



Research Article

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Assessing the Challenges of Information, Communication and Technology Education in the Rural Communities of Ghana: A Case of Sekyere South District

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Abstract

The Ghanaian government developed and implemented an ICT in Education Policy in 2008. ICT was integrated into instructing and education at all levels of the country's educational system as a result of this approach. This study looks at the challenges that rural communities in Ghana confront in securing the benefits of ICT in tutoring at various levels. The study used a sample size of 142 ICT instructors and heads of schools, as well as a small number of students, with a 90% confidence level. The district's respondents were chosen using planned and practical sampling methods. A structured form was used to gather primary data from all participants; however, only 93.67 percent responded. With the use of SPSS, tables were used to examine the primary data. According to the students, the number of hours per week dedicated to teaching ICT in schools is positively connected with their dedication to learning ICT. In terms of the impact of ICT on students' daily lives in the district, the reading discovered that ICT instruction had both beneficial and adverse consequences for kids. Based on the findings, the various stakeholders in education should conduct periodic on-the-job training for all teachers on evolving e-learning high-tech and approaches to provide them with the necessary abilities to effectively teach ICT.

Keywords: Education, Government of Ghana, Information Communication Technology, Rural Community

1. Introduction

In today's world, info and communication technology (ICT) is rapidly growing, and its influence on socio-economic happenings cannot be understated. It has pervaded almost every element of life, including business, education, civic activities, governance, and society, and it has emerged as a key force in the development of wealth in industrialized countries globally (Opoku, 2004). A new knowledge-based economy has emerged as a result of globalization and rapid technological innovation. ICT has certainly become a significant enabler of a knowledge-based economy for many countries in this context. Governments all over the world have recognized the numerous paybacks of information and communication technology (ICT) to people's socioeconomic and political development. As a result, rather than abolishing schooling, many administrations have begun to spend deeply on ICT to grow their States social and human wealth, enabling them to fulfill the needs of the digital and information era (Douglas, 2015).

The government is required by the Ghanaian Constitution of 1992 and the Education Act of 1987 to take all feasible measures to make education widespread and free. The 2007 Education Restructurings reaffirm education as a right, and the constitution-mandated Free Compulsory Universal Basic Education (FCUBE) will benefit all Ghanaians (MOE, 2015). The reform also targeted human capital development for industrial growth and global competitiveness, with an emphasis on information and communication technology (ICT) teaching, practical/vocational tutoring and training, and value improvement. For this purpose, the Ministry of Education has adopted several policies and program reforms intended at progressing ICT education admission and equity while also improving its quality: "The use of technology in education to promote effective teaching, learning, and administration by providing computer labs, internet and network connectivity in schools, and the distribution of laptops to teachers and students, as well as teacher capacity development." (Ministry of Education, 2015).

In 2013, the government in power began supplying notebook computers to basic and secondary schools across the republic, as well as organizing workshops for instructors on the use of computers in tutoring on a district-by-district basis, all through RLG Communications Inc., in line with public perceptions of ICT's potential in instruction (Douglass, 2015). The previous debates demonstrate the importance of ICT integration in education to the Ghanaian government and numerous stakeholders. As a result, it is vital to review the current situation, identify any barriers to mixing technology into erudition and education in Ghana's rural communities, and guarantee that ICT policies are implemented successfully.

1.1 Statement of Problem

The ICT in Education strategy highlights the alteration of outmoded memory-based erudition into schooling that develops critical thinking and creativity, which are necessary skills for dealing with 21st-century concerns. The strategy is presently being implemented at many levels throughout the country in all tertiary, secondary, and primary schools (Jacob, 2013). For more than ten years, the Ministry (primarily through the Ghana Education Service), its expansion associates, and various private segment companies have worked to integrate ICTs into the education system (MOE, 2015). Efforts have primarily concentrated on bringing ICTs to schools by providing computers and constructing ICT labs. However, they have largely been restricted to city areas, with few instances of how they have been used to funding educational aims (MOE, 2015). Furthermore, the availability and utilization of ICT substructure in countryside and city areas have not received equal care. ICT substructure and equipment are supported by other amenities such as energy, internet connection, and other computer devices. These facilities are uncommon in many Ghanaian rural villages. The state appears to have focused more on metropolitan regions in terms of strong ICT education throughout time. Using Sekyere South District as a case reading, this research attempts to expand the frontiers of knowledge about the obstacles to ICT education in Ghana's rural areas.

