

**Influence Of Instructional Materials On Performance Of Students. A Case Study Of Comboni High School In Adjumani District**

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**Abstract**

The study investigated the influence of instructional materials on the performance of learners in mathematics at Comboni high school. The specific objectives included identifying the types of instructional materials available for teaching mathematics, examining whether these materials were utilized during instruction, and establishing the impact of their utilization on the development of mathematical competencies among students. Utilizing a survey research design, data were collected from a target population of 190 respondents, including head teachers, teachers, and students. A sample size of 150 participants was determined using Krejcie and Morgan's formula, employing simple random sampling for students and teachers, while school administrators were selected through criterion-based sampling. Primary data were gathered using structured questionnaires and interviews, while secondary data were sourced from school records. The findings revealed demographic characteristics, including a predominance of younger respondents and a gender distribution skewed toward males. Most respondents possessed only primary education, suggesting that limited educational qualifications may affect their engagement with instructional materials in mathematics. The results indicated the need for effective utilization of instructional materials to enhance mathematical performance among learners. The findings revealed that while textbooks and workbooks were the most accessible resources, the use of digital tools was limited. Although teachers incorporated various materials into lessons, their effectiveness was inconsistent, with only 51% of respondents strongly agreeing on their effective use. The study also highlighted that instructional materials significantly contributed to students' understanding of mathematical concepts and problem-solving skills. However, concerns regarding resource adequacy and the need for professional development were noted.

**Keywords: Instructional Materials, Performance, Students and Comboni High School**

**Background of the study**

UNESCO (2008) states that everyone has a right to education while the United Nations Convention for the Rights of Children (UNCRC) adds that education is a fundamental human right (Wolfenson, 2000). The World Conference forum on Education for All (EFA) which was held in Dakar Senegal (UNESCO, 2000) hailed that the use of instructional resources in secondary schools should be mandatory. Hence, the Dakar conference scored the importance of instructional resources (IR) in secondary schools for the purpose of improving students learning (Nelson, 2024). The right to education is universal to all children, youth and adults with difficulties in learning. This right is enshrined in the Convention on the Rights of the Child (UN, 1989) and the Convention on the Rights of Persons with Disabilities (2008).

Globally, over the decades, the development of instructional materials has reflected advancements in pedagogical theory and technological innovation (Julius & Desire, 2025). Historically, Instructional materials came into existence long ago when the slate was first introduced as a supplement to books and teaching (Godfrey et al.,

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2023). This gradually gave birth to the chalkboard which is widely used many educational institutions, from such, thousands of tools and devices came into use in the teaching and learning process(Nicholas & Nancy, 2024). Some of the instructional materials used include: pictures, chalkboard, radio, computer, typewriter, charts, models, television sets, maps, graphs, among others (Carmo, 2020). The 20th century witnessed a shift from traditional blackboard and textbook-based instruction to more interactive approaches incorporating multimedia resources such as audiovisual aids and early computer programs (Oliveira et al., 2022). The late 20th and early 21st centuries marked a significant digital revolution, expanding the scope of instructional materials to include digital textbooks, simulations, and adaptive learning platforms that cater to individual learning needs (Wang & Hannafin, 2023). These advancements have aimed to foster deeper engagement, conceptual understanding, and critical thinking skills among students, thereby improving their mathematical proficiency across diverse educational contexts (Zevenbergen & Lerman, 2021).

At the regional level, Sub-Saharan Africa, for instance, the introduction of instructional materials has been pivotal in addressing educational challenges, with a focus on bridging gaps in resource availability and enhancing pedagogical practices (Nkamnebe & Mbe, 2021; Masuku, 2022). The early 21st century witnessed significant strides with the integration of technology in classrooms, promoting the use of digital resources and interactive tools designed to support students education(Anthony, Kazaara, & Kazaara, 2023). Initiatives such as the use of mobile learning apps and digital textbooks have been increasingly adopted, particularly in urban and semi-urban settings, enhancing students' engagement and understanding of mathematical concepts (Mogari & Moswela, 2022). However, challenges remain in rural areas, where limited access to technology and resources continues to hinder the effective implementation of these instructional materials (Zhou & Mwabu, 2023). In contrast, regions like East Asia have seen advancements through the incorporation of sophisticated teaching aids and curriculum innovations, supported by robust educational policies that emphasize the use of high-quality instructional materials to boost mathematical performance (Li & Zhang, 2021; Wang, 2022).

In East Africa, countries like Kenya and Tanzania have prioritized the integration of digital technologies and modern teaching aids to improve mathematical education (Mulwa & Nzuki, 2021; Okwach & Mutua, 2022). Over the past decade, there has been a notable shift towards using interactive digital platforms, e-learning resources, and multimedia tools in classrooms, aimed at enhancing student engagement and understanding of mathematical concepts (Makori & Keengwe, 2023; Ngware et al., 2023). This approach has been particularly beneficial in addressing challenges such as overcrowded classrooms and limited access to traditional teaching materials(A. G. Kazaara & Kazaara, 2025). In West Africa, countries like Nigeria and Ghana have also made strides in adopting innovative instructional materials, including educational software, online repositories, and mobile applications, to support students instruction (Ajibade & Ogunlade, 2021; Odukomaiya & Adegbile, 2022). These initiatives reflect a broader regional effort to leverage technology in education, although disparities persist in rural areas where infrastructure and resource constraints remain significant barriers (Awoyemi & Amoo, 2023).

