



## **Challenges Of ICT Integration In Teaching History And Government In Public Secondary Schools, Ainabkoi Sub-County, Uasin Gishu County, Kenya**

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### **Abstract**

*Information and communication technology (ICT) era has made significant changes in our work and lives in general, affecting both the private and public sectors. In Ainabkoi sub county, Uasin Gishu County, the integration of ICT in teaching and learning faces a number of obstacles including inadequate facilities, insufficient training of teachers, and limited availability of digital resources. Despite various efforts by the Kenyan government and other stakeholders to promote ICT use in schools such as the Digital Literacy Programme (DLP), provision of computer labs, and teacher training initiatives there is still a gap in how ICT is practically applied in teaching subjects like History and Government. The study, therefore, sought to bridge this gap by studying the challenges of ICT Integration in Teaching History and Government in selected public secondary schools in Ainabkoi Sub-County, Uasin Gishu County, Kenya. A mixed-methods strategy was used in the study, combining quantitative and qualitative methods. The target population comprised 660 individuals, including 30 Principals, 30 History and Government teachers, and 600 Form Three students. Using a 30% sampling ratio, the study sampled 196 respondents drawn from 9 schools: 9 Principals, 9 teachers, and 180 students. Stratified random sampling ensured representation from National, Extra-County, County, and Sub-County schools. The instruments comprised of an interview schedule for principals, questionnaire for History and Government teachers and students to collect data on the challenges and coping strategies. Qualitative data was analyzed thematically while descriptive statistics was used to analyze quantitative data. The research highlighted several obstacles, including insufficient formal training, deficient infrastructure, limited technical assistance and time limitations. Educators indicated that their capacity to integrate ICT tools is constrained by insufficient time and training. Students similarly identified technical challenges and insufficient access to ICT resources as significant barriers to effective learning. The study concluded that several barriers exist. These include poor infrastructure, lack of technical support, limited access to ICT resources, and insufficient time allocated for teachers to plan and incorporate ICT in their lessons. It recommends that schools should employ full-time ICT support personnel and allocate dedicated time for ICT-integrated lesson planning to address technical and structural barriers to ICT use in History and Government. Future research was recommended on evaluation of ICT policy implementation in secondary schools and its influence on integration outcomes across school types.*

**Keywords:** *Challenges, ICT integration, teaching of History and Government*

### **Introduction**

The era of information and communication technology (ICT) has profoundly transformed our work and lives, impacting both the corporate and public sectors. ICT integration in teaching is the inclusion of information and communication technology tools and resources into the educational process to promote learning and teaching. Among other things there are many new technologies that help one in capturing, managing and sending information. This move of technology advancement is now common having several benefits such as arranging; upgrading among others now encompassing a range of digital talk (Kennedy, 2023). Integrating ICT into teaching means adding old methods with tools like tablets, phones, laptops, computers and projectors. Students' digital skills are also developed while it makes learning fun and easily accessible fostering critical thinking abilities.

Globally, amidst the global shift towards integrating ICT into education, subjects like History and Government hold tremendous potential for leveraging technological tools to enhance teaching and learning. ICT can transform traditional classroom methods into dynamic, interactive, and engaging experiences for students, making complex historical events and governmental structures more accessible and comprehensible. As various models of ICT integration are explored worldwide from treating ICT as a standalone subject to embedding it seamlessly within the curriculum the development of essential 21<sup>st</sup> -century skills such as critical thinking, creativity and collaboration becomes increasingly feasible (Gesare, 2023).



In Sub-Saharan Africa, there are a number of obstacles that hinder successful integration of ICT into instructional strategies. For instance, Kennedy (2023) in his case study on the University of Liberia, College of Education, says some big obstructions toward the successful use of ICT in classrooms encompass lack of funding, poor training, and no technical assistance. Nonetheless, despite such enormous prospects, ICT integration within education in East Africa faces serious challenges, especially when considering its transformative power. Institutions grapple with inadequate initial training, resources, and often low confidence among educators to use such resources. According to Okoed (2023), there are much of the same challenges in pre-service teacher education in Uganda, with pre-service students expressing dissatisfaction with the extent to which their educators are integrating ICT in teaching.

In Kenya, while subjects like Mathematics and Sciences have seen considerable incorporation of ICT tools, the subject of History and Government continues to lag behind (KNEC, 2019). In most public secondary schools, there is a noticeable low student engagement, limited development of critical thinking, and a generally passive learning environment, which hampers learners' academic achievement and interest in the subject (Wachira, 2021).

