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Instructional Materials Usage and Learner's Academic Performance in Rwanda Secondary Schools

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Abstract

The effective usage of instructional materials plays a significant role in the promotion of academic performance among learners in schools. The purpose of this study therefore, sought to determine the correlation between instructional materials usage and students' academic performance in day and boarding schools of Ngororero District in Rwanda. Correlation research design was employed. The target population was 868 people with the sample size of 274 respondents. Questionnaire, interview guide and documentation were used during data collection where IBM SPSS software was involved in data analysis. The findings revealed there is poor use of audio materials in both boarding and day schools considering the grand means of 2.57 and 2.36 which are interpreted as low means. It was noted that the performance in boarding schools is good on high level comparing to that of day schools where for boarding schools the mean is 2.84 while in day schools the mean is 2.64. It was also found that there is a positive correlation between instructional materials and performance of students in Ngororero District whereby the correlation value is 0.484 and the tabulated p-value of 0.002 which is below the significance value of 0.05. The study recommends that educational planners introduce instructional materials that are in line with the use of technology in education, keeping in mind that some day schools are in remote areas where there is no internet connectivity. Educational stakeholders are recommended to collaborate with families of students in order to avail the necessary resources to improve instructional materials, especially in day schools. A vigorous follow-up on how instructional materials are maintained and how they are used should be an integrated part of inspections.

Keywords: *Instructional materials, academic performance, basic education, and secondary schools*

1.0 Introduction

For teachers to be more effective and for students to perform better, instructional resources must be used in the teaching and learning of academic topics. They improve the teaching-learning by making it more fascinating, practical and realistic. Furthermore, instructional materials facilitate both students and lecturers to participate actively or effectively and constructively in classroom activities. The teaching aids facilitate the acquisition of competences, knowledge, self-actualization, and self-assurance. Onyeachu (2010) defined instructional materials as ways and means of making the teaching and learning process easy, more meaningful and understandable. According to him, instructional materials make the teaching-learning easier because they capture the learners' attention, facilitate the understanding of concepts, save time consuming by limiting the use of words explanation, and provide learners with opportunity to manipulate objects in the environment. In a similar definition, Fadeiye (2005), instructional materials are visual and auditory tools that teachers can employ to raise the caliber of Social Studies teaching and learning activities. These tools could be physical or abstract. All instructional materials should appeal to the senses when utilized for teaching and learning, Agina-Obu (2005). Furthermore, Isola (2010) viewed teaching resources as 'devices or tools that facilitate teachers to provide lesson content to students in a consistent order. Abdu Raheem and Oluwagbohunmi (2014) defined the learning-teaching resources like tools used by instructors for helping the students understand concepts and support teacher-led explanations. Similarly, Obanya (2004) claimed that the findings of multiple studies conducted in various locations of Nigeria revealed a success of high school certificate examinations which was practically dreadful in every topic that learners offered. He underlined that just a low percentage of students succeeded the test offered to them. According to Abdu-Raheem (2011), an insufficient provision of instructional resources has a significant impact on the educational system and students' mediocre academic attainment. According to Eniyewu (2005), it is crucial to employ instructional aids when delivering teaching in order to ensure that students learn new material and to uphold academic standards.

Instructional materials, according to Olumorin et al. (2010), make learning easier for both teachers and students. They contended that educational materials immediately reach all humans' sense organs. According to Kochhar (2012), instructional materials are tools used in inculcating teaching activities. Similarly, he asserted that for broadening the topics and enhance the learners' motivation during the lesson, a competent teacher must acquire additional and concrete teaching tools to supplement/or complete what is presented in textbooks. However, Akinleye (2010) confirmed that effective teaching-learning process must involve real world activities and instructional resources leading to more vivid learning, rational, realistic, and pragmatic. Again, Esu et al. (2004) emphasized him by agreeing that effective teaching-learning activities necessitate the utilization of teaching aids. According to Ekpo (2004) most instructional tools are beneficial to the sense of organs. Even though instructional materials are important resources making studying realistically and learning new information easier, they are not widely available and not sufficient enough in some secondary schools, causing students to do poorly on government assessments and exams. Josua (2007) alludes to instructional material as anything used to encourage the acquisition of information, competences, and abilities in Abiodun-Oyebanji and Adu (2007). According to Abdu-Raheem (2014), teaching aids are critical in encouraging students' active engagement in lessons, providing solutions to problems, difficulties encountered and develop a peer learning opportunities. Meaning that the role of the teacher is to divide the content

covered into tasks to students and guide the scenario until the attainment of prefixed goals or objectives.

