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Instructional Resources and Teacher Effectiveness in Government-Aided Secondary Schools in Uganda

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Abstract
The study examines the influence of instructional resources on teacher effectiveness in government-aided secondary schools in Uganda and specifically the extent to which availability and utilization of instructional resources influence teacher effectiveness. A descriptive cross-sectional survey design was used in which 82 head teachers and 1024 teachers were selected using multistage sampling. Survey, interview, observation and document analysis methods were used to collect data. Quantitative data were analyzed using descriptive statistical analysis and ordered logistic regression, while content analysis was used to analyze qualitative data. The findings suggest that availability and utilization of instructional resources significantly contribute to teacher effectiveness although instructional resources are inadequate and not properly utilized. To enhance teacher effectiveness, the Ministry of Education and Sports (MoES) should continuously train teachers on use and improvising of instructional resources. Government should construct more libraries and science laboratories especially for Universal Secondary Education [USE] schools to promote easy accessibility of textbooks by learners and teachers and practical teaching of science subjects.

Keywords: instructional resources, teacher effectiveness and government-aided secondary schools.

Introduction

Secondary education plays a critical role in national development. Secondary education is intended to enable individuals acquire and develop knowledge and an understanding of emerging needs of society and the economy. It is also meant to provide up-to-date and comprehensive production in theoretical and practical aspects of innovative production, modern management methods in the field of commerce and industry and their application in the context of the social economic development of Uganda (National Development Programme [NDP], 2015). However, quality of education in Uganda's government-aided secondary schools does not meet the expectations of the public (MoES, 2015). Teachers in most

secondary schools in Uganda lack the necessary instructional resources to teach effectively; where the resources are available, the teachers hardly make proper use of these resources (MoES, 2015, Uganda National Examinations [UNEB], 2015). Availability of instructional resources in a school significantly determines the teaching methods used by teachers (Musaazi, 1982). In situations where instructional materials such as textbooks, laboratory and display materials, and plant and animal specimens are lacking, teacher- centered methods of delivery tend to dominate (UNESCO, n.d). In addition, where the instructional materials are available, well-qualified and motivated teachers will skillfully use the available resources to engage learners in practical activities that give the learners the opportunity to experiment, solve problems, discuss with each other, thereby stimulating curiosity, critical thinking and innovativeness (Smith, Wood, Adams, Wieman, Knight & Guild, 2009). Therefore, the significance of instructional materials in any learning and teaching environment cannot be underestimated. For effective learning to occur, the teacher has to make proper use of the instructional resources and appropriately guide learners by employing a variety of teaching methods such as demonstration, experimental or discussion (Raw, 2006).

Uganda's education system was one of the best on the African continent before the wars and civil strife of the seventies and eighties (Government of Uganda, 1992). Teaching focused on developing learners' competencies and students were taught in a way that fostered higher order thinking skills (Ssekamwa & Lugumba, 2010). In order to re-establish the quality of education, government carried out major reforms in education in line with the Education White Paper (MoES, 2009) including implementation of Universal Primary and Secondary Education. The introduction of Universal Secondary Education increased access to secondary education; however, teacher effectiveness deteriorated due to the mismatch between the inputs and the increased enrollment (MoES, 2015; Nannyonjo, 2007). In the recent times, there have been reports of increasing examinations malpractices, levels of rote learning, coaching of students and examination-oriented teaching (MoES, 2015). This is happening at a time the Government of Uganda is struggling to develop initiatives aimed at equipping her people with skills needed by the employment sector.

The study is anchored on the constructivism theory, which stipulates that through active learning, students are able to use their prior knowledge in context to promote learning (Golightly & Roath 2015). In other words, the students' prior knowledge or experience coupled with results from the activities carried out during the lesson aid the learners to construct new knowledge. According to the theory, ownership of learning in the classroom is shifted from the teacher to the learner. Since understanding is crucial to constructive learning, use of instructional resources provides students with the opportunity to learn as the teacher plays the role of a facilitator to engage and guide the students in discovering information, constructing their own learning and solving problems (Balogun, Okon, Musaazi, Thakur, 1981). Therefore, the study focuses on two key concepts: instructional resources and teacher effectiveness.