In Uganda, the reliance on traditional textbooks and teacher-centered methods limited the effectiveness of students instruction(A. I. Kazaara & Deus, 2024). However, recent initiatives have aimed to modernize and diversify instructional materials to enhance student engagement and understanding(Nancy & Prudence, 2024). The introduction of digital learning platforms and interactive tools has been a game-changer, especially in urban schools with better access to technology (Okiror & Otaala, 2022). Programs such as the National ICT Policy for Education have promoted the integration of ICT in classrooms, providing digital resources and training for teachers to effectively use these tools (Ministry of Education and Sports, 2021). Partnerships with international organizations have facilitated the distribution of supplementary materials, including visual aids and hands-on learning kits, which have proven effective in improving mathematical competencies (UNICEF, 2023). Ugandan schools, like other schools in African country, embrace utilization of IM. Utilization of instructional materials promotes academic achievements, (Otieno, 2010).

### **Problem statement**

The performance of students is a crucial determinant of their academic success and future career prospects. In secondary education, especially, a strong foundation is essential for developing critical thinking and problem-solving skills(Christopher et al., 2022). In Uganda, the emphasis on improving educational outcomes has led to various initiatives aimed at enhancing the quality of teaching and learning(Nelson, 2024). Instructional materials, including textbooks, visual aids, and digital resources, play a vital role in facilitating effective students instruction(Julius & Nancy, 2026). These materials not only provide the necessary content but also help in engaging students and making abstract concepts more understandable (Nsibambi, 2021).

However, the recognized importance of instructional materials has not prevented many schools in Uganda, particularly in rural areas like Adjumani district, from facing significant challenges in acquiring and utilizing these resources(Anthony, Kazaara, Kazaara, et al., 2023). Factors such as limited funding, logistical issues, and lack of teacher training on the effective use of instructional materials contribute to the inadequate supply and use of these resources (Odiwuor, 2023). Consequently, students often have to rely on outdated or insufficient materials, which hampers their ability to fully grasp mathematical concepts. The disparity in resource availability between urban and rural schools further exacerbates this problem, leading to unequal educational opportunities and outcomes (Okiror, 2022).

Despite these challenges, there is evidence that targeted interventions can significantly improve the situation. Programs that provide schools with modern instructional materials, coupled with teacher training, have shown promising results in enhancing students' mathematical performance (Mugisha, 2022). For instance, the introduction of digital learning tools has been associated with increased student engagement and better understanding of mathematical concepts(Godfrey et al., 2023). The sustainability and scalability of such initiatives remain concerns that need to be addressed. Without continuous support and adequate funding, the positive impacts of these interventions may not be fully realized. Thus this researcher seeks to examine the impact of instructional materials on performance of students in in secondary schools in Adjumani district.

**Objectives of the study**

**General objective**

To investigate the influence of instructional materials on the performance of students at Comboni High School in Adjumani district.

**Specific objectives**

- i. To find out the types of instructional materials available for teaching students in secondary schools.
- ii. To find out whether instructional materials are utilized during instruction in secondary schools.
- iii. To establish the influence of utilization of instructional materials on development of competencies.

**Research questions**

- i. What types of instructional materials are available for teaching students in secondary schools?
- ii. Are instructional materials utilized during instruction in secondary schools?
- iii. How does the utilization of instructional materials influence the development of students competencies in secondary school?

**Scope of the study**

**Geographical scope**

The study was carried out from Comboni High School which is located in Adjumani district. The researcher chose Comboni High School because the school is accessible to the researcher, facilitating regular visits for data collection, observation, and interaction with the students, teachers, and administrative staff.

**Content scope**

The study focused on types of instructional materials available for teaching students, whether instructional materials are utilized during students instruction and the influence of utilization of students instructional materials on development of students competencies.

**Time scope**

The study was carried out for a period of six months that is May- October 2026. This was enough time for the researcher to collect the various information from the selected population.

**Significance of the study**

The study findings of this study enabled curriculum planners to review the curriculum in line with the compulsion of the use of instructional materials for the classroom instruction. The idea of teachers doing the teaching without the integration of instructional materials was reduced to the barest minimum and maximize teachers' effectiveness in the classroom.