In Ainabkoi sub county, Uasin Gishu County, the incorporation of Information Communication Technology in education faces a number of obstacles including lacking facilities, insufficient training of teachers, and non-availability of digital resources (Onyancha, Kafu, & Cheruiyot, 2023). The government has various programming; one of those is the Digital Literacy Programme, which intends to avail digital devices and training. Teachers in Ainabkoi, however, are still the least effective in implementing ICT in their classrooms, especially in the training their students. All of these point out the need for continued support and professional development for educators in these areas.

Despite various efforts by the Kenyan government and other stakeholders to promote ICT use in schools such as the Digital Literacy Programme (DLP), provision of computer labs, and teacher training initiatives there is still a gap in how ICT is practically applied in teaching subjects like History and Government. These interventions have either focused more on infrastructure or have been generalized across subjects, without tailored approaches to humanities. Moreover, teacher preparedness, curriculum alignment, and contextual challenges have hindered effective implementation. As such, previous initiatives have not adequately addressed the specific pedagogical needs of History and Government instruction. This paper, therefore, sought to bridge this gap.

### **Materials and Methods**

Using a mixed-methods design, the study used quantitative and qualitative techniques to offer thorough insights on the use of ICT in government and history education. It adopted an explanatory sequential mixed methods design, which involved collecting and analyzing quantitative data first, followed by qualitative data. To gather systematic data and spot trends, a descriptive survey design was used. Ainabkoi Sub-County, Uasin Gishu County, was chosen for the study due to its socioeconomic diversity and pertinence to the research problem. The target population comprised 660 individuals, including 30 principals, 30 History and Government teachers, and 600 Form Three students. A sample size of 10%-30% is recommended for descriptive studies to ensure feasibility, manageability and statistical reliability while maintaining data accuracy (Kothari & Garg, 2021). Using a 30% sampling ratio, the study sampled 196 respondents drawn from 9 schools: 9 principals, 9 teachers, and 180 students. The study used a stratified random sampling technique to ensure representation from all categories of public secondary schools in Ainabkoi Sub-County namely national, extra county, county, and sub-county schools. Schools were stratified based on these categories, after which a proportionate number were randomly selected from each stratum. From the selected schools, principals and form 3 History and Government teachers were purposively sampled due to their direct involvement in instructional leadership and subject delivery. History and Government students were selected using simple random sampling, with the number drawn proportionately from each school to achieve the desired sample size. Research instruments included structured questionnaires for teachers and students and semi-structured interview schedules for principals. A pilot study conducted in Kesses Sub-County established reliability (Cronbach's Alpha: 0.793–0.875) and validity through expert review and refinement. Data collection followed ethical approval from the University of Eldoret, NACOSTI, and local authorities. Informed consent, confidentiality, and voluntary participation were ensured. Data analysis utilized SPSS v29 for quantitative data (frequencies, percentages, means), while qualitative responses underwent thematic analysis. Results were presented in tables, charts, and narratives to capture both statistical trends and contextual insights. Ethical safeguards included anonymity through coding, secure data storage, and transparency in reporting findings.



## Results And Discussion

### The challenges impeding effective ICT integration in teaching History and Government

Based on a five-point Likert scale—Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA), this section outlines the main obstacles history and government teachers experience when incorporating ICT into their lesson plans.

#### Teacher Responses on challenges impeding effective ICT integration

**Table 3.1 Challenges impeding effective ICT integration in teaching History and Government**

Statement	Descriptive	SD	D	N	A	SA	Mean
<b>Lack of proper training is a major barrier to effective ICT integration in my teaching</b>	Frequency	0	0	2	6	1	3.8889
	Percentage	0	0	22.2	66.7	11.1	
<b>Insufficient ICT infrastructure hinders my ability to integrate ICT in teaching</b>	Frequency	1	1	0	3	4	3.8889
	Percentage	11.1	11.1	0	33.3	44.4	
<b>There is lack of technical support available for using ICT tools in teaching</b>	Frequency	0	3	0	3	3	3.6667
	Percentage	0	33.3	0	33.3	33.3	
<b>Time constraints limit my ability to effectively use ICT tools in teaching</b>	Frequency	0	2	0	1	6	4.2222
	Percentage	0	22.2	0	11.1	66.7	

Table 3.1 presents the thought of teachers on the challenges they face when integrating ICT in teaching history and government lessons. A vast majority of respondents (77.8%) agreed or strongly agreed that lack of proper training is a major barrier, with a mean of 3.89. This aligns with earlier findings where 77.8% of teachers reported not having attended any ICT training. The lack of skills and pedagogical knowledge likely undermines teachers' confidence and competence in using technology effectively.