The advantages of instructional materials, according to Abolade (2009), include the following: being less expensive to effectively train the whole class, student's motivation, attention and curiosity while sparkingly grasps and discovering the content with the guide of the teacher. Human body is assisted and stimulated by instructional materials to alter its' current behavior and acquire a new one. As underlined by Ogbondah (2008), the human organs, particularly those of students, are more facilitated in teaching-learning contexts when instructional materials are properly used. He raised awareness about the woefully inadequate and underutilized instructional resources required to make up the deficiencies of the sense organs and strengthen the potentialities of dominating ones. Such educational resources can be acquired in a variety of methods; some are expensively purchased, while others are manufactured locally. He added that teachers should try their best to allocate locally manufactured materials as opposed to the conventional aids to facilitate lessons in the case that none of the schools (day and boarding school) have enough teaching aids. Enaigbe (2009) pointed out that many schools lack basic supplies/ equipments like textbooks, chalkboards, and necessary technological devices like computers, projectors, televisions, and video. Accordingly, from the above statements, it's a great concern of many academics and researchers on how instructional materials do affect the learner's teaching. In line of this, our work aims at examining if the students' academic performance of day and boarding schools in Rwanda is a result of teaching –learning aids usage.

1.1 Problem statement

The poor success observed within the schools, in both rural and standardized exams, is an issue facing education system in developing countries. Over time, the cause of these differences in student performance became a major issue for researchers, educators, and all other partners involved in education. For example, in Namibia the teaching was defined by the challenge of the absence of basic instructional resources, overloaded teacher and administrative duties, underfunding to schools and poor teacher salaries. Also, most teachers were not skilled to improvise instructional and teaching materials due to the absence of sufficiency resources, which has rendered teaching ineffective. Rural school teachers felt isolated and health service centers were not easily accessible, which caused low teacher morale, and consequently teaching ineffectiveness (Elock 2020). According to the Rwandan Ministry of Education (MINEDUC), numerous initiatives have been taken to achieve the Sustainable Development Goals' (SDGs) objectives to answer the Universal Primary Education (UPE) requirements. To address this, a great number of children and young people are enrolled to education system by the establishment of new day secondary schools elsewhere in the country; commonly known as 9–12 YBE schools; to expand the number of pupils who had access to formal education at secondary level (MINEDUC, 2017).

However, according to Ntawiha, (2022) the quality of inputs and the way they are utilized in education system affect normally the students' performance. He went further and stressed that students in Rwanda are not well performing as well as they might in both national and international examinations. In a similar context, it was shown that audio-visual aids are effective in increasing the understanding of students as indicated in the significantly improved marks for post assessment in the experimental group (Daniel, 2018). To conclude on the effect of instructional materials in

teaching-learning process, it was noted that ineffective teaching strategies and a lack of crucial teaching resources frequently result in pupils failing exams (Afolabi, 2009). However, the researcher doubts about the way day schools are equipped with those teaching aids and he assumes that their poor academic performance is caused by a lack of qualified teachers and suitable teaching resources when compared to boarding schools. This study therefore deemed to investigate if there is difference in academic performance in day and boarding schools.

1.2 Objective of the study

The objective of this study was to determine the correlation between instructional materials usage and students' academic performance in day and boarding schools of Ngororero District in Rwanda.

2.0 Literature Review

The study discussed the literature review in sections.

2.1 Meaning of Instructional Materials Related Theories

Teaching aids have been mentioned by several authors. According to Faize & Dahan (2011) instructional materials are print and non-print items that are designed to impact information to students in the educational process. Instructional materials include items such as prints, textbooks, magazines, newsstudies, slides, pictures, workbooks, electronic media, among others. Instructional materials play a very important role in the teaching-learning process the availabilities of textbook, appropriate chalkboard, Mathematics kits, Science kit, teaching guide, science guide, audio-visual aids, overhead projector, among others are the important instructional materials Allen (2010) emphasized the importance of educational resources as tools for the teaching and learning process that indicate a significant work and are generally self-sustaining rather than supplementary. Instructional materials are resource materials that are visual, audiovisual or mechanical devices or technological that make audible or visible in classroom settings in order to improve teaching and learning efficacy (Iwu et al, 2009).

As said by Kochhar (2012), educational materials are critical teaching and learning aids. He advised educators to seek out other teaching tools to supplement and/or augment what is provided in textbooks in order to widen the concepts and pique students' interest in the subject taught. According to Abdu-Raheem (2014), teachers employ instructional resources during the teaching-learning process to help explanations and make clear the subject matter learning clear to students. In addition, the use of instructional gadgets in the classroom can improve teaching efficiency and increase student engagement. Instructional materials are crucial and significant educational instruments. With the help of instructional resources, the instructor can achieve the defined aims and objectives. Instructional materials of various kinds engage the senses when teaching and learning. This allows students to actively participate in learning when they interact with real-world objects and events, such as watching, hearing, touching, feeling, or manipulating them. Meanwhile, teachers can choose and use a various instructional aid that allow students to read, hear, see, touch and taste because it helps students achieve their stated learning objectives or actively engage them in intellectual, emotional, and physical components (Omiko, 2015).

2.2 Categorization of instructional materials

According to Barde, et al (2005) instructional materials can be classified in several ways by different authors. But no matter how the classification is, one views them under three broad categories that are audio, visual and audio-visual materials.

