



“Harnessing Information Communication Technology in Civic Education Teaching and Learning: A Comprehensive Review”

Chanda Chansa Thelma¹, Zohaib Hassan Sain²

¹Chanda Chansa Thelma, Chreso University, Lusaka, Zambia

²Zohaib Hassan Sain, Superior University, Lahore, Pakistan

Corresponding Author: channdathelma1@gmail.com

Abstract:

Overview: This comprehensive review explores the intersection of ICT and civic education teaching and learning, examining its potential, challenges, and implications for educators, policymakers, and learners.

Contribution to the Body of Knowledge: ICT has revolutionized the landscape of teaching and learning, particularly in the domain of Civic Education. This comprehensive review explores the multifaceted role of ICT in enhancing the efficacy and relevance of Civic Education instruction. ICT integration in civic education facilitates immersive and interactive learning experiences, transcending traditional classroom boundaries. Through multimedia resources, such as videos, simulations, and virtual tours, ICT engenders a dynamic learning environment that captivates pupils' interest and fosters deeper engagement with civic concepts and issues.

Methods: The study employed both the qualitative and quantitative methods and a descriptive survey design that sampled officials from DEBS office, head teachers, teachers, parents and the pupils. The sample size for this study was 150. Data was obtained from the respondents by means of interviews and questionnaires. Percentages, tables, graphs and pie-charts were used in combination with the use of software MS access and MS Excel.

Results: The study found that the role of ICT in promoting global citizenship education and addressing pressing societal issues cannot be over-emphasized, underscoring its potential to foster cross-cultural understanding and social change.

Recommendation: This review underscores the transformative potential of ICT in enriching civic education teaching and learning processes. By leveraging innovative technologies

thoughtfully and inclusively, educators can empower learners to become active, informed, and responsible citizens in the digital age.

Keywords: Civic Education, Challenges, Information Communication Technology, Effect, Learning, and Teaching.

1.1 INTRODUCTION

Many countries around the globe have realized the need to educate citizens especially, the young people in order to secure the future of society. This requires the imparting of necessary skills and knowledge that would shape, nurture and inculcate values that could help propel the agenda of nations to bring about development (Chanda, 2023a). Hence, Civic Education has been identified as a discipline that could drive the aforementioned agenda. Harnessing Information Communication Technology (ICT) in civic education teaching and learning presents a transformative opportunity to revolutionize the educational landscape. Civic Education, also known as citizenship education, facilitates the development of the knowledge, understanding, social skills, disposition, virtues and values that personally fulfil individuals and render them socially constructive citizens (Chanda, 2023b). Through a comprehensive review, it becomes evident that integrating ICT tools and platforms into civic education fosters an enriched learning environment, enabling students to engage actively with democratic principles, governance structures, and civic responsibilities. Wong (2003) says that by leveraging ICT, educators can create interactive and dynamic lessons that transcend traditional boundaries, offering immersive experiences such as simulations, virtual debates, and multimedia resources. Furthermore, ICT facilitates access to a wide range of authentic civic-related information sources, enabling pupils to critically analyze diverse perspectives and develop informed opinions. Additionally, ICT enhances collaboration among students and educators, fostering a participatory learning culture that mirrors democratic processes. However, effective implementation requires addressing challenges such as the digital divide, ensuring equitable access to technology, and providing adequate training for educators to leverage ICT effectively. Overall, by embracing ICT in civic education, institutions can empower students to become active and informed citizens equipped to navigate and contribute to the complexities of modern society.

Chanda (2023d) explains that a true civics education has three interrelated components, virtue, knowledge and skills. Civic virtues are the traits of character necessary for the preservation and improvement of democratic governance and citizenship. Examples of civic virtues are respect for the worth and dignity of each person, civility, integrity, self-discipline, tolerance and compassion. Civic knowledge includes principles of democratic theory, operations of democratic governance, and behaviors of democratic citizenship. In particular, it involves concepts and data about democracy in the learner's country and comparisons with other countries. Civic skills are the cognitive operations that enable the learner to understand, explain, compare, and evaluate principles and practices of government and citizenship. There also are participatory skills that involve actions by citizens to monitor and influence public policies and the resolution of public issues. Together, the cognitive and participatory skills involve the citizen's use of knowledge to think and act competently in response to the ongoing challenges of democratic governance and citizenship. As a school subject of study, Civic Education is supposed to provide young citizens

with conceptions of citizenship, its rights and duties, governance and participation opportunities in a broad sense Muleya, 2019). It infers on making learners critical thinkers and active participants in democratic activities of their community. Civic education is the continual and systematic provision of information and learning experiences to all citizens for their effective participation in democratic life. The purpose of civic education is to have an informed citizenry that actively participates in governance affairs of the society on the basis of enhanced knowledge, understanding and ownership. Civic education imparts information and creates awareness of civic morals and values, rights and responsibilities and on how these are exercised and accessed by all citizens within society including disadvantaged and marginalized groups. Civic education is often used in combination with other participatory governance tools. It can take different forms from classroom-based learning, informal training, experiential learning, to mass media campaigns. When done effectively, it leads to more effective and inclusive participation by all citizens in socio-economic, political and governance processes affecting their lives.