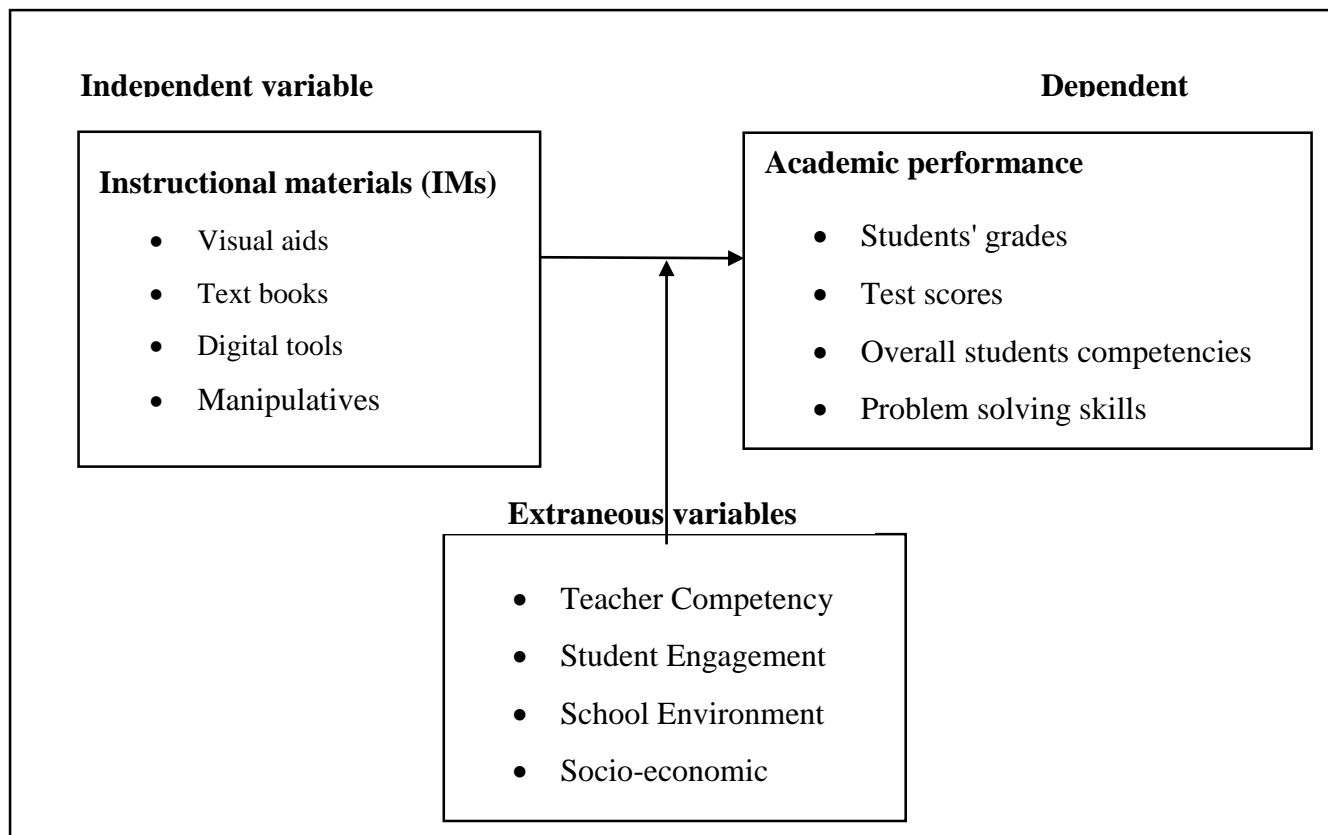
The findings of the study also made students actively involved in the teaching and learning process as their attentions was more attracted when taught with the instructional materials and as a result, improve and develop students' cognitive aspects of learning.

The study findings also assisted teachers in the selection of appropriate instructional materials in impacting the required knowledge to the students in the area of cognitive, affective and psychomotor domain in order to achieve the desired educational goal.

The study findings helped the government most especially local government and educators to reflect and make evaluation on the requirements of other instructional materials apart from class-rooms alone.

The findings of the study was very important to other researchers who have interest in demographic dynamics of school age going children in relation to planning of school facilities.

**Conceptual framework**



of students . These materials, including textbooks, visual aids, digital resources, and manipulatives, serve to make mathematical concepts more accessible and understandable, thereby enhancing student learning outcomes. However, the effectiveness of these materials is influenced by several intervening variables. Teacher competency is crucial, as skilled teachers can effectively integrate instructional materials into their teaching, thereby maximizing their impact. Student engagement is essential; students who are more engaged are likely to benefit more from these materials. The school environment also plays a role, with factors such as class size, availability of resources, and administrative support affecting the utilization of instructional materials. Socio-economic factors can influence access to and the effectiveness of instructional materials, as students from different socio-economic backgrounds may have varying levels of support and resources available to them. Addressing these intervening variables is essential to fully realize the potential benefits of instructional materials on student performance .

**Operational definition of Key Terms**

Instructional materials refer to various resources used in educational settings to facilitate teaching and learning processes. These materials can include textbooks, visual aids, digital resources, manipulatives, and other educational tools designed to enhance understanding and engagement in the learning process (UNESCO, 2020).

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Scholars such as Sönmez and Kılıç (2019) argue that the quality and availability of instructional materials significantly influence student learning outcomes, particularly in subjects like students where abstract concepts require concrete illustrations for better understanding.

Performance of students is a measure of how well students understand, apply, and excel in mathematical concepts and skills. This performance is typically assessed through grades, test scores, problem-solving abilities, and overall competencies. According to Olatunde (2021), academic performance is a critical indicator of a student's cognitive development and problem-solving skills. Research by Afolabi and Akinbobola (2022) indicates that students' performance is not only a reflection of their individual capabilities but also the effectiveness of the instructional strategies and materials used in the classroom.

