

# The Role of E-Governance and ICT in Basic Education: Implications for Social Justice

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## Abstract

*e-Governance is a mechanism that a government can utilise within all three spheres of government to provide efficient and effective public services. Access to education, particularly amongst underprivileged learners, can be promoted through information and communications technology (ICT). In South Africa, social justice strives to ensure that every child has access to fair education that will enable them to thrive in socio-economic aspects as adults. The application of ICT in education is one mechanism that can ensure that learners are prepared for the world of work in the 21<sup>st</sup> century. Furthermore, adapting to the Fourth Industrial Revolution ensures citizens benefit from technological advancements. Reform is also required for the government to modernise itself and use technology to optimise service delivery. This article highlights the importance of e-governance and ICT in education, following an investigation into the role of these factors in promoting social justice. The research approach was qualitative. A single case study design, with two observation units, was adopted. Ten research participants were selected from a group of experienced educators, senior education administrators, and ICT professionals. The research participants were selected based on their knowledge and experience through purposive and snowball sampling. The outcomes of the investigation suggest that e-governance can effectively promote social justice; however, the implementation of policies must be executed in such a manner that buy-in from stakeholders is obtained from the early stages of the implementation phases. The common obstacles to implementing e-governance and ICT in education, especially in underprivileged areas, are ICT infrastructure, financial cost and training.*

**Keywords:** Social justice, education, ICT, Education, e-Governance.

## Introduction

Numerous attempts have been undertaken since the beginning of the democratic era to guarantee that every South African has the chance to participate in educational activities that will improve their socioeconomic well-being. The goal of social justice in South Africa is to guarantee that all

children have equitable access to education that will help them succeed in socioeconomic areas as adults. One way to ensure that the aforementioned is realised is through using information and communications technology (ICT) in the classroom. This is because ICT tools may help students prepare for the changes that are now taking place in the workplace due to the Fourth Industrial Revolution. The Gauteng Department of Education (GDE) can guarantee that students are ready for the workforce and that social justice is advanced by effectively implementing ICT in the classroom. Various e-governance services can be administered through the internet. e-governance is a mechanism that a government can utilise within all three spheres of government to get closer to the citizens with the ultimate objective of providing efficient and effective services that are efficient and effective. Access to education, particularly amongst underprivileged learners, can be promoted through ICTs. This study aims to understand the role of ICT and e-governance in GDE education. The study looked into how these elements affected social justice.

## Literature Review

Fu (2013, p. 112) states that ICT in education can be seen as an essential tool for educational change and reform if ICT is applied successfully in instruction, learning, and assessment opportunities. Education quality can be increased, and learners can be exposed to various real-life scenarios. ICT can be regarded as a tool that learners in the 21st century can utilise to obtain new knowledge, thus enabling students to move away from the traditional learning approaches and methods. Through the application of ICT in education, learning can occur at any time and at any location as learning content is always available to learners (Fu, 2013, p. 112). Through the aid of ICT, learning can be reoriented and reformulated, and the principle of life-long learning can be promoted, as it is needed to develop problem-solving skills (Conliffe, 2022). ICT is a supplement to enhance teaching and learning (Ghavifekr & Rosdy, 2015). According to Ghavifekr and Rosdy (2015, p. 175), ICT can serve as a support tool for teaching and learning purposes, providing learners with a platform to engage in their learning. Noor ul Amin (2016, p. 23) states that ICT in education fosters active learning.

Various challenges are associated with the successful implementation of ICT in education. This section will briefly explore these challenges. There is a low return on investment in poor communities when ICT is utilised (Gigler, 2015, p. 6). Another challenge of ICT in education is related to infrastructure. Teaching with ICT tools is extremely challenging when there is a lack of Internet connectivity and ICT infrastructure (Pholotho & Mtsweni, 2016, p. 7). There are also instances where, due to limited computers, learners must utilise their cell phones to participate in educational activities (Pholotho & Mtsweni, 2016, p. 8). The cost implications make it impossible for an entire population to have Internet access (Hakikur, 2016, p. 30). Capacity building is another challenge since educators must undergo continuous training in order to keep abreast with the latest trends in ICT and education. Training and the lack thereof are also a huge challenge of ICT in education (Tomei, 2016, p. 3). When facilitators host training sessions, educators find it difficult to understand the training as the training transfer is often poor. Educators feel more comfortable if the facilitator is an educator by profession (Zhang et al., 2016, p. 235).