Teacher effectiveness is complex to define given the complex nature of teaching. There is no agreed position on whether teacher effectiveness should be defined using teacher qualifications, pedagogical practices or learner achievement (Stronge, Ward & Grant, 2011). According to Walls (1999), teacher effectiveness entails the following:

(i) clearly spelling out the learning outcomes to focus learners on the learning goals;
(ii) making the content as clear as possible as the teacher builds on existing knowledge;
(iii) engaging learners in activities during the teaching and learning process; and
(iv) display of high level of enthusiasm that reflects professional competence and confidence.

Popoola and Haliso (2009) define teacher effectiveness as the ability of a teacher to instill knowledge and skills in students, as well as positively influencing the learners' behavior for a better living. Ismaila (1999) cited in Adeoye and Popoola (2011) link teacher effectiveness to the teacher's knowledge of subject matter, expertise and resourcefulness that enhance students' academic performance. Teacher effectiveness in this study is conceptualized as the teacher using a variety of resources to plan, and present content and skills that enhance the opportunities for students to learn and attain the desired learning outcomes.

Instructional resources are support materials used by teachers in the classroom to enhance the learning process (Abdullahhi, 2010; Agun & Okunrotifa, 1977). These help teachers to make their lessons explicit, more interesting and understandable to learners. These resources range from textbooks, display materials such as wall charts, chalkboard to pictures and diagrams, laboratory apparatus and plant and animal specimens. These make it possible to teach lessons that involve objects that cannot be brought to the classroom or which the learners cannot experience directly (Balogun, Okon, Musaazi & Thakur, 1981). The instructional resources are intended to stimulate, motivate and focus the learners' attention during the teaching and learning process to enhance constructive learning (Shabiralyani, Hassan, Hamad & Iqbal, 2015). In this study, instructional resources include textbooks, laboratory materials and teaching aids.

There is growing concern about teacher effectiveness in Government secondary schools in Uganda (MoES, 2016). The way teachers teach is not in consonance with the expectations of various stakeholders in the education arena (Curriculum Assessment and Examination [CURASSE], 2007; MoES, 2012; UNEB, 2016; MoES, 2016). Teacher-centered method of delivery remains the predominant form of teaching making leaners passive listeners in the classroom; science concepts are not practically taught and teachers have difficulty in relating science concepts to daily life experiences (MoES, 2015). According to the National Assessment of Progress in Education [NAPE] report of 2016 (UNEB, 2016), the teaching in secondary schools encourages rote-learning rather than imparting skills. The teaching is more examination driven and does not consider the learning of competencies. Despite government's effort to remedy the situation through provision of instructional resources, these resources are underutilized or inadequate in most government-aided secondary schools (MoES, 2016). The purpose of the study therefore is to

establish the extent to which instructional resources explained variations in teacher effectiveness in government-aided secondary schools in Uganda. Specifically, the study focuses on investigating the extent to which; availability and utilization of instructional resources explain variations in teacher effectiveness in public secondary schools in Uganda.

A number of scholars (Busingye & Najjuma, 2015; Bizimana & Oradho, 2014; Goloba, Wokadala & Bategeka, 2010; Abdullahhi, 2010; Raw, 2006; Orji, 2000) have attempted to explore the linkage between availability of instructional resources and teacher effectiveness in the classroom. For instance, Busigye and Najjuma (2015) investigated the influence of the teaching and learning resources on the learning outcomes in Uganda's primary schools. Findings of their study revealed that availability of teaching and learning resources had minimal influence on the learning outcomes of Mathematics and English pupils. They further observed that teaching and learning resources are only effective when teachers have the necessary skills to use them. Relatedly, an earlier study by Goloba, Wokadala and Bategeka (2010), revealed that it was not actually availability of resources that majorly explained quality of teaching in schools, but supervision of the teachers. According to Goloba et al (2010), administrators were not sufficiently supervising teachers to ensure that they used instructional materials to promote the highly recommended learner-centered methods of teaching. As a result, it is imperative for the schools administrators to supervise the teachers' utilization of the available resources for effective teaching in schools.