ICT has revolutionized the landscape of teaching and learning, particularly in the domain of Civic Education. This comprehensive review explores the multifaceted role of ICT in enhancing the efficacy and relevance of Civic Education instruction. Chanda (2024) narrates that civic education means all the processes that affect people's beliefs, commitments, capabilities, and actions as members or prospective members of communities. ICT integration in civic education facilitates immersive and interactive learning experiences, transcending traditional classroom boundaries. Through multimedia resources, such as videos, simulations, and virtual tours, ICT engenders a dynamic learning environment that captivates students' interest and fosters deeper engagement with civic concepts and issues (Watson, 2001). Moreover, digital platforms and online forums enable students to participate in collaborative learning activities, share diverse perspectives, and cultivate critical thinking skills essential for active citizenship. ICT tools also empower educators to personalize instruction, catering to individual learning styles and preferences, while offering real-time feedback and assessment opportunities to monitor student progress effectively. Furthermore, the accessibility and ubiquity of ICT democratize access to Civic Education, bridging socio-economic divides and reaching marginalized populations. However, challenges such as the digital divide, technological infrastructure limitations, and concerns regarding the quality and reliability of online information underscore the need for careful integration and pedagogical guidance. Overall, the integration of ICT in Civic Education holds immense potential to cultivate informed, engaged, and empowered citizens capable of contributing meaningfully to their communities and society at large.

In this 21st century, the term "technology" is an important issue in many fields including education. This is because technology has become the knowledge transfer highway in most countries. Technology integration nowadays has gone through innovations and transformed our societies that has totally changed the way people think, work, communicate and live (Grabe, 2007). As part of this, schools and other educational institutions which are supposed to prepare students to live in a knowledge society need to consider ICT integration in their curriculum (Ghavifekr, et al, 2012).

Chanda (2023c) narrates that Civic dispositions, like civic skills, develop slowly over time and as a result of what one learns and experiences in the home, school, community, and organizations of civil society. Every day, computers become more important factor in today's society because there

are virtually no human endeavors where computer does not find applications. Indeed, we are confronted with computers during working hours and in our private lives (Habeenzu, (2016). The same applies to communication. Nowadays, people have much more possibilities to communicate with other people as a result of computer networking. Mobile phones, electronic mail, short message service (SMS) and many other are few examples of the new possibilities actualized through communication. All these new communication means have their own specific way of using them, their own advantages and disadvantages and their own specific group of users. The Information Communication Technology (ICT) is one of the important innovations for modern development. The term Information Communication Technology springs up from the convergence of telecommunication, computing and broadcasting through the use of digital information. It covers any product that will store, retrieve, manipulate, transmit and receive information electronically in a digital form.

ICT encompasses the broad fields of information and communications by means of computer and telecommunication; tools that are being increasingly used for organizational or personal information processing in all sectors of economy and the society as a whole (Hamidi, et al, 2011). Information Communication Technologies (ICT) have had an impact on the Zambian society and have changed the way people live, learn, work and play. Zambia has initiated the integration of information and communication technology in many sectors of national development. For instance, the Zambia Revenue Authority (ZRA) introduced online tax-payer's system which makes it easier to collect tax revenue.

Another example is where most banks in Zambia now have e-banking, mobile banking and many others. Furthermore, Open and Distance Learning (ODL) has relatively grown in many Zambian education institutions and ICT has proven to be at the center of this arrangement. Moreover, recently when COVID 19 negatively impacted on the education system, but due to the introduction of information and communication technology in education, learning still continued (Abas, 2009). This revolution demands for basic information and communication technology (ICT) knowledge for some careers in order for one to be competitively functional in the Zambian society today. Information and Communication Technology refers to the combination of manufacturing and services industries that capture, transmit and display data and information electronically.

Information and Communication Technology are those technologies that can be used to interlink information technology devices such as personal computers with communication technologies such as telephones and their telecommunication networks. The personal computer (PC) and laptop with e-mail and Internet provides the best example (Hussain et al, 2011).

ICT has a range of electronic technologies which when converged in new configurations are flexible, adaptable, enabling and capable of transforming organizations and redefining social relations (Crowder, 2018). The penetration levels of information and communication technology in Zambia 's education institutions remain low, with those schools that are equipped mostly utilizing second-hand and refurbished computers. The integration of information and communication technology on practice has been limited, although the introduction of computer studies as a school study subject has begun to change this (Isaacs, 2017).

The adoption of a national information communication technology policy, as well as the development of a draft information and communication technology (ICT) policy for education and an associated implementation framework, provides an enabling policy environment to promote far

greater access and use of information and communication technology across all sectors of Zambia's education system. These include a system for enhancing education management, administration, teaching and learning. While the goals and targets set in the policy documents seem realistic. Besides, realizing them within the established time frames remains a challenge (Snelson, 1974). The future of Zambia will be dependent on the size and quality of its human capital. Therefore, it is the duty of education system to equip learners with relevant information and communication technology skills at all levels. It was for this motive that the study was conducted to do a comprehensive review on the effect of ICT on civic education in selected secondary schools of Lusaka district in Zambia.

1.2. Statement of the Problem

Information communication technology integration in education generally means technology-based teaching and learning process that closely relates to the utilization of learning technologies in schools (Tinio, 2002). These are considered to be cardinal on civic education because they make lessons interesting and clear to the learners during and after the lessons. Information is now in multiple forms like texts, graphics, video, audios and many more. In the realm of education, the integration of Information Communication Technology (ICT) has been widely recognized as a powerful tool to enhance teaching and learning experiences. However, in the specific context of civic education, there remains a significant gap in understanding the comprehensive impact, challenges, and opportunities presented by ICT integration (Trucano, 2005). Despite the growing availability and accessibility of ICT tools, there exists a lack of comprehensive review and analysis regarding their utilization in civic education teaching and learning processes, specifically in Zambian context.

1.3. The Purpose of the Study

The purpose of this study was to examine the effect of ICT on civic education teaching and learning in selected secondary schools of Lusaka district, Zambia. The examination comprehensively reviewed on challenges, successes and recommendations.