According to Zambrano and Seward (2013, p. 7), e-governance involves how people gain access to information and knowledge and how stakeholders interact with one another. Public management and business have been transformed by the Internet. Singh (2015) portrays e-

governance as a mechanism that can solve many problems that are associated with public service delivery. e-governance is the utilisation of ICT in government departments to enhance governance structures (Kumar et al., 2014). According to Kumar et al. (2014, p. 6), “e-governance is a decisional process which involves ICT in governance” with the aim to increase participation and deeper involvement of citizens, institutions, NGOs, and the private sector. Dugbazah et al. (2022) state that e-governance was established to achieve greater operational efficiency and to improve public services in an attempt to respond to citizens’ needs in an optimum manner. Not only is e-governance aligned to administrative reform, but to democracy as well.

Baum and Mahizhnan (2014, p. 9) define social justice as “the ability people have to realise their potential in the society where they live”. Social justice is concerned with equal rights for all human beings and strives to ensure that all human beings can progress economically and socially (Kent State University, 2020). This can be linked to Rawls’ principle, namely the “principle of equal opportunity and difference” (Yang 2022, p. 270). Social justice takes into consideration injustices such as economic, political, and cultural aspects and aims to address these injustices through the redistribution of resources. Furthermore, social justice seeks to understand how individuals, in terms of distributional issues both from an advantage and disadvantage perspective, are progressing in general (Wilson-Strydom, 2015). The aim of social justice is thus translated into policy demands that take respectful treatment, social security, and dignity into consideration (Venieris, 2013). Social justice intersects with philosophy, politics, and legal theory and has received attention from various perspectives (Wilson-Strydom, 2015).

South Africa can be regarded as a country that is very unequal on a global scale. Despite various initiatives (the provision of basic services and social grants for children, the elderly, and individuals who have various impairments) implemented by the government to eradicate inequality as one of the consequences of the apartheid regime, it still persists (Govender, 2016). Social justice embodies human rights, “but contains a further conception of equality rights that are not human rights” (Hibbert, 2017, p. 2). Human rights have a strong emphasis on the distinction between political and civil rights and social justice has a strong emphasis on socio-economic rights. It is imperative to consider that both these categories are important and that one category is not more superior to the other. The Constitution of South Africa, 1996 provides the realisation of socio-economic rights (Matthews & McLaren, 2016). The government has been granted the responsibility to ensure that socio-economic rights are met with the resources that are at the disposal of the government (Matthews & McLaren, 2016).

Even though a great deal of progress has been made towards the realisation of socio-economic rights, South Africa is still witnessing challenges such as poverty and inequality (Ebrahim & Masiangoako, 2019). Unemployment in South Africa is one of the factors that is slowing down the realisation of socio-economic rights (Langford et al., 2014), and the unemployment rate continues to increase. The unemployment rate for the third quarter of 2019 was 29.1% (BusinessTech, 2020). In the second quarter of 2014, it was 25.5% (*Mail & Guardian*, 2014). Between 2014 and 2019, the South African unemployment rate increased by 3.6%. In addition to unemployment, informal settlements are another indicator that the government has realised not everyone’s socio-economic rights (Ebrahim & Masiangoako, 2019). Approximately 3.6 million South Africans reside in informal areas. Access to housing and quality education remains highly unequal in South Africa (Langford et al., 2014).