However, Bizimana and Oradho (2014) in their study on teaching and learning resources availability and teachers' effective classroom management and content delivery in Rwanda established a significant positive relationship between availability of instructional resources and effective teaching. Bizimana and Oradho concluded that teachers should be innovative to improvise those necessary instructional materials that could be lacking in schools. Relatedly, Okwara, Shiundu and Indoshi (2009) observed that availability of instructional resources significantly contributes to effective pedagogical practices. They hence urged teachers to make instructional materials an integral part of the teaching and learning process. Mwanamukubi (2013) established that inadequate instructional resources greatly influenced teacher performance. She pointed out inadequacy of instructional resources as a deterrent to effective teaching.

Musaazi (1982) basing on Taylor's scientific management theory emphasize the critical role of instructional resources in enhancing teacher effectiveness. According to the theory, a workman should be given the appropriate tools and materials to effectively accomplish his/her work with efficiency. Musaazi argues that teachers and students need to be provided with the necessary and up-to date resources such as textbooks, science equipment, laboratories, libraries, visual aids and many others for effective teaching and learning. Despite the relevancy of instructional materials in enhancing effective teaching, most secondary schools in Uganda lack the basic teaching and learning resources. According to the NAPE report, the instructional

materials provided by government do not match the robust increase in enrolment, most especially in USE schools (UNEB, 2015).

For the instructional resources to contribute effectively to teaching and learning, they must be put to proper use (Nannyonjo, 2007; Adeleke, 2005; Okiy, 2000). However, the Education and Sports sector Annual Performance Report [ESAPR] of 2015/16 (MoES, 2016) revealed that the few instructional materials provided by government to secondary schools, such as textbooks, chemicals/reagents and science kits were not well utilized. According to the report, teachers did not engage learners in hands-on activities that enhance cognitive and manipulative skills to interpret scientific and mathematical concepts. The earlier report of the Directorate of Education Standards of 2015 (MoES, 2015) attributed the failure of teachers to utilize available instructional materials in Uganda's secondary schools to poor lesson planning for teaching and learning aids. Balogun, Okon, Musaazi and Thakur (1981) advise that instructional materials can only be properly used, when teachers through good lesson planning; identify, prepare the necessary teaching and learning materials, and determine the order in which these materials will be used. According to Smith et al (2009), when teachers skillfully use instructional materials, it will not only facilitate interaction among learners, but it will equally engage higher order cognitive strategies of analysis, synthesis and evaluation.

Raw (2006) advises that to promote learner participation and hence enhance effective teaching, students should be allowed to manipulate the provided materials. The teacher should give the learners a chance for practical work and allow them to make their own conclusion from their findings. The teachers should let the learners discover knowledge and answers to challenges in their daily lives. This motivates learners to create their knowledge through exploring, analyzing and understanding. Raw asserts that learner participation will not only make the teaching and learning process more interesting, but will also enhance the memory level of the learners. In congruence with Raw, Orji (2000) emphasizes that instructional materials in the teaching and learning process, motivate and arouse student's desire to learn. In the same vein, Brown et al (2005) assert that instructional resources promote interaction amongst learners, effective communication and learning which enhances retention; thereby making learning more permanent. Other studies (Armbruster, Patel, Johnson, and Weiss, 2009; Armstrong, Chang, Brickman, 2007; Deslauriers, Schelew, Wieman, 2011) concur with Brown et al's underscoring the fact that when interactive methods of teaching are used, students usually demonstrate better understanding of concepts, greater participation and increased persistence to learn.