1.2 Research Objectives

1. To assess the government's commitments in the Sekyere South District to ICT education.
2. Examine the ICT resources available to pupils in Sekyere South District schools.
3. To determine the fundamental elements influencing the usage of ICT in teaching and learning in the Sekyere South District.

The following core research questions guided the research;

4. In the Sekyere South District, how is the government promoting ICT education?
5. What ICT resources are accessible in Sekyere South District schools for students to use?
6. What are some potential solutions to the issues of ICT education in Ghana's rural communities?

2. Literature Review

2.1 The role of ICT in Education

The world is fast becoming an information society as a result of info and communication technologies (ICTs). This shift needs the ability of the education sector to fully employ ICTs to improve teaching and learning quality. It's no surprise, then, that the usage of ICTs in many instructive institutions is increasing, as they may be used for a number several in instruction and erudition (Jacob, 2013). Fan and Ho classify three key uses of ICT in teaching (2012). The main goal of information and communication technology (ICT) is to employ application software to progress education and erudition. The second drive is to make managerial activities in schools, like grading and record-keeping, easier so that students' education history and output level can be tracked. The third function of ICT in education is to provide information on pupils' reading levels.

According to the argument for ICT investments in education, traditional coaching and learning approaches, in which information is forced on learners, do not provide an adequate chance for beginners to construct their data and mature critical minds. As a result, rendering to Osin (1998), the use of computers in schools provides crucial components of education that were missing in all earlier instruments that sparked prospects when they initially entered the teaching field. In the past, the chalkboard, for example, was solely utilized to communicate data to students. Computers have enabled "individualized contact," allowing for the distribution of information to students as well as the modification of performances to their needs and favorites, according to him. The world has evolved into a technological one, according to Zappacosta (2001), with computers playing a leading role in the transmission of knowledge. Computers could be used to give learning agents a variety of teaching and learning options, allowing them to adapt their learning methods.

ICTs, according to Smeets (2005), present users with a wealth of information resources. Furthermore, ICTs can help learners understand intricate processes by using simulations. According to UNESCO (2007), joining ICT into educational systems has the potential to increase instructive quality while also providing impoverished individuals and communities with greater access to information and services. As a result, ICTs can improve lives when used effectively makes teaching easier, cheaper to access, and free of the restraint of distance and result in better academic recital due to changes in teaching and learning. According to Johannessen (2009), info and communication technologies (ICTs) can be used to provide visualization and variation in a range of sectors. He also recognized that some youngsters already have a basic understanding of ICT skills from their households and that the educational system can assist them in developing these skills.

2.2 Benefits of ICT use in Education

As internet connections has improved, virtual classrooms have become more common. The enormous obstacles of time and space are reduced essentially outdated in such simulated classrooms

(Stennes, 2008). The benefits, on the other hand, are determined by how well ICT is integrated into the classroom (Condie & Munro 2007). New technologies, according to Dawes (2001), can help educators across the curriculum by providing novel communication choices. The potential for ICT in education to affect teaching practices is apparent.

According to Condie and Munro (2007, p.5), the use of ICT has benefited students who are disadvantaged due to personal or familial problems in several courses. Computer-Aided Instruction (CAI), according to Parr (1995), dramatically diverts the teacher's focus away from weaker students.

According to a study, many pupils have benefited from the use of ICT (Friar & Hirschbuhl, 1999). According to this definition, a computer is a tool that aids users in taking responsibility for their profits by assisting them in creating higher orders. Papert (1993) mentions its potential to support learning, whereas Korte and Husing (2007), as cited by Redden, emphasize its ability to encourage learning (2010). According to Forrester and Jantzie (2000), the computer has a lot of potentials when it comes to producing Gardner's manifold intelligences. Korma (2005) claims that info and communication technology (ICT) may be used to recover education transfer and access. Gaining ICT skills, which are becoming increasingly in demand, improves the student's suitability for the workplace. According to Korma and Anderson (2002), ICT is also altering education by offering a new curriculum based on real-world difficulties, offering diverse tools to encourage erudition, and providing students and instructors with additional response and reflection opportunities. Social Constructivism emphasizes this type of student-centered education, which considers the instructor as a guide or implementor who helps students to determine things for themselves.