2.2.1 Audio materials

Audio is an efficient teaching-learning tool exceptionally utilized to record and deliver knowledge. Audio has come a long way from audiocassettes since the 1970s to digitally recorded music. Audio material is a quick and economical alternative asset to textbooks for engaging students in learning and offering current content, interviews, dialogues, and course materials. Middleton (2013) emphasizes how audio materials have been shown to allow students being connected to the outside world in different ways as both listeners and publishers consequently engaged in learning. There are numerous desktop apps and small digital recording devices, such as cellphones, that make it simple to create audio. However, the following sentence defines how an audio material can be applied in promoting the teaching activities : weekly updates on instructional events, important dates, and current events via unit podcasts; interviews with subject-matter experts: can be listened to and used for larger incidental applications or as primary sources of information; recording student input, either to replace or enhance written feedback; recordings made by students can be integrated in a lesson plan or a document evidence; public lecturers' recordings can be adapted and applied to various situations and topics; internet conversations involving two or more persons that are live. Audio materials are used to make the teaching-learning process easier and students are accumulating knowledge by hearing themselves the content taught.

2.2.2 Visual materials

Models, pictures, posters, fliers, maps, and graphic organizers are examples of dependable visual materials (Brophy& Alleman, 2009). Overheads, power point, whiteboards, video clips, handouts, flip charts, and other visual aids are the most commonly employed. These services enable students with and without hearing loss to access material and engage in discussions, as well as improve their problem-solving abilities (Luckner et al., 2009). It is vital that these are appropriate for boosting both deaf and deaf pupils' verbal and cognitive abilities. They help children identify connections between items, develop critical thinking skills about concepts, and develop questioning skills by contrasting the past and present (Zarrillo, 2012). Graphic organizers are used to synthesize information gathered through the use of realia and images. Students can use graphic organizers such as menus, logos, lists, and idea maps to prepare for everyday life and quickly recall the links between events, which can aid in information retention (Luckner et al.2009; Ponce et al.2019).

2.2.3 Audio-visual materials

A variety of academics have defined the idea of audio-visual materials. For instance, Shabiralyani et al. (2015) described audio-visual resources as any teaching-learning devices such as, models, map, charts, projectors, televisions, etc. used to support the teaching- learning process, making it more motivating, exciting and easier for students to understand. According to Kinder (2015), audio-visual resources are any tools that can be used in the classroom to enhance learning by making it more efficient, concrete, realistic, and dynamic. Audio-visual resources include films, documentaries, and instructional videos (Brophy& Alleman, 2009). The primary goal of these

materials is to illustrate circumstances that are dangerous, difficult, or perhaps impossible to encounter in real life. Educational videos assist students strengthen their ability to differentiate by illustrating actual situations (Siagian et al., 2019). While movies create emotional responses from viewers in the face of real-life situations and provide a fictional depiction of the past, documentaries provide proof by comparing events with historical record (Marcus et al., 2018).

When students may examine audio-visual resources practically, Cummins (2001) proposed that they help students identify solutions to difficulties. In addition, to improve the relationships in the classroom and fostering good communication between the students and their teachers, it's a must to use audio-visual elements in teaching- learning so that to make learning process more engaging for both students and teachers. Learning has become more permanent as a result of improved student retention due to teaching materials used by teacher, which also assist students remember and recall what they have learned. The audio-visual aids when they are well used in the classroom alleviate/or close the understanding gap between pupils who have poor levels of comprehension and make learning possible. They help teachers overcome potential challenges in teaching a particular subject by presenting instruction in a more practical way. The main goals of audio-visual aids in teaching and learning include best motivation, a clear image, time and energy savings, attention-grabbing, reinforcement of learning and positive learning transfer. They also aim to engage students, increase understanding and retention, and foster the growth of attitudes.

2.3 Conceptual definition of academic performance

In this study, a number of concepts have been used, but academic achievement is where our focus lies. This is so because academic success affects how an economy develops its human capital. It allows parents and students to be aware of their children's present academic standing and embraces the succeeding mission, vision or weakness of the school towards the pre-fixed objectives. Academic performance according to Narad and Abdullah (2016), is the skills or knowledge obtained and measured by a teacher through grades or learning goals that teachers and students specify to be achieved during a given period. They mentioned that the results of tests or ongoing evaluations are utilized to measure these goals. Similarly, Arhad, Zaidi, Mahmood, Howard and Midred (2015), assessed the value of an education based on academic achievement. They underlined that how well a school is, its teachers, and its pupils achieve their learning objectives all are shown by the academic performance. According to Yusuf and Bello (2016), academic performance is a measurable, quantifiable and observable behavior of a student over a certain period. He went further on to say that it is made up of a student's performance through assessments including quizzes, tests, midterms, mock exams, and final exams. Islam A. (2009) stated once more that a student's academic performance is characterized by their performance on tests, exams, and course works.

2.4 Factors Affecting Students' Academic Performance

The factors having an impact on students' academic performance are discussed as follows:

2.4.1 Attitude of the students

Secondary school pupils' range in age from 12 to 18. They can distinguish between acceptable and unacceptable behavior. Goal-oriented kids frequently have strong academic self-esteem, exhibit the attributes of diligence, perseverance, and resourcefulness, are voracious readers, and devote less time to extracurricular activities. Students must have positive attitudes about their academic

subjects, professors, and schools. Children with a positive attitude can fully commit to learning and achieve the necessary academic results.