1.4. Research Objectives

The objectives of the study were to:

- Identify the effects of ICT on civic education teaching and learning in selected secondary schools of Lusaka district, Zambia.
- Determine challenges associated with the use of ICT in teaching and learning of civic education in selected secondary schools of Lusaka district, Zambia.
- Assess strategies put in place for ICT to enhance the effective teaching and learning of civic education in selected secondary schools of Lusaka district, Zambia.

1.5. Theoretical Framework

This study was guided by the behaviorist theory. This theory suggests that reinforcement strengthens the behavior arising from connection between stimulus and response. In Pavlov's famous experiment, the dog salivated (Response-R) when food (unconditioned stimulus- UCS) was served and a bell (conditioned stimulus-CS) rang simultaneously. Later on, even in the absence of food, only on hearing the bell, the dog salivated. This was because response was made even to the CS after it had been paired several times with UCS. For instance, we stop at red traffic signal even when we are no longer asked to do so because the red light (CS) itself generates the response thus leading to learning. Behaviorists consider learning to be a mechanical process of

association of response with a stimulus for producing a new behavior, i.e. learning. They also emphasize the need for 'practice' for strengthening the association so that the newly acquired behavior can be performed with speed as well as efficiency, and gains the strength of a habit. For instance, while learning to use a computer keyboard, you gain speed and efficiency with practice. You have also read that behaviorists like Pavlov highlight the need for conditioning the response (R) through proper reinforcements and enabling the learner to respond to even a neutral stimulus (S) that assumes the strength of a natural stimulus (Chris, 2016). Learning experience needs to be enjoyable: While using ICT for teaching, one need to understand that once the novelty of the device wears off, learners may lose interest unless the content taught is interesting. Hence, children may be excited as you take them to a smart classroom and use computers but to sustain their interest you need to teach in a way that they enjoy learning.

1.6. Significance of the Study

The study findings would help the stakeholders such as curriculum planners to adopt new interventions basing on researched findings. It would also help the Ministry of Education to realize the need to produce materials in terms of ICT equipment that can help transform the learning environment into one that is learner-centered. The findings would help the teachers trained in ICT to adjust their teaching methods with the aim to improve on the usage of the technology. Additionally, the study findings may also add value to the existing body of knowledge and raise interest for further studies in the area. It is further hoped that the findings of the study would high lighten the government and other stakeholders on the hindrances to the use of ICT in teaching and learning of civic education.

2. RESEARCH METHODOLOGY

2.1. Study Design

This study used a descriptive research design in order to collect qualitative and quantitative data from the participants (respondents) on the effects of ICT on civic education teaching and learning. Satishprakash (2020), states that descriptive study regulates and reports the way things are and generally involves assessing attitudes, opinions towards individuals, organizations and procedures.

2.2. Research Site

This study was conducted in Lusaka district, the capital city of Zambia from 5 selected secondary schools from which the participants were selected for the study.

2.3. Population, Sample and Sampling Procedure

The population for the study comprised official from DEBS office head teachers, teachers of civic education, parents and pupils of civic education giving a total of one thousand five hundred (1500). The sample size involved a total of 150 respondents which included 2 officials from DEBS office, 5 head teachers, 1 from each selected school. 10 civic education teachers, 2 from each selected school. 120 pupils of civic education, 24 from each selected school and 13 parents. The study used both purposive and simple random sampling on different participants.

2.4. Data Analysis

This study used descriptive analysis to analyze the data. Qualitative and Quantitative techniques of data analysis were used, and data was presented on the analytical tools such as tables, figures and charts.

2.5. Ethical Issues

An introductory letter was sought from DEBS office Lusaka district to permit the study to collect data from the targeted schools. The study upheld research ethical considerations such as voluntary participation of the respondents, confidentiality, honesty, right of privacy and so forth in a manner that the research would not disrupt the daily routine of the business activities under research. The researchers briefed the participants at the beginning and at the end of the study and assured the participants that the data collected was purely for academic purposes only and would not be published on any sort of media. Furthermore, the main objective of gathering such information was made clear to the respondents. The study avoided pressuring respondents to take part in the research. In this research, the study was fully conscious of the need to abide by the ethical rule of respecting the privacy of individuals taking part in the research.

3. FINDINGS AND DISCUSSIONS

The following findings and discussions were presented according to set research objectives:

3.1. Effects of ICT on Civic Education Teaching and Learning

Enhanced engagement as an effect of Information and Communication Technology (ICT) on civic education teaching and learning is a pivotal advancement in modern pedagogy. Voogt (2003) says that ICT integration fosters a dynamic learning environment by providing diverse tools and platforms that cater to different learning styles and preferences. Head teachers observed that through interactive simulations, online forums, multimedia presentations, and real-time collaboration tools, students are encouraged to actively participate in their learning process. Furthermore, ICT enables educators to diversify their teaching methods, making lessons more engaging and relevant to students' lives (Masumba & Mulenga, 2019). By leveraging social media platforms and online communities, students can connect with peers globally, exchange ideas, and engage in meaningful discussions about civic issues, thus broadening their perspectives. Additionally, the accessibility of information through digital resources empowers students to conduct independent research, critically analyze data, and form well-informed opinions about complex societal issues. Ultimately, the integration of ICT in civic education cultivates a more informed, active, and engaged citizenry, laying the foundation for a thriving democratic society in the digital age.

