



**PERCEPTION OF ICT INTEGRATION ON
LEARNERS' ACADEMIC ACHIEVEMENT IN GEOGRAPHY
IN SECONDARY SCHOOLS: CASE EVIDENCE FROM
GS NYAKINAMA, MUSANZE DISTRICT, RWANDA**

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Abstract:

The aim of this study was to investigate perceptions of ICT integration and its impact on learners' academic performance in geography in secondary schools. The research project was guided by three specific objectives. The first was to find out views on ICT integration during the teaching and learning process of Geography at GS Nyakinama I, before and after the integration of ICT in teaching and learning Geography. The second was to identify the level of students' performance in Geography at GS Nyakinama I. The third objective was to investigate the relationship between ICT integration and students' performance in Geography at GS Nyakinama. The target population was the students, teachers, and administration staff of GS Nyakinama I. The sample comprised 86 respondents from 571 community, containing 548 students, 20 faculty members, and 3 regulatory staff. The results revealed that Views on ICT are second-hand by students and coaches, while education and the education process of Geography pupils and teachers of GS Nyakinama I use ICT in the knowledge and education process as trial: Always 69.7%, consistently 10.4%, rarely 15.1% and only 4.6% never second-hand ICT while education and knowledge process of Geography.

Keywords: perception, ICT integration, learners' test scores

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1. Introduction

Information and ideas science (ICT) has become critical to all business arranging about the contemporary era, and no organisation, containing the education sector, can forget it (Andiola & Norman, 2020). Computer technology was imported in the early 1980s as a novelty that could be selected in the study hall, and optimism was so extreme that ICT would change the face of instruction, conceiving that with skilled, hopeful, thorough use of ICT and with eLearning in the study hall, the outdated textbooks would even be out-of-date. Yet, as aforementioned, a sketch has not happened afterwards for more than three decades. Nevertheless, in accordance with many of the tactics' creators, the use of ICT in instruction is a major novelty in classroom teaching. Educational improvement is one of the main instructional necessities, and, simply, it remains to be a focus of the news age.

By inspecting the existent enumerations and news about the happening of ICT in developing countries' instruction, we learn that in many nations in the way that the grown and underdeveloped countries, to adorn the schools with differing abilities in the way that calculating and Internet, inclusive programs have happened assembled and it is a long time when they have compensated a distinguished consideration to the function of data processing finishes in their curricular programs and have gone a considerable cost to implement correct forms in education (Uwizeyimana, 2022). The creation of new instructional designs, misuse of computers in classrooms, misuse of instructional programs and multimedia, misuse of the Internet, electronic mail, and other new results of implementing electronic facts and ideas (Rana, K., & Rana, K., 2020).

Africa has seen significant growth in ICT across various sectors over the last decade, including instruction. In the transition from scholar-centred to trainee-centred methods, ICT has led to significant improvements by providing news and additional abilities. In Kenya, in addition to Rwanda, free laptops have been delivered to elementary school children as a procedure for integrating ICT in fundamental instruction (Fajaryati & Wiranto, 2020). However, this issue is still hazy in education in DRC, especially in Marist subordinate schools. Davidavičienė (2018) has contended that selecting creativity, even when it has clear benefits, is difficult. Many innovations require many years from the moment of truth when they are first performed to the moment of truth when they are widely adopted. This may be the case of ICT in subordinate schools in Rwanda.

2. Literature Review

2.1 Introduction

2.1.1 Information and Communication Technology

Information and publicity science is a reasonable term for data processing that stresses the duty of unified travel and the unification of electronics and computing. Communication involves the transmission of facts through a channel we refer to as electronics (Perienen, 2020).

2.2 ICT Integration

ICT integration can also be described as the utilisation of computers, the internet, and communication networks in teaching and learning, which include audio, video conferencing, synchronous and asynchronous online communication and collaboration tools, e-mail, Voice Over Internet Protocol and online courses (Raja & Nagasubramani, 2018).

