



# **Effect of Instructional Resources on Academic Achievement: A Comparative Study of Public and Private Primary Schools in Lurambi Sub-County, Kenya**

*David Khamala Wafula*

*Department of Educational Planning & Management, Kibabii University, Kenya*

DOI : <https://doi.org/10.55248/gengpi.6.0325.11131>

---

## **ABSTRACT**

This study sought to investigate the effect of instructional resources on academic achievement by comparing public and private primary schools in Lurambi Sub-County of Kakamega County. achievement in public and private primary schools in Lurambi Sub-County, Kenya. The study was anchored on Systems Theory, and employed a causal comparative design. It targeted a population of 4992, comprising of 78 head teachers, 390 teachers and 4,426 class 8 pupils of the public and private primary schools in Lurambi Sub-County of Kakamega County. Questionnaires, interview schedules and pupil achievement tests were used to collect data. Multi-stage sampling was adopted for selection of participants. The quantitative data obtained by questionnaires and document analysis guides was analyzed by frequencies, means and percentages, while the qualitative data obtained from interview schedules was analysed thematically. Welch's t-test and correlation analysis were used to test the hypotheses to establish the relationship between the dependent and independent variables at  $\alpha = 0.05$ . The study found that private primary schools had a higher level of adequacy of instructional resources than public primary schools.

**Keywords:** Academic, Comparative, Performance, Schools

---

## **1.0. INTRODUCTION**

Instructional resources are the entirety of resources apart from human resources, that are used for realization of teaching/ learning objectives. They are also referred to as teaching/ learning materials. These materials include textbooks, workbooks, educational computer software, audio aids, visual aids and audio-visual aids (Nwabueze, 2016). These instructional materials help to provide a demonstration of the subject being taught.

In Canada, Frenette and Chan (2015) studied the academic outcomes of public and private high school students to determine what lay behind the differences. The study examined the roles played by student characteristics, school resources and practices, peer effects, and province fixed effects in accounting for differences in the academic outcomes of private and public high school students. Private high school students scored significantly higher than public high school students on reading, mathematics, and science assessments at age 15, and had higher levels of educational attainment by age 23. Two factors that constantly explained for these differences were students' socioeconomic characteristics and school resources. Students who attended private high schools were more likely to have socio- economic characteristics positively associated with academic success and to have school peers with university-educated parents. School resources and practices partly accounted for the differences in academic outcomes. While Frenette and Chan spread their focus on various factors, the current study only focused on school resources.

Tofi and Agipu (2019) in Nigeria conducted a survey on accessibility and use of school library facilities in secondary schools in Makurdi. The study targeted all students of 12 selected schools. Participants were obtained by random sampling done within strata. From a student target population of 4124, a total of 399 students were selected in the 12 secondary schools. Questionnaires were employed for collecting data, which was then analysed descriptively.

The study revealed that the library resources in schools were not adequate, particularly the ICT equipment. It was suggested that schools' leadership needed to provide adequate funding to libraries for procurement of the requisite resources. It was also recommended that library staff needed professional training to enhance their performance of the duties of disseminating information to the user persons. While Tofi and Agipu conducted their study among secondary schools in Nigeria, the current researcher carried out the study among primary schools in Kenya. Tofi and Agipu only focused on library as a school resource in public secondary schools. However, apart from instructional resources, the current study also considered physical and human resources. The researcher involved both public and private schools for comparison.

In Kenya, Arisa and Thinguri (2017) conducted a study to assess the effect of use of the instructional resources on teaching and learning in public secondary schools in Kenya. The study examined the teachers' preparedness to use instructional resources, and how variety, simplicity, cost and

adaptability of instructional resources impacted pedagogy. The findings suggested that teachers were not adequately prepared towards effective use of instructional resources. Furthermore, there were inadequate instructional resources in secondary schools. The study recommended increased government funding to schools with a focus on purchasing of instructional materials. There was need for remedial measures that can promote teachers' readiness and effectiveness of use of available instructional materials. While Arisa and Thinguri narrowed down on teaching/ learning resources, the current study also considered physical resources as well as human resources. The current researcher also considered private institutions apart from public ones for purposes of validation and comparison.