2.4.2 School Resources

Classroom resources for increasing children's academic achievement must be made available. Textbooks, notes, instructional materials, handouts, technology, library resources, and lab supplies should all have the needed things, especially in scientific topics. Giving pupils the tools and equipment, they will need resources helping them understand academic concepts and undertake experiments. Some students, particularly those from underprivileged, organized, and socioeconomically challenged homes, find it impossible to acquire the books and other educational materials they require; as a result, they rely on resources supplied by libraries and other students (Maina, 2010)

2.4.3 Leadership aspect

The principal, the teachers, and the administrative staff of the school have the authority to carry out the managerial functions of organizing, controlling and directing the operations. The principal has the majority of the decision-making authority. One may opt to operate independently or they may contact others and solicit opinions and suggestions from the staff members of the school, including the teachers. Obviously, the students' academic performance heavily depends on the management and administration of the school. When the proper policies, processes, and administration are put into place in a reasonable manner, the students' academic performance will improve (Maina, 2010).

2.4.4 Skills and abilities of the Teachers

The students' academic success is normally influenced by teachers' capabilities. They are the ones who have authority to direct all classroom activities and supervise education. Instructors must possess the traits of professionalism and dedication. They must be approachable, open to listening, and capable of providing solutions to the problems that kids confront. They should be knowledgeable about the subjects they teach, as well as how to use technology, new teaching and learning techniques, stay organized, and plan all classroom and school-related activities and functions. Teachers can be strict in certain situations, but they should do sociably. The teacher's endurance leads him/her to cooperatively operate in developing the academic performance of the students.

2.4.5 Classroom Environment

In the classroom, teachers cover the academic disciplines of the students. Teachers' major role is to ensure that the academic program is completed. As a result, creating a calm and regulated classroom climate is crucial (Kudari, 2016). In the classroom, both teachers and students must uphold moral and ethical standards. Cooperation, kindness, and respect among pupils, as well as between students and teachers, must be encouraged. Effective classroom management can aid in the management of teaching-learning processes, lesson planning, instructional techniques, and other related activities. When there is order and good communication among the population, students' learning and academic achievement will improve.

2.4.6 Role of the Parents

The term home is frequently used to describe the setting in which education and learning take place. To achieve great academic performance, parents, children, and other family members must create a teaching-learning climate at home. For instance, the parents must help their children when they are struggling with a certain subject. To boost their academic performance, they give their kids access to technology and other educational materials at home. Parents are essential in fostering their children's healthy growth and development (Kudari,2016). Parents are often informed of any concerns that the pupils may have at school with their academics or/ in other areas. Children receive support from their parents in the form of safety, motivation, and help in problem-solving.

2.4.7 Social Circle

Children attend school to learn intellectual concepts as well as to hone their social and interpersonal abilities. Typically, students form friendly relationships with their classmates. Students' academic performance improves when social networks and friendships are formed. Group study is frequently advantageous when working on a project or studying for an exam. It also increases a student's sense of social fulfillment and contentment (Kudari, 2016). Building a social network its' a big benefit for people whereby there are shared joys and sorrows, participation in leisure activities and academic support.

2.4.8 Psychological and Health Related Factors

The students may encounter difficulties in learning. They must study hard, be resourceful, and conscientious in order to learn more. To achieve optimal academic achievement, students' mental and physical health must be maintained. A healthy student can actively participate in their education. On the other hand, factors like stress, anxiety, concern, fear, trauma, melancholy, or physical health issues demonstrate to be amusing and assist pupils to view their academic and classroom activities favorably (Srinivas & Venkatkrishinan, 2016).

2.4.9 Motivating and Encouraging students.

Some of the principles in academic learning are challenging to grasp and comprehend. The kids must seek aid from others when they run into issues and obstacles. Instead of being upset with the children when they don't obtain the grades they want, the teachers and parents can offer them support and assistance. They ought to inspire the pupils and provide them advice on how to succeed in the future. To assist them, they must comprehend their flaws. Teachers should repeat concepts with students who are having trouble understanding them, as well as give them class and homework projects, to ensure that they fully comprehend the material (Srinivas & Venkatkrishinan, 2016).

2.4.10 Visual and Hearing Impairments

Hearing and vision impairments are indicated as disease-related factors. Certain students are dealing with these challenges. However, if they are goal-oriented, they will not let these hurdles prevent them from achieving their academic objectives. When these challenges are significant and the children lack the required tools to support learning, academic performance is likely to deteriorate. Handwriting and reading from blackboards are often challenging for people who have low eyesight. Hearing loss makes it harder to follow teachers' directions and explanations in class,

and it has been linked to delay language learning. It jeopardizes pupils' communication skills, which has a negative impact on their academic progress (Srinivas & Venkatkrishnan, 2016).