According to Schlepp (2005), constructivist strategies must control the education environment for technology to have an important influence on knowledge. It is crucial to highlight, however, that the usage of ICT in classrooms is a comparatively new phenomenon when likened to traditional instruction methodologies. While some studies have found that ICT helps teaching and learning (Palak & Walls 2009), the majority of studies have found that it does. Student learning, according to Heinicke et al (1999), is defined as the retention of fundamental skills and subject content. Evidence suggests that computer-assisted training or computer-based education and uniform assessments have a positive relationship, as proven by standard testing. According to Hawkrige (1990), computers as pedagogical aids in Computer Assisted Learning or Computer Assisted Instructions have altered education in advanced countries. He argued that the spectators are advantageous to the exercises and practices of the students. Tutorial tasks include things like guided discovery, building intellectual structures, retrieving data, and manipulating data.

Due to the use of ICT in instruction and erudition, Todd (1997) asserts that a true learning upheaval has happened, in which instructors use information technology to deliver knowledge experiences that are fundamentally different from those supplied by their precursors. Despite the educational benefits of computers, Bigum (1997) cautions that ICT should not be considered the sole instructive tool accessible, but rather as one of many possibilities for teaching subjects and skills. Parthemore (2003) claims that the introduction of ICT has altered learning in digital library environments in schools today in terms of accessing, evaluating, and using information resources. According to Todd (1997), pupils have a good thoughtful of computers and information technology, as well as a pedagogy that emphasizes improving students' knowledge and services. Todd presents a method for managing, processing, and utilizing the large amount of data generated by ICT.

Hawkrige (1990) saw computers in schools as substances for education, serving pupils become less reliant on instructors and improving cooperative learning. However, evidence reveals that developing countries require communications networks that enable electronic data exchange to innovate and build information and knowledge stocks via ICT. According to Parthemore (2003), many secondary schools in Ghana offer a computer lab where pupils can learn basic computer literacy. According to a study of the literature, the use of ICT in Ghanaian schools is extremely disparate. ICT delivery in schools is tilted in favor of premier schools and metropolitan schools, according to the literature (Parthemore, 2003). Inappropriately, this is not a new occurrence. Since the beginning of formal education in Ghana, instructive resources have been distributed unequally.

Communication technology (ICT) cannot become another weapon for preserving instructive imbalances in Ghana's educational system unless authorities assure formation. To promote ICT in Ghanaian schools, school administrators, educational policymakers, nongovernmental organizations (NGOs), mutual and multilateral donor organizations, and school superintendents are all working together.

2.3 *Government's commitments toward ICT education in rural Communities*

Around the world, information and communication technology (ICT) has emerged as the furthestmost powerful, reliable, and cost-effective tool for driving company and organizational growth. Its significance has expanded to the point that no significant progress would be possible without this modest yet complex tool (Paul, 2015). The United Nations claimed in a declaration released in 2013 to honor the International Day of Girls in ICT that 95 percent of present global employment is in the field of ICT, and advised many girls throughout the world to partake in ICT to help close the gender slit. The following is a quote by Hamadoun Toure. To correct the technology sector's imbalance, the International Telecommunication Union (ITU) Secretary-General stated, "We need to get more ladies interested in information and communication technology" (Paul, 2015).

Ghana's Ghana Education Service has adopted necessary policy reforms, integrating ICT into the instructive system and even making ICT an examinable subject in the Basic Education Certificate Examination (BECE). The strategy's purpose was to ensure that every Ghanaian student has satisfactory ICT information and experience. Since 2008, the government has started supplying computers to students through RLG, dubbed the "one laptop per child" scheme, in support of the strategy. Despite how good the initiative was, it has faded into obscurity because many of the children who received laptops are unable to brag about them, which contradicts the project's stated objective. Paul (2015).

As a result, a national ICT instructive strategy was initially drafted in 2003 and revised in 2006 and 2008 to enable universal access to ICT education in Ghana. A new policy paper for implementation was released by the Ministry of Education in 2009. The policy's goal is to "articulate the relevance, responsibility, and effectiveness of using ICTs in the education sector, to address challenges and equip Ghanaian learners, students, teachers, and communities to meet the national and global demands of the twenty-first century." This strategy was also designed to encompass all societies across the country, as well as rural areas. Paul (2015).