Visual aids are educational tools that incorporate visual elements to enhance learning and comprehension. They include charts, graphs, diagrams, posters, and videos that help illustrate and clarify concepts. According to Mayer (2021), visual aids are effective in improving students' understanding and retention of information by providing concrete examples of abstract ideas. Visual aids facilitate the learning process by engaging students' visual senses, making the material more accessible and memorable. Visual aids are especially beneficial in subjects like students and science, where complex concepts often require visual representation for better comprehension (Clark & Paivio, 2020).

Textbooks are comprehensive resources that provide structured content and information on specific subjects, designed to support both teaching and learning. They include explanations, illustrations, exercises, and assessments aligned with curriculum standards. According to Altbach et al. (2022), textbooks are essential in providing a consistent and authoritative source of information for students and teachers. They are particularly useful for guiding instruction, offering a sequential approach to content delivery, and serving as references for both students and teachers (Chambliss & Calfee, 2019).

## **Literature Review**

### **Instructional materials**

Teaching at any level requires that students be exposed to some form of simulation. Ikerionwu, (2000), refers to instructional materials as objects or devices that help the teacher to make learning meaningful to the students. Instructional materials, which are educational inputs, are of vital importance to the teaching of any subject in the school curriculum. Wales (1975), opined that the use of instructional materials would make discovered facts glued firmly to the memory of students (Julius & Kazaara, 2026b). A teacher who makes use of appropriate instructional materials to supplement his teaching helped enhance student's innovative and creative thinking as well as help them become enthusiastic, Ekwueme and Igwe (2001).

Instructional materials refer to objects or devices which help the teacher to make learning meaningful to the students, (Ikenionwu, 2000). Ezegbe, (1994), classified them into two; visual materials made up of reading and non reading materials, and audio visual materials comprising electrically operated and none electrically operated materials. According to Aduwa Et Al, (2005), these materials and resources include, audio tapes recorders, video tape recorders, slide projectors, still pictures, programmed instructional film strips, maps, chart, graphs and many

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more; offer a variety of learning experience individually or in combination to meet different teaching and learning experiences(Nelson, 2024). Ngaroga, (2007), talks of teaching and learning materials as those that are accessed in the School environment, collected and brought. They can be three dimensional, two dimensional real objects and others are electronic. The “term mathematical instructional resource” is defined as any form of specific mathematical apparatus (Structured or unstructured), image, ICT game, tool, paper, or everyday material which could be utilized to provide a mathematical teaching or learning (Dorine, Et. Al, 2007).

Instructional materials can be improvised,(SMASE Project, 2010). Onasanya et al: (2008), Adebimpe (1997) and Aguisiobo (1998) noted that improvisation demands adventure, creativity, curiosity and perseverance on the part of teachers. Such skills are only realized through well-planned training program on improvisation. Odii F, (1990) asserts that improvised instructional materials may be used as practice devices with which the students build accuracy, understanding and efficiency(Julius & Kaazara, 2025). According to Dada (2006), improvised instructional materials involve the fact of producing and using alternative resources aimed at facilitating instruction(Julius & Nancy, 2025). Again, Ikwuas and Onwiodiket (2006) state that improvised materials involve selection and deployment of relevant instructional elements of teaching and learning processes in absence or shortage of standard teaching and learning materials, for meaningful realization of specified educational goals and objectives(Julius & Audrey, 2026). Abimbade (2004) had earlier noted that the approach of using improvised materials classroom assist in proper introduction of new skills, develop understanding as well as show the appropriate way of doing things.

Instructional strategies need to be identified where the use of manipulative are often suggested as some of the effective approaches to improve student students achievement (Gurbuz, 2010; Sherman & Bisanz, 2009). Students manipulative-based instructional techniques are approaches that include opportunities for students to physically interact with the objects to learn target information (Carbonneau & Marley, 2012). For example, at the elementary level, teachers use play money to help students learn basic arithmetic functions. The use of manipulative instruction has been cited as a strategy to allow students draw on their practical knowledge (Burns, 1996). Concrete objects that resemble everyday items should assist students in making connections between abstract mathematical concepts and the real world (Brown, Neil, & Glernberg, 2009).

### **Performance of students**

The concept of performance of students is believed to possess an amorphous nature, since it broadly incorporates various factors ranging from attaining a professional degree to the development of students in the moral sense (York, Gibson & Rankin, 2015). The perspective oriented nature of “performance of students” further creates hindrance in giving an exhaustive definition of the term(Julius & Kazaara, 2026b). For some entities, completing courses and gaining knowledge and skills may be the meaning of academic performance. Whereas, for some others, having the abilities to secure a progressive career would be the version. On the whole, securing and inculcating a meaningful change (psychological, affective, cognitive as well as behavioural) in the students, is the ultimate goal of the education system across the world(Julius & Kaazara, 2025).