Method

Participants

The study sample consisted of 1024 teachers from government-aided secondary schools who were selected using multi-stage sampling technique, 82 head teachers, and two officials from the Directorate of Education Standards who were purposively selected.

Design

A descriptive cross-sectional survey design was used, in which data was collected from a representative sample at one point in time to make inferences about the target population (Borg & Gall, 1989). The design was useful in gathering factual information and data on attitudes and preferences, beliefs and behaviour and experiences of respondents in reference to instructional resources and teacher effectiveness as they naturally occurred (Cohen, Manion & Morrison, 2007). The design facilitated the collection and analysis of data using both quantitative and qualitative methods with the purpose of providing a better understanding of the research problem and question (Creswell & Plano Clark, 2011).

Materials

Given the large number of respondents, the questionnaire method of data collection was preferred, which helped to save time and costs. A 32-item questionnaire whose questions were acquired and revised from the teaching and learning assessment instrument of DES was used to collect data from teachers. The questionnaire comprised questions pertaining to respondents' background information, respondents' views on availability of instructional resources, utilization of instructional resources and teacher effectiveness. The questions were measured on a 5-point Likert scale: Strongly Agree (5), Agree (4), Non-committal (3), Disagree (2) and Strongly Disagree (1).

The interview method was further used to seek the views of DES officials and head teachers of the selected schools on the influence of instructional resources on teacher effectiveness. The method enabled further probing on concerns that were being studied. The document review method was also used to collect data. It adopted a checklist from DES's teaching and learning quality instrument. This method made it possible to validate the information obtained using the questionnaire and interview methods.

The tools used were pre-tested before the actual data collection was conducted. Descriptive and inferential statistical methods were used to analyze quantitative data. Specifically, the logistic regression model was used to determine the extent to which availability and utilization of instructional resources influence teacher effectiveness. The tests of significance were performed at the significance level of $p< 0.05$. Qualitative data were analyzed using content analysis method.

Procedure

Given the vast amount of work, five research assistants were appointed and trained to assist in the data collection process. The research assistants underwent a two-days training on the following: personal presentation; how to seek permission from head teachers to access school; how to conduct interviews with the head teachers, selection of teachers and collection of data using questionnaires.

The head teachers were interviewed from their offices using the semi-structured interview schedule. Through the head teacher, teachers to participate in the study were identified. The consent of the teachers was sought through an introduction letter that explained the purpose of the study, why they had been selected to participate in the study and highlighted the treatment of information provided. The teachers were neither expected to provide their names nor the names of their schools

Results

Profile of Respondents

The background characteristics of the respondents are presented in Table 1.

Table 1 - Background information on the Respondents

Variable	**Category**	**Frequency**	**Percentage**
Age	20 to less than 30 years	358	35
	30 to less than 40 years	453	44.2
	40 years and above	213	20.8
Gender	Male	702	68.6
	Female	322	31.4
Level of education	Diploma	215	21
	Graduate	635	62
	Post-graduate	174	17
Number of years in the school	Less than 3 years	193	18.8
	3 to less than 10 years	604	60
	10 years above	227	21.9

The findings in Table 1 indicate that 79.2% of the teachers were aged between 20 and 40, showing that majority were young and energetic to discharge instructional tasks. Results also demonstrate a gender disparity in employment of teachers in public secondary schools with more male teachers (68.6%) employed. Results also suggest that all the teachers have the prerequisite qualification of at least a Diploma to teach at a secondary school level. In relation to numbers of years spent in the schools, findings show that 81.9% of the teachers who participated in the study had adequate experience of more than three years of teaching.

