

**RELATIONSHIP BETWEEN PROVISION OF LEARNING
RESOURCES AND EFFECTIVE PERFORMANCE OF
INSTRUCTIONAL ROLES IN SECONDARY SCHOOLS IN NANDI
EAST SUB-COUNTY, KENYA**

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ABSTRACT

Provision of teaching and learning resources in education is central to the achievement of the goals of education. From numerous complaints by various stakeholders on teachers' performance of instructional roles, this study sought to investigate the relationship between the provision of learning resources and performance of teachers' instructional roles in secondary schools in Nandi East Sub County, Kenya. Data collection tools were questionnaires. Reliability of the instruments was tested using the test re-test method and use of data triangulation from teachers and deputy principals. The target population was secondary school teachers while the accessible population was 192 teachers from 30 secondary schools and 30 deputy principals. Proportionate sampling was used to categorize respondents into female and male teachers as well as based on boarding and day schools. Simple random sampling technique was used to sample the actual teacher respondents. The Sample size was 127 teachers in the 30 sampled schools and 30 deputy principals surveyed. The study established that there was a positive and statistically significant relationship between the provision of learning resources and performance of instructional roles by teachers' in secondary schools in Nandi East Sub-County; $r=0.560^*$; $p<0.05$ by teachers and $r=0.520^*$; $p<0.05$ by deputy principals. It was further established that there was the insufficient provision of learning materials such as Internet facilities, library, Computer laboratories, journals, online resources, educational games and multi-media learning resources which could hamper learning. This study, therefore, recommends the provision of adequate and varied learning resources such as internet facilities, library, computer laboratories and educational games for the effective performance of instructional roles in Nandi East Sub-County, Kenya.

Keywords: Provision of Learning Resources, Learning Resources, Performance of Instructional Roles.

1.0 INTRODUCTION

1.1 Background of the Study

Provision of teaching and learning resources to enable teachers to perform their roles is an important management function used in running successful educational institutions (Usman, 2016). The Management Boards of educational institutions in Germany and other jurisdictions play a critical role in the provision of instructional resources which may be required for teaching and learning (Zuljan & Zuljan, 2012). Moreover, Van (2014) argues that school managements in the USA formulate and implement policies which ensure that teachers perform their evaluation roles uninterrupted by the insufficient provision of evaluation resources. In China, Arijit (2014) reports that Boards of Management of schools account for how they provide teachers with teaching resources and how this influences the performance of their instructional roles in the schools under which they have been appointed.

A study by KICD (2014) showed that there was the inadequate provision of teaching resources in many secondary schools and locally available resources were used by a few teachers. A survey by Kenyan National Examinations Council (KNEC) found out that teachers' performance of instructional roles was not effective (KNEC, 2017), a view also advanced by a SACMEQ IV (2017) report. The level of compliance with regulations related to the acquisition of teaching and learning resources by many Boards of Management is wanting as reported in the Status of Schools Audit (Mulatya, 2014).

Previous Studies in East African countries revealed that teachers' performance of instructional roles had been ineffective (Wangui, 2012; Mberia, 2012). Teachers' service commission (K) (TSC, 2018), established that performance of instructional roles in public secondary schools had deteriorated, a view supported by a report of the Ministry of Education (MoEST, 2017). This report noted that "the government, education sector players and individuals were not satisfied with teachers' performance of instructional roles.

The problem of teachers' ineffectiveness in the performance of instructional roles was widespread across all counties in Kenya (Wekesa & Nyaroos, 2018). Performance of instructional roles by teachers had not been satisfactory (TSC, 2018; MoEST, 2017; Oduor, 2017). Stakeholders in education in Nandi East Sub-County had complained about teachers' ineffectiveness in the performance of instructional roles (CEB, 2016). Such stakeholders included Kenya National Union of Primary School teachers (KNUT), Kenya Union of Post Primary Education Teachers (KUPPET), quality assessment and standards officers and public secondary school sponsors in Nandi East Sub-County. Teachers' ineffective performance of instructional roles could have affected learning outcomes as indicated in Table 1.

NANDI EAST SUB –COUNTY KCSE ANALYSIS

CENTRE NAME

MG	M.G	M.G	MG	M.G	M.G
2017	2016	2015	2014	2013	2012

Samoei Boys High	6.83	7.14	10.00	9.30	8.48	8.25
Our Lady of Peace	4.91	4.88	5.53	6.32	6.68	6.55
St Elizabeth Chepkunyuk	3.89	4.60	7.01	6.62	7.68	6.63
Taito Ktga	3.97	4.48	6.67	5.72	6.09	6.61
Tigityo	4.02	4.42	6.83	5.23	4.68	3.66
Sochoi Boys	3.99	4.29	7.09	5.93	4.43	4.81
Aic Sochoi Girls	2.78	4.25	4.61	5.05	4.54	5.66
Lelwak Boys	4.03	4.18	6.31	5.69	5.96	5.60
Koilot	3.15	3.89	5.05	5.51	5.48	5.35
Kabote Advetist	2.95	3.72	5.64	5.87	5.39	5.84
Siwo	3.69	3.66	3.94	3.91	3.81	3.61
Kosoiywa	2.97	3.43	5.20	5.16	4.92	5.71
Kapsimotwo	2.87	3.36	4.88	4.38	4.60	5.04
Kaplellmet	3.20	3.20	4.35	5.01	5.40	5.42
Taboiyat	2.55	3.16	4.08	-	-	-
St Johns	2.79	3.13	-	-	-	-
Ollesos Day	2.90	2.89	4.42	4.04	3.60	4.14
Kaptien	2.48	2.86	4.40	-	-	-
Savani	2.64	2.82	4.10	4.10	4.14	4.57
Siret	2.64	2.81	3.86	3.83	4.44	4.55
Chebarus	2.41	2.77	3.42	-	-	-
Cheplelachbei	3.05	2.61	4.33	3.67	3.36	-
Cheptabach	2.57	2.51	4.04	-	-	-
Sirwa	2.34	2.40	3.48	4.27	3.60	-
AVERAGE	3.66	4.26	6.01	5.86	5.87	5.04

Source: CEB (2018).