Academic outcomes of students is a key feature in education (Rono, 2015). It is considered to be the center around which the whole education system revolves. Narad and Abdullah (2016) opined that the performance of students determines the success or failure of any academic institution. Singh, Malik and Singh (2016) also argued that performance of students have a direct impact on the socio-economic development of a country. Similarly, Farooq, Chaudhry, Shafiq and Behanu (2011), asserted that students' academic performance serve as a bedrock for knowledge acquisition and the development of skills. Additionally, Farooq, (2018) emphasized that the top most priority of all educators is performance of students. According to Narad and Abdullah (2016) academic performance is the knowledge gained which is assessed by marks by a teacher and/or educational goals set by students and teachers to be achieved over a specific period of time (Julius, 2024). They added that these goals are measured by using continuous assessment or examinations results.

Annie, Howard and Midred (as cited in Arhad, Zaidi & Mahmood, 2015) also indicated that performance of students measures education outcome. They stressed that it shows and measures the extent to which an educational institution, teachers and students have achieved their educational goals (Julius & Kazaara, 2026a). Similarly, Yusuf, Onifade and Bello (2016) opined that performance of students is a measurable and observable behaviour of a student within a specific period. He added that it consist of scores obtained by a student in an assessment such as class exercise, class test, mid-semester, and end of semester examination. Again, Martha (2019) emphasized that performance of students is defined by a student's performance in an examination, tests, and in a course work.

### **Methodology**

#### **Research Design**

Ogula (2005) describes research design as a plan, structure and strategy of investigation to obtain answers to research questions and control variance. The researcher used a survey research design in this study. The finding from descriptive survey design was used to generalize the researcher 's results about the target population. According to Osuala (2005) Descriptive Survey Design gives the accurate assessment of the characteristics of the whole populations of people. This survey research design according to Amin (2005) is important cause it helped the researcher attain systematic data on different sample respondents at different times. Survey design allows for the collection of both quantitative and qualitative data, enabling the researcher to analyze statistical trends as well as gather nuanced insights and perspectives from participants.

Quantitative approach was used to process data which can be quantified and is numeric in nature. For example, the respondents' age, income, number of times they have visited a given destination in a given period of time, etc. According to Creswell (2013), quantitative research helps in getting an in-depth analysis of the problem under investigation.

Qualitative approach was used to describe qualitative data which cannot be quantified in numbers. This included respondents' opinions and ideas. Qualitative research was also applied in order to describe current conditions or to investigate relationships, including effects and relationships. In addition, it helped in answering questions concerning the current state of the subject under study

**Area of the study**

The study was carried out from Comboni High School which is located in Adjumani district. The researcher chose Comboni High School because the school is accessible to the researcher, facilitating regular visits for data collection, observation, and interaction with the students, teachers, and administrative staff.

**Population of the study**

(Nzahabimana, 2011) defines a population as the universe of the study through which the research intends to draw a multiple for the purpose of administering primary data collection tools. The target population for this study 190 respondents including head teachers, teachers and students in Comboni High School In Adjumani district

**Sampling procedure**

**Sample size**

According to (Nwabuno, 2013), sampling refers to the selection of a subset of individuals from within a population with the aim of estimating the characteristics of whole population. Sample is therefore, a portion of population which is involved in the research work. The researcher used sample size of 150 respondents through use of Krejcie and Morgan (1970).

*Table 1: Showing the sample size of the respondents*

Respondents	Population study	Sample size	Percentage (%)	Sample Technique
Teachers	40	25	17	Simple random sampling
Students	140	120	80	Simple random sampling
School administrators	10	5	3	Criterion-Based Sampling
TOTAL	190	150	100	

*Source: Adopted from Krejcie and Morgan (1970). Modified by the researcher (2026)*

**Sampling technique**

The researcher used simple random sampling and criterion-Based Sampling. Simple random sampling was used to select students and teachers because it ensures that each student has an equal chance of being included in the study.

Criterion-Based Sampling. This is a research technique that involves selecting participants for a study based on specific criteria or predetermined characteristics relevant to the research objectives. The researcher selected the school administrators based on predetermined criteria, such as years of experience in the school or specific achievements in implementing educational programs. This approach helped ensure that the chosen head teacher possesses the necessary insights and expertise relevant to the research topic.

### **Sources of data**

#### **Primary data**

The researcher obtained primary data himself through the use of questionnaires, interviews and personal observation.

#### **Secondary data**

This is data prepared or developed by another person, study and from journals for other than helping to solve the problem at hand. The researcher also used secondary data from the school records like reports, previous documents, text books, previous research and reading journals.

### **Data collection methods and instruments**

#### **Questionnaire**

The study employed a well-structured questionnaire to collect data from teachers and students in Comboni High School. The questionnaire consisted of two sections, one focusing on gathering biodata (Section 'A') and the other addressing questions related to instructional materials and academic performance (Section 'B'). To minimize logistical costs and accommodate participants' literacy levels, the questionnaire predominantly featured close-ended questions. Quantitative analysis was the primary method of data interpretation, enabling the acquisition of easily quantifiable data necessary for the study. Each question was designed as closed-ended, utilizing a four-point Likert Scale for response options, ranging from 'strongly disagree' to 'strongly agree.' This approach is intended to streamline data collection and analysis for efficient research outcomes.

#### **Interviews**

Qualitative data of the study was gathered by use of interviews. The interviews was considered for a limited number of respondents. The only category that considered for interviews was school administrators. This is because he has a busier work schedule compared to others. This method allows further probing and clarification of questions that tends to be difficult and not clear to the respondents. It also enhances responses for questions which was regarded as sensitive.