2.4.11 Guidance and Counseling Services

Students encounter a wide range of issues and challenges in secondary schools. Others might even engage in aggressive and illegal behavior, drug misuse, HIV infection, teenage pregnancies, forced abortions, and unemployment. These factors have a direct impact on not only how well individuals perform academically but also how they live their lives. They may even have problems like despair, trauma, or stress as a result, which could adversely harm their psychological outlook. Guidance and counseling services is urgently needed to help students in discovering solutions to their problems, concentrating on their schoolwork, and growing into responsible members of society (Maganga, 2016). Counselors must have the ability to specialize in a certain field, such as academics, depression, stress, health, family issues, etc.

2.4.12 Development of Study Skills

It's critical for people to build their own study skills if they want to improve their academic achievement. In order to get the desired academic results, students themselves must raise knowledge of study techniques. Making notes, practicing mathematical computations, and memorization from textbooks or other materials are only a few examples of study techniques. One of the key things to remember when studying is that one must give their academics their whole attention. One of the elements that contribute to undesirable academic outcomes is the inability to focus. Since memorization is a learning technique less recommended, teachers are advised to encourage their students to understand the concepts rather than just memorizing them (Radhika, 2018).

2.4.13 Time Management

Secondary school students have busy schedules; thus, it is necessary for them to develop understanding of excellent time management. According to research, secondary school students often have classroom hours and then need to spread out their time to finish their homework assignments. They participate in many sports and extracurricular activities as well. Playing and participating in creative activities allow youngsters to excite their minds as well as improve their ability to concentrate. It is crucial for secondary school students to participate in extracurricular activities, and for this reason, they need to put good time management techniques into practice. The pupils must strike a balance between all of the assignments and activities. Less time should be spent on the less important activities, and more time should be allocated to the more vital ones (Radhika, 2018).

2.4.14 Home Environment

For the home environment to provide the desired academic results, it should be friendly and enjoyable. It is crucial to take action to create productive terms and connections among family members at home. They must maintain respectful dialogue with one another and try to avoid confrontations and disagreements. According to research, disputes between siblings over the use of technology, books, or stationery are possible; as a result, it is the responsibility of the parents to make sure that all kids have access to the resources they need to improve their academic performance. To concentrate on their studies and achieve the desired academic results, students

need to have access to the necessary materials and a welcoming environment at home (Radhika, 2018).

2.4.15 Teaching-Learning Methods

The teaching-learning techniques and approaches used should be suitable and motivating for the pupils. The people who play a crucial role in encouraging pupils to learn in schools are the teachers. It is crucial for them to make sure that the pupils would benefit from the teaching strategies used. For instance, professors should supply notes if pupils may learn more effectively by being dictated notes. If the vocal explanation helps the pupils learn more, they should encourage verbal explanation, etc. It is advised for parents and tutors to make sure those effective teaching-learning methods are put into place if students receive private instruction in academic subjects like mathematics or science at home or if their parents are their teachers. This could encourage learning among the students and aid in their understanding (Radhika,2018).

2.4.16 Approachability and Professionalism

The teachers at the school must behave themselves in a professional and approachable manner. When students encounter issues or difficulties, they are the ones that they turn to. The pupils feel safe approaching their professors and asking questions when they see them as kind and giving. The teachers' professionalism and friendly demeanor are of greatest importance in positively affecting the academic success of the students. However, at home, parents or tutors are the ones who oversee their academic progress; therefore, they must act professionally at all times. Implementing instruction should be done in a relaxed and enjoyable way. Avoid using any harsh language or behavior because it could discourage the students (Radhika, 2018)). Therefore, there so many factors that influence the students' academic performance. It is up to everyone to assess which is needed for achieving a desired goal and the success of the whole institution.

3.0 Methodology

The study employed a correlation research design. The study used the target population of Head Teachers, Dean of Studies (DoS) and teachers of day and boarding schools located in Ngororero District, equal to 868 people. Due to Yamane formula used for sample size calculation, the respondents were 274. During sampling, simple random sampling technique was considered. The data collection instruments were questionnaire, interview guide and documentation. However, validity and reliability of data collection instruments were also maintained. In data analysis, IBM SPSS was used in management of quantitative data where Spearman correlation was involved. For Qualitative data, thematic analysis was involved.

4.0 Findings

The finding of this study was present due to objective which was to determine the correlation between instructional materials usage and students' academic performance in day and boarding schools of Ngororero District in Rwanda. However, the association between variables was also presented.

4.1 Learning materials used in both day and boarding schools in Ngororero District

The learning materials are divided into audio materials visual materials and audio-visual materials.