Furthermore, teachers of civic education alluded that the integration of Information Communication Technology (ICT) into civic education teaching and learning has proven to be a catalyst for the promotion of critical thinking skills among students. Through interactive digital platforms, students are encouraged to engage with diverse perspectives, analyze complex socio-political issues, and evaluate the credibility of sources. ICT enables educators to present real-world scenarios, simulations, and multimedia content that stimulate inquiry and foster deeper understanding of civic concepts (Tinio, 2002). Moreover, online forums and collaborative tools provide opportunities for students to participate in meaningful discussions, share insights, and construct knowledge collaboratively. By navigating digital resources, students develop

information literacy skills, enabling them to discern biases, detect misinformation, and make informed decisions as responsible citizens. Thus, the effective utilization of ICT in civic education empowers students to think critically, question assumptions, and actively contribute to civic discourse, thereby cultivating a generation of informed and engaged citizens equipped to navigate the complexities of the modern world. The respondents also said that access to information has been significantly transformed by the advent of Information and Communication Technology (ICT), thereby influencing civic education teaching and learning. ICT has revolutionized the dissemination of information, breaking down traditional barriers and enabling unprecedented access to a wealth of knowledge. Pedro (2004) narrates that through digital platforms, databases, and online resources, individuals now have the ability to swiftly retrieve information on civic matters, governmental processes, and societal issues. This enhanced access fosters informed citizenship by empowering learners to critically analyze information, engage in civic discourse, and participate meaningfully in democratic processes. Furthermore, Mulenga (2016) noted that ICT facilitates interactive learning experiences, such as virtual simulations, multimedia presentations, and online forums, which enrich civic education curricula and promote active civic engagement. However, challenges related to the digital divide and misinformation must be addressed to ensure equitable access and the cultivation of informed citizenship in the digital age. In essence, ICT has fundamentally reshaped access to information, profoundly impacting civic education teaching and learning by promoting informed, engaged, and empowered citizenry.

Moving on, officials from DEBS office narrated that interactive learning, influenced by ICT, has significantly transformed the landscape of civic education teaching and learning. This was supported by Sichone (2011) who added that leveraging digital platforms, pupils are now exposed to dynamic and immersive educational experiences that extend beyond traditional classroom boundaries. Through ICT tools such as online forums, virtual simulations, and multimedia resources, educators can foster active engagement, critical thinking, and collaboration among learners. Interactive Learning enables students to explore complex civic concepts in interactive ways, encouraging them to analyze real-world issues, engage in problem-solving, and participate in simulated civic scenarios. Moreover, ICT facilitates personalized learning experiences tailored to individual student needs and preferences, enhancing accessibility and inclusivity in civic education. By integrating ICT into civic education teaching, educators can empower students to become informed and active citizens, equipped with the necessary skills to navigate contemporary civic challenges and contribute meaningfully to society.

Parents pointed out that the integration of Information and Communication Technology (ICT) in civic education has catalyzed a transformative shift, fostering a deeper engagement and activism among students. Through digital platforms, students are not only exposed to theoretical concepts but are also empowered to actively participate in civic affairs. ICT enables educators to present real-world scenarios, interactive simulations, and multimedia resources, thereby enhancing students' understanding of complex civic issues (Pulkkinen, 2007). Moreover, online forums and social media platforms provide avenues for open discourse and collaboration, encouraging students to voice their opinions and engage in meaningful debates. This dynamic exchange of ideas cultivates critical thinking and empathy, nurturing a generation of informed and socially conscious citizens. Furthermore, ICT equips students with the tools to organize and mobilize for causes they are passionate about, transcending geographical boundaries and amplifying their impact (Selwyn,

2011). By harnessing the power of technology, civic education transcends traditional classroom boundaries, fostering a culture of active citizenship and inspiring a new wave of civic engagement and activism among students.

Pupils of civic education also expressed that personalized learning, catalyzed by Information and Communication Technology (ICT), has emerged as a transformative force in civic education teaching and learning. ICT tools, ranging from interactive educational software to online platforms, have enabled educators to tailor instruction to individual student needs, interests, and abilities, fostering a more inclusive and engaging learning environment. Through adaptive learning algorithms and data analytics, teachers can identify students' strengths and weaknesses in civic education, allowing for targeted interventions and differentiated instruction (Rosswall, 1999). Moreover, ICT facilitates access to diverse learning resources, such as multimedia presentations, simulations, and virtual field trips, enriching students' understanding of complex civic concepts and issues. By promoting active participation and collaboration, online forums and social media platforms empower students to explore diverse perspectives, engage in meaningful discussions, and develop critical thinking skills essential for informed citizenship (Ron, 2015). Ultimately, personalized learning driven by ICT enhances the effectiveness of civic education by catering to the unique learning needs of each student, cultivating their civic knowledge, skills, and dispositions in preparation for active civic engagement in an increasingly interconnected world. Figure1 below summarizes the effects of ICT on civic education teaching and learning in line with the responses given by the participants in the study.