Education can be an important instrument that can contribute to social justice (Uyanga & Emanu, 2016). In terms of the Constitution of the Republic of South Africa of 1996 (Republic of South Africa [RSA], 1996), every citizen has the right to basic education, which should be made available by the government. According to Francis and Le Roux (2011), the need for educators to promote social justice, human rights, and inclusivity was the central theme embedded within all education legislation and policies after 1995. Social justice in education can be portrayed as an approach that ensures that affected individuals and those whose living conditions are associated with inequalities in terms of poverty, race, ethnicity, language, and nationality benefit from education (Nkoane, 2012). Social justice in education can be described as interrelated practices that embody “empathy, equality and the appreciation of otherness” (Nkoane, 2012, p. 7).

Schools that are “democratic, fair and successful” can be established when social justice is achieved (Sampaio & Leite, 2018, p. 1). Social justice ought to foster inclusive education, whereby democratic issues, equity, and opportunity are embraced. In order for schools to be the main drivers of social justice, it is imperative that the experiences of different learners are considered. The United Nations Sustainable Development Goal 4, which deals with quality education, can be achieved through the application of e-governance in the education sector (Ramya, 2016). According to Seddiky and Ara (2015), the application of ICT in education can improve learners’ skills and enhance the quality of education. The latter is required in order to ensure that the education sector is able to keep up with the challenges that are occurring in the digital world (Seddiky & Ara, 2015). The capabilities of management within the education sector can also improve, which will ensure that the quality of education and “human resource development is enhanced” (Seddiky & Ara, 2015, p. 400).

One of the instruments that contributes to national development is education. Educators are responsible for preparing current and future learners to adapt to the changes of an ever-evolving society to foster “social harmony” (Ramya, 2016, p. 17). Educators should therefore be equipped with adequate knowledge of e-governance, as it contributes to socio-economic improvement and sustainable development. Education on the secondary level links “the development of the child with society and its political productive and socio-cultural dimension” (Ramya, 2016, p. 17). As a result of the successful implementation of e-governance in the education sector, learners develop the necessary skills and competencies that are needed in the world of work, which will ensure that most of the populace of a country is developed on a social, economic, and political level (Hamiduzzaman, 2012). Education is important for the development of a country and it is therefore crucial to adopt e-governance in this sector (Hamiduzzaman, 2012).

The main objective of introducing e-governance in education is to contribute to the enhancement of good education (Alhomod & Shafi, 2012). As a result of utilising e-governance in education, learners are provided with new communication mechanisms, new mechanisms through which education can be imparted, and new mechanisms to organise and deliver information and services (Alhomod & Shafi, 2012). The education sector can benefit immensely from e-governance, due to the fact that e-governance has the potential to provide quality services (Hamiduzzaman, 2012). The integration of e-governance into the management of the education sector is required in order to foster the success of this sector. “To make the service providing system efficient, faster and easier, e-governance may be regarded as” an important mechanism to mitigate the challenges of this sector (Hamiduzzaman, 2012, p. 196).

## Theoretical Framework

The origin of the CST dates back to between 1920 and 1930 and was spearheaded by the Institute for Social Research in Frankfurt, Germany (Celikates & Flynn, 2023). The CST is defined as a “multidisciplinary framework with the implicit goal of advancing the emancipatory function of knowledge” (Ha, 2023, p. 144). Jennings et al. (2006, p. 40) state that the origin of the CST is interdisciplinary, and that the essence of the CST is “emancipatory processes”. Through these processes, there is an increase in community action, and social justice is also promoted. The aim of this theory is to identify any form of oppression that can be regarded as a hindrance to an individual to fulfil their potential to the fullest (Bennett et al., 2016, p. 82). Youth empowerment is also closely linked to this theory as it seeks to enable the youth to become agents of change. Youths are regarded as critical citizens, who can participate in activities that can foster the building of a strong and equitable community (Jennings et al., 2006).