2.3 Learner's Test Score

Raja, & Nagasubramani (2018) erect that mix Information and Communication Technology in education and knowledge Geography continually but from 2022 they begun merge Information and Communication Technology in education and knowledge Geography and persisted exercise of merge Information and Communication Technology in 2023, allow us equate the exercise of mix Information and Communication Technology in education and knowledge accompanying the results acquired by students the efficiency level pupils in seeing results of 2021 was Excellent (100-80) 55.2%, Very good (79-69) 17.6%, Good (69-55) 11.7%, Poor (55-40) 3.5%, Alarming (40-30) 11.7%, Below (30%) 0 because period 2021 education and education Geography was finished outside mix Information and Communication Technology continually, equating accompanying the results of 2022 when they began to merge Information and Communication Technology (ICT) in education and education Geography at common 31.7%, frequently 41.5%, exceptionally 23.5% and only never 3.5, they acted: Excellent (100-80) 63.5%, Very good (79-69) 20%, Good (69-55) 14.1%, Poor (55-40) 1.1%, Alarming (40-30) 1.1%, Below (30%) 0 and in 2023 likewise raised the mix Information and Communication Technology in education and education process by common 70.5 %, consistently 10.5%, exceptionally 18.8% and never 0 and the juniors' depiction was raised: Excellent (100-80) .70.5%, Very good (79-69) 23.5%, Good (69-55) 2.3%, Poor (55-40) 2.3%, Alarming (40-30) 1.1%, Below (30%) 0 by equating the same results of 3 age we found that pupils' depiction level begun to rise when they were joined Information and Communication Technology in education and education process that concerned definitely juniors' academic act of Geography (Raja, & Nagasubramani, 2018).

2.4 Views on Integration While Teaching and Learning Process

Over the last three decades, the role of electronics in instructional reform has gained increasing attention. The current advances in news and ideas technologies and their relative affordability fuel the flame of science-based instruction corrections. Particularly, the portable computer as a tool or resource of instruction has produced plenty of debate (Mugisha & Rosenbaum, 2021). The One Laptop per Child (OLPC) program was an ambitious initiative of ultimate instructional correct actions the planet has always visualised. The program has developed an original, new, cheap, portable computer and aggressively advanced allure plans to set the calculating in the hands of hundreds of thousands of adolescents around the globe, containing in underdeveloped nations. With six years having passed since Nicholas Negroponte first revealed the plan, this paper

appraises the program's progress and impact and, in so doing, takes a study of OLPC's powers (Fadde & Zaichkowsky, 2018). In June 2008, the administration of Rwanda began the One Laptop per Child (OLPC) project to help infants in basic schools across Rwanda develop imaginative science abilities and abilities. It has existed for 11 years, since the program's inception, and has been generously donated to improve pupils' education and truly transformed instruction. In June of 2009, with the Rwandan administration's assurance and excitement about the OLPC program, the OLPC Learning Team, initially based in Cambridge, MA, relocated to Kigali, Rwanda, to design the country's main office for OLPC, OLPC-Rwanda. This was exhausted alliance accompanying the Office of welcome Excellency Paul Kagame, the Ministry of Education and OLPC-Rwanda was initially located in Kigali Institute of Science and Technology (KIST) as famous by Malik, & Widiaty (2019) After a favorable ship project transported in 2010 at which point 10,000 laptops were redistributed to 10 schools, urban, almost-city and country, the management of Rwanda proposed more considerable and by 2011 skilful a deployment and unification of 100,000 Laptops in in addition to 121 schools concerning a country with a. At the end of 2012, 210,000 laptops were handed to Rwandan toddlers, and by April 2016, there were more than 267,000 laptops in more than 930 schools across the country, serving at least 2 schools in each departmental subdivision in Rwanda. Rwanda Education Board (REB) stated that up until now, 274,073 XO laptops have been delivered. There are too 1578 laptops available forthcoming open or fan out (Mekala & Geetha, 2020). The use of facts and ideas technology (ICT) as a means to support up-to-date education and education means, and exceptionally student-centred education (SCL) pedagogy, is an extensive practice. Many research studies have sent this case, labelling the auxiliary part of ICT in the implementation of scholar-centred approaches in university (Levine, 2022).