Note: The blanks in the table indicate that schools had not done the Kenya Certificate of Secondary Education Examination (KCSE)

If the problem of ineffective performance by teachers in instruction continues unabated, then the general academic performance in the Sub-County could deteriorate further.

No study had been conducted to establish a relationship between the provision of learning resources and performance of instructional roles in secondary schools by teachers in Nandi East Sub-County, Kenya.

1.2 Statement of the Problem

This study sought to investigate the problem of ineffective performance of instructional roles by teachers in Nandi East Sub-County, Kenya in as far as its relationship with the provision of teaching resources is concerned. The background of this study indicated that teachers had not been effective in performing instructional roles. The background of the study further showed that there had been inadequate provision of teaching and learning resources in Nandi East Sub-County.

There had been numerous complaints by various education stakeholders on the effective performance of instructional roles by teachers as shown in the background of this study. These indicate that teachers had not been effective in performing roles related to classroom instruction, students' evaluation and academic advising in Nandi East Sub-County. Ineffective performance of instructional roles by teachers could have affected learning outcomes. If the problem of ineffective performance of instructional roles by teachers in classroom instruction, students' evaluation and academic advising continues unabated then learning outcomes in Nandi East Sub-County, Kenya could continue to deteriorate.

Could the problem of ineffective performance of instructional roles by teachers be related to inadequate provision of learning resources in Nandi East Sub- County, Kenya?

1.3 Research Objective

To investigate relationship between provision of learning resources and effective performance of instructional roles in secondary schools in Nandi East Sub-County, Kenya

1.4 Research Hypothesis

H01: There is no significant relationship between the provision of learning resources and effective performance of instructional roles by teachers in secondary schools in Nandi East Sub-County, Kenya.

1.5 Significance of the Study

This study could contribute to a greater understanding of the relationship between the provision of learning resources and effective performance of instructional roles by teachers in secondary schools. Recommendation of the study could enable Boards of Management, TSC,

Ministry of education and other stakeholders to effectively perform learning resources provision and teacher performance management functions. It could also add to the body of knowledge in learning resource provision and management and in teacher efficacy in performance of instructional roles.

2.0 LITERATURE REVIEW

2.1 Provision of Learning Resources

Learning resources are used by students during their own study time to reinforce that which is learnt in class. These resources are designed to engage students and enable teachers to focus on students' interaction to further learn new concepts. Such resources could be formal or informal. Azikwe (2014) avers that formal learning resources must be accurate, evidence-based, objective-driven and designed to engage learners and teachers as well as aligned to government standards. Informal learning resources must still adhere to quality content and designed to standards to provide a meaningful educational experience. Students can't learn effectively from one type of learning materials. Educators, parents and administrators can determine what content is effective for learners. As advanced by Otieno (2013), supplemental learning resources can help teachers vary instruction and engage students who for whatever reason need enrichment beyond the core classroom materials.

Learning resources can be; software, texts, videos, projects, supplies and other materials that teachers use to assist students meet the expectations for learning as defined by KICD (2014). Before a learning resource is used in the classroom in Kenya, it must be evaluated and approved by KICD (KICD, 2014). Evaluation criteria include curriculum fit, social considerations, age or developmental appropriateness among others.

A library, another learning resource centre, contains various learning resources including books, periodicals and journals that could help students learn. Otieno (2013) observes that concepts presented in class by teachers can be reinforced by students' access to reading and learning resources which include posters, magazines, and novels. Learning resources such as academic games, charts and maps are important. Internet access, computer games, audio, visual, audio-visual aids, educational software, library and other instructional materials are examples of learning resources that could be availed to students to enhance learning. Wangui (2012) also suggests that learning resources may include e-portfolios (which are a collection of electronic materials assembled and managed by the learner), texts, electronic files, images, multimedia, blog entries and links. Other learning resources may include open online journals or articles that are free of cost for the end-user. Illustrations and graphics that include visual concepts, models and or processes visually present concepts, models, and processes to enable students to acquire more skills and knowledge. Otieno (2013) avers that these online resources could be in the form of diagrams, illustrations, graphics or infographics in any file format that may include Photoshop, Illustrator and other similar file types.

Online resources are available on the internet and whose search results display an ordered list of items for use in learning. Mwanamukubi (2013) established that open online textbooks could allow students access and use at no additional costs. This could be provided to enhance learning and enable the student to have a wider scope of the learning resource.

Reference materials are learning resources meant for general learning similar to those found in the reference section of a library (Muchiri, 2014). Such learning resources are important since teachers direct students to them, to further improve the learning process. Students can be guided to subject-specific directories to other academic sites, texts or general information by teachers in order to enhance learning (Otieno, 2013). Agaro (2014) posits that instructional videos that show teachers delivering lessons, places and things can enable them to pass knowledge and skills to students in order to enhance learning. As such, learning can continue after the teacher leaves class.