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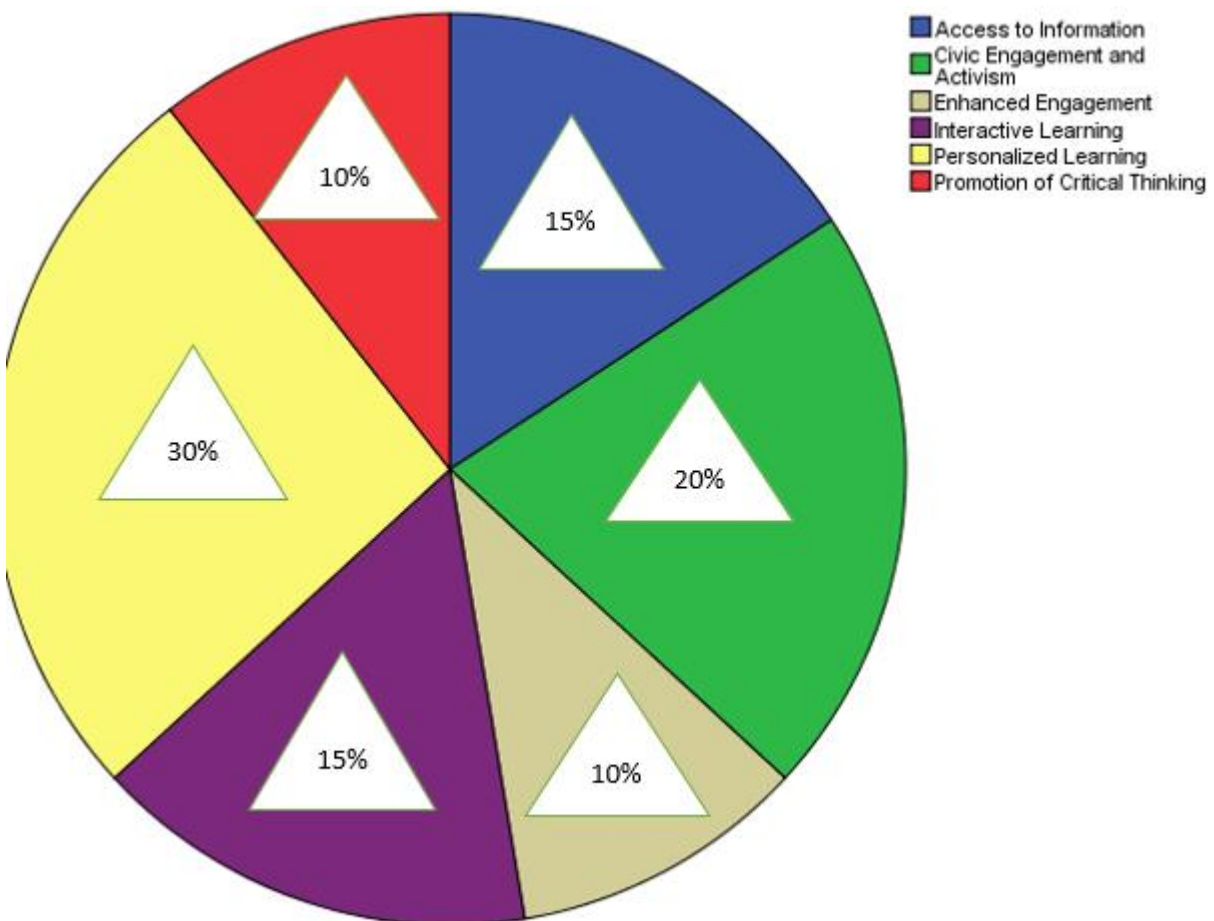


Figure 1: Effects of ICT on Civic Education Teaching and Learning

3.2. Challenges Associated with the use of ICT in Teaching and Learning of Civic Education

The findings indicated that access to technology presents a formidable challenge in the realm of civic education teaching and learning within the context of ICT. Head teachers noted that while the integration of ICT has the potential to revolutionize civic education by offering interactive learning experiences and access to vast information resources, the digital divide exacerbates disparities in educational opportunities. In many regions, especially in developing countries or underserved communities, inadequate infrastructure, limited internet connectivity, and a lack of access to devices hinder students' ability to fully engage with technology-enhanced civic education (Yousef and Dahmani, 2008). Consequently, students from marginalized backgrounds face barriers in accessing online educational platforms, interactive learning tools, and digital resources, impeding their comprehension of civic concepts and democratic principles. Furthermore, educators may struggle to incorporate technology into their teaching methodologies due to insufficient training or resources. Thus, addressing the challenge of access to technology is paramount to ensure equitable and inclusive civic education, requiring concerted efforts to bridge the digital divide through infrastructure development, provision of devices, internet connectivity initiatives, and comprehensive teacher training programs. Only through such initiatives can ICT truly fulfill its potential as a transformative force in civic education, empowering all students to become informed and engaged citizens in an increasingly digital world.

Additionally, teachers of civic education said that infrastructure and connectivity pose significant challenges to the effective integration of Information and Communication Technology (ICT) in civic education teaching and learning. In many regions, particularly in developing countries like Zambia or remote areas, inadequate infrastructure such as reliable electricity supply, internet connectivity, and access to necessary hardware devices like computers or tablets hinder the seamless adoption of ICT tools in educational settings (Chris, 2016). Limited or inconsistent internet connectivity not only disrupts online resources and communication platforms but also restricts access to updated information and collaborative learning opportunities. Furthermore, the lack of infrastructure often results in unequal access to ICT resources, exacerbating the digital divide and disadvantaging students who do not have the same access to technology. Consequently, educators face the challenge of finding alternative teaching methods that do not rely heavily on digital tools or adapting materials to accommodate offline usage, thus impeding the full potential of ICT in enhancing civic education teaching and learning. Overcoming these challenges requires concerted efforts from governments, educational institutions, and technology providers to invest in infrastructure development, expand internet access, and provide equitable access to ICT resources, ensuring that all students have the opportunity to benefit from technology-enhanced civic education.

Officials from DEBS office narrated that quality of content presents a significant challenge within the realm of ICT in civic education teaching and learning. This finding relates to sentiments by authors such as Al-Zaidiyeen et al (2010), on the reluctance in the utilization of ICT facilities by teachers in their teaching. As technology becomes increasingly integrated into educational practices, ensuring that the content delivered through these channels is accurate, reliable, and unbiased becomes imperative. Chaamwe (2010) added that with the vast amount of information available online, students may encounter misinformation, biased perspectives, or outdated material, which can hinder their understanding of civic concepts and issues. Moreover, the rapid evolution of technology often outpaces the development of educational content, leading to a lag in the availability of relevant and engaging materials. Additionally, the subjective nature of civic education topics further complicates the issue, as different interpretations and viewpoints may exist on complex issues such as politics, governance, and human rights. Educators must navigate these challenges by critically evaluating and curating content to ensure its quality, relevance, and alignment with educational objectives. This necessitates ongoing professional development for educators to enhance their digital literacy skills and their ability to discern credible sources of information. Furthermore, collaboration between educators, content creators, and technology developers is essential to create high-quality, interactive, and culturally sensitive content that fosters critical thinking, civic engagement, and informed citizenship among students in the digital age.