As a development partner, Ghana's business sector has been heavily involved in the educational system, spending heavily on ICT in both private and public institutions at all levels. A non-governmental organization (NGO) in the Northern Region called Savana Signatures is an example of how the new revolution is being used to impact change and development among rural people. The NGO is experimenting with novel approaches to improving education in Ghana's rural communities. The NGO works in teaching, maternal mortality discount, and young female empowerment, all of which are aided by technological advancements. Paul (2015).

On the issue of education, Savana Signatures recently donated 110 desktop supercomputers, ten laptops, and 20 projectors to ten elementary and junior high schools in the Savelugu/Nanton Municipality to improve ICT instruction and erudition in those institutions. The gift is part of the organization's Incorporation of ICT in Education project, which it has been working on for several years to improve the area's educational quality. Teachers in beneficiary schools are presently working to integrate ICT pedagogy into the country's educational system.

2.4 *Challenges to the use of ICT in Education*

A challenge is whatsoever that obstructs the advancement or accomplishment of a given aim or target as a result, addressing one or more of these roadblocks, such as those in ICT integration, could help to speed up the integration process significantly (Adebi & Teye 2012). Computer integration is the use

of technology in the classroom to assist, enrich, and extend students' knowledge (Omwenga, 2004). More than purely instructing students how to use mainframes is required when incorporating ICT into the classroom. Technology is a means to improve education, not an end in itself. According to Muriithi (2005), ICT use in Kenya is still limited to computer literacy training, as it is in most poor countries.

In 2009, the Organization for Economic Cooperation and Development (OECD) performed research, which was cited in Redden (2010), that indicated several impediments to the use of ICT in education. A discrepancy in the number of computers available to pupils, a disparity in upkeep and technical support, and, ultimately, poor and inadequate computer skills facilitators and experience among teachers were among the obstacles (OECD 2009). Jenson et al (2002). identified including a lack of equipment, insufficient skills, insufficient sustenance, time restraints, and a lack of enthusiasm or understanding among teachers.

Even though there are appreciated lessons to be learned from best performs around the world, Redden (2010) claims that there is no single formula for estimating the appropriate level of ICT incorporation in the educational system. Legislators and developers, educators, education superintendents, and other stakeholders must all address instructive strategy and planning, infrastructure, language and content, capacity building, and financing.

According to studies, these blockades have been characterized in a variety of ways. Several readings have divided extrinsic and internal constraints into two categories. Extrinsic and intrinsic meanings, on the other hand, differed amongst readings.

3. Materials and Methods

3.1 Research Design

The type of research and the researcher's goals usually define the research design used by researchers (Robson, 1993). The purpose of descriptive research is to precisely and systematically define a population, situation, or phenomenon (Bridget, 2018). In contrast, an exploratory reading design is utilized to explore a problem that isn't well defined. It is done to obtain a better appreciation of a present problem, but it will not provide a definitive answer. The main purpose of the study was to measure the barriers to ICT education in Ghana's rural areas, using Sekyere South District as a case reading. To attain this purpose, a variety of tactics were tried (both exploratory and descriptive research designs). As a result, to meet the study's main purpose, the researchers acquired both qualitative and quantitative data. This is because the reading highlighted the significance of fully grasping the current situation before making recommendations. As a result, the opinions of the respondents, within discussions, as well as observation and measurement in natural sceneries, were all suitable (qualitative approach). The goal of the reading was to collect empirical information from the district; a quantitative technique was used to fast data in numerical formats using occurrences, tables, and charts to date statistics on the focus under investigation so that conclusions could be drawn.

3.2 Population

Rendering to Charles and Bawa (2017), a survey's target population is the whole set of components for which the review results will be used to make implications. Furthermore, the population that is accessible must be determined in terms of time, budget, and workforce. This method benefited the researcher in acquiring a more detailed insight into the population sample. Purposive and convenience sampling methods were used to sample from the study's target population, which included all 243 schools in the district (SSDA, 2015).

3.3 Sample (Respondents selected) and Sampling Procedure

It is impossible to observe every element in the sample frame directly. As a result, sampling is a useful strategy for selecting representative elements from a population to conduct research. A sample of the total population is taken. Despite being a subsection, it is illustrative of the general population and acceptable for research in terms of suitability, cost, and time.