Table 1: Extent in using audio materials used in both day and boarding schools in Ngororero District

| | Category of the school | SD | | D | | A | | SA | | Mean |
|---|------------------------|----|------|----|------|-----|------|----|------|---------------|
| | | F | % | F | % | F | % | F | % | |
| Records of teachers are maintained for helping students to remember what was said in last lessons | Boarding school | 3 | 1.9 | 11 | 7.1 | 103 | 66.9 | 37 | 24.0 | 3.13 |
| | Day school | 16 | 13.3 | 53 | 44.2 | 36 | 30.0 | 15 | 12.5 | 2.75 |
| Selected broadcasting related to subjects of the study are allowed | Boarding school | 10 | 6.5 | 65 | 42.2 | 64 | 41.6 | 15 | 9.7 | 2.55 |
| | Day school | 12 | 10.0 | 81 | 67.5 | 21 | 17.5 | | | 2.18 |
| Schools have facilities like audio tapes, CDs to enhance the understanding of students | Boarding school | 15 | 9.7 | 76 | 49.4 | 63 | 40.9 | 6 | 5.0 | 2.31 |
| | Day school | 9 | 7.5 | 69 | 57.5 | 40 | 33.3 | 2 | 1.7 | 2.29 |
| Microphones in big classes are used to raise the sounds of teachers | Boarding school | 27 | 17.5 | 66 | 42.9 | 49 | 31.8 | 12 | 7.8 | 2.30 |
| | Day school | 29 | 24.2 | 52 | 43.3 | 30 | 25.0 | 9 | 7.5 | 2.16 |
| Drama and theatre are used to enhance the ways of understanding some things related to lessons | Boarding school | 31 | 20.1 | 42 | 27.3 | 41 | 26.6 | 40 | 26.0 | 2.58 |
| | Day school | 16 | 13.3 | 71 | 59.2 | 15 | 12.5 | 18 | 15.0 | 2.29 |
| Audio materials | Boarding school | | | | | | | | | 2.5740 |
| | Day school | | | | | | | | | 2.3650 |

According to the Table1, audio materials in both day and boarding schools are used in the following manner: records of teacher are maintained for further use but boarding schools reported to use them higher than day schools where for boarding schools the mean was found to be 3.13 which is interpreted as high mean, while for day schools the mean is 2.75 which is also interpreted as high mean, but the difference was found to be not statistically significant. Regarding allowing selected broadcasting for some subjects in boarding schools the mean is 2.55 is interpreted as low and the same today schools where the mean is 2.18 but the here the difference is statistically significant. Regarding the possession of audio tapes and CDs, the mean for boarding schools is 2.31 and 2.29 for day schools where these means fall in the interval of low level and this strengthen by the significance value of 0.795. Regarding the possession of microphones in big classes, to boarding schools the mean was found to be 2.30 and 2.16 for day schools where are interpreted as low level and this was found to be not statistically significant. Regarding organizing dramas and theatre to understand some subjects is at low level in both boarding schools and day schools with means of 2.58 and 2.45 respectively. In fact, there is poor use of audio materials in both boarding and day schools considering the grand means of 2.57 and 2.36 which are interpreted as low means. But this little difference between boarding schools and day schools is statistically significant.

Table 2: Extent in using visual materials used in both day and boarding schools in Ngororero District

| | Category of the school | SD | | D | | A | | SA | | Mean |
|--|------------------------|----|------|----|------|----|------|----|------|---------------|
| | | F | % | F | % | F | % | F | % | |
| Maps are hanged in all classrooms | Boarding school | 12 | 7.8 | 3 | 1.9 | 70 | 45.5 | 69 | 44.8 | 3.27 |
| | Day school | 4 | 3.3 | 4 | 3.3 | 65 | 54.2 | 47 | 39.2 | 3.38 |
| Posters are used as methods of information | Boarding school | 27 | 17.5 | 58 | 37.7 | 40 | 26.0 | 29 | 18.8 | 2.46 |
| | Day school | 13 | 10.8 | 52 | 43.3 | 38 | 31.7 | 17 | 14.2 | 2.66 |
| Fliers are prepared and distributed to students for selected lessons | Boarding school | 31 | 20.1 | 70 | 45.5 | 46 | 29.9 | 7 | 4.5 | 2.19 |
| | Day school | 0 | 0.0 | 28 | 23.3 | 50 | 41.7 | 42 | 35.0 | 2.12 |
| Some walls have graphics for scientific lessons | Boarding school | 15 | 9.7 | 41 | 26.6 | 60 | 39.0 | 38 | 24.7 | 3.19 |
| | Day school | 12 | 10.0 | 37 | 30.8 | 52 | 43.3 | 19 | 15.8 | 2.83 |
| Motion pictures are printed to facilitate students' learning | Boarding school | 6 | 3.9 | 27 | 17.5 | 87 | 56.5 | 34 | 22.1 | 3.12 |
| | Day school | 0 | 0.0 | 14 | 11.7 | 72 | 60.0 | 34 | 28.3 | 3.19 |
| Visual materials | Boarding school | | | | | | | | | 2.7169 |
| | Day school | | | | | | | | | 2.7150 |

According to the Table 2, the use of visual materials in both boarding and day schools is explained by the following: maps are hanged in all classrooms in boarding and day schools on high level considering the mean of 3.27 for boarding schools and 3.38 which is interpreted as high mean and there is no significant difference considering the p-value of 0.648 which is interpreted as high mean. Posters as methods of information are used on low level in both day and boarding schools considering their means of 2.46 and 2.66 and this were found the same since the p-value is above 0.689. Regarding distributing flyers for students this was found to be used at low level since the mean are 2.19 and 2.12 and their no significant difference in their use since the p-value is 0.575. Regarding graphics for scientific lessons on walls, the mean for boarding schools is 3.19 and for day schools is 2.83 where all interpreted as high mean but there is no significance difference among them. Regarding the existence of motion pictures to facilitate students are used on high level since for boarding schools the mean is 3.12 and for day schools the mean is 3.19 and this was found to be not statistically significant. In brief conclusion, visual materials are used on high level in both boarding and day schools considering the grand means are 2.71 to all and this was found to be not statistically significant.