Parents pointed out that in the realm of civic education teaching and learning, Cybersecurity and Privacy emerge as formidable challenges intertwined with the integration of Information and Communication Technology (ICT). As educational institutions increasingly leverage digital platforms for instruction, communication, and collaboration, safeguarding sensitive data and promoting digital citizenship become paramount concerns. Magambo (2017) adds up that cybersecurity encompasses a multifaceted approach to protect systems, networks, and data from unauthorized access, breaches, and attacks, posing a critical concern in educational settings where

personal and institutional information are at risk. Moreover, ensuring privacy rights amidst the digital landscape presents a complex challenge, with the potential for surveillance, data mining, and profiling affecting individuals' autonomy and freedom. Educators must navigate this terrain by fostering a comprehensive understanding of cybersecurity principles and practices among students, empowering them to recognize potential threats, practice safe online behavior, and advocate for their privacy rights. Integrating cybersecurity and privacy education into civic curriculum cultivates informed citizens capable of navigating digital spaces responsibly, advocating for digital rights, and contributing to a safer, more secure society in the digital age (MoE, 2012). Thus, addressing Cybersecurity and Privacy as challenges of ICT in civic education is essential for equipping students with the knowledge and skills necessary to engage ethically and effectively in an increasingly interconnected world.

It was also revealed in the study that some schools did not have ICTs. This means that learners were not learning Information and Communication Technology despite the government of the Republic of Zambia introducing the subject in schools. UNESCO (2005) states that the introduction of ICT resources in schools is one of the most significant developments around the world during the last 20 or so years because it has the most benefits for learners and it helps them work independently. It can be deduced from the assertion made by UNESCO that because of the lack of ICTs in schools, learners were not benefiting from the vast knowledge which could be derived from ICTs. However, pupils of civic education on the other hand also observed that cost and sustainability present significant challenges within the realm of ICT in civic education teaching and learning. Firstly, the initial investment required for implementing ICT tools and infrastructure in educational settings can be substantial, especially for cash-strapped institutions or those operating within resource-constrained environments. This financial burden encompasses not only the procurement of hardware such as computers, tablets, and smart boards but also the ongoing expenses related to software licensing, maintenance, and technical support (Violet, 2018). Moreover, ensuring the sustainability of ICT initiatives demands continuous funding for upgrades, repairs, and staff training to keep pace with technological advancements and changing educational needs. Additionally, concerns about the environmental impact of ICT equipment and practices further complicate the sustainability aspect. The production, use, and disposal of electronic devices contribute to e-waste accumulation and energy consumption, raising ethical and ecological dilemmas for educational institutions committed to environmentally responsible practices. Therefore, while ICT offers valuable opportunities for enriching civic education by fostering interactive learning experiences and facilitating access to diverse resources, addressing the cost and sustainability challenges is essential to ensure equitable and enduring benefits for all learners (Watson, 2001). The respondents further explained that the digital divide reinforcement stands as a formidable challenge within the realm of ICT in civic education teaching and learning, exacerbating existing disparities in access to information and resources. This phenomenon underscores the persistent gap between those who have access to digital technologies and those who do not, often along socio-economic lines. In the context of civic education, this divide can significantly hinder the effectiveness of teaching and learning initiatives. Students lacking access to digital resources may struggle to engage with online educational materials, participate in virtual discussions, or access up-to-date information on civic issues (Waiharo, 2017). Consequently, their understanding of democratic principles, political processes, and civic responsibilities may remain

limited. Moreover, educators face the challenge of adapting their teaching methods to accommodate diverse technological capabilities among students, further complicating efforts to bridge the digital gap. To address this challenge, concerted efforts are required to ensure equitable access to ICT infrastructure, devices, and digital literacy training for all students. Additionally, initiatives to integrate ICT into civic education curricula must prioritize inclusivity and accessibility, leveraging technology as a tool for empowerment rather than a barrier to learning. By addressing the Digital Divide Reinforcement, stakeholders can foster a more equitable and effective civic education ecosystem, empowering students to actively participate in democratic processes and civic life.