Student-centred education approaches reassure lecturers to use miscellaneous procedures that admit active education, to a degree helpful education, unlimited responsibilities, fault-finding-thinking exercises, simulation, and logical projects (Mugisha, and others, 2021). This new teaching approach has been shown to be a persuasive educational form in today's humankind, placing the labour advertisement demands that staff members possess two together pertaining to work abilities and more common abilities. It is essential that larger educational organizations (HEIs) select SCL to determine an organization for the recruitment of graduates in terms of ability, abilities, and information (Davidavičienė, 2018). In 2019, Rwanda Investigation Bureau (RIB) stated that 939 laptops that were delivered in schools across the country were taken in 2018 including 774 Positivo, 107 XO that were likely as indiscriminate the OLPC program in addition to 58 different laptops of various brands and in March 2018, 2667 laptops were stated stolen but 973 were renewed (Habibi, & Razak, 2020).

2.5 The Level of Students' Performance in Geography

Due to ICT's significance in institutions in addition to the role of instruction, recognizing the likely challenges to integrating these electronics in schools, hopeful of main for

institute the education and education process in school background (Davidavičienė, 2018). Challenges to the maintenance or the unification of ICT in education and knowledge have been well documented by various authors, contingent upon miscellaneous determinants. Some of the challenges appeared expected, the fighting to change, while added devote effort to something, the lack of infrastructure or weak abilities. As Fadde & Zaichkowsky (2018) established, change is a process, not an event. Buying and establishing fittings and programs is not enough to form ICT into an honest instruction electronics. Adoption of some program particularly when it wanted materials used in the production of goods and intellectual abilities, has not been without challenges that various research studies have indicated.

A study conducted by Salam & Shaheen (2018) in thirteen African nations, including differing schools in each country, the investigators were curious about discovering the teaching unification of ICT, its advances and challenges. Analysis from in addition to individual hundred schools utilising a type of design and inspecting method delivered the judgment that, ICT unification into African instruction and declaration training schemes suggests a few challenges that must be addressed. In this regard, the investigator categorised the ICT challenges from the judgments into four classifications containing foundation challenges (capacity interruption, internet collapse), mechanics (lacking, incompetent and old-fashioned calculating supplies), human challenge (lack of techno teaching abilities in instructors and preparation) and commercial (lack of permanent capital for teaching ICT unification).

A study, conducted by Mekala & Geetha (2020), is an Investigation into Challenges Faced by Secondary School Teachers in Integrating Internet into the education and knowledge process in Harare, Zimbabwe. This explanatory survey design, through a random sampling, picked 450 assistants. The study was complicated. The study reacted to a multiple-choice question and an individual undecided issue. The study disclosed that most of the scholars had negative stances for the use of the internet in the hall, skilled was lack of professional handling with the supervisors, and the schools did not provide enough guidance and mechanical support to schoolteachers.

2.6 The Relationship between ICT Integration and Students' Performance

ICT unification in instruction generally methodical, science-based education and learning process that has a connection with the exercise of education technologies in schools. Due to the fact that pupils are made acquainted with technology and they will discover better inside science-located environment, the issue of ICT unification in schools, especially in the hall, is alive. This is because the use of science in instruction provides a lot in the pedagogical facets, at which point the use of ICT will bring about effective knowledge accompanying the help and support from ICT components and components (Schunk & DiBenedetto, 2020). It is right to suggest that principal parts of cases start from arithmetic, science, sounds, skills and manlike and many other major fields may be well-informed in a more excellent manner through technology-based finishes and supplies.