In Kakamega county Kiguthi, Shiundu and Wangila (2019) examined "teaching/learning resources and the implementation of Agriculture curriculum in Kakamega Central Sub- County, Kenya". This was due to the concern that the number of students taking the subject as well as their performance in the subject was on a drop. The study looked into the variety and amounts of resources that were accessible for the teaching and learning of Agriculture. The study used a descriptive survey with a total of 440 participants involved in the research. The study established that apart from textbooks and guide books that were provided by the government, schools had an inadequacy of the needed instructional resources for Agriculture curriculum. The study recommended that all the relevant teaching/learning resources needed to be supplied in all secondary schools by the government to ensure equitable distribution to all schools, and consequently guarantee effective implementation of Agriculture curriculum. While Kiguthi *et al* focused only on agriculture and not any other subject whose performance was equally declining, the current researcher's concern was over an entire overall performance in all subjects. The current research not only considered public schools as was the case of Kiguthi *et al.*, but also private schools for purposes of comparison.

## 2.0. METHODOLOGY

### 2.1. Research Design

This study used a causal-comparative design that was advanced by Lord (1973). This is a study layout that finds out the cause-effect associations between independent and dependent variables "after an action has already occurred" (Salkind, 2010). This design was preferred because of its suitability in meeting the researcher's goal of determining whether the independent variable (instructional resources), which the researcher cannot manipulate, has effect on pupils' academic achievement by comparing two groups of participants. The respondents were categorized into the two groups (private and public) and the instructional resource characteristics of the two groups then compared to produce quantitative as well as qualitative data.

### 2.2. Sampling Procedure and Sample Size

Table 1: Sampling Frame

Participants	Category	Population	Sample
Schools	Public	53	13 (25% of 53)
	Private	25	6 (25% of 25)
	Total	78	19
Headteachers	Public	53	13
	Private	25	6
	<b>Total</b>	<b>78</b>	<b>19</b>
Class 8 Subject Teachers	Public	265	73
	Private	125	31
	<b>Total</b>	<b>390</b>	<b>104</b>
Class 8 pupils	Public	3339	346
	Private	1087	278
	<b>Total</b>	<b>4426</b>	<b>624</b>
<b>Total population &amp; sample</b>		<b>4992</b>	<b>747</b>

### 2.3. Data Collection

The study gathered qualitative and quantitative data. Questionnaires and Pupil Achievement Tests (PAT) were employed to obtain quantitative data, while interview schedules collected qualitative information.

## 3.0 RESEARCH FINDINGS AND DISCUSSION

### 3.1. Perceptions on adequacy of instructional resources

Perceptions on adequacy of instructional resources were as in Table 4.5 on a scale of 1 to 5 where “Not available at all” =1, “Very inadequate” =2, “Inadequate” =3, “Adequate” =4 and “Very adequate” =5. The resources included syllabus books, coursebooks, reference books, teaching/ learning aids and ICT equipment.

**Table 2: Teachers’ Perceptions on Adequacy of Instructional Resources**

Resources	Schl Type	Not available at all (1)	Very Inadequate (2)	Inadequate (3)	Adequate (4)	Very adequate (5)	Total	Mean	S.D
Syllabus books	Priv.	0(0.0%)	0(0.0%)	0(0.0%)	12(41.4%)	17(58.6%)	29(100%)	4.59	0.50
	Pub.	0(0.0%)	2(2.7%)	19(25.3%)	30(40.0%)	24(32.0%)	75(100%)	4.01	0.83
	Total	0(0.0%)	2(1.9%)	19(18.2%)	42(40.4%)	41(39.4%)	104(100%)	4.17	0.79
Course books	Priv.	0(0.0%)	0(0.0%)	0(0.0%)	10(34.5%)	19(65.5%)	29(100%)	4.66	0.48
	Pub.	0(0.0%)	4(5.3%)	18(24.0%)	29(38.7%)	24(32.0%)	75(100%)	3.95	0.89
	Total	0(0.0%)	4(3.8%)	18(17.3%)	39(37.5%)	43(41.3%)	104(100%)	4.16	0.85
Ref. books	Priv.	0(0.0%)	0(0.0%)	0(0.0%)	10(34.5%)	19(65.5%)	29(100%)	4.66	0.48
	Pub.	0(0.0%)	1(1.3%)	18(24.0%)	28(37.3%)	24(32.0%)	75(100%)	3.95	1.00
	Total	3(2.9%)	1(1.0%)	18(17.3%)	38(36.5%)	44(42.3%)	104(100%)	4.14	0.94
T/ L aids	Priv.	0(0.0%)	0(0.0%)	0(0.0%)	15(51.7%)	14(48.3%)	29(100%)	4.48	0.51
	Pub.	3(0.0%)	6(8.0%)	14(18.6%)	29(38.7%)	23(30.6%)	75(100%)	3.84	1.08
	Total	3(2.9%)	6(5.8%)	14(13.5%)	44(42.3%)	37(35.6%)	104(100%)	4.02	1.00
ICT equipment	Priv.	1(3.4%)	0(0.0%)	0(0.0%)	21(72.4%)	7(24.1%)	29(100%)	4.14	0.74
	Pub.	6(8.0%)	5(6.6%)	18(24.0%)	44(58.7%)	2(2.7%)	75(100%)	3.41	0.96
	Total	7(6.7%)	5(4.8%)	18(17.3%)	65(62.5%)	9(8.7%)	104(100%)	3.62	0.96