### **Quality control**

#### **Validity**

To ensure the validity of the study, the researcher carefully went through a detailed process of content validation/checking, thoroughly examining the questionnaire's items to confirm that they accurately capture the intended concepts related to instructional materials and academic performance. This involved seeking expert opinions from the supervisor to assess the questionnaire's relevance and alignment with the research objectives.

#### **Reliability**

In ensuring the reliability of the study, the researcher employed the test-retest method, administering the questionnaire to a small group of participants initially and then re-administering the same questionnaire to the same group after a specific interval. By comparing the consistency of the responses over time, the researcher was able to assess the stability and reliability of the questionnaire.

### **Data Analysis and Presentation**

Data was verified, compiled, coded and summarized prior to analysis. Univariate analysis was used to determine the distributions and magnitude of individual variables among respondents which included percentages and frequencies. Percentages under multiple responses was established in open ended questions to describe various issues on the subject matter. The Statistical Package for Social Science (SPSS) computer program was used (Nelson et al., 2022). Descriptive statistics (including percentages, frequencies, figures etc) was determined where the implication of its results led to recommendation.

### **Ethical Considerations**

Before involving any participants, informed consent was obtained. The researcher provided clear and understandable information about the study's purpose, procedures, potential risks, and benefits. Participants voluntarily agreed to participate without any form of coercion.

All collected data was treated with the utmost confidentiality. Participants' identities, responses, and any personal information was anonymized or kept confidential to protect their privacy.

Participation in the study was voluntary, and participants have the right to withdraw at any point without facing any negative consequences. The researcher ensured that individuals are not pressured or obligated to continue their involvement against their will.

Researchers took steps to minimize any potential harm or discomfort to participants. This involved careful planning of the study procedures and avoiding any activities that can cause undue stress, anxiety, or negative consequences for the participants.

The study respected the cultural, social, and individual differences of the participants. The researcher was mindful of cultural sensitivities and avoid any actions or questions that are offensive or disrespectful to the participants' backgrounds or beliefs.

The researchers were transparent about her intentions, methodologies, and any potential conflicts of interest. This transparency built trust with participants and the broader community and ensures the credibility of the study.

### **Limitations of the Study**

Intervening or confounding variables was beyond the researchers' control, such as the honesty of the respondents and personal biases. To minimize these conditions, the researcher requested respondents to be as honest as possible and to remain impartial and unbiased when answering the questionnaires.

The research environments was classified as uncontrolled settings where extraneous variables might influence the gathered data, such as comments from other respondents, anxiety, stress, and motivation on the part of the respondents while answering the questionnaires. The researcher established rapport with respondents to minimize these conditions.

Instrumentation was another potential limitation of this study. The research tools used was researcher-made. However, validity and reliability tests was conducted to ensure a reliable measuring tool. The researcher addressed any bias from the respondents by providing an introduction letter as confirmation that the data is also required for academic purposes. This approach aimed to improve their response and prevent bias.

**Results**

**Table 1: Types of instructional materials available for teaching in secondary schools.**

Statement	F	SA	F	A	F	NS	F	D	F	SD
Textbooks and workbooks provide structured content aligned with curriculum standards.	70	48%	40	25%	3	3%	17	11%	20	13%
Visual aids (e.g., charts, graphs) enhance understanding of mathematical concepts.	82	57%	20	13%	6	4%	25	16%	17	11%
Manipulatives (e.g., base-ten blocks) support hands-on learning experiences.	47	31%	30	19%	3	2%	55	38%	15	9%
Digital tools (e.g., educational software) offer interactive learning opportunities.	70	47%	37	25%	4	3%	30	19%	9	6%
Multimedia resources (e.g., instructional videos) facilitate comprehension of mathematical topics.	38	25%	70	49%	7	4%	20	13%	15	9%

*Source; Primary data, 2026*

According to Table 1 above, textbooks and workbooks are viewed as essential instructional materials in teaching , with 48% of respondents strongly agreeing and 25% agreeing that they provide structured content aligned with curriculum standards. However, a notable proportion disagreed, with 11% disagreeing and 13% strongly disagreeing, while 3% remained unsure. This indicates that although textbooks are recognized as fundamental, they may not always meet the needs of all learners or teachers. As research suggests, textbooks provide a standard framework, but their effectiveness depends on how well they align with the specific learning context and teacher competence (Oakes & Saunders, 2021).

In terms of visual aids, 57% of respondents strongly agreed, and 13% agreed that charts and graphs enhance learners' understanding of mathematical concepts. Only 4% were unsure, and 27% expressed disagreement, with 16% disagreeing and 11% strongly disagreeing. This suggests a strong positive perception of visual aids, as they make abstract mathematical concepts more concrete and easier to grasp, which aligns with the idea that visuals support better conceptual understanding, especially in (Fuson & Murata, 2020). The disagreement may be linked to limited availability or ineffective use of these materials in some classrooms.