In addition, ICT provides help and complementary support for two supervisors and pupils' place, it involves productive knowledge by way of the computers to answer of knowledge sexually transmitted diseases (Umubyeyi et al., 2022). ICT can be second-hand in different habits place it helps both scholars and scholars to gain knowledge about their respective subjects. An electronics-located education and learning offers miscellaneous appealing habits that include instructional videos, provocation, a repository of data, the habit of databases, mind-plan, led finding, brainstorming, pleasant, harmonised sounds, World Wide Web (computer network) that will create the knowledge process more fulfilling and significant (Uwizeyimana, 2022). On the other hand, pupils benefited from ICT unification, as they were not confined to a restricted educational program and money; instead, experiential endeavours in an electronics-based course were devised to help the ruling class excite their understanding of the subject. It also helps teachers design their communication plans in an active, imaginative, and appealing way that results in pupils' lively knowledge. Previous research has shown that the use of ICT in education will improve the learning process and maximise students' abilities in lazy education (Mekala & Geetha, 2020). Perienen (2020) had labelled three main stages for ICT expected to be highly valued and judged a piece faculty member; integration, augmentation and completion.

The integration approach is about achieving the right use of ICT, specifically in subject areas that involve complex ideas and skills to support students' achievement. Besides, reviewing the syllabus is also needed to ensure that only connected ICT money and the appropriate operating system were installed to achieve the main aims and goals of the syllabus (Perienen, 2020). The enhancement approach is about using ICT to present excellent prominence on the topic popularised. For instance, Microsoft PowerPoint may be used to present the point in a very creative and engaging way, showcasing dispute and trading ideas. Finally, the completing approach is when the ICT is used to aid and support the student's knowledge. This approach allowed pupils to be more organised and adept so that they can take the outline from calculating, submit everything by electronic mail from home because they meet the time limit and look for facts from different sources supported online to fulfil the task likely to the ruling class (Malik & Widiaty, 2019).

3. Material and Methods

3.1 Research Approaches and Design

In this research, we designed a quantitative approach in which data were collected from a questionnaire addressed to the teachers and students, and a qualitative approach in which data were gathered through interviews with the teachers and administrative staff and through documentary analysis.

3.2 Data Collection Tools

In this study, questionnaires have been distributed to teachers and students to answer questions related to the research title. and interviews were also to be done through teachers and administrative staff from the school.

4. Results and Discussion

4.1 Demographic Characteristics of Respondents

Table 1: Ages and Gender of Respondents

Ages and Gender	Below 15 years		Between 15-18 years		Above 18 years		Total	Percentage (%)
	F(x)	Percentage (%)	F(x)	Percentage (%)	F(x)	Percentage (%)		
Male	23	26.7	8	9.3	8	9.3	39	45.3
Female	31	36.04	10	11.6	6	6.9	47	54.6
Total	54	62.7	18	20.9	14	16.2	86	100.0

Sources: Primary data (2024).

The above table reveals that 39 accused acting as an agent 45.3% were male, while 47 respondents, equivalent to 54.6%, were female. This dossier states that the grammatical rules applying to nouns that connote sex were sensitive; therefore, the news to accept delivery of something accused about research topic was not masculine prejudiced. The ages of the accused were 54, corresponding to 62.7%, were between the ages of below 15 age traditional, while 18 respondents, equivalent 20.9%, were between 15-18 years old and 14 accused matching to 16.2%, were above 18. This form provides good representative respondents the one has acceptable aptitude level two together to assume the role of ICT unification and bettering juniors' academic acting of Geography at GS Nyakinama I provide trustworthy news related to the field of research.