With a mean score of 3.89, around 77.7% of the teachers agreed or strongly agreed that inadequate ICT infrastructure is a barrier. Just 22.2% disagreed, indicating that many schools still lack appropriate access to basic ICT resources like computers, dependable internet, and projectors.

One-third (33.3%) of the respondents strongly agreed and another third agreed that lack of technical support is a challenge. This challenge had a slightly lower mean score of 3.67, yet still significant. This suggests that even when infrastructure is available, teachers may struggle to resolve technical issues independently.

Time limitations emerged as the most significant challenge, with a high mean of 4.22. A majority (66.7%) of the teachers strongly agreed that they lack sufficient time to incorporate ICT into lesson planning and teaching. This could be due to tight academic schedules, pressure to complete syllabus, or limited lesson duration that makes ICT use appear time-consuming or impractical.

The findings show that obstacles to ICT integration in history and government education are both systemic and personal. Lack of technical assistance, inadequate infrastructure, inadequate training, and time restrictions are the main obstacles. Targeted interventions are therefore required, including infrastructure investment, the supply of ICT support staff, capacity building through frequent ICT training programs, and lesson time reorganization to allow for efficient technology use.

#### Student Responses on the challenges in ICT integration

This section presents student perspectives on the key challenges that hinder effective integration of ICT in the teaching and learning of History and Government. The data was gathered using a five-point Likert scale, with responses ranging from Strongly Disagree (SD) to Strongly Agree (SA). The mean scores were used to determine the general trends in perception.



**Table 3.2 Student Responses on the challenges in ICT integration**

Statement	Descriptive	SD	D	N	A	SA	Mean
<b>I encounter technical difficulties when using ICT tools in my History and Government classes</b>	Frequency	14	30	24	65	32	3.4303
	Percentage	8.5	18.2	14.5	39.4	19.4	
<b>There is lack of ICT resources (e.g. computers, internet) in my school for effective learning</b>	Frequency	12	12	17	60	64	3.9212
	Percentage	7.3	7.3	10.3	36.4	38.8	
<b>My teachers adequately trained in Using ICT tools for teaching History and government</b>	Frequency	11	45	47	42	20	3.0909
	Percentage	6.7	27.3	28.5	25.5	12.1	
<b>The integration of ICT in history and government lessons disrupts the flow of the class</b>	Frequency	88	42	12	4	19	1.933
	Percentage	53.3	25.5	7.3	2.4	11.5	

Students' perceptions on the problems they encounter while incorporating ICT into history and government classes are shown in Table 3.2. When using ICT tools, a sizable percentage of pupils (58.8%) agreed or strongly agreed that they encounter technical challenges. With a mean score of 3.43, this problem appears to be moderately problematic. These issues may be caused by software incompatibilities, system errors, or a lack of user expertise.

Inadequate ICT resources were one of the students' top worries, with a high mean score of 3.92. The majority of students—roughly 75.2%—agreed or strongly agreed that their schools do not have enough computers and internet. This supports instructor input and implies that availability and access to ICT tools are significant barriers.

Regarding Teacher ICT Competency, there were differing opinions expressed on the assertion about whether instructors are properly taught, with a mean score of 3.09. 34% opposed or strongly disagreed, 28.5% were neutral, and 37.6% agreed or strongly agreed. This implies that, depending on the school or individual teacher, children may perceive differences in the ICT proficiency of teachers.

Interestingly, a majority (78.8%) of students disagreed that ICT integration disrupts the flow of history lessons. With a low mean score of 1.93, this implies that students do not view ICT as a distraction or hindrance to learning; in fact, it may enhance the learning process when effectively implemented. These students' responses complement the earlier findings from teachers. The key challenges identified were, technical difficulties, lack of infrastructure, and variable teacher training mirror those acknowledged by educators. However, the students clearly do not view ICT as a disruptive force, but rather see its potential to enrich the learning experience. These results highlight a shared readiness among learners and a need for systemic support to equip teachers and schools for effective ICT integration in History and Government education.

Both teachers and students recognize similar structural challenges such as limited infrastructure, insufficient training, and technical difficulties as major impediments to effective ICT integration. However, while teachers emphasize professional and logistical barriers such as lack of time and support, students largely express a willingness and enthusiasm for ICT use, provided the necessary tools and support systems are in place. This calls for targeted interventions such as teacher training, improved ICT facilities, and administrative support to enhance the effective use of technology in History and Government education.