The CST has the notion that social reality has been composed in a historical manner and that individuals reconstruct this reality in a manner that is “more conscious and deliberate” (Pelton, 2013, p. 216). This theory therefore aims to understand a particular phenomenon and it also challenges inequalities in society (McDowell, 2015). Researchers also utilise the CST to study occurrences of the past. The CST seeks to explore how a society finds ways to reap the benefits associated with technological innovations. This theory “is a qualitative approach to research” (Tootell, 2006, p. 407). A qualitative approach can add a great deal of value to research when a researcher aims “to describe, interpret, verify or evaluate the impact of a particular area of interest” (Tootell, 2006, p. 407). The CST can also be utilised by the government to foster “public motivation and adoption” practices (Tootell, 2006, p. 406).

According to Leonardo (2004, p. 11), this theory is strengthened by the fact that theory and practice are not addressed in isolation; however, the production and application of theory are encouraged as this ultimately relates to the journey of knowledge in a transformative manner. According to Pleasants (1999, p. 157), the core of the CST is that all individuals who are able to act and speak are considered as “critical theorists”. According to Dant (2003, p. 160), this theory explores the relationship between individuals and society. Habermas (in Pleasants, 1999, p. 161) “maintains that critical social theory understands that its claims to validity can be verified only in the successful process of enlightenment, and that means: in the practical discourse of those concerned”. Through the application of the CST, there is a desire to transform the world and not just to explain the world (D’Arrigo-Patrick et al., 2017, p. 575).

One of the biggest limitations of ICT is the concept of the digital divide, which is one of the key issues that must be addressed by social justice in the 21st century (Soomro et al., 2020). Various attempts have been made to integrate ICT into the education sector to mitigate the digital divide; however, there is still a need for social justice to be promoted within the education sector. Based on the latter, this article aims to explore role of e-governance and ICT in Education to Promote Social Justice.

## Research Methodology

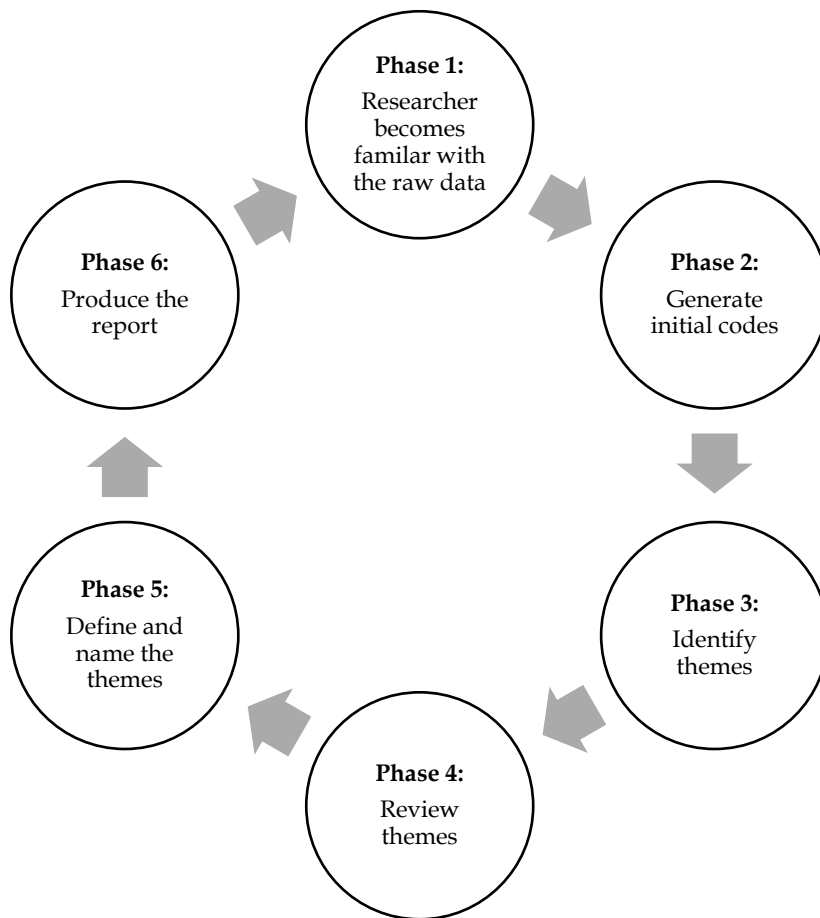
The research approach was qualitative in nature. A single case study design, with two units of observation, was adopted in this study. Data was collected from semi-structured interviews.