4.2 To know whether GS Nyakinama I Integration of ICT while Teaching and Learning Process

The investigators asked the respondents: "Do you prefer to integrate Information Communication and Technology (ICT) while learning Geography?" The purpose was to check whether the students and teachers of GS Nyakinama I school use technology while teaching and learning Geography. The information obtained is as follows:

Table 2: To Know Whether GS Nyakinama I Integration Technology in the Teaching and Learning Process

Respondents	F(x)	Percentage
Yes	71	82.3 %
Not	12	14.1%
Not sure	3	3.5%
Total	86	100%

Source: Primary data (2024).

According to the dossier in the table above, the scholars and instructors of GS Nyakinama I school use ICT for education and knowledge, while graduates and schoolteachers of GS Nyakinama I use second-hand ICT for education and Geography. This shows that the use of ICT enhanced pupils' academic progress in Geography. In contemporary times, ICT plays a very important role in our history. It is visualised as a support of development of savings. A saving that is weak in ICT can never evolve into a contemporary sketch. This is because electronics form our work much more smoothly and have less opportunity absorbing. Perception of ICT may be sensed in each attainable field individual field is Education. With further unification of electronics, the effect on fine engine abilities is uncertain. Some research has discovered into this field, but it is still somewhat unexplored.

4.3 Views on ICT Used by Students and Teachers While Teaching and Learning

Table 3: Views on ICT used by students and teachers while teaching and learning

Respondents	F(x)	Percentage (%)
Always	60	69.7
Sometimes	9	10.4
Rarely	13	15.1
Never	4	4.6
Total	86	99.8 (=100.0)

Source: Primary data (2024).

By refer to the facts in the above table on Views on ICT second hand by graduates and scholars while teaching and education process of Geography graduates and professors of GS Nyakinama I use ICT in learning and education process as attend: Always 69.7%, frequently 10.4%, rarely 15.1% and only 4.6% never second hand ICT while education and education process of Geography, it showed us that professors and scholars use ICT in their education and teaching process but they should increase the active use of ICT for fear that it will help them to boost their academic accomplishment Geography by share them in probing news about Geography particularly about the content they are going to transfer. The teacher consulted pronounced that:

“The growing habit of mathematical novelty can create issues organising undergraduates’ consideration spans and preventing bureaucracy from being absent-minded”. Students’ attention can easily be diverted from academic pursuits by the temptation of friendly publishing, wagering, and other internet-related diversions. When bothersome to exaggerate the advantages of Information Communication and Technology (ICT) while confining disruptions in the school room, expanding and enforcing sound organizing about mathematical devices opposes a fault-finding function. Implementing online security measures, in the way that a K12 web clean, can assist in repressing the approach to distracting content, enabling educators to uphold concentrated learning environments.

This admits bureaucracy to make the most of the benefits mathematical instruments provide while restricting the risks that guide their use".

Other teachers also pronounced that:

"The Information Communication and Technology (ICT) gap among graduates, famous as the mathematical divide, is an important concern. Some undergraduates face unequal access to science and the computer network outside of school due to determinants such as socioeconomic status, geographic location, and limited foundation. This prejudice creates impediments to finalizing tasks, conducting research, and achieving instructional fabrics online. As a result, scholars with restricted access grant permission not to completely undertake digital education occurrences, affecting their academic performance. Addressing the mathematical divide is important for ensuring impartial hope and providing all scholars with access to science and the boundless educational resources freely available on the internet.

Integrating Information Communication and Technology (ICT) into educational settings can, yes, raise issues regarding the protection of pupils' personal information and privacy. There is a likely hazard that delicate student facts may be compromised due to dossier breaches and cyberattacks. Additionally, instructional science vendors can obtain a graduate dossier, raising questions about the data's ownership and how it is used. Schools are required to engage best practices to secure the solitude of graduate information. These best practices include implementing rigorous security measures, using encrypted channels, and ensuring sufficient training to adhere to dossier protection requirements. Additionally, schools carefully judge educational electronics suppliers' solitude rules to learn how the scholar dossier is trained. Educators can establish conviction and assurance in pupils, parents, and additional partners in utilising Information Communication and Technology (ICT) for educational purposes by nurturing a reliable mathematical learning environment and prioritising keeping students' privacy.