The principals also identified, a range of challenges to effective ICT integration. These included inadequate infrastructure, lack of ICT training, time constraints within the curriculum, and resistance from some teachers due to lack of confidence or interest. Principals also cited financial limitations and the absence of digital content specifically aligned with the History and Government syllabus as further obstacles. Some schools also lacked consistent electricity or faced difficulties in maintaining existing equipment.



*"We don't have enough ICT tools, and the ones we have are shared among many teachers. Sometimes, even getting a laptop for one lesson is a struggle."* – Principal I, 24<sup>th</sup> March, 2025

*"The curriculum is already packed. Teachers say they barely have enough time to cover content, let alone plan ICT-integrated lessons."* – Principal A, 20<sup>th</sup> March, 2025

*"Some of our teachers are not comfortable using computers in class. They feel it's too complicated and prefer sticking to their usual methods."* – Principal E, 21<sup>st</sup> March, 2025

*"We cannot afford to buy new projectors or digital content every year. Our budget is already stretched with basic needs."* – Principal D, 20<sup>th</sup> March, 2025

*"Electricity is unreliable here. Sometimes we go for days without power, so planning a digital lesson becomes risky."* – Principal C, 20<sup>th</sup> March, 2025

Most principals expressed positive attitudes toward ICT integration and recognized its potential; they admitted that systemic support at the administrative level was limited. Schools often lacked formal policies, dedicated budgets, and coordinated strategies for promoting ICT use across all departments, especially in non-science subjects like History.

*"We support the idea, but without a clear plan or funding, it becomes difficult to implement ICT meaningfully across all subjects."* – Principal F, 21<sup>st</sup> March, 2025

*"We occasionally organize peer-sharing sessions where more tech-savvy teachers guide others, but these are not structured or frequent."* – Principal B, 20<sup>th</sup> March, 2025

*"ICT is often associated with sciences and computer studies. Humanities are rarely included in ICT planning or budgeting."* – Principal I, 24<sup>th</sup> March, 2025

*"There is a need for the Ministry or school boards to develop specific policies for ICT in History and Government and other arts subjects, not just STEM."* – Principal E, 21<sup>st</sup> March, 2025

The lack of institutional commitment, absence of targeted initiatives, and limited funding were seen as key impediments to creating an enabling environment for ICT integration in the teaching of History and Government.

The findings of this study reveal that multiple systemic and pedagogical barriers hinder effective ICT integration in teaching History and Government in secondary schools in Ainabkoi Sub-County. Among these include technical problems, poor ICT infrastructure, inadequate teacher training, few digital materials fit for the syllabus, and low teacher confidence particularly among older teachers or those opposed to change. Responses from administrators, instructors, and students all repeatedly reflected these difficulties, implying that even if ICT is seen favorably by kids, the ecosystem needed to enable its integration is still scattered and underdeveloped.

These findings coincide with those of Hashemi and Kew (2021), who noted as main obstacles in English language teaching lack of teacher confidence, poor training, and insufficient time. Their advice for efficient professional development initiatives and time allocation for ICT use greatly supports the result of this study that Ainabkoi teachers feel unprepared and unsupported in introducing ICT into History and Government courses. While Hashemi and Kew focused on language teaching, the commonality of barriers across disciplines points to a structural issue rather than a subject-specific one.

Similarly, Bingimlas (2009) agrees with the current study's findings, identifying lack of confidence, competence, and access to resources as major obstacles to ICT integration. Bingimlas also emphasizes that no single factor can ensure success, but a combination of infrastructure, training, and technical support is essential—precisely the gap evident in Ainabkoi schools, where power outages, broken equipment, and insufficient hardware continue to impede meaningful integration. This lends weight to the need for holistic, multi-component strategies rather than isolated interventions.



Salehi and Salehi (2012) reinforce the importance of technical support and Internet access, reporting that even when teachers are enthusiastic, the lack of support systems and constrained teaching schedules discourage ICT use. This is aligned with teachers' feedback in the current study, who reported that curriculum pressure and insufficient time limited their ability to prepare and deliver ICT-based lessons. This repeated evidence suggests that beyond providing equipment, time management policies and ICT-specific lesson planning support are urgently needed.