Non-probability sampling, namely purpose and snowball sampling, was utilised. Interviews were conducted with 10 research participants. For this study, experienced educators, senior education administrators, and ICT professionals were the research participants. Three research participants were from the Matthew Goniwe School of Leadership and Governance and seven were from Willow Crescent

The research sample consisted of experienced educators, senior education administrators, and ICT professionals, and. The research participants were coded from Participant A to Participant J to provide anonymity.

Principles of anonymity and confidentiality was maintained throughout the research. Ethical clearance from the College of Business and Economics at the University of Johannesburg to conduct the study. Gatekeeper permission was obtained from Willow Crescent and Matthew Goniwe School to conduct the proposed research. Furthermore, informed consent was obtained from the participants during the data-collection phase. During the data-analysis phase, the research participants were coded Participant A to Participant J to provide anonymity.

The following six-phase framework by Braun and Clarke's (2006) was used to guide the thematic analysis.



**Figure 1: Braun and Clarke's (2006) six-phase framework**  
Source: Authors' own illustration based on Braun and Clarke (2006, p. 87)

The data was analysed through the thematic analysis. For the purpose of this study, two themes have been identified by using thematic analysis, namely: The conceptualisation of ICT in education, social justice, and e-governance and the role and significance of e-governance in social justice promotion. After the interview data was analysed, it was triangulated with secondary data and the literature review in the discussion of findings section.

### Data Analysis: Interview Results

This section presents the results that were derived from the data analysis. In order for recurring categories to be established, it was essential for the researcher to compare the responses from the research participants. The thematic analysis process identified two main themes.

#### *Theme 1: The Conceptualisation of ICT in Education, Social Justice, and E-governance*

Theme 1 aimed to obtain the research participants' understanding of the study's main concepts, namely, the concept of ICT in education; the concept of social justice in education; and conceptual views of e-governance and social justice. These main concepts are provided in the sub-sections that follow.

- *Sub-Theme 1.1: The Conceptualisation of ICT in Education*

Table 1 depicts an overview of the ICT concept in education, obtained from the dataset.

**Table 1: An overview of the concept of ICT in education Source: Authors' own construction**

Contributors	Initial codes	Group codes
Participants B and C	Child-centred learning	Broad
Participants B, C, and J	Learner emancipation: social justice in relation to education	Broad
Participants A and B	Resources, systems, processes, capacities	Broad
Participant A	e-Learning as part of traditional pedagogy and systems	Narrow
Participant A, C, and E	e-Learning as a new model of educating society	Narrow
Participant A	e-Learning environment/ecosystem (resources, policies, capacities)	Broad
Participants G and H	Education enhancement using ICTs (quality, interest, output)	Narrow
Participants A and H	e-Learning content/curriculum	Narrow
Participants A and H	e-Learning, e-Education, e-Content (systems multiplicity)	Narrow
Participants A, B, C, D, F, and G	ICT as a medium in education (teaching, learning, or both)	Narrow

- *Sub-Theme 1.2: Conceptual Views of Social Justice*

Various responses from the dataset provided an overview of how the participants understood the concept of social justice in education. Table 2 depicts a word density search to identify keywords that the respondents associated with social justice.

**Table 2: Five common social justice in education aspects**

Participants	Equality	Access	Availability	Quality	Opportunity
A	•	•	•	•	•
B	•	•	•	•	•
C	•	•	•	•	•

D			•		
E					
F		•			
G					•
H		•	•	•	•
I		•		•	
J					•

Source: Authors' own construction

## Advantages, Benefits, and Current Improvements/Achievements of ICT in Education

The advantages of ICT in education and its contributions to improving the South African educational system, that has been extracted from the dataset, is depicted in Table 3.

