free writing materials like pencils, pens and exercise books. However, due to high enrollment rate in public secondary education, textbooks were being shared in the ratio of one textbook to five students. Sharing of teaching and learning resources affects students' accessibility to the resources while at home and many have to do their homework early in the morning the next day when in school. This lowers students' motivation in education and end up performing poorly in their examinations. This in turn may lead to their retention or failure to complete their education. The state Government of Kenya had to set bench marks to be adhered to in order to achieve quality education. The benchmarks set related to physical facilities, instructional materials, curriculum supervision, pupils' enrolment and deployment of teachers. However, Mackatiani (2017) noted that the government of Kenya only set bench marks for quality education on basic learning resources but impletion of the same has not been actualized.. The issue of adequacy of instructional materials ensuring that pupils participate reasonably in learning activities has not been actualized. According to Mackatiani et al (2017), teachers use traditional methods of teaching. In spite of this, teachers use teacher centered approaches that don't incorporate learning resources.

1.3 Influence of Teaching and Learning Resources on Students Completion rates.

Macgowen (2007) carried out a study on the impact of school teaching and learning resources on student achievement, attendance, behavior, completion rate and teacher turnover rate at selected Texas High Schools. School resources condition for the participating schools was determined by the Total Learning Environment Assessment (TLEA) as completed by the principal's designee on high school campuses in Texas with enrollments between 1,000 and 2000 and economically disadvantaged enrollments less than 40%. Each school in the study population was organized by grades nine through twelve. The study found that student achievement, attendance and completion rate measures were not found to be statistically significant in relation to school facility conditions as measured by the Total Learning Environment Assessment (TLEA).

Charles (2009) carried out a study on internal efficiency measures in promotion of access and completion rates in public secondary schools of Bungoma South sub-county. The study found out that schools lacked adequate provision of teaching and learning resources which was greatly hindering attainment of qualitative objectives of education. Mackatiani et al (2018) concurred with these findings when they noted that inadequate instructional materials influenced the application of teacher-centered approaches which don't promote learning achievement. Besides, on financial resources, it was established that head teachers were inadequately prepared to handle financial matters. The following recommendation was given: There is need to regulate the starting of new schools in particular regions after having ensured that the existing ones were having at least three streams and fully enrolled to minimize underutilization of teachers. Head teachers should be adequately prepared to make them effective financial managers. The study findings cannot be generalized to other sub counties in Kenya. Thus, the current study sought to provide solid information on school based factors affecting students' completion rates in public and private secondary schools in Meru central sub-county.

2. Statement of the problem

From the background information, it is evident that students' completion rates in secondary education is crucial worldwide. Despite the Kenya government through the Ministry of Education embarking on reforms gearing towards attaining the education for all (EFA) (UNESCO, 2005), there are still quite a number of secondary school students who do not complete secondary education. The increasing number of students incompleting rates are due to various implications in terms of existing resources to promote students' completion rate. These implications have impacted negatively on learning achievement of learners. This has subsequently influenced the students' completion rates in secondary schools. This study, therefore, investigated issue of teaching and learning resources underlying usage of teacher-centered approaches. The teaching approaches applied don't motivate learners. They subsequently demotivate learners, leading to low completion rates. The study therefore investigated influence of these variables on students' completion rates in secondary schools in Meru Central Sub County.

3. The significance of the study

The study might be significant to the government of Kenya and entire sub-Saharan Africa as education characteristics are similar. The findings would be used by education planners and teachers on how to incorporate available teaching and learning resources. Policy planners would use measures identified in the formulation of policy on provision of teaching and learning resources.

The study findings might also provide suggestions for quality assurance to be shared with education stakeholders at on importance of teaching and learning resources. The study findings are likely to draw the attention of Quality Assurance and Standards Officers (QASOs) who might use the information while on supervision of schools.

Finally, findings of the study would further add to the growth of knowledge on students' completion rates. These study findings might be additional knowledge on teaching and learning resources to the existing research findings and literature. Besides, it might help future researchers while identifying priority area in which to carry out more research. The results may, therefore, be of interest to researchers in educational policy studies; and comparative and International education since it would provide data on what the Kenyan education sector is doing in promoting students' completion rates in secondary school.

4. Theoretical Context

The study applied the theoretical constructs on transitional analysis and benchmarking theories. The transitional theory investigates how people have developed and how they treat themselves. It therefore looks at people relate and communicate among themselves. This is actualized in the provision of suggestions and interventions which enable people to change and adjust to the environment. The theory identified three central concepts that are crucial in learning. The foremost one is that people learn through observation. The next aspect was that the internal mental states of people are essential in the learning process. The final concept identified in the theory is the learning achievement. Due to inadequacy of teaching and learning resources, teachers adopt convectional approaches which contribute to students dropping out of schools. According to various scholars (Kozak, 2004, Zairi, 1992; Smith et al., 1993 and Rogers et al., 1995) considered benchmarking as strength and weaknesses depending upon changes in supply, demand and market condition. However, benchmarking theory, as advanced by Watson (1993) is established upon the performance comparisons and gaps realized in performance process. Benchmarking approach performs the same function as performance gap analysis. In this context, benchmarking determines the performance gaps with respect to generation and utilization within the management system. It ultimately develops methodologies to close the gaps. The existence of a gap between internal and external practices leads to identification of the changes that are crucial for comparison and analysis in research. Subsequently, benchmarking generates comparisons and examines the operation and management skills that

contribute to service production. Competitive analysis in benchmarking looks at the characteristics of team players in the environment. Despite this, time constraints, competitive and poor management commitment of professional human resources.