4.4 Views on ICT Tools Used in Learning Geography

The investigators asked the respondents: "Which is the most used ICT tool in teaching and learning Geography?" The purpose was to assess the most commonly used ICT tools in learning geography. The information obtained is as follows.

Table 4: Views on ICT tools used in learning geography

Respondents	F(x)	Percentage (%)
Computer	60	69.7
Projector	9	10.4
Radios	13	15.1
Audio Visual	4	4.6
Total	86	100.0

Source: Primary data (2024).

According to the information in the above tables showing the most ICT tools used in teaching and learning Geography, data found that 69.7% of respondents used a computer, 10.4% used a projector, radio covered 15.1%, and 4.6% of respondents stated that they used audiovisual. These results showed us that the ICT tools can affect students' academic performance in Geography at GS Nyakinama I.

4.5 Views on the strategies used in implementing ICT in teaching and learning Geography

The investigators addressed a question to the respondents: "Which is the most the strategies used strategy in implementing Information and Communication Technology in teaching and learning Geography at GS Nyakinama I?" The purpose was to examine the most common strategies used to implement Information and Communication Technology in teaching and learning Geography at GS Nyakinama I. The information obtained is as follows:

Table 5: Views on the Strategies Used in Implementing ICT in Teaching and Learning Geography

Respondents	F(x)	Percentage (%)
Improve infrastructure	19	22.09%
Use active learning methods	17	19.7%
Distribute enough computers	22	25.5%
Improve positive attitudes use of technology	16	18.6%
Improve ICT skills	12	13.9%
Total	86	99.79(=100.0)

Source: Primary data (2024).

By referring to the news in duplicate table on ultimate the strategies second hand in achieving Information and Communication Technology in education and knowledge Geography at GS Nyakinama I we raise that 22.09% asserted that develop foundation, while 19.7% were pronounced that use alive education methods nevertheless, 25.5% established that classify enough calculating in addition 18.6% asserted that help helpful stances use of science and 13.9% of answered that improve ICT abilities. This indicates that the above plans will second hand in executing Information and Communication Technology in teaching and knowledge Geography at GS Nyakinama. I will boost the productive unification of ICT in the education and learning process that impressed all graduates in the academic field of Geography. Teacher interviewed on the likely resolution to overcome challenges confronted ICT unification in education and learning arithmetic still pronounced that Technology has performed a fault-finding role in enduring schools all along the universal: Record numbers of undergraduates immediately have their own school-issued mathematical schemes, educators have enhance more-fault-finding evaluators of electronics finishes, and a hard push is underway at the combined, state, and local levels to receive all birthplaces affiliated to speedy internet.

Another lecturer examined the attainable answer to overcome challenges met in Information and Communication Technology integration in education and knowledge arithmetic pronounced that

“Without even looking at digital direction, the amount of momentary teenagers and tweens give watching at calculating screens rivals how much time they would give active at a brimming- or any-time task. Educators and children’s energy masters alike contend graduates need more support to prevent the become worn of electronics from superior to unsound presence in the classroom”.

Teacher had connection with the likely answer to overcome challenges met Information and Communication Technology unification in teaching and education arithmetic further pronounced that

“Illustration of many computer fanlights coinciding accompanying nasty eyeballs inside the close, open, and underrate circles within the miscellaneous bay screens. Student dossier solitude circumscribes a broad range of considerations, from graduates’ own smartphones, to hall uses found and grasped by teachers, to community-level dossier schemes, to state experiment programs. Here’s the reason schools are struggling to defend that dossier”.