It is clear from the literature reviewed that there exists a gap in an investigation on the relationship between the provision of learning resources and effective performance of instructional roles by teachers in secondary schools. This study sought to fill this gap.

2.2 Theoretical Framework

In seeking to establish the relationship between the provision of learning resources and effective performance of instructional roles, this study was anchored on Frederick Taylor's scientific management theory (1909). Taylor studied tasks and incentives to develop fixed procedures to maximize productivity and efficiency. Frederick Taylor used motion studies to determine how long it should take a person to complete a task when correct movements were made. Frederick Taylor also looked for ways to standardize tools so that each worker had the right tools for the job. Frederick Taylor concluded in his experiments that when the correct tools, movements, and procedures are used they could increase productivity (Cole & Kelly, 2011). The result was unsurpassed as productivity drastically increased.

Taylor was then able to provide managers with a set of systematic guiding principles so that they no longer had to make uninformed decisions. Frederick Taylor's approach to management can be summed up into his four principles. First, management should get rid of the general guidelines on how to complete tasks. Instead, they should be replaced with a precise, scientific approach for each task of a worker's job. Second, management should use those same principles of scientific methodology to carefully recruit, train, and develop each worker according to the job they will hold for the company. Third, there should be a level of cooperation between staff and management, to be sure that jobs match plans and principles of the developed methods (Kitunga, 2009). Lastly, managers should also provide an appropriate division of labour and responsibility between the managers and the worker; that is; the managers are responsible for planning the work and the workers are responsible for following it as they complete the work.

By adopting this theory, teachers should be able to use learning resources, and other physical learning resources to become more efficient and effective. Using scientific management theory could enhance School Management control over teachers' performance of instructional roles. This could be achieved by scientifically selecting, training and developing each teacher rather than passively leaving them to train themselves. The BoM could strive to mentor, coach, train, and develop each teacher according to their responsibility in the performance of instructional roles. This could be done by the BoM allocating and providing teaching and learning resources and staff professional development. The weakness of

scientific management theory is that cooperation of management and teachers' advisors is necessary for effective performance yet these may not be achieved.

In order to address the noted weakness of scientific management theory in the study, Systems theory was used. In this study, the school is seen as an open system built by energetic input-output where the energy coming from the input reactivates the system. Schools are seen as open systems due to their material exchanges with the external environment with technical components (instructional resources) and social components (teachers). The school receives learning resources and teachers as human resource. These are the system's inputs which are transformed through teaching and learning to achieve the desired performance. It is envisaged that when all the inputs in the system are coordinated well by the BoM, teachers' performance of instructional role is enhanced.

2.3 Conceptual Framework

The relationship between the performance of instructional roles by teachers and the provision of learning resources is presented using a conceptual framework. Figure 1 illustrates this relationship.

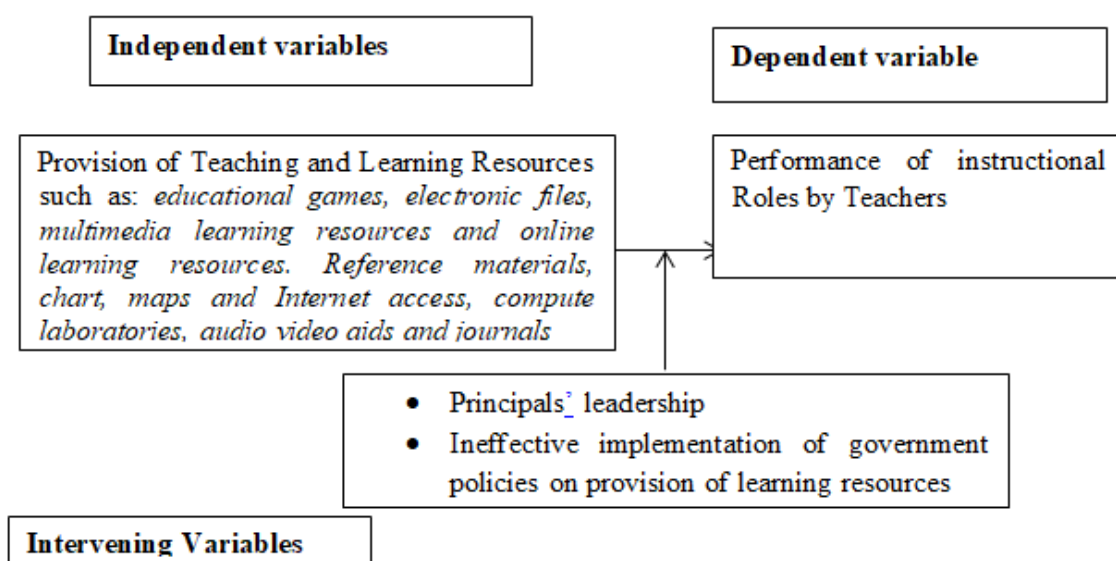


Figure 1: Conceptual Framework

The conceptual framework in Figure 1 shows the relationship between the provision of learning resources and the performance of instructional roles. It is envisaged that the provision of learning resources by the school management could influence the way teachers perform instructional roles. Ineffective implementation of Government policy on instructional leadership can affect how teachers perform instructional tasks. This study did not focus on the intervening variables.