This study, therefore, adopted transactional analysis theory and the benchmarking theory in order to analyze factors that contribute to students' completion rates in secondary schools in Kenya.

5. Methodology

This study adopted the mixed method research approach. The approach incorporated qualitative and qualitative analysis of data. The study targeted head teachers, teachers, and students in Secondary schools in Meru central County, Kenya. The study targeted a total of 10000 head teachers, teachers and students. The purpose of the target was to access respondents who had experience and information about students' completion rates in secondary schools. From this target population, a sample of 384 respondents (24 head teachers, 120 teachers and 240 students) was drawn to conform to the confidence Interval of 0.05, confidence level of 1.96 and standard of deviation of 0.5. The study objectives led to the collection of partly quantitative and qualitative data. In this case, quantitative and qualitative data of respondents were analyzed. The derived data led to the classification and coding of collected information. The coded data were entered into the computer, and the statistical package for social sciences software (SPSS version 20) was used to analyze the data. Qualitative data were classified according to variables of the study (class size, attitudes, and competencies). The Cronbach's alpha test of the variable reliability of the relevance coefficient at 0.67(Virginia University, 2016) was used on all standardized items. Descriptive statistics gathered included means, frequencies, standard deviations, and regressions. Findings were depicted using tables and graphs. Regression analysis was used to determine the relationship between independent variables of teacher-centered approaches and the dependent variable of learning achievement.

6. Results and Discussions

The purpose of this study was to investigate the influence of teaching and learning resources on students' completion rates in secondary schools in Kenya. Primary data was collected from head teachers, teachers, and students from secondary schools in Meru County. The study, therefore sought information from head teachers on adequacy of teaching and learning resources. Their responses were presented in table 6.1 below:

Table 6.1 Head teaches' responses on adequacy of teaching and learning resources

Response	Public		Private	
	Frequency	Percent	Frequency	Percent
Adequate	0	0	2	22.2
Inadequate	15	100	7	77.8
Total	15	100	9	100.0

In regard to data contained in Table 6.1, 0 percent of the head teachers in public secondary schools indicated that teaching and learning resources in their schools were adequate. In addition 22.2 percent of head teachers in private secondary schools indicated that teaching and learning were adequate. However, further findings from Table 6.1 revealed that 100 percent of the head teachers in public secondary schools indicated that teaching and learning resources were inadequate. Another 77.8 percent of head teachers in private secondary schools indicated that teaching and learning resources were inadequate.

Overall, there was inadequacy of teaching and learning resources in both public and private secondary schools. These findings concurred with Charles (2009) who noted that schools lacked adequate provision of teaching and learning resources greatly hinder attainment of qualitative objectives of education.

The study, further sought information from head teachers, teachers, and students on influence of teaching and learning resources on completion rates in public and private secondary schools. Head teachers, teachers and students were asked to respond to the influence of teaching and learning resources on students' completion rates. Their responses were presented in table 6.2 below:

Table 6.2 Head teachers', teachers' and Students' views on whether teaching and learning resources influence completion of education in their schools

Attendance	public primary schools						private secondary schools					
	head teachers		teachers		Students		head teachers		Teachers		students	
	N	%	n	%	N	%	N	%	N	%	N	%
Yes	15	100	75	100	100	100	9	100	45	100	90	100
No	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	100	75	100	150	100	9	100	45	100	90	100

In regard to data contained in Table 6.2, 100 percent of the head teachers in public secondary schools indicated that teaching and learning resources in their schools influenced students' completion rates. Another

100 percent of teachers in public secondary schools indicated that teaching and learning resources influence students' completion rates. Besides, 100 percent of the students in public secondary schools indicated that teaching and learning resources influenced students' completion rates. In addition 100 percent of the head teachers in private secondary schools indicated that teaching and learning resources in their schools influenced students' completion rates. Another 100 percent of teachers in private secondary schools indicated that teaching and learning resources influence students' completion rates. Besides, 100 percent of the students in private secondary schools indicated that teaching and learning resources influenced students' completion rates.

However, further findings from Table 6.2 revealed that 0 percent of head teachers, teachers and students in public secondary schools indicated that teaching and learning resources in their schools did not influenced students' completion rates. Another 0 percent of head teachers, teachers and students in private secondary schools indicated that teaching and learning resources didn't influence students' completion rates.