When deciding on sample size, it's vital to be cautious because too large samples can waste resources, time, and energy, while too small samples can lead to flawed conclusions (Charles & Bawa 2017).

The sample size for selecting participants from the 243 schools was established with De Vau's (2002) formula:

$$n = \frac{N}{1 + N(\alpha^2)}$$

Where n is the sample size, N is the population universe and is the level of confidence. The formula used a 90 percent confidence level, resulting in a margin of error of 10%, which is suitable in social science research. The following formula was used to establish the sample size for the schools:

$$N=243 \\ n = \frac{243}{1+243(0.1^2)} = \frac{243}{1+243(0.01)} = \frac{243}{3.43} = 71$$

This indicates that out of a sum of 243 elementary schools, 71 were chosen. The 71 schools were picked at random, whereas the headmasters and ICT in the classroom teachers were carefully selected. In ethnobotany, purposeful sampling is a way of selecting informants (Charles & Bawa, 2017). It is the purposeful choice of a participants depending on the potentials of the participants. It is a non-random strategy that does not require any original hypotheses or a certain number of contributors. Simply put, the investigator recognizes what data is needed and then seeks out persons who can and will provide it based on their information or experience (Charles & Bawa, 2017). Two respondents from each school were chosen based on the explanations in the preceding paragraph. As a result, the study's overall sample size was 142. (2 x 71).

To get qualitative data, key informant interviews were conducted to contact entities such as the GES Office, significant individuals such as Circuit Superintendents (CS), and specific ICT specialists in the Municipality, as well as some students in the designated schools. A total of 142 headteachers instructors were chosen for the study. Table 1 illustrates the sample size and response rate that was chosen. To get qualitative data, key informant interviews were conducted to contact entities such as the GES Office, significant individuals such as Circuit Supervisors (CS), and specific ICT specialists in the Municipality, as well as some students in the designated schools. A total of 142 headteachers instructors were chosen for the study. Table 1 illustrates the sample size and response rate that was chosen.

Table 1: Sample and Response Rate

Questionnaires sent out	Questionnaires retrieved	Response Rate %
142	133	93.67%

Source: Field survey, 2020

3.4 Data Collection Procedures

A face-to-face discussion with a controlled questionnaire was used to gather primary data (quantitative data) from participants, while key informant conferences were used to gather qualitative data to empower full analysis. The interviewees were approached at their various schools and permitted to take part in the interviews. In other cases, when school leaders were overworked,

the questionnaire was given to them to complete at their leisure. In some circumstances, they were given two weeks to complete the form. A survey form was sent to each of the 142 respondents. The questionnaire's prologue defined the study's purpose, making participants feel comfortable sharing everything they know about the subject under inquiry. During the administration of the questionnaires, follow-up questions were asked to acquire further information on the research topic, allowing for a more thorough analysis and understanding of the subject.

3.5 Instruments

Standardized questionnaires and personal conferences (Key Informant Interviews) were utilized to collect data from participants for the reading. The same survey was presented to both ICT tutors and school principals. Forms were designed to cover both open-ended and closed-ended queries to reflect the study's different objectives. Obtaining the study's topic matter was also critical in developing the questionnaires.

3.6 Data Analysis Procedure

Blanchard (2010) claims that the validity and comprehension you will gain from your data have less to do with the sample size and more to do with data gathering and analysis. Founded on the nature of the data, the Statistical Package for Social Science (SPSS) was used to process primary data collected from the designated participants. Descriptive statistical components such as occurrence tables, charts, and graphs were employed to present some of the findings from the fieldwork.

3.7 Ethical Issues

Two concepts were used to help protect study participants' privacy while also considering the privacy of responses. The study protects the privacy of participants' personal information while they are taking part in it. Respondents were assured that their personal information will not be shared with anyone who wasn't participating in the study directly. Anonymity was another norm utilized by the researcher, which meant that the participant remained anonymous throughout the study, including to the researcher.

4. Presentation of Data and Analysis

Only 133 of the 142 headteachers and ICT instructors who were selected for the study responded to the surveys, accounting for 93.67 percent of the total questionnaires.

Table 2: Do You Have Computers Set Up to Teach Students ICT

Question	Response	Frequency
Do You Have Computers Set Up to Teach Students ICT?	Yes	92
	No	41

Source: Field survey, 2020

Table 2 demonstrates that 92 respondents (69.17 percent) have computers in their schools to teach ICT, while the remaining 41 respondents (30.83 percent) do not. Even though the majority of respondents own computers, it is not a sizable or meaningful majority.