In our scrutiny, we found that Schools are dealing with education sciences that use machine intelligence for the entirety, from education concerning the manipulation of numbers to optimising bus routes. The use of leading Information and Communication Technology in the nation’s education and knowledge process. An extreme budget has been established to support the supplies wanted by teachers to boost instruction overall. Despite all the work, most of the nations are facing the same question, in which the instructors are not maximising the use of the Information and Communication Technology provided.

4.6 Views on Students’ Performance Level in the Geography Subject, Considering Marks Obtained

We addressed a question to the respondents: “How would you grade your performance level in geography subjects, comparing marks obtained in the last three years?” The purpose was to see the performance level of students of GS Nyakinama I according to marks obtained by considering the impact of the use of ICT in teaching and learning Geography. To make this clear, we compared the degree of integration of ICT in teaching and learning Geography from 2021,2022 and 2023, and we linked them with the results of students in these three years 2021,2022 and 2023, so we compared the degree of integration of ICT by linking them with results obtained by students as follows:

**Table 6: Views on Students' Performance Level
 in Geography Subject, Considering the Marks Obtained**

Degree of usability	2021		2022		2023	
	F(X)	Percent (%)	F(X)	Percent (%)	F(X)	Percent (%)
Every day	10	11.6	27	31.3	60	69.7
Sometimes	47	54.6	35	40.6	10	11.6
Rarely	8	9.3	21	24.4	16	18.6
Never	21	24.4	3	3.4	0	0.0
Total	86	100.0	86	100.0	86	100.0

Source: Primary data (2021, 2022, 2023).

By the news in above table we found that in 2021 they acted not mix Information and Communication Technology in education and knowledge Geography forever but from 2022 they begun mix Information and Communication Technology in education and education Geography and persisted exercise of mix Information and Communication Technology in 2023, allow us equate the exercise of mix Information and Communication Technology in education and education accompanying the results acquired by juniors of GS Nyakinama I in the period 2021, 2022 and 2023 as holler:

**Table 7: Views on students' performance level
 in Geography subjects, comparing marks obtained in the last three years**

Grades (marks)	2021		2022		2023	
	F(X)	Percent (%)	F(X)	Percent (%)	F(X)	Percent (%)
Excellent (100-80)	47	55.2%	54	63.5%	60	70.5%
Very good (79-69)	15	17.6%	17	20%	20	23.5%
Good (69-55)	10	11.7%	12	14.1%	2	2.3%
Poor (55-40)	3	3.5%	1	1.1%	2	2.3%
Alarming (40-30)	10	11.7%	1	1.1%	1	1.1
Below 30%	0	0	0	0	0	0

Source: Primary data (2021, 2022, 2023).

According to the news in duplicate tables above show that the conduct level of GS Nyakinama I graduates in seeing results of 2021 was Excellent (100-80) 55.2%, Very good (79-69) 17.6%, Good (69-55) 11.7%, Poor (55-40) 3.5%, Alarming (40-30) 11.7%, Below (30%) 0 on account of old age 2021 education and education Geography in GS Nyakinama I was accomplished outside merge Information and Communication Technology forever, equating accompanying the results of 2022 when they began to merge Information and Communication Technology (ICT) in education and knowledge at common 31.7%, frequently 41.5%, exceptionally 23.5% and only never 3.5, they acted: Excellent (100-80) 63.5%, Very good (79-69) 20%, Good (69-55) 14.1%, Poor (55-40) 1.1%, Alarming (40-30) 1.1%, Below (30%) 0 and in 2023 further raised the mix Information and Communication Technology in education and education process by common 70.5 %, occasionally 10.5%, exceptionally 18.8% and never 0 and the juniors' acting was raised: Excellent (100-80) 70.5%, Very good (79-69) 23.5%, Good (69-55) 2.3%, Poor (55-40) 2.3%, Alarming (40-30) 1.1%, Below (30%) 0 by equating duplicate results of 3 age we found that juniors'

efficiency level begun to rise when they were joined Information and Communication Technology in education and education process that overwhelmed definitely graduates' academic act of Geography at GS Nyakinama I.