Overall, over 100 percent of, head teachers, teachers and students in both public and private secondary schools indicated that teaching and learning resources influenced students' completion rates in secondary schools.

These findings concurred with Enos (2003) who argues that student enrolment rate in public secondary schools is high causing teaching and learning resources to be inaccessibility to all students lowering their motivation and finally failure to complete their education.

The study, further sought information from head teachers, teachers, and students on the extent to which teaching and learning resources influence completion rates in public and private secondary schools. Head teachers, teachers and students. Their responses were as presented in Table 6.3

Table 6.3 Head teachers', teachers' and Students' responses on the extent to which teaching and learning resources influence completion rates

Responses	Public primary schools						Private primary schools					
	head teachers		teachers		students		head teachers		Teachers		students	
	N	%	n	%	N	%	N	%	N	%	N	%
To a great extent	15	100	75	100	150	100	9	100	45	100	90	100
Not at all	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	100	75	100	150	100	9	100	45	100	90	100

In regard to data contained in Table 6.3, 100 percent of the head teachers in public secondary schools indicated that teaching and learning resources in their schools influenced students' completion rates to a great extent. Another 100 percent of teachers in public secondary schools indicated that teaching and learning resources influence students' completion rates to a great extent. Besides, 100 percent of the students in public secondary schools indicated that teaching and learning resources influenced students' completion rates to a great extent. In addition 100 percent of the head teachers in private secondary schools indicated that teaching and learning resources in their schools influenced students' completion rates to a great extent. Another 100 percent of teachers in private secondary schools indicated that teaching and learning resources influence students' completion rates to a great extent. Besides, 100 percent of the students in private secondary schools indicated that teaching and learning resources influenced students' completion rates to a great extent.

However, further findings from Table 6.2 revealed that 0 percent of head teachers, teachers and students in public secondary schools indicated that teaching and learning resources in their schools did not influenced students' completion rates at all. Another 0 percent of head teachers, teachers and students in private secondary schools indicated that teaching and learning resources didn't influence students' completion rates at all.

Overall, over 100 percent of, head teachers, teachers and students in both public and private secondary schools indicated that teaching and learning resources influenced students' completion rates in secondary schools to a great extent.

Testing Hypothesis of the study

The study hypothesis was H0: Teaching and learning resources do not significantly influence students' completion rates in secondary schools. To determine the influence of teaching and learning resources on students' completion rates in secondary schools, regression analysis was done. Results of the analysis were as indicated in the table below:

Table 6.8: Regression model on the influence of teaching and learning resources

Change statistic									
R	R Square	Adjusted R Square	Std Error of the Estimate	R Square Change	F Change	df1	df2	Sig F Change	
.249 ^a	.062	-.094	.395	.349	.398	5	30	.846 ^a	

a. Predictors: (Constant); teaching and learning resources

b. Dependent Variable: Students' completion rates

In regard to the data contained in Table 6.8, results were summarized by the following regression analysis

equation;

$$Y = a + bX;$$

Where Y = dependent value (learning achievement) that was being predicted in this study. X was the independent value (teaching and learning resources). The value (a) was the constant in the regression analysis equation. It was the intercept point of the regression line and Y-axis. The (b) value was the coefficient of X. It was the slope of the regression line. The independent variable for the hypothesis H0 in the study was the teaching and learning resources and their influence on students' completion rates in secondary schools.

The results in Table 6.8 indicated that the significance level was at sig F= 0.846. It was greater than $p = 0.05$. The relationship $F(5,30) = 0.389$, $p > 0.05$, adjusted $R^2 = 9.4$ percent. The hypothesis was therefore rejected. This meant that X= teaching and learning resources predicted students' completion rates in secondary schools. The study, therefore revealed that teaching and learning resources predicted students' completion rates in secondary schools by 9.4 percent. The findings concurred with Macgowen (2007) who noted that school teaching and learning resources impacted on student achievement, attendance and completion rate.

7. Conclusion

From the findings of this study, it was evident that teaching and learning resources were crucial for achieving high completion rates in secondary schools in Kenya. Secondary schools in Kenya have inadequate teaching and learning resources. The strained learning and teaching resources, impede learning achievement. Subsequently, pupils are enslaved through reliance on teachers who provide knowledge through rote learning. As a result students are frustrated and demotivated. They in the end drop out of school before completing the secondary school cycle. Overall, it was, therefore, concluded from the findings that teaching and learning resources contribute to a great extent the students' completion rates in secondary schools in Kenya.

8. Recommendations

The study established that students' completion rates in secondary schools were. The government of Kenya should therefore develop a proper policy on students' completion rates in secondary schools.

The study further established that strained teaching and learning resources impeded students' completion rates in secondary schools. It is therefore recommended that the government of Kenya should redress the issue of adequacy of teaching and learning resources through the allocation of more funds to the school infrastructure kitty.

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