In contrast, while the students in Ainabkoi expressed optimism about ICT use, their enthusiasm was not matched by the availability of tools or trained personnel. This result corroborates to Ben Ouahi et al. (2022), who observed that although students value interactive technologies, their limited exposure results from teachers' underuse of tools or lack of training. This disparity between student readiness and teacher preparedness points to a significant implementation gap that, if not addressed concurrently with parallel investments in teacher upskilling and infrastructure provision, runs the danger of stagnating development.

The points of view of the principals draw attention to even more difficult issues like teacher opposition, financial restrictions, curriculum time limits, and the dearth of syllabus-aligned digital materials. This is consistent with Murithi and Yoo (2021), who discovered that Kenyan public-school teachers lacked confidence and practical ideas to include ICT into the Competency-Based Curriculum even with minimal ICT training. Despite widespread policy advocacy, both studies reveal that on-the-ground implementation is still severely lacking due to limited access, poorly designed training programs, and overreliance on outdated infrastructure.

The issue of insufficient administrative and technical support is also echoed by Al-Mamary (2022), who identified that accessibility, technical assistance, time, and training significantly impact ICT integration in Yemeni schools. Though the context differs, the alignment with the Ainabkoi findings underscores that developing countries share structural and logistical barriers that transcend national boundaries. However, Al-Mamary offers a model-based solution to prioritize interventions something that the current study did not delve into, representing a possible area for further research.

The students' positive attitude toward ICT in this study also supports findings by Akram et al. (2022), who reported that learners are often more ready to adopt ICT than teachers, but their efforts are hampered by the lack of teacher competence and administrative encouragement. Similarly, Mokotjo and Mokhele (2021) noted that South African teachers had access to tools like GeoGebra but struggled due to poor confidence and training paralleling the Ainabkoi context where ICT tools are underutilized despite their presence in some schools.

From a Kenyan-specific standpoint, Ntorukiri et al. (2021) observed low investment in ICT infrastructure and emphasized the need for training in core software skills such as Microsoft Office. This is particularly relevant to the Ainabkoi case, where teachers reported that even basic tools like projectors and computers were unavailable or poorly maintained. Although the government has ICT policies in place, these findings indicate that policy implementation is neither uniform nor effective, especially in under-resourced schools.

Finally, Ezeodo and Aroh (2024) reported that Nigerian secondary schools also suffer from poor ICT culture and weak maintenance practices, leading to underutilization of even the limited ICT resources available. This reinforces the need for a cultural shift in institutional attitudes toward ICT moving beyond hardware acquisition to promoting ongoing usage, repair, and adaptation of ICT tools to meet evolving pedagogical needs in History and Government.

While the literature broadly supports this study's findings, a clear research gap emerges: most existing studies focus on Science, Technology, Engineering and Mathematics (STEM) subjects or general education without paying sufficient attention to subject-specific needs especially for Humanities and Social Sciences like History and Government. Moreover, while students' perspectives are acknowledged in the literature, they are often not central to policy or implementation discussions.

This study contributes uniquely by emphasizing learners' readiness and enthusiasm for ICT, which remains underutilized due to teacher-level and systemic barriers. It also brings into sharp focus the misalignment between national ICT policies and actual classroom realities, especially in rural or semi-rural schools like those in Ainabkoi. The convergence of these challenges across teacher, student, and administrative perspectives calls the



urgency of a coordinated, well-funded, and context-specific ICT strategy one that is not generic but tailored to discipline-specific content, local infrastructure realities, and differentiated teacher needs.

### **Conclusion and Recommendation**

#### ***Conclusion***

The findings concluded that several barriers exist in the integration of ICT in the Teaching of History and Government. These include poor infrastructure, inadequate technical support, limited access to ICT resources, and insufficient time allocated for teachers to plan and incorporate ICT in their lessons. Additionally, the absence of subject-specific training programs has left many teachers ill-prepared to effectively implement ICT in a History and Government context. The data also showed that both teachers and students face logistical and technical difficulties that affect the smooth utilization of digital resources in classroom settings.

#### ***Recommendations***

- i. Schools should employ full-time ICT support personnel and allocate dedicated time for ICT-integrated lesson planning to address technical and structural barriers to ICT use in History and Government.
- ii. Schools should institutionalize peer mentorship and professional learning communities to promote collaborative learning and the sharing of best practices in ICT integration among History and Government teachers.
- iii. There is need to emphasize the role of ICT and other emergent technologies like artificial intelligence beyond the classroom, so as to nature and motivate learners to be better prepared for the world of work.



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