Concerning manipulatives, such as base-ten blocks, 31% strongly agreed and 19% agreed that these hands-on tools support learning, while a significant 38% disagreed and 9% strongly disagreed. Only 2% were unsure(Nelson et al., 2023). This indicates a more divided perception of manipulatives' effectiveness. The disagreement could

stem from factors such as a lack of resources, insufficient teacher training, or the time required to integrate these materials effectively into lessons. Manipulatives are known to enhance understanding through tactile learning, but their use must be well-structured to realize their potential benefits (Moyer-Packenham & Westenskow, 2021). Regarding digital tools, 47% of respondents strongly agreed and 25% agreed that educational software offers interactive learning opportunities. However, 19% disagreed and 6% strongly disagreed, while 3% were unsure. This suggests that while many see the benefits of digital tools in engaging students and making learning more interactive, challenges like access to technology or inadequate teacher training could limit their usage. Digital tools are recognized for promoting active learning, but their impact is contingent on proper implementation and equitable access (Li & Ma, 2022).

On, multimedia resources, such as instructional videos 25% strongly agreeing and 49% agreeing that they facilitate the comprehension of mathematical topics. In contrast, 13% disagreed, and 9% strongly disagreed, while 4% were unsure. The strong support for multimedia resources reflects their ability to cater to diverse learning styles by breaking down complex topics through engaging visual and auditory content (Clark & Mayer, 2020). However, the disagreement may point to challenges in accessing high-quality or relevant multimedia content, especially in resource-limited settings.

**Table 2: Effect of forced marriage on the right to education of the girl child in rural communities**

Statement	F	SA	F	A	F	NS	F	D	F	SD
Teachers effectively incorporate instructional materials during lessons.	77	51%	25	17%	3	2%	15	10%	30	20%
Students actively engage with instructional materials during instruction.	67	45%	30	20%	6	4%	19	13%	28	19%
Instructional materials cater to diverse learning needs in the classroom.	32	21%	40	27%	3	2%	50	33%	25	17%
Teachers regularly use a variety of instructional materials to enhance learning outcomes.	50	33%	57	38%	4	3%	17	11%	22	15%
The school provides adequate resources to support the use of instructional materials in .	56	37%	20	13%	7	4%	19	12%	48	30%

*Source; Primary data, 2026*

According to Table 2, 51% of respondents strongly agreed, and 17% agreed that teachers effectively incorporate instructional materials during lessons, while 10% disagreed, and 20% strongly disagreed. Only 2% were unsure. This indicates that although the majority of respondents believe that teachers are utilizing instructional materials

effectively, a significant portion still feels that there is room for improvement. Research shows that when instructional materials are well-integrated into lessons, they can enhance student engagement and understanding (Moore & Smith, 2021). The relatively high percentage of disagreement suggests that not all teachers may be consistently integrating these resources or may face challenges such as insufficient training or resource availability.

In terms of student engagement with instructional materials during instruction, 45% of respondents strongly agreed, and 20% agreed that students actively engage with these resources. On the other hand, 13% disagreed, and 19% strongly disagreed, with 4% unsure. This points to a relatively positive perception of student involvement, although nearly a third of respondents expressed doubt. Active engagement with instructional materials is critical to improving learning outcomes, as it allows students to interact with concepts in more meaningful ways (Fuson & Murata, 2020). The significant level of disagreement may reflect barriers such as inadequate or irrelevant materials, or ineffective instructional strategies.

Regarding the statement that instructional materials cater to diverse learning needs in the classroom, only 21% strongly agreed, and 27% agreed, while a larger percentage (33%) disagreed and 17% strongly disagreed, with 2% unsure. This indicates that a substantial number of respondents felt that instructional materials are not sufficiently accommodating the diverse needs of learners. Effective instructional materials should be adaptable to various learning styles and abilities to ensure inclusivity in the classroom (Clark & Mayer, 2020). The high level of disagreement implies that many schools may lack a variety of materials that address different learning modalities, such as visual, auditory, and kinesthetic.

When it comes to the regular use of a variety of instructional materials by teachers to enhance learning outcomes, 33% strongly agreed, and 38% agreed, suggesting that many teachers are perceived to use a diverse range of materials in their lessons. However, 11% disagreed, and 15% strongly disagreed, with 3% unsure. This suggests that while the majority recognize the efforts of teachers to diversify their teaching resources, a portion of respondents feels that this is not consistently happening. Teachers who employ a wide range of materials can address multiple learning styles and improve engagement and retention (Fuson & Murata, 2020). The disagreement might highlight gaps in training or resource availability that hinder the consistent use of varied materials.

Concerning the adequacy of resources provided by schools to support the use of instructional materials in , 37% strongly agreed, and 13% agreed that schools provide enough resources. However, 30% strongly disagreed, and 12% disagreed, while 4% were unsure. This indicates a significant concern about resource availability, with nearly half of the respondents expressing dissatisfaction. Adequate resources are crucial for the effective use of instructional materials, and the lack of them can severely limit the quality of instruction (Moore & Smith, 2021). The high level of disagreement may reflect disparities in resource allocation, particularly in rural or underfunded schools, where access to materials is often limited.