4.7. Discussion and Interpretation of Results

Research question individual (1) To what are the ICT forms used in instruction and information process of Geography at GS Nyakinama I from study dossier we erect that Views on ICT used by philosopher and helpers while instruction and information process of Geography junior and professors of GS Nyakinama I use ICT in information and instruction process as trail: Always 69.7%, usually 10.4%, unusually 15.1% and only 4.6% never used ICT while instruction and instruction process of Geography, it presented us that ability appendages and graduates use ICT in their information and instruction process but they should increase the influential use of ICT cause it will help aristocracy to improve their academic acting Geography by portion of food red tape in acute revelation about Geography specifically about the content they are make use of transfer. Illustration of many scheming apertures coexisting following terrifying eyeballs inside the close, open, and underestimated circles inside the varying bay screens. Student file aloneness contains a broad range of concerns, from pupils' own smartphones, to school range uses established and handled by helpers, to area-level dossier plans, to state experiment programs

5. Recommendations

Considering the findings of this research, the following recommendations are made to promote the use of Information Communication and Technology (ICT) in teaching and learning. Those recommendations are addressed to the different governments of Rwanda, under the Minister of Education, teachers, students, and further researchers.

5.1 Recommendations to the Minister of Education

- The government, through relevant ministries, should inspire teachers to be willing to adopt the application of Information Communication and Technology (ICT) as a significant equipment for delivering academic materials to students easily and get rid of old means of using hard copy and black boards, the integration leads to improved academic performance within secondary schools.
- The Ministry of Education should prioritise computer subjects as amongst the most significant lessons to be taught in primary schools, which will improve the attitude of students.

5.2 Recommendations to the Policy Makers

- For successful implementation and integration of Information Communication and Technology (ICT) into teaching and learning, teachers and students have to perceive the technology as better than earlier practices; consistent with their

existing values, past experiences and needs; ease to apply, can be experimented with on a limited basis before making a decision to adopt and finally the results of the innovation are visible to others.

- The decision-makers and implementers should have enough knowledge on whether the investments for the integration of technology in primary curricula reach their aims. The investments can be directed according to teachers' and student's level of knowledge, their willingness and application of technology in learning teaching process, as well as their attitudes of teachers and students to apply the technologies in the classroom to integrate them into the curricula, educating teachers was come a more important issue for students also; this is because one of the factor that slows down the integration of computer technology into education is inappropriate technology infrastructures.
- The education policies and government policies on technology and tax have not prioritized the accessibility and availability of computer integration in education, the government should distribute enough computers to secondary schools within the country and make sure the equipment are sufficient and that is not enough in the world of free trade suppliers of the products in education should be given special attention in the factors like tax as the way of making the efforts positive.

5.3 Recommendations to the Teachers

- The teachers and students should be encouraged to use Information and Communication Technology (ICT) for teaching and learning.
- Schools should develop a system of teaching and learning through the use of Information and Communication Technology (ICT) for their students.
- Most of the teachers have a negative attitude towards the use of Information Communication and Technology (ICT) in classroom teaching, hence the Ministry of Education and REB should provide on-site training and coaching, workshop and conferences to secondary level school teachers.
- Every teacher should be capable of running the class through the use of a projector.

6. Conclusion

The result of the hypothesis revealed that skill is a positive and significant link between two points of instruction and information composition through Information Communication and Technology (ICT) use. Researchers named the interview with the manager in terms of what instruction and instruction by taking advantage of Information Communication and Technology (ICT) can advance instruction and instruction process. From the study interpretation it was certain that, the posture of ability appendages in grades 9-12 is sure toward Information Communication and Technology (ICT) consolidation rebellious schools, as the use of Information Communication and Technology (ICT) is essential for instruction purposes and for philosopher the use of

Information Communication and Technology (ICT) leads to enough origins of matters and upgrades student's understanding rebellious schools.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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