3.0 METHODOLOGY

3.1 Research Design

Research design is considered as a plan of action for collecting, organizing and analysing data with the objective of combining the relevance of research with the economy in procedures (Kothari & Gaurav, 2014). In seeking to establish the relationship between the provision of learning resources and performance of instructional roles, the study adopted a correlational research design. The study involved measurement of the provision of teaching resources and effective performance of instructional roles by teachers and an assessment of the relationship between them.

According to Wallen and Fraenkel (2011), the goal of correlational research is to establish whether there's a systematic relationship among the variables. Correlation research design allows researchers to establish the strength and direction of a particular relationship. Kothari and Gaurav (2014) further argue that it involves measuring two variables and assessing the relationship between them without manipulating the variables.

3.2 Location of Study

The study was carried out in public secondary schools in Nandi East Sub County in Nandi County, Kenya. Nandi East Sub-County was chosen because the performance of instructional roles by teachers was not satisfactory as was shown in the background of the study and was accessible to the researcher. There were no private secondary schools in Nandi East Sub County. Nandi East Sub County is located within a Latitude of 0° 10' 0.00"N and Longitude of 35° 08' 60.00" E.

3.3 Population of Study

The target population refers to the subjects with related characteristics in respect to a given study (Orodho, 2013). It is the total number of individuals to whom the researcher intends to generalize the results of the study (Mugenda & Mugenda, 2003). The target population of this study comprised all trained secondary school teachers who were engaged in the performance of instructions in secondary schools in Nandi East Sub-County, and whose effectiveness in performance of instructional roles could be affected by the provision of learning resources (MoEST, 2006). Deputy Principals were targeted because they were engaged in supervision of performance of instructional roles by teachers in Nandi East Sub-County. Deputy Principals in Kenya play a crucial role in instructional supervision of curriculum implementation and in ensuring teacher effectiveness in performance of instructional roles (TSC, 2017).

3.4 Sampling Procedure and Sample Size

3.4.1 Sampling Procedure

Sampling is a process of selecting a small group of individuals to represent a target group in a study (Mugenda & Mugenda, 2003). The study used multi-stage sampling technique for teacher respondents where different sampling techniques were used at different stages. Purposive sampling was used to select Nandi East Sub-County from among other Sub-

Counties in Nandi County. Stratified sampling technique was used to categorize respondents into male and female. Schools were stratified as boarding and day schools. Proportionate sampling was used to allocate proportionate samples to each data stratum (female and male, boarding and day schools).

Simple random sampling was used to sample the actual teacher respondents from the proportionate samples. All 30 deputy principals were surveyed because of their small number and accessibility since all teacher respondents were to be sampled from each school. Census further increases the reliability of data collected. The study had an accessible population of 192 teachers and 30 deputy principals.

3.4.2 Sample Size

Mugenda and Mugenda (2003) points out that sampling is a process of selecting a small group of individuals to represent a target group in the study. To determine a sample size with a confidence level of 95% and a sampling error of 5%, the Krejcie and Morgan (1970) table of sample size cited by Cohen, Manion and Morrison (2016) was used to come up with a sample of 127 teachers from 30 secondary schools to participate in the study as shown in Table 2.

Table 2: Krejcie and Morgan Table of Sample Size Determination

<i>N</i>	<i>S'</i>	<i>N</i>	<i>S'</i>	<i>N</i>	<i>S'</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S'* is sample size.

Source: Krejcie & Morgan, 1970

3.5 Research instrument

A research instrument is a tool employed to collect data for a research study. The kind of data to be collected largely determines the type of instrument that should be used to collect data (Kothari & Gaurav, 2014). This study used questionnaires to collect data from teachers and deputy principals' in the month of October 2018. Bird (2015) explains that questionnaires are used in descriptive research because they obtain facts about current conditions and are useful in making inquiries concerning perceptions, attitudes, and opinions. Questionnaires were used in this study because it saves time and is economical. It is also convenient since respondents could respond based on contents. It also enables the researcher to collect information from a huge number of respondents (De Vellis, 2016). According to Mugenda and Mugenda (2003), a questionnaire can easily be analysed, anonymity made possible and it is easier to administer.

3.6 Validity of the Research Instrument

Validity assesses the measurement ability of the instrument (De Vellis, 2016). Validity is the appropriateness of an instrument in measuring what it intends to measure. In validating the instrument for data collection, the researcher was concerned with establishing its content validity. In order to establish construct validity, provision of learning resources and performance of instructional roles which were the variables of interest were operationalized. In order to establish external validity, careful attempt was made to ensure that samples used were as representative of the target population as possible. Pilot testing can be used to ensure instrument validity (Sanjari, 2014). The tests score from pilot study were highly correlated hence construct validity.

3.7 Reliability of Research Instruments

Reliability refers to the degree of consistency with which an instrument measures a concept. It is a measure of the proportion of variance of the score (De Vellis, 2016). To achieve this, the questionnaires were pre-tested through a pilot study by administering it to a small sample of respondents made up of teachers whose responses and general reactions were sought and examined. A pilot study of teacher questionnaire was done in one public secondary school randomly selected in Nandi East Sub- County. The deputy principals' questionnaire was piloted in 3 public secondary schools in the neighbouring Nandi Central Sub-County which had similar demographic characteristics as schools in Nandi East Sub-County. Simple random sampling was used to identify respondents to participate in the pilot study. Test-retest reliability test yielded a correlation coefficient of 0.7 for all variables indicators implying that the instrument was good enough to be adopted for data collection. Triangulation of data from deputy principals was used in order to curb bias of self-rating by teachers. Triangulation refers to the use of multiple data sources in qualitative research to develop a comprehensive understanding of a phenomenon (Wetzel, 2011). It is viewed as a qualitative research strategy to test validity through the convergence of information from two different sources (Sanjari, 2014).