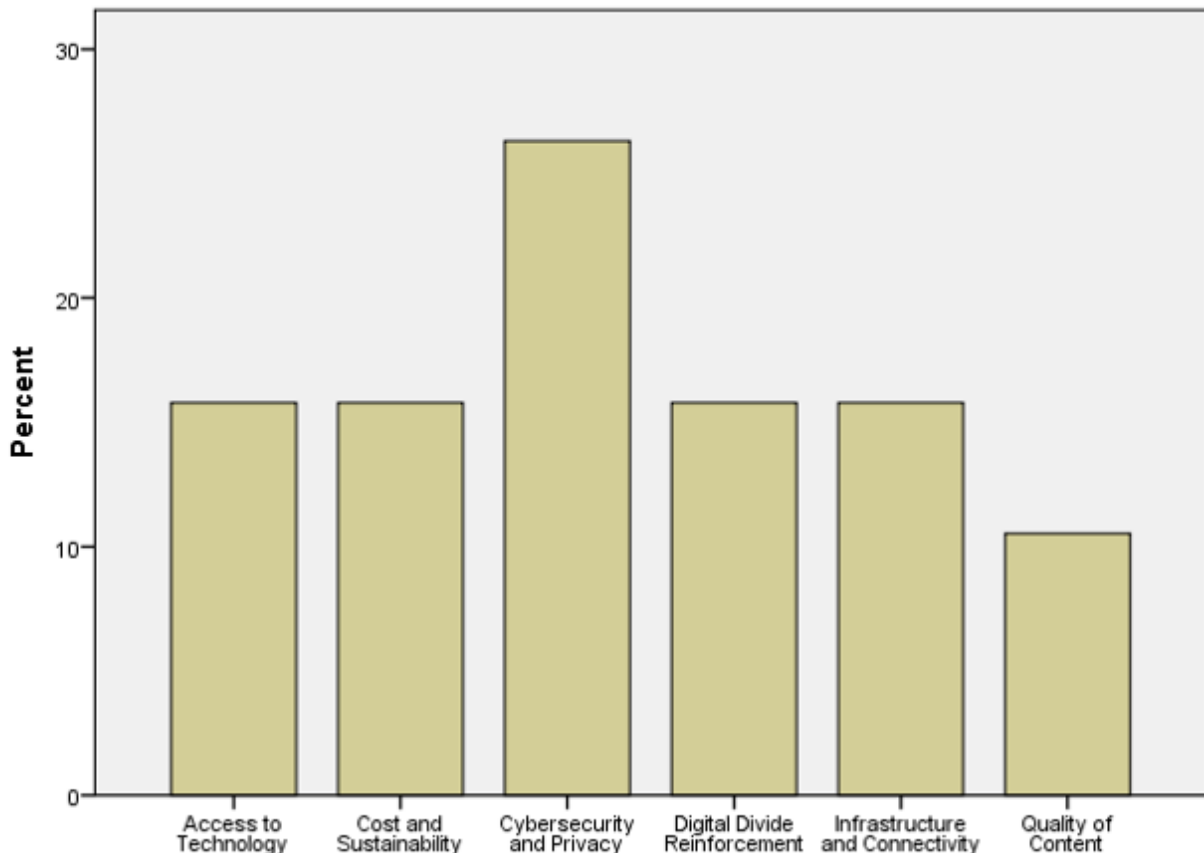


Figure 2: Challenges Associated with the use of ICT in Teaching and Learning of Civic Education

3.3. Strategies Put in Place for ICT to Effectively Enhance the Effective Teaching and Learning of Civic Education

From the study findings, head teachers suggested that interactive multimedia content serves as a potent strategy for integrating information and communication technology (ICT) into civic education teaching and learning. By leveraging multimedia elements such as text, images, audio, video, and interactive simulations, educators can create dynamic and engaging learning experiences that cater to diverse learning styles and capture learners' attention. Through interactive multimedia, students can delve into complex civic concepts, explore real-world scenarios, and actively participate in their own learning process (Peter, 2016). This approach fosters critical thinking, problem-solving skills, and civic engagement by encouraging students to

analyze issues from multiple perspectives and make informed decisions. Moreover, interactive multimedia content can facilitate collaborative learning environments, where students can collaborate, discuss, and share ideas, promoting social interaction and citizenship skills. Additionally, ICT in civic education can bridge geographical barriers, allowing students to access educational resources and participate in discussions regardless of their location. Overall, integrating interactive multimedia content into civic education enhances the effectiveness and relevance of teaching and learning in the digital age, empowering students to become informed and active citizens in society (UNESCO, 2016).

Parents also suggested that virtual field trips and guest speakers represent dynamic strategies for integrating information and communication technology (ICT) into civic education teaching and learning. Through virtual field trips, students are transported beyond the confines of the classroom, immersing themselves in diverse civic contexts without logistical constraints. This approach leverages ICT tools such as virtual reality simulations, interactive maps, and multimedia presentations to offer students experiential learning opportunities. By virtually visiting government institutions, historical landmarks, or community organizations, students gain firsthand exposure to civic processes, fostering a deeper understanding of democratic principles and civic engagement. For instance, Ikpesu's (2021) finding across 75 studies in the Nigeria showed the following. Students who used computer tutorials in mathematics, natural science, and social science score significantly higher on tests in these subjects. Students who used simulation software in science also scored higher. The findings also indicated that primary school students who used tutorial software in reading scored significantly higher on reading scores. Moreover, incorporating guest speakers—experts, activists, or policymakers—via video conferencing platforms further enriches the learning experience. These speakers provide real-world insights, share personal experiences, and engage students in meaningful dialogues, thereby enhancing critical thinking skills and encouraging active citizenship. By embracing virtual field trips and guest speakers as pedagogical strategies, educators can cultivate informed and empowered citizens equipped to navigate the complexities of civic life in the digital age. They further pointed out that collaborative projects and online debates represent an innovative strategy for integrating information and communication technology (ICT) into civic education teaching and learning. By leveraging digital platforms and communication tools, educators can foster dynamic engagement among students while promoting critical thinking, collaboration, and digital literacy (Isleem, 2003). Collaborative projects allow students to work together on meaningful tasks, such as researching and creating multimedia presentations on relevant civic issues, thereby enhancing their understanding of democratic principles and societal challenges. Additionally, online debates provide a structured forum for students to explore diverse perspectives, articulate their opinions, and engage in respectful discourse with peers. Peter (2016) explains that through these interactive activities, students not only develop a deeper comprehension of civic concepts but also hone their communication skills and digital citizenship. Moreover, the accessibility and flexibility of online platforms facilitate broader participation and accommodate various learning styles, promoting inclusivity within the classroom. By incorporating collaborative projects and online debates into civic education curricula, educators can effectively harness the power of ICT to cultivate informed and active citizens capable of contributing positively to their communities and participating meaningfully in democratic processes.