Availability of Instructional Resources

Table 2 - Distribution of the Teachers' Views on Availability of instructional Resources in Government-Aided Secondary Schools in Uganda

Availability of resources	**Disagree**	**Non-committal**	**Agree**
The government provides the necessary teaching and learning resources	102 (9.9%)	13 (1.3%)	909 (88.8%)
The school regularly procures relevant textbooks	658 (64.3%)	54 (5.3%)	312 (30.5%)
The relevant text books in our school are adequate for the learners	712 (69.5%)	68 (6.6%)	244 (23.8%)
Recommended text books are easily accessed in my school	453 (44.2%)	97 (9.5%)	474 (46.3%)
Our science laboratories have the necessary equipment ,chemicals and reagents	146 (14.3%)	215 (21%)	663 (64.7%)
Our school has a functional library	567 (55.4%)	24 (2.3%)	433 (42.3%)
I improvise teaching and learning materials where the conventional materials are lacking to facilitate my teaching	335 (32.7%)	14 (1.4%)	675 (65.9%)
The time allocated on the timetable is adequate for use of teaching and learning resources.	681 (66.5%)	34 (3.3%)	309 (30.2%)
We have sufficient laboratories for effective teaching of sciences	534 (52.1%)	42 (4.1%)	448 (43.8%)

Results in Table 2 show that, largely, government provided the necessary teaching and learning resources; however, schools hardly procured the relevant textbooks. The majority of the respondents (64.3%) indicated the relevant textbooks were not adequate for the learners. Results in the table also show that majority of the respondents (55.4%) indicated that their schools did not have functional libraries, and only 46.3% of the respondents agreed that the recommended textbooks were easily accessible. Although 64.7% of the respondents indicated that their science laboratories had the necessary equipment such as chemicals and reagents, only 43.8% agreed that the schools had sufficient laboratories for effective teaching of sciences. The results further suggest that there was an effort by majority of the teachers (65.9%) to improvise teaching and learning materials to promote effective teaching.

Interviews with the head teachers revealed that the government provided laboratory equipment, chemicals and textbooks for Mathematics, Biology, Physics and Geography subjects to USE schools under IDA support. However, the teaching and learning resources were still insufficient. According to the head teachers, USE schools lacked funds to procure instructional resources to supplement what the government provided and only a few of their students could afford instructional materials for their personal use. One head teacher illustrated:

> As a USE school, we do not have funds to stock the necessary teaching and learning materials. Our students come from poor families; they can

hardly afford the required instructional materials such as textbooks for their personal use. We entirely rely of provisions of government…

The head teachers also revealed that teachers were not reaching out for the locally available materials to improvise when need arose. For example, with regard to teachers' failure to improvise instructional materials, a head teacher from a non-USE school in Ankole sub-region explained, "…..most teachers are either inadequately trained or lack the innovativeness to improvise the instructional materials. Our teachers rely on what is provided by the school."

According to the head teachers, USE schools had a big challenge of storage and utilization of the textbooks and the science equipment provided. It was observed that USE schools mainly in the Elgon and West Nile sub-regions lacked libraries and laboratories to stock these instructional resources; as a result, these resources were kept in the offices of head teachers.

Utilization of Instructional Resources

Table 3 - Distribution of Teachers' Views on Utilization of Instructional Resources in Government-aided Secondary Schools in Uganda

Utilization of the instructional resources	**Disagree**	**Non-committal**	**Agree**
I regularly use conventional teaching aids for my lessons	297 (29%)	53 (5.2%)	674 (65.8%)
Students use textbooks to do their class exercises	157(15.3%)	87 (8.5%)	780 (76.2%)
I always give my students homework that require use of the available instructional materials	356 (34.8%)	38 (3.7%)	630 (61.5%)
Practical sessions are usually used to teach sciences	473 (46.2%)	52(5.1%)	499 (48.7%)
Students always are allowed to operate the science apparatus/equipment during the science lessons	524 (51.2%)	49(4.8%)	451 (44%)
I complete my lessons within the allocated time whenever I use teaching and learning resources	639 (62.4%)	23 (2.2%)	362 (35.4%)
It is proper to always use teaching and learning resources	338(33%)	29(2.8%)	657 (64.2%)

Results in Table 3 suggest that majority of the teachers use conventional teaching aids for their lessons, give class exercises that call for use of textbooks and give homework that demands the use of the available instructional materials. Results further show that only 48.7% of the respondents agreed that sciences were practically taught in their schools and 51.2% of the respondents indicated that students were not allowed to operate the science apparatus and equipment during science lessons. Although 64.2% of the teachers agreed that it was proper to always use teaching and learning resources, only 35.4% of the respondents indicated that

they were able to complete their lessons within the allocated time whenever they used teaching and learning resources.