3.8 Data Collection procedures

In order to collect data, the researcher first sought permission from the Institute of Postgraduate Studies of Kabarak University and thereafter from the National Council for Science, Technology and Innovation. The researcher then visited the office of the Nandi County Director of Education and County Commissioner to get permission to collect data from secondary schools in Nandi East Sub-County. The researcher visited participating schools, sought permission from school principals to collect data and explained to the respondents the procedure and purpose of the study after which a letter requesting them to participate was issued. Finally, questionnaires were administered to sampled teacher respondents and deputy principals.

4.0 RESULTS AND DISCUSSION

4.1 Descriptive Analysis of Provision of Learning Resources

A descriptive analysis of the provision of learning resources for teachers' effective performance of instructional roles in secondary schools in Nandi East Sub-County, Kenya, according to teachers and deputy principals was done. The findings are presented in Tables 3 and 4.

Table 3: Provision of Learning Resources (According to Teachers)

Statement	Teachers (n=124)			
	SD %	D %	A %	SA %
My school provides students with academic projects learning resources.	61.6	23.9	9.5	5.0
My school provides students with educational games for learning	27.4	59.7	10.7	2.2
My school provides students with academic electronic files for learning	33.9	58.9	6.6	0.6
My school provides students with Computer laboratory for learning	30.6	53.2	8.5	7.6
My school provides students with multi-media learning resources	38.4	32.6	12.1	16.9
My school provides students access to online learning resources.	17.9	58.5	13.7	8.9
My school provides students with journals for learning	46.8	43.5	7.3	2.4
My school has a library for students learning.	53.2	41.9	4.0	0.8

Key: SD = Strongly Disagree; D=Disagree; N = Neutral; A = Agree; SA Strongly Agree; %=Percentages

Table 4: Provision of Learning Resources (According to Deputy Principals)

Statement	Deputy principals (n=30)			
	SD %	D %	A %	SA %

My school provides students with learning resources for academic projects.	30.0	40.0	6.7	23.3
My school provides students with educational games for learning	50.0	20.0	10.0	20.0
My school provides students with academic electronic files for learning	36.7	40.0	13.3	10.0
My school provides students with Computer laboratory for learning	33.3	36.7	16.7	13.3
My school provides students with multi-media learning resources	40.0	26.7	13.3	20.0
My school provides students access to online learning resources.	26.7	36.7	23.3	13.3
My school provides students with journals for learning	33.3	30.0	20.0	16.7
My school has a library for students learning.	30.0	36.3	23.7	10.0

Key: SD = Strongly Disagree; D=Disagree; N = Neutral; A = Agree; SA Strongly Agree; %=Percentages

The findings from Table 3 show that a significant percentage of teacher respondents, (a total of 85.5% of respondents) either strongly disagreed or disagreed that their schools provided learning resources for academic projects. Besides, from Table 4 a total of 30% and 40% of the deputy principals strongly disagreed and disagreed respectively that their schools provided teachers with learning resources for academic projects. This finding corroborates that of Koros (2014), which established that in West Pokot District, there was inadequate learning resource. Project-based learning could help students apply what they learn to real-life experiences and provide an all-round enriching education. It could also inspire students to obtain a deep knowledge of the subjects they are studying. Students could explore real-world challenges and simultaneously develop cross-curriculum skills while working in small teams, carrying out independent work and also collaborating with each other. This finding suggests that learning resources for academic projects had been inadequately provided in public secondary schools in Nandi East Sub-County, Kenya.

A total of 77.3% of teacher respondents either strongly disagreed or disagreed on their schools providing online learning resources. Moreover, 50% and 20% of the deputy principals strongly disagreed and disagreed respectively, that their schools provided students with online learning resources, an indication that some of the schools in Nandi East Sub-County, Kenya had not embraced provision of online learning resources for students learning. Such ICT resources can create an interactive learning environment and can create access to varied, up to date and relevant learning materials.

A significant percentage of teacher respondents, (46.8% of them), strongly disagreed and another 43.5% of them disagreed with the statement that their schools had provided journals

for learning. Either, a total 63.3% of the deputy principals either strongly disagreed or disagreed that their schools provided students with journals for learning. This implies that the majority of the schools had not provided journals. This finding is similar to Okongo et al. (2015) who established that journals, periodicals and reference learning materials could raise teachers' effectiveness and efficiency and could improve learner outcomes. Inadequate provision of journals could have denied learners in secondary schools in Nandi East Sub-County, an opportunity to get further readings and different perspectives on concepts learnt in the classroom.

A total of 71% of teacher respondents indicated that their schools had not provided multimedia learning resources. Furthermore, 40% and 26.7% of the deputy principals strongly disagreed and disagreed respectively that their schools provided teachers with multimedia learning resources. This implies that most schools were not supporting learners in their quest to integrate multimedia learning resources in the learning processes. This view is also shared by Muchiri (2014) who found out that there was the inadequate provision of multi-media learning resources which could deny learners greater ease and higher frequency of active learning. As opined by Otieno (2013), the use of multimedia resources such as visual graphs, charts, videos and smart boards could provide learners with visual simulations which provides an opportunity to access content from different vantage points. Multi-media learning resources provide a complex multi-sensory experience in exploring learners' worldview through the presentation of information such as texts, graphics, images, audio and video. This increases the likelihood of teachers helping students to integrate larger amounts of information.