Teachers of civic education suggested that digital citizenship education serves as a pivotal strategy within civic education teaching and learning, particularly in the context of Information and Communication Technology (ICT). In an increasingly interconnected and digitized world, fostering digital citizenship is essential for equipping individuals with the skills, knowledge, and ethical frameworks necessary to navigate the digital landscape responsibly (Miller et al, 2020). By integrating Digital Citizenship Education into civic education curricula, educators can empower students to critically engage with digital technologies, understand their rights and responsibilities online, and actively participate in digital communities. This approach not only enhances students' digital literacy and cyber-safety but also cultivates their sense of civic engagement and social responsibility in the digital sphere (MoTC, 2006). Moreover, Digital Citizenship Education encourages discussions around important issues such as online privacy, digital rights, cyberbullying, and misinformation, thereby promoting informed decision-making and ethical behavior online. By incorporating these principles into civic education, educators can prepare students to become active, responsible, and ethical citizens in the digital age, capable of contributing positively to their communities and society at large. Furthermore, the use of Information and Communication Technology in education also shifts the learning approaches. As put by (Bransford et al, 2000) cited in Volman (2005), there is a common belief that the use of ICTs in education contributes to a more constructivist learning and an increase in activity and greater responsibility of pupils. This limits the role of the teacher to supporting, advising, and coaching pupils rather than merely transmitting knowledge. The gradual progress in using computers changes from learning about computers, to learning computers, and finally to learning with computers (Volman, 2005).

Pupils brought the idea that integrating ICT (Information and Communication Technology) skills development into civic education teaching and learning serves as a strategic approach to enhance the effectiveness and relevance of civic education in the digital age. This was supported by Tearle (2003) who says that incorporating ICT skills, educators can empower students with the necessary tools to critically engage with civic issues, participate in democratic processes, and become active citizens in their communities. Through the utilization of various digital platforms, students can access a wide range of information sources, engage in virtual discussions, and collaborate on projects related to civic issues. Furthermore, teaching ICT skills alongside civic education fosters digital literacy, enabling students to discern credible information from misinformation, critically evaluate online content, and effectively communicate their ideas using digital mediums. This approach not only equips students with essential twenty-first-century skills but also cultivates a deeper understanding of democratic principles and civic responsibilities. Moreover, ICT integration facilitates personalized learning experiences, catering to diverse learning styles and preferences, thus ensuring inclusivity and equity in civic education (Newpher, 2006). Overall, leveraging ICT skills development as a strategy in civic education teaching and learning enhances student engagement, fosters critical thinking, and prepares individuals to actively participate in civic life in an increasingly digital world.

4. CONCLUSION

In conclusion, the integration of Information and Communication Technology (ICT) into civic education in schools has brought about transformative effects, reshaping the way students learn about civic concepts, engage in democratic processes, and prepare for active citizenship in the digital age. Firstly, ICT has greatly expanded access to information relevant to civic education, breaking down traditional barriers to learning by providing pupils with a vast array of digital resources, including online databases, interactive platforms, and multimedia content. This access enables pupils to explore diverse perspectives, engage with real-world civic issues, and develop a deeper understanding of democratic principles and processes. Secondly, ICT has revolutionized pedagogical practices in civic education by offering innovative teaching tools and methodologies. Through digital platforms, simulations, and online collaboration tools, educators can create dynamic and interactive learning experiences that cater to diverse learning styles and foster critical thinking, problem-solving, and collaboration skills essential for civic engagement. Thirdly, ICT has empowered pupils to actively participate in civic life both inside and outside the classroom. Digital platforms and social media provide avenues for pupils to express their views, engage in discussions, and take action on issues that matter to them, thus fostering a sense of agency and empowerment in shaping their communities and societies. However, the integration of ICT into civic education also presents challenges that need to be addressed. These include ensuring equitable access to technology and digital resources, promoting digital literacy and responsible online behavior, addressing concerns about online misinformation and digital privacy, and navigating the complexities of online civic engagement in an increasingly interconnected and digital world. The effects of ICT on civic education in schools are multifaceted, its overall impact is undeniably positive. By leveraging digital technologies effectively, educators can enhance the quality and effectiveness of civic education, empower pupils to become informed, engaged, and responsible citizens, and ultimately contribute to the cultivation of thriving and inclusive democratic societies. However, to fully realize the potential of ICT in civic education, it is essential to address the challenges and ensure that technology is harnessed in a way that promotes equity, inclusivity, and ethical digital citizenship.

5. RECOMMENDATIONS

The following are action points that should be taken on the basis of the findings of this study:

- The Government through the Ministry of Education should ensure that there are enough computers to cater for the demands of the pupils in secondary schools.
- The Government through the Ministry of Education should ensure that there is equitable access to technology resources, including computers, tablets, internet connectivity, and relevant software applications, in all secondary schools and communities.
- Curriculum developers should integrate ICT tools and resources into the civic education curriculum to enhance teaching and learning experiences.
- The Government through the Ministry of Education should employ more teachers of civic education equipped with ICT skills.
- The higher education authority should engage higher learning institutions to train civic education teachers with the component of ICT as part of the curriculum.

- The Ministry of Education should sensitize all teachers through workshops on the need to incorporate ICT in the teaching and learning processes.

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Authors' Short Biography



Chanda Chansa Thelma specializes in Social Sciences, Political Science and Education. She has lectured and still lecturing at the University level under the school of Humanities and Education..



Zohaib Hassan Sain is a Researcher and a Certified Trainer of Total Quality Management, Sustainable Development Goals and Health & Safety. His professional experience is regarding ISO Audits, Compliance Audits and Health & Safety Audits and he has worked in different organizations.

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