Information from the head teachers suggested that the government policy of placing textbooks in the hands of learners was not working. The head teachers preferred to "safely" keep the books in the libraries and their offices. One head teacher of a USE school from the west Nile sub region explained, "... government does not know the category of students we have in our USE schools. If you give them books, they destroy or even lose them. It is safer keeping them in the libraries and given to students when need arises". However, during lesson observations, of the 76 lessons observed, it was only in only 22 (29%) of the lessons where the textbooks provided by government were used. In majority (71%) of the lessons, teachers used lecture method of teaching, spent most of the lesson time dictating notes and/or writing notes on the blackboards for the learners to copy. Several students in these lessons appeared bored and some sleepy!

With regard to utilization of science equipment provided by government, head teachers of USE schools revealed that lack of space to conduct practical sessions partly explained why the science apparatus provided by government was not fully utilized. The available space was used to prepare candidates for the national examinations. Concerning practical teaching of sciences, one head teacher explained,

> Practical teaching of sciences is deliberately delayed because of the limited time that is available to complete the syllabus. We are forced to start practical teaching of science subjects at Senior 4; however, teachers usually carry out demonstrations during science lessons at the lower levels

Teacher effectiveness

This sub-section presents a description of the teachers' responses on teacher effectiveness in government-aided secondary schools in Uganda. Table 4 provides the descriptive statistics, showing the frequencies and percentages of the teachers' opinions on teacher effectiveness.

Table 4 - Distribution of Teachers' Views on Teacher Effectiveness in Government-aided Secondary Schools in Uganda

Teacher effectiveness	**Disagree**	**Non-committal**	**Agree**
I always adhere to National Curriculum Development Centre [NCDC] guidelines when making the schemes of work	183 (17.9%)	27 (2.6%)	814 (79.5%)
I make lesson plans for all my lessons	621(60.6%)	41(4.0%)	362 (35.4%)
I usually plan to use a variety of teaching aids	411 (40.1%)	58 (5.7%)	555 (54.2%)
I always prepare class exercises for students before the lessons.	233 (22.7%)	68(6.6%)	723 (70.6%)

I regularly use a variety of teaching methods	368 (35.9%)	18 (1.8%)	638 (62.3%)
I usually use teaching aids to enhance my teaching	296 (28.9%)	77 (7.5%)	651 (63.6%)
I usually use the demonstration method to enhance learning of my learners	305 (29.8)	80 (7.8%)	639 (62.4%)
I encourage students to discover new knowledge on their own	402 (39.3%)	33 (3.2%)	589 (57.5%)
I always give class exercises during my lessons	456 (44.5%)	24 (2.3%)	544 (53.1%)
I usually mark class exercises	429 (41.9%)	32 (3.1%)	563 (55%)
I always make constructive comments as I mark the given exercises	112 (10.9%)	19 (1.8%)	893 (87.2%)
I usually engage my students during lessons	106 (10.4%)	67 (6.5%)	851 (83.1%)

Results in Table 4 show that whereas 79.5% of the teachers agreed that they made schemes of work in adherence of NCDC guidelines, 60.6% indicated that they did not always make lesson plans, while 40.1% did not plan to use a variety of teaching aids and 62.3% used a variety of teaching methods. The majority of the respondents (62.4%) agreed that they used demonstration methods to enhance their teaching, while 57.5% encouraged students to discover new knowledge on their own. Barely half of the respondents gave and marked class exercises. The results further suggest that teachers usually made constructive comments and engaged students during lessons.