The findings in Table 3 further shows that a total of 87.1% of teacher respondents either strongly disagreed or disagreed that their schools had provided education games for academic learning. Likewise, 50% and 20% of the deputy principals strongly disagreed and disagreed respectively that their schools provided teachers with educational games for academic learning. This finding concurs with Elibariki (2014), who established that educational games could provide learning opportunities and make learning fun but were rarely used. The finding infers that in most schools, educational games were inadequately provided. The inadequacy of these learning resources in secondary schools in Nandi East Sub-County, Kenya, could mean that schools and teachers, in particular, had not fully embraced the use of educational games in teaching and learning, thereby not exploiting this new frontier to teaching and learning. Educational games could accord learners an opportunity to develop their capacity for three-dimensional thinking, problem-solving, collaborative skills and creativity. As advanced by Otieno (2013) educational games could bring fun to the learning process, are inspiring as well as motivating to the learner to continue learning. It could also make the lesson interesting thereby engaging and enhancing learners' participation and concentration.

A total of 83.8% of teacher respondents either strongly disagreed or disagreed that their schools provided Computer laboratories for students learning. Additionally, a total of 70% of the deputy principals either strongly disagreed or disagreed that their schools provided teachers with computer laboratories for learning. Computer laboratories could provide students with an opportunity for practical hands-on learning and have the capability to help learners to self-develop their knowledge. In this process, students could be guided to adapt their newly found knowledge into their current knowledge. This process could help students'

shape analytical, critical, innovative and creative thinking. As argued by Ng'ang'a, Koskei and Ng'ang'a (2011), the use of computers in learning brings simulations that increase students' interests and comprehension towards a topic being learnt.

Libraries were also said to be inadequately provided with a total of 94.1% of the teacher respondents saying they were inadequate. In addition to that, a total of 66.0% of the deputy principals either strongly disagreed or disagreed that their schools provided teachers with adequate libraries. This finding infers that most secondary schools in Nandi East Sub – County, had not provided adequate libraries for learning. Inadequacy of libraries could mean students miss out on reading space and access to learning resources that would enhance learning after teachers leave class. Ajayi (2015) opines that libraries have physical components such as space, equipment and storage media. They accord users sharing of expensive resources. This could include books, periodicals, films and videos, specialized tools such as projectors, graphic equipment and many others.

As argued by Ghulam et al. (2015), learning materials could allow teachers to modify learning processes. It could also activate each individual student's learning style, reinforce a skill or concept and allow students to practice.

4.2 Performance of Instructional Roles

This section presents data analysis on the effective performance of instructional roles by teachers in secondary schools in Nandi East Sub County, Kenya as observed by teachers and deputy principals. Respondents were asked to rate their responses using a 4-point Likert rating scale of; not effective, less effective, effective and very effective. The results are presented in Tables 5 and 6.

Table 5: Performance of Classroom Instructional Roles (According to Teachers)

Statement	Teachers(n=124)			
	NE (%)	LE (%)	E (%)	VE (%)
Regularly Preparing curriculum support materials.	21.0	66.1	8.1	4.8
Giving timely feedback on student achievement to parents/guardians.	25.8	56.5	12.9	4.8
Regularly providing reference materials to students.	30.6	52.4	12.1	4.8
Regularly giving notes to students.	11.3	30.6	41.1	16.9
Regularly giving assignments to students	25.8	29.8	28.2	16.1
Regularly supervising students as they study	44.4	49.2	4.0	2.4
Regularly using audio-visual equipment during lesson delivery.	53.2	40.3	5.6	0.8
Regularly explaining concepts in class.	55.6	32.3	7.3	4.8

**Key: NE=Not Effective, LE=Less Effective, E=Effective, VE=Very effective
%=Percentages**

Table 6: Performance of Instructional Roles (According to Deputy Principals)

Statement	Deputy Principals(n=30)			
	NE (%)	LE (%)	E (%)	VE (%)
Regularly Preparing curriculum support materials.	36.7	16.7	23.3	23.3
Giving timely feedback on student achievement to parents/guardians.	16.7	53.3	30.0	0.0
Regularly providing reference materials to students.	30.0	43.3	6.7	20.0
Regularly giving notes to students.	20.0	36.7	16.7	26.7
Regularly giving assignments to students	16.7	40.0	26.7	16.7
Regularly supervising students as they study	26.7	53.3	13.3	6.7
Regularly using audio-visual equipment during lesson delivery.	43.3	46.7	6.7	3.3
Regularly explaining concepts in class.	33.3	26.7	23.3	16.7

**Key: NE=Not Effective, LE=Less Effective, E=Effective, VE=Very effective
%=Percentages**

The findings in Table 5 indicate that an overwhelming majority (a total of 87.1%) of teacher respondents were not effective in regularly preparing curriculum support materials. Furthermore, as indicated in Table 6, a total of 53.4% of deputy principals observed that teachers were not effective in regularly preparing curriculum support materials. These findings are similar to that of Eya (2011), which established that teacher’s production of instructional materials was wanting as most teachers found its development as stressful, frustrating and an arduous task. The findings construe that few teachers regularly prepared curriculum support materials in secondary schools in Nandi East Sub- County, Kenya. Subsequently, teachers’ performance may have been impeded by irregular preparation of teaching and learning aids. Every teaching and learning material developed can be of benefit to the teacher since they can use it for a longer period of time to teach similar concepts.