Table 3: Extent in using audio-visual materials used in both day and boarding schools in Ngororero District

| | Category of the school | SD | | D | | A | | SA | | Mean |
|--|------------------------|----|------|-----|------|----|------|----|-----|--------|
| | | F | % | F | % | F | % | F | % | |
| Documentary Videos are used to show how things works | Boarding school | 43 | 27.9 | 65 | 42.2 | 46 | 29.9 | 0 | 0.0 | 2.02 |
| | Day school | 39 | 32.5 | 46 | 38.3 | 35 | 29.2 | 0 | 0.0 | 1.97 |
| Slide-tape presentations are conducted in all classes | Boarding school | 32 | 20.8 | 90 | 58.4 | 27 | 17.5 | 5 | 3.2 | 2.03 |
| | Day school | 28 | 23.3 | 71 | 59.2 | 20 | 16.7 | 1 | .8 | 1.95 |
| Films are prepared and students are asked to make summaries of what they have seen | Boarding school | 25 | 16.2 | 106 | 68.8 | 21 | 13.6 | 2 | 1.3 | 2.00 |
| | Day school | 30 | 25.0 | 80 | 66.7 | 10 | 8.3 | 0 | 0.0 | 1.83 |
| Television programs are allowed to students | Boarding school | 46 | 29.9 | 26 | 16.9 | 26 | 16.9 | 9 | 5.8 | 1.99 |
| | Day school | 48 | 40.0 | 53 | 44.2 | 10 | 8.3 | 9 | 7.5 | 1.83 |
| Corporate conferencing are organized for some subjects | Boarding school | 57 | 37.0 | 91 | 59.1 | 5 | 3.2 | 1 | .6 | 1.68 |
| | Day school | 48 | 40.0 | 53 | 44.2 | 10 | 8.3 | 9 | 7.5 | 1.64 |
| Audio-visual materials | Boarding school | | | | | | | | | 1.9429 |
| | Day school | | | | | | | | | 1.8450 |

Table 3 shows the perceptions of respondents on the use audio-visual material in day and boarding schools of Ngororero District. It was revealed that documentary videos are used on low level since the means are 2.02 for boarding schools and 1.97 for day schools and this was found to be almost the same since the t-test shows that there is no significant difference. Regarding slide tape presentation, it was found that are lowly used in in both boarding and day schools seeing the means of 2.03 and 1.95 which are interpreted as low means. Regarding films and asking students to make summaries on what they have seen, it was found to be used on low level seeing the means of 2.00 and 1.83. Regarding allowing television programs, it was revealed that are used on low level in both boarding and day schools considering the means of 1.99 and 1.83 where all are interpreted as low mean, and organizing corporate conferencing for some subjects is done on low level where for boarding schools the mean is 1.68 and for day schools the mean is 1.64. To audio-visual materials, in general it was revealed that are used on low level or almost not used. This is due to the grand mean of 1.94 for boarding schools and 1.84 for day schools.

4.2 Performance of students in day and boarding schools in Ngororero District

This was achieved using both primary data and secondary data where primary were from the questionnaire and secondary data were from reports especially those of national examinations.

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Table 4: Performance of students in day and boarding schools in Ngororero District

| | Category of the school | SD | | D | | A | | SA | | Mean |
|--|------------------------|----|------|----|------|-----|------|----|------|---------------|
| | | F | % | F | % | F | % | F | % | |
| The results for national examinations are always good in this school | Boarding school | 19 | 12.3 | 40 | 26.0 | 52 | 33.8 | 43 | 27.9 | 2.77 |
| | Day school | 25 | 20.8 | 41 | 34.2 | 37 | 30.8 | 17 | 14.2 | 2.38 |
| During mock examination students perform well | Boarding school | 28 | 18.2 | 40 | 26.0 | 55 | 35.7 | 31 | 20.1 | 2.58 |
| | Day school | 23 | 19.2 | 42 | 35.0 | 43 | 35.8 | 12 | 10.0 | 2.37 |
| There is high performance in school examinations | Boarding school | 6 | 3.9 | 34 | 22.1 | 83 | 53.9 | 31 | 20.1 | 2.90 |
| | Day school | 5 | 4.2 | 36 | 30.0 | 59 | 49.2 | 20 | 16.7 | 2.78 |
| There is the character of competition among students | Boarding school | 33 | 21.4 | 32 | 20.8 | 74 | 48.1 | 15 | 9.7 | 2.46 |
| | Day school | 19 | 15.8 | 28 | 23.3 | 59 | 49.2 | 14 | 11.7 | 2.57 |
| The level of absenteeism in class is low | Boarding school | 0 | 0.0 | 13 | 8.4 | 104 | 67.5 | 37 | 24.0 | 3.16 |
| | Day school | 11 | 9.2 | 8 | 6.7 | 75 | 62.5 | 26 | 21.7 | 2.97 |
| Students show the character of discipline | Boarding school | 2 | 1.3 | 19 | 12.3 | 83 | 53.9 | 50 | 32.5 | 3.18 |
| | Day school | 19 | 15.8 | 17 | 14.2 | 50 | 41.7 | 34 | 28.3 | 2.83 |
| Performance | Boarding school | | | | | | | | | 2.8409 |
| | Day school | | | | | | | | | 2.6486 |