Although the majority of the teachers (79.5%) agreed that they made schemes of work to in line with NCDC guidelines, review of the schemes of work revealed that a great portion of teachers did not adhere to NCDC guidelines that emphasized learner-based approaches of teaching. The head teachers associated this failure to adhere to guidelines the teachers' fear to complete the syllabi in time for the national examinations. Findings of lesson observations revealed that only 33.9% used learner-based methods. A review of the students' exercise books revealed that only 53.5% teachers administered and assessed class exercises. These findings were in congruence with descriptive results in Table 3 where 55% of the teachers indicated that they gave and marked class exercises.

Verification of the Hypotheses

The ordered logistic regression was conducted to test the following null hypotheses:

I. Availability of instructional resources does not significantly influence teacher effectiveness.

II. Utilization of instructional resources does not significantly influence teacher effectiveness.

The results of the hypothesis tests are presented in Table 5.

Table 5 - Ordered logistic regression results on teacher effectiveness

Teacher Effectiveness	**Coefficient**	**P>|Z|**	**95% confidence interval**	
Availability of instructional resources	5.632	**0.000**	4.76	6.43
Utilization of instructional resources	3.231	**0.000**	2.58	3.64
Age	1.013	0.803	-0.89	1.15
Gender	-0.187	0.434	-0.72	0.37
Education level	-0.438	0.068	-0.71	0.04
Duration	-0.253	0.121	-0.46	0.07

Pseudo R^2 = 0.685, Number of respondents = 1024, LR χ^2 (10) = 1416.73, Prob > χ^2 = 0.00

The results in Table 5 show that 1024 observations were used in the analysis. The likelihood ratio chi-square of 1416.73 with p-value of 0.000 ($p<0.05$) showed that the model overall was statistically significant compared to the null model with no predictors. Pseudo R^2 = 0.685 means that the explanatory variables in the model explained 68.5% variability in the quality of teacher effectiveness ($p=0.000$, <0.05), whereas, the demographic variables did not ($p>0.05$). The results also indicate that a unit increase in availability of instructional resources resulted in a 6-unit change in teacher effectiveness, while a unit change in utilization of instructional resources explained a 3-unit change in teacher effectiveness. The null hypotheses I and II were therefore rejected, implying that:

(i) Availability of instructional resources significantly influences teacher effectiveness in government-aided secondary schools in Uganda

(ii) Utilization of instructional resources significantly influences teacher effectiveness in government-aided secondary schools in Uganda.

The overall frequency of dilemmas coded as justice, care or justice-care mixtures for both genders were collated and put to SPSS.

Discussion

The purpose of the study was to establish the extent to which availability and utilization of instructional resources explained variations in teacher effectiveness in government-aided secondary schools in Uganda. Findings of the study revealed that, other factors held constant, availability and utilization of instructional resources significantly ($p<0.05$) influenced teacher effectiveness. These finding were in congruence with findings of Bizimana and Oradho (2014), Mwanamukubi (2013) and Okwara et al. (2009). However, the results contradict findings of Goloba, Wokadala and Bategeka (2010).

Although availability and use of instructional resources significantly contributes to improved teacher effectiveness, findings of the study revealed scarcity of these resources especially in USE schools where resources were available but utilization was low. The most affected USE schools were in the Elgon and West Nile sub-regions of Uganda. The findings suggested that the non-USE schools were not only better equipped with teaching and learning resources but the teaching and learning materials in these schools were better utilized than in USE schools.

The inadequacy of instructional resources in USE schools is explained by the mismatch between the resources the Government provides and robust increase in enrollment in these schools (UNEB, 2015). The study established that teachers in USE schools who sometimes carry out moonlight teaching in private schools took and used the instructional resources provided to USE schools in these schools, thereby creating scarcity of the teaching and learning resources. The study also revealed that several teachers lacked the necessary training or innovativeness to improvise teaching materials; this partly explained the insufficiency of instructional materials. This insufficiency has contributed to failure of a large proportion of learners to apply concepts learnt in class to daily life (UNEB, 2016) because most teachers continued to use teacher-centered methods of teaching that promote rote learning for examinations rather than imparting skills or enhancing learning competencies. This could also explain the poor performance of the USE schools in the Elgon and West-Nile sub-regions.