Table 3: Total enrolments in schools compared to the number of computers

Student Enrolment Level	Total Number of Computers			Total
	1-30	31-50	51-100	
51-100	21	0	0	21
101-150	8	0	0	8
151-200	6	22	0	28
201 and above	1	0	34	35

Source: Field survey, 2020

In evaluating this, a cross-tabulation was done by likening the number of computers in the schools to the enrolment stages.

Table 3 demonstrates that one school with more than 200 students has computers ranging from 1 to 30, while 22 responses stated that their total computers range from 31 to 50, even though their enrolment levels are between 151 and 200 students. This suggests that computer distribution to the district's various schools is insufficient.

Table 4: Received in-service training on ICT

In-Service Training Scale	Frequency	Percent
None	58	43.6
Rarely	75	56.4
Regularly	0	0

Source: Field survey, 2020.

Table 4 reveals that none of the participants received regular ICT in-service training. According to the chart, 43.6 percent of participants have never attended any in-service drill on ICT since ICT tutoring became a mandatory topic. The justification given was that the most recent ICT drill took place about five years ago, and they hadn't yet joined the service. This ties the district's government's lack of commitment to ICT education.

Table 5: ICT resources available in schools

Variable Name	Category	Frequency	Percent (%)
Percentage of available computers working	Below 20%	17	18.5
	21-50%	18	19.6
	51-80%	57	62.0
	Above 80%	0	0
	Total	92	100.0
Other ICT equipment in school	Printer	10	7.5
	Digital Camera	4	3.0
	Scanner	9	6.8
	None	110	82.7
	Total	133	100.0
Have a computer Lab.	Yes	38	28.6
	No	95	71.4
	Total	133	100.0
Have Internet access	Yes	22	16.5
	No	111	83.5
	Total	133	100.0

Source: Field survey, 2020

ICT According to teachers and principals, just 21-50 percent of computers in schools are active, while 62 percent of participants said 51-80 percent of their PCs are working. This means that, in addition to a shortage of computer resources, not all of the computers in the numerous schools can be used for instruction and erudition. According to the survey results, 28.6 percent of respondents had computer labs, as indicated in table 5. However, the lack of internet access in this tiny number of laboratories was depressing, as 16.5 percent of participants said their schools did not have admittance to the internet.

4.1 Challenges in ICT education in the district

The researchers utilized a 5-point Likert scale with 5 being the most agreeable and 1 being the most disagreeable (strongly disagree). To regulate the relative status of the difficulties, the Relative Relevance Index was utilized (RII). The Relative Relevance Index (RII) is a model for determining the importance or heaviness of variables. The advanced the RII of a variable, the more essential or heavy the variable is. RII was determined for each of the challenges listed using this method;

$$RII = \frac{\sum W}{A * N} \quad (0 \leq RIO \leq 1)$$

Where W specifies how each task was weighted by the respondents (which ranges from 1 to 5). SPSS was used to calculate the total weight given to each challenge by the respondents. The maximum weight (in this case, 5) is denoted by A, while the total number of participants is denoted by N, which in this case is 133.

It should be noted that in this reading, if the RII is less than 0.49, the variable is considered to be of lower value or the variable's impact on ICT education is minor. Table 6 shows the results of the RII computation in this case.

Table 6: Ranking of challenges in ICT education in the district

CHALLENGES	REPORT			
	Mean (M)	Weight	RII	Rank
Inadequate computers and accessories	4.86	646	0.99	1 st
Lack of training	4.68	622	0.95	2 nd
The Age of teachers	4.41	586	0.90	3 rd
Lack of skilled ICT teachers	4.40	586	0.89	4 th
Low commitment from the government to ICT education	3.98	530	0.81	5 th
Poverty on the part of students to own personal computers	3.54	471	0.72	6 th
Lack of professional ICT personnel to repair damaged computers	3.51	467	0.71	7 th
Limited time dedicated to ICT lessons	3.43	456	0.70	8 th
No or poor supply of electricity	2.87	382	0.58	9 th
No or poor internet access	2.83	376	0.57	10 th
Fear on the part of students to manipulate computers	2.32	309	0.47	11 th
Poor attitudes of students towards ICT education	1.91	254	0.39	12 th

Source: Field survey, 2020

In the district, the major challenge in ICT education is 'inadequate PCs and accessories,' as seen in Table 6. This is because it has the highest RII=0.99. The respondents' second most concerning problem was a lack of training. As a result, the lack of regular in-service training for educators is the district's second-largest education issue. According to the table, all of the criteria listed first through tenth were judged to be significant impediments to ICT education in the district.