A significant percentage of 83% of teacher respondents indicated that they were either not effective or less effective in regularly providing reference materials to their students. Similarly, a total of 73.3% of the deputy principals reiterated that their teachers were not effective in regularly providing reference materials to students. The finding suggests that few teachers were regularly providing reference materials to students in Nandi East Sub-County’s schools. This further indicates that teachers’ performance of classroom instructional role may have been affected by insufficient reference materials. Reference materials could accord students an opportunity for further reading to get different approaches about a concept. Owate and Okpa (2013) opine that teachers’ and students’ access to reference materials creates further curiosity for the search of knowledge and widen their scope in the subject matter, a view also shared by the researcher.

A significant proportion (41.9%) of teacher respondents indicated that they were either not effective or were less effective in regularly giving notes to students. Besides, 56.7% of the deputy principals also affirmed that their teachers were either not effective or less effective in

regularly giving notes to students. Teachers who are unable to regularly provide notes to their students can also be ineffective in teaching their students. This is supported by Omina (2016), who avers that preparation and presentation of notes to the students forms a key component in the teaching process and general success of learning though some teachers were not preparing them.

On regular supervision of students as they study, a total of 93.6% of teacher respondents indicated that they were either not effective or less effective. This view was supported by 80% of the deputy principals who observed that teachers' regular supervision of students as they study was either not effective or less effective. The finding infers that teachers did not effectively supervise students during studies in the secondary schools in Nandi East sub-county, Kenya. These imply that teachers did not guide students on private studies. As argued by Omina (2016), supervision of students as they study can accord teachers an opportunity to become familiar with students' preparation, knowledge, abilities and adjust their teaching methods to improve on the classroom teaching.

Table 5 further shows that 53.2% and another 40.3% of teacher respondents were not effective and less effective respectively in using audio-visual equipment during lesson delivery. It was also observed from Table 6 that a total of 90% of the deputy principals affirmed that teachers' regular use of audio-visual equipment during lesson delivery was either less effective or not effective. This finding is consistent with Tanui (2012) who established that most teachers had previously not used audio-video resources in teaching. Audio-visual resources can be used by teachers to show slides & pictures. This can enable students to develop a positive attitude towards learning thereby according to students an opportunity to proceed at their own pace. It can further increase the interactivity between teachers and students. This finding further concurs with that of Mege (2014) which found out that, projectors, audio-visual and computer resources were hardly available for use in Secondary schools.

The findings further indicate that a total of 87.9% of teacher respondents were either not effective or less effective in regularly explaining concepts in class. The finding suggests that 26.7 % of the deputy principals affirmed that teachers were less effective in regularly explaining concepts in class with another 33.3% indicating that they were not effective. This shows that some considerable number of teachers were ineffective in the performance of instructional roles in secondary schools Nandi East Sub-County, Kenya. Bulimo et al. (2011) advocated that teachers who are unable to effectively deliver instructional content should be subjected to refresher courses.

4.3 Level of Education of Respondents

An analysis of the level of education of respondents teaching in secondary schools in Nandi East Sub County, Kenya, was done to determine the highest level of education attained. The results are shown in Table 7.

Table 7: Highest Level of Education of Respondents

Teachers n=124

Deputy Principals n=30

Characteristic	Frequency	Percent %	Frequency	Percent %
Diploma	6	4.8	6	20.0
Bachelors'	109	87.9	17	56.7
Masters	9	7.3	7	23.3
PhD	0	0	0	0
Total	124	100.0	30	100

The findings in Table 7 shows that majority (87.9%) of teacher respondents performing instructional roles in Nandi East Sub-County, Kenya had Bachelor’s Degree qualification with a small proportion of 7.3% and 4.8% of respondents holding Masters and Diploma qualifications respectively. Similarly, the majority (56.7%) of the deputy principals had a Bachelor’s degree while a few (23%) had acquired a Master’s Degree. According to the TSC Act, 2013, the minimum qualification required for teachers to perform instructional roles in secondary schools in Kenya is a Diploma in Education, Secondary option (TSC, 2017). This infers that all respondents were qualified to perform instructional roles in secondary schools.

4.4 Differences in Provision of Learning Resources by School Category

T-test was performed to determine whether there exists a statistically significant difference in the provision of learning resources between boarding and day schools. The tests results are presented in Tables 8 and 9.

Table 8: Differences in Provision of Learning Resources by School Category (According to Teachers)

School Category	N	Mean	SD	Df	t-value	p-value
Boarding	70	1.90	0.45	122	0.179	0.769
Day	54	1.92	0.41			

Table 9: Differences in Provision of Learning Resources by School Category (According to Deputy Principals)

School Category	N	Mean	SD	Df	t-value	p-value
Boarding	8	2.05	0.49	28	0.237	0.680
Day	22	2.36	0.45			

The results of the T-test in Tables 8 and 9 shows that provision of the learning resources was not statistically significantly different between day and boarding schools at $\alpha = 0.05$, $t(122)=0.179$, $\rho = 0.769$ for teacher respondents and $t(28)=0.237$, $\rho = 0.680$ for deputy principals. This finding means that there was no significant variation in the provision of learning resources between boarding and day schools in Nandi East Sub County, Kenya. This finding contradicts Gathuthi (2011) who established that boarding schools seemed to have provided better learning resources to their students than day schools.