**Table 3: Influence of utilization of instructional materials on development of competencies.**

Statement	F	SA	F	A	F	NS	F	D	F	SD
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Instructional materials help students develop a deeper understanding of mathematical concepts.	50	35%	43	28%	3	2%	38	24%	16	10%
The use of instructional materials improves students' problem-solving skills in .	40	25%	55	38%	3	4%	20	13%	32	20%
Students' confidence in increases due to the effective use of instructional materials.	50	31%	38	25%	3	2%	20	16%	39	24%
Instructional materials contribute to enhancing students' mathematical fluency.	50	37%	39	25%	4	3%	35	18%	22	14%
Teachers' professional development on instructional materials positively impacts students' competencies.	57	41%	35	22%	7	4%	29	18%	22	14%

*Source; Primary data, 2026*

The findings from Table 3 show the influence of instructional materials on the development of learners' competencies. For the first statement, 35% of respondents strongly agreed, and 28% agreed that instructional materials help students develop a deeper understanding of mathematical concepts. However, 24% disagreed, 10% strongly disagreed, and only 2% were unsure. This implies that while most respondents recognized the benefits of instructional materials in fostering a deeper understanding of mathematical concepts, a notable percentage (34%) felt that these materials were not effective enough in doing so. The disparity could be due to differences in the availability or quality of instructional materials across schools. Research by Fuson and Murata (2020) highlights that the quality and relevance of instructional materials are key factors in improving student understanding.

Regarding the improvement of problem-solving skills through instructional materials, 38% of respondents agreed, and 25% strongly agreed with the statement, while 13% disagreed, and 20% strongly disagreed. Only 4% were unsure. These findings suggest that the majority of respondents believed instructional materials have a positive impact on problem-solving skills in , which aligns with studies by Moore and Smith (2021) that found hands-on resources and visual aids enhance students' ability to tackle complex mathematical problems. However, the 33% who disagreed or strongly disagreed reflect a possible lack of access to high-quality problem-solving materials or inconsistencies in their application by teachers.

In terms of the impact of instructional materials on students' confidence in , 31% of respondents strongly agreed, and 25% agreed that the effective use of these resources boosts confidence. On the other hand, 16% disagreed, 24% strongly disagreed, and 2% were unsure. This points to a fairly even split, with slightly more than half of the respondents believing in the confidence-boosting role of instructional materials. Confidence is an essential factor

in academic achievement, as highlighted by Clark and Mayer (2020), who emphasized that instructional materials can significantly improve self-efficacy when students can easily relate to and understand the content.

When considering the influence of instructional materials on enhancing students' mathematical fluency, 37% of respondents strongly agreed, and 25% agreed, indicating that a majority of respondents saw these materials as beneficial. However, 18% disagreed, and 14% strongly disagreed, while 3% were unsure. Mathematical fluency refers to the ability to efficiently and accurately solve problems, and it is often strengthened through the use of varied and engaging instructional materials (Fuson & Murata, 2020). The findings indicate that, while the majority believe these materials support fluency development, some respondents may feel that the resources available are insufficient or not appropriately tailored to enhance fluency skills.

41% of respondents strongly agreed, and 22% agreed that teachers' professional development on instructional materials positively impacts students' competencies. On the contrary, 18% disagreed, 14% strongly disagreed, and 4% were unsure. This suggests a strong belief among respondents that when teachers receive proper training on how to use instructional materials, it can have a significant effect on students' performance in . As Moore and Smith (2021) pointed out, professional development is crucial in equipping teachers with the skills and knowledge needed to effectively utilize instructional resources, which in turn directly influences student outcomes.

### **Conclusions**

In conclusion, the study has demonstrated that instructional materials play a critical role in enhancing the performance of learners in . The availability of textbooks and workbooks is essential, but the limited use of digital and multimedia resources suggests a need for more comprehensive access to modern instructional tools. Schools must prioritize not only the availability but also the diversity of instructional materials to cater to different learning needs.

The effective utilization of instructional materials by teachers remains a challenge in many secondary schools. Although some teachers effectively integrate these materials, the inconsistency in their usage indicates the need for targeted interventions. The study concludes that improving teacher training programs and providing regular professional development will help ensure that teachers can make the most of available resources to enhance instruction.

Instructional materials have proven to be influential in improving students' understanding of mathematical concepts, problem-solving skills, and overall confidence in the subject. However, the study also concludes that without adequate resources and support for teachers, the potential benefits of these materials may not be fully realized. Schools should invest in professional development programs and provide teachers with the necessary resources to improve their instructional practices.

### **Recommendations**

Based on the findings, the study recommends that schools and policymakers prioritize the provision of a wider range of instructional materials, particularly digital and multimedia resources, to support interactive and engaging lessons. These materials should be made available to all schools to ensure equitable access to quality learning resources.

Secondly, schools should implement regular training programs for teachers on the effective use of instructional materials. This will ensure that teachers are well-equipped to incorporate a variety of resources into their lessons and address the diverse learning needs of students. Professional development should focus on both the pedagogical aspects and the practical use of different instructional tools, particularly digital tools.

Finally, further research is recommended to explore the long-term effects of instructional materials on students' performance. Studies could investigate how the continuous use of different types of materials impacts learners' competencies over time. In addition, schools should establish systems to regularly evaluate the effectiveness of the instructional materials being used to ensure that they are meeting educational goals.

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