Although availability of instructional materials is critical in the teaching and learning of students, utilization of these resources is fundamental in ensuring quality-learning outcomes (Nannyonjo, 2007; Adeleke, 2005; Okiy, 2000). The study established that instructional resources provided by Government under the IDA support such as textbooks and laboratory equipment were not easily accessible to the learners. These findings contradict what was reported in the Education and Sports Sector Annual Performance Report of 2014/15 that provision of textbooks for the core subjects, science kits and chemicals had improved learner access to instructional resources (MoES, 2015). It was observed that most rural USE schools lacked libraries to stock the books provided; as a result, the textbooks were kept in the offices of the head teachers, which were not easily accessible to the learners.

The study further established that the policy of placing textbooks in the hands of the learners was not working in several of the USE schools because of the administrators' negative perception of the leaners' level of responsibility in maintaining the textbooks. The administrators preferred to have the textbooks safely kept in the libraries or their offices and only had the books used when a teacher distributed and supervised learners using them. Generally, utilization of the textbooks provided by government was significantly low. However, the study established that use of the textbooks to enhance teaching was more common among teachers of English and Mathematics because the curriculum of these subjects is designed in a manner that requires teachers to give class exercises from specific text-books recommended by the NCDC.

The study also established that the science equipment provided by government was not fully utilized due to lack of space to conduct practical sessions. The findings demonstrated that a number of schools specifically the USE schools lacked functional laboratories due to lack of apparatus, chemicals and reagents. In these schools, the laboratory materials remained locked up in the head teachers' offices or the Ministry of Education lockable cupboards. These findings are in agreement with New Vision article on wastage of laboratory chemicals worth billions of Uganda shillings because the schools lack laboratories to utilize the materials provided by the Ministry of Education and Sports (Nakajubi, 2017). Furthermore, findings revealed that failure to utilize the available resources was due to the lack of the teachers' competence resulting from the inadequate pre-service training (UNESCO, n.d).

Furthermore, the study found that teachers shunned using available resources arguing that the allotted time was not sufficient to engage learners on practical activities. These findings on the attitude of teachers using the resources to involve learners in activities during lessons conform to the ESAPR report of 2015/16 (MoES, 2016). The findings suggested that teachers think practical sessions delay completion of the syllabus; therefore, practical teaching of science subjects in majority of the schools across the sub-regions were mainly conducted in the candidate classes to prepare their candidates for the practical papers in the national examinations. This explains the theoretical teaching of science concepts in the lower classes despite availability of science kits and laboratories (MoES, 2015). Hands on activities call for time to plan, practice, set the necessary materials and clear the classroom after the lesson; those teachers who are not motivated, find this rather demanding and cannot spare time for such a process (MoES, 2015; UNESCO, n.d).

Conclusion

The study established that availability and utilization of instructional resources play a significant role in enhancing teacher effectiveness. The findings generally suggest that proper use of instructional resources helps teachers to gain and hold the attention of students. It also stimulates and attracts learners' attention during the teaching and learning process thereby promoting teacher effectiveness. However, in Uganda's government-aided secondary schools, instructional resources are inadequate, while the few available ones are not well utilized. The results further suggest that teachers hardly improvise the teaching and learning materials where the commercial or conventional materials are lacking.

To improve teacher effectiveness in government-aided secondary schools, the Ministry of Education and Sports and school administrators should avail teachers with instructional resources and supervise to ensure that the teachers appropriately use these resources. Government should construct more libraries and science laboratories especially for USE schools to promote easy accessibility of textbooks by learners and teachers and practical teaching of science subjects. The Ministry and

schools should provide training to teachers on how use and improvise instructional resources to improve their effectiveness in the teaching and learning process.

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