4.5 Relationship between Provision of Learning Resources and Effective Performance of Instructional Roles

Pearson Product Moment Correlation Coefficient was computed in order to investigate the relationship between the provision of learning resources and effective performance of instructional roles by teachers in secondary schools in Nandi East Sub- County, Kenya. The strength and direction of the relationship are presented in Tables 10 and 11.

Table 10: Relationship between Provision of Learning Resources and Effective Performance of Instructional Roles (According to Teachers)

		Effective Performance of Instructional Roles
		Teachers
Provision of Learning Resources	Pearson Correlation	.560*
	Sig. (2-tailed)	.000
	N	124

*. Correlation is significant at the 0.05 level (2-tailed).

Table 11: Relationship between Provision of Learning Resources and Effective Performance of Instructional Roles (According to Deputy Principals)

		Effective Performance of Instructional Roles
		Deputy-principals
Provision of Learning Resources	Pearson Correlation	.520**
	Sig. (2-tailed)	0.003
	N	30

*. Correlation is significant at the 0.05 level (2-tailed).

The findings in Tables 10 and 11 shows that there exists a positive and statistically significant relationship between the provision of learning resources and effective performance of instructional roles by teachers as reported by teachers ($r=0.560^*$; $\rho<0.05$) and deputy principals ($r=0.520^*$; $\rho<0.05$) in secondary schools in Nandi East Sub-county, Kenya. This

finding is consistent with Nyaega (2011), who established that learning resources could enable a teacher to connect learners with what happens in the classroom to their life. This could make learners stay interested as it could make the topic relevant to their daily lives. The information being learnt through learning materials could be made challenging, accessible and relatable. This finding implies that teachers' performance of instructional roles could improve with the provision of learning resources. Conversely inadequate provision of such resources could negatively affect teachers' performance of their roles.

4.6 Hypothesis Testing

The decision to either reject or fail to reject the null hypothesis was set at 0.05 alpha levels; that is rejected H_0 : if $p < 0.05$, otherwise fail to reject the H_0 : if $p > 0.05$.

The null hypothesis being tested was H_{01} : There is no significant relationship between the provision of learning resources and effective performance of instructional roles by teachers in secondary schools in Nandi East sub-county, Kenya. In order to test this hypothesis, a correlation test between the provision of learning resources and effective performance of instructional roles by teachers was carried out.

The findings in Tables 10 and 11 show that there exist a positive and statistically significant relationship between the provision of learning resources and effective performance of instructional roles by teachers as reported by teachers ($r=0.560^*$; $p < 0.05$) and deputy principals ($r=0.520^*$; $p < 0.05$) in secondary schools in Nandi East Sub-county, Kenya. Consequently, the null hypothesis was rejected since the p value (0.000) is less than 0.05 alpha levels for teachers and p value (0.003) is less than 0.05 alpha levels for deputy principals. Therefore, a decision was made that there is a positive and statistically significant relationship between the provision of learning resources and effective performance of instructional roles by teachers in secondary schools in Nandi East Sub-county, Kenya.

This finding concurs with Mutetei et al. (2011), which established that inadequate provision of teaching and learning resources to teachers was found to negatively affect learners. Provision of learning resources help teachers to focus on the individual learner, hence foster discipline and attainment of better learning outcomes.

This finding suggests that the provision of learning resources could significantly improve how teachers performed instructional roles in Nandi East Sub-County, Kenya. This finding infers that teachers' performance of instructional roles could improve with the provision of learning resources to learners. Contrarily, inadequate provision of such resources could negatively affect teachers' performance of instructional roles. Muchiri (2014) argues that learning resources could facilitate; teachers' presentation of facts in condensed form, facilitates learning, takes care of a large group of learners, and develops student motivation towards learning.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The findings of this study indicated that there was a positive and statistically significant relationship between the provision of learning resources and effective performance of instructional roles by teachers in secondary schools in Nandi East Sub-County, Kenya. It was established that there was the insufficient provision of learning materials such as; internet facilities, library, computer laboratories, journals, online resources, educational games and multi-media learning resources which hamper learning.

It was further noted that multimedia learning resources had been insufficiently provided. These resources provide learners with a complex multi-sensory experience. They could further use it in exploring their world by presenting information through texts, graphics and images, audio and video. This finding is consistent with that of Orodho (2013), who established that unavailability and inadequacy of learning resources were found to negatively affect teacher effectiveness in the use of teaching methods.

This finding implies that the provision of learning resources can improve teachers' effective performance of instructional roles. Therefore, the performance of instructional roles by teachers could have been hampered by inadequate learning resources.

5.2 Recommendation

In view of the foregoing conclusion; that there were inadequate learning materials such as internet facilities, library and computer laboratories, educational games and multi-media learning resources, this study recommends the BoM and principals to make sure that they provide adequate and varied learning resources for the effective performance of instructional roles in Nandi East Sub-County, Kenya. Teachers Service Commission (TSC) of Kenya, Kenya Secondary Schools Heads Association (KSSHA) and Ministry of Education should work hand in hand to urgently implement Teacher Professional Development (TPD) programs.

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