When it came to the district's ICT concerns, issues like "bad attitude of students toward ICT education" and "fear of pupils manipulating computers" were not important, according to the poll's findings. This is because their RII is less than 0.49.

5. Findings

5.1 Government commitments toward ICT education

To achieve this purpose, respondents contributed both qualitative and quantitative data. Two variables were largely used to assess this goal. As a result, the government provides computers to schools and arranges for ICT teachers to receive in-service training. Following an examination, researchers discovered that the government's distribution of computers to schools was abysmal, with 30.83 percent of respondents admitting that their school lacked computers. Even though most schools had more than 150 students, none of them had more than 100 computers.

In terms of regular in-service drill, the study found that 43.6 percent of ICT instructors had never gotten any, while the rest had only received government instruction on rare occasions. According to the findings, the district's government's commitment to ICT education is quite poor.

5.2 Availability of ICT Resources

The aim of this goal was to recognize the district's ability to mix ICT into the instructive system in a smooth manner. As indicated in the first aim, all of the district's schools are in desperate need of computers and related equipment. Aside from the few PCs, just 7.5 percent and 3% of participants have printers and digital cameras, correspondingly.

According to the research, 71.4 percent of respondents said their schools lacked computer labs, and 83.4 percent said they lacked internet access. The district's ICT education is jeopardized as a result of these findings.

Finally, the study discovered that ICT equipment and related facilities are insufficient to help the district integrate ICT education as quickly as possible, as recommended by the ICT in Education Policy.

5.3 Challenges in ICT Education

The Relative Importance Index (RII) was used to assess 12 variables to achieve this goal. When the RII of a variable was less than 0.49, it was measured a minor obstacle or challenge in ICT education. Because both of these factors had an RII of 0.49, it was decided that 'Students' poor attitude toward ICT education' and 'Students' fear of using computers' were not major obstacles in ICT education. The following are the primary challenges affecting ICT education in the district, listed in order of severity.

- Inadequate computers and accessories.
- Inadequate in-service training.
- The Age of teachers.
- Insufficiently skilled ICT teachers.
- Low commitment from the government to ICT education
- High cost involved in repairing computers.
- Limited time dedicated to ICT lessons.
- No or poor supply of electricity.
- No or poor internet access.

6. Conclusion

The education looked at the issues of ICT teaching in Ghana's rural communities using Sekyere South District as a case study. For this survey, a total of 133 participants were picked from 71 schools, including Headteachers and ICT instructors. Secondary and primary data were collected from

reputable sources, and the primary data was analyzed with SPSS v.19 to answer the study's questions. According to the report, the statements commitment to ICT teaching in the region is relatively low, resulting in insufficient ICT tools and facilities in numerous schools, as well as teachers with limited ICT skills. Using Mean analysis, the study showed that the utmost influence of ICT on students' lives is that it has harmfully damaged their morale due to recurrent use of social media. The reading used RII to measure the severity of the challenges affecting ICT education, and it was discovered that the main obstacle affecting ICT education in the district is 'inadequate computers and accessories.' The study turned out to be a big success. The researchers were able to uncover responses to all of the research questions after overcoming all of the readings limitations. The interviewees were cooperative and eager to share everything they knew about the investigation's subject.

7. Recommendations

Based on the answers, the study recommends the following;

1. Ghana's state and other education partners should look at evenly allocating ICT resources across the country's communities.
2. To facilitate more efficient ICT teaching and learning, the government and other stakeholders in Ghana's education system should consider allocating ICT resources, such as computers, proportionally to all schools, among other things.
3. Teachers who lack practical ICT skills should seek training to be able to use them in their classrooms competently and confidently.
4. Effective monitoring and assessment of the ICT in Education strategy are required in the district regularly to check on progress and flaws in its implementation. This will provide policymakers with information to aid in the planning of ICT integration in education.

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