The study found that the performance of students in boarding schools is better than in day schools. According to the above table, in boarding schools the mean is 2.77, which is interpreted as a high mean, while for day schools the performance is low, considering the mean of 2.38, which is interpreted as a low mean. This difference was found to be statistically significant, as the p-value is 0.001. For mock examinations, the performance of students was rated to be low, considering the means of 2.58 for boarding schools and 2.37 for day schools, where all are interpreted as low means, and the test shows that there is no significant difference among them. Regarding performance in school examinations, boarding schools perform well, with a mean of 2.90, which is interpreted as a high mean, while for day schools, the performance is also high, with a mean of 2.78, but there is no significant difference, as the p-value is 0.201, which is greater than the significance value of 0.05. Regarding the performance in terms of competition among students, in boarding schools the mean is 2.46, which is interpreted as a low mean, and for day schools, the mean was found to be 2.57, which is also interpreted as a low mean, and this difference was found to be not statistically significant.

Regarding the low absenteeism in class as one of the indicators of academic performance, it has been found that for boarding schools, attendance is good, considering the mean of 3.16, which is

interpreted as a high mean, and for day schools, the mean is 2.97, which is also interpreted as a high mean, but the difference in attendance is statistically significant due to the p-value of 0.029, which is less than the significance level of 0.05. Regarding performance of students in terms of discipline, for boarding schools, the mean was found to be 3.18, which is interpreted as a high mean, and for day schools, the mean was found to be 2.83, which is interpreted as a high mean, but this difference was found to be statistically significant, as the p-value was found to be 0.001, which is less than the significance level of 0.05. Concluding to the performance in general, the grand means show that the performance in boarding schools is better than in day schools, where for boarding, the mean is 2.84, which is interpreted as high, while in day schools, the mean is 2.64, and interpreted as low. This difference was found to be statistically significant, as the p-value was found to be 0.00, which is below the significance level of 0.05.

4.3 The effect of instructional materials usage on students’ academic performance in Ngororero District

To achieve this, the correlation was used where the significance p-value was 0.01.

Table 5: Correlation between instructional materials and performance of students

| Correlations | | Performance | Instructional materials |
|--------------------------------|---------------------|-------------|-------------------------|
| Performance | Pearson Correlation | 1.000 | |
| | Sig. (2-tailed) | | |
| | N | 120 | |
| Instructional materials | Pearson Correlation | .484** | 1.000 |
| | Sig. (2-tailed) | .002 | |
| | N | 274 | 120 |

** . Correlation is significant at the 0.01 level (2-tailed).

The study found that, according to Table 5, there is a positive correlation between instructional materials and the performance of students in Ngororero District. This is explained by the correlation value of 0.484 and the tabulated p-value of 0.002, which is below the significance value of 0.05. This means that instructional materials are one of the indicators that may be considered a necessity for the performance of students in both day and boarding schools in Ngororero District. Due to this, stakeholders in education should work hard to improve the way instructional materials are used and to bring them in line with the current educational system, which relies on technology.

5.0 Summary of findings

The objective of this study was to determine the correlation between instructional materials usage and students’ academic performance in day and boarding schools of Ngororero District in Rwanda. It was noted that there is a positive correlation between instructional materials and performance of students in Ngororero District where this is explained by the correlation value of 0.484 and the tabulated p-value of 0.002 which is below the significance value of 0.05. This means that instructional materials is one of the indicators that may be considered as a necessity for performance of students in both day and boarding schools in Ngororero District

6.0 Conclusion

This study concludes that Only, the provision of adequate instructional materials is not sufficient enough for all schools to achieve students' academic performance. There must be other interning factors such as teacher qualification and skills, motivation of both teacher and student, parent involvement and so on to be associated with for a school perform.

7.0 Recommendations

Basing on the presented findings and drown conclusion, the recommendations were addressed:

1. Educational planners are recommended to introduce instructional materials that are in line with the use of technology in education knowing in mind that same day schools are located in remote areas where there is no internet connectivity.
2. Educational stakeholders are recommended to collaborate with families of students in order to avail necessary resources to improve instructional materials especially in day schools.
3. Students are recommended not to damage the available instructional materials
4. For the State, a vigorous follow-up on how instructional materials are maintained, how they are used and this should be an integrated part of inspections.

Suggestion for Further Research

The researcher suggests that the further study could find out the impact of school facilities including ICT use and the students' academic performance among day and boarding schools.

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