The study found that the mean adequacy of instructional resources in private primary schools was higher than public primary schools. In all categories, private schools had more instructional resources than public schools. This implies that teachers and learners in private schools have a comparatively better access to syllabus books, coursebooks, reference books, teaching/ learning aids and ICT equipment. It agrees with Victorini and Wambiya (2016), that private schools are more equipped in terms of instructional resources than public schools.

Furthermore, a Welch’s t-test was performed to compare adequacy of school resources of the two groups, that is, private primary schools and public primary schools. This was done under the null hypothesis that:

**H<sub>0</sub>:** There is no significant difference in adequacy of instructional resources between public and private primary schools in Lurambi Sub-County.

Results of the test are presented in Table 3.

**Table 3: Welch’s T-Test Results for Comparative Adequacy of School Resources**

	Welch Statistic <sup>a</sup>	df1	df2	Sig.
Instructional Resources	34.120	1	98.326	.000

	24.012	1	96.625	.000
--	--------	---	--------	------

The results indicated that there was a statistically significant difference in adequacy of instructional resources [ $F(1, 98.326) = 34.120$ ] and [ $F(1, 96.625) = 24.012$ ] between private and public primary schools,  $p < 0.001$  at  $\alpha = 0.05$ . Private schools had a higher rating of adequacy of instructional resources than public schools, which agrees with Victorini and Wambiya (2016).

---

## CONCLUSION

This study concludes that there is a difference in adequacy of instructional resources between public and private primary schools.

---

## RECOMMENDATION

In view of the study findings and the conclusions arrived at, the study recommends that the government should step up providing of sufficient instructional resources to public schools so as to enhance learning outcomes to match private schools.

---

## REFERENCES

- Arisa, J. B., & Thinguri, R. W. (2017). A Critical Analysis on the Impact of Utilization of the Instructional Resources on Pedagogy in Public Secondary Schools in Kenya. *European Journal of Education Studies* 3(1), 351-360.
- Frenette, M., & Chan, P.C.W. (2015). Academic Outcomes of Public and Private High School Students: What Lies Behind the Differences? *Social Analysis and Modelling Division, Statistics Canada*, 367, 1-24
- Kiguthi, E. N., Shiundu, J. O., & Wangila, E. (2019). Teaching/Learning Resources and the Implementation of Agriculture Curriculum in Kakamega Central Sub-County, Kenya. *Journal of Education and Practice*, 10 (19), 10-12
- Nwabueze, A. I. (2016). Resources in education. In J.M. Ebong, J. D. Asodike & N. J. Izuagba (Eds.) *Economics of Education: Expository Issues* (p. 186-205). Port Harcourt: EagleLithograph Publishers.
- Salkind, N. J. (2010). Causal comparative design. *Encyclopedia of Research Design*. DOI: <https://dx.doi.org/10.4135/9781412961288.n42>
- Tofi, S. T., & Agipu, O. L. (2019). Availability and Utilization of School Library Resources in Selected Secondary Schools in Makurdi Metropolis. *Library Philosophy and Practice*, 1-32.
- Victorini, S., & Wambiya, P. (2016). Assessment of the adequacy of resources and facilities to enhance learner centred pedagogy in secondary schools in Kilimanjaro region, Tanzania. *European Journal of Education Studies*, 2(2), 213-221