**Table 3: Advantages, benefits, and current improvements/achievements**

Contributors	Initial codes	Group codes
Participants A, B, and H	Learners can learn from anywhere – Access	Accessibility/availability
Participants E and F	Adaptation of education to the current technological environment	Adaptivity
Participants A and D	Ease of administrative data availability (performance, curricular coverage, etc.)	Administrative
Participants A, C, and H	Enhanced learner assessment processes	Assessment processes
Participant C	Enhanced learner involvement in performance management	Assessment processes
Participants F, G, and I	Encourages and develops digital literacy	Digital literacy and capacity
Participant J	Eco-friendly (paperless)	Environmental
Participants A, C, H, and J	Ease of matching various learner preferences in teaching	Teaching and learning effectiveness
Participant C	Teaching efficiency – easier and quicker to deliver lessons	Teaching and learning effectiveness
Participant C	Efficiency of remedial actions and processes	Teaching and learning effectiveness
Participant C and H	Easy to adapt content management to meet learners' needs	Teaching and learning effectiveness
Participant I	Keeps learners interested	Teaching and learning effectiveness
Participant I	Enhanced communication	Teaching and learning effectiveness

## Challenges in Implementing ICT in Education

Table 4 is a summary of the challenges that have been and are experienced with the implementation of ICT in education.

**Table 4: Challenges in implementing ICT in education**

Contributors	Initial codes	Sub-themes
Participants, B, C, E, H, and I	The digital divide and other inequalities	Accessibility/availability/equality
Participants B, C, and G	Underutilisation and misuse of digital resources	Adaptability
Participants G and H	Slow adaptability – stuck in the past	Adaptability
Participant B	Home environments not suitable or adapted for remote learning	Adaptability

Participants A, B, C, and H	Educator and user preparedness issues	Capacity
Participant H	Low country preparedness	Capacity, skills, and preparedness
Participants A, B, and C	Teaching and learning policy adaptability issues	Capacity, skills, and preparedness
Participants A and D	Educators' negative perceptions of new systems	Capacity, skills, and preparedness
Participants C and D	Training resources and skills challenges	Capacity, skills, and preparedness
Participant A	Issues in terms of implementing policy	Policies and strategy
Participants C and D	Lack of technical support for schools and educators	Policies and strategy
Participant C	Inadequate intervention policies	Policies and strategy
Participant B	Systems formulated at head office not filtering to schools (theory versus practice)	Policies and strategy
Participant B	Lack of political will to regulate Internet service affordability	Policies and strategy
Participant C	No follow-ups on ICT resources implementation in schools	Policies and strategy
Participant H	Excessive dependency on ICT - ignorance	Quality
Participant J	Poor e-Learning systems (quality issues)	Quality
Participant G and H	Methods may not appeal to learners	Quality
Participants A, C, D, E, G, I, and J	Budget constraints - government level	Resources
Participant C	Funding direction - resources versus capacity building	Resources
Participants F, H, and I	ICT connectivity challenges, costs	Resources
Participants I and J	Basic infrastructure - electricity	Resources
Participant J	Cyberattacks	Technical and technological
Participant J	Systems technical maintenance challenges	Technical and technological
Participant I	Misleading information	Technical and technological
Participants I and J	Technology misuse	Technical and technological

Source: Authors' own construction

- *Sub-Theme 1.3: Conceptual Views of E-governance*

The focus of this sub-theme was to obtain the participants' views in terms of identifying what e-governance and social justice are and what the relationship between e-governance and social justice is. This also included discussing the role of ICTs in education within this relationship's context. Based on the data collection, three perspectives on the relationship between e-governance and social justice were identified: the direct input versus outcome relationship, the indirect input versus outcome relationship, and the non-existent relationship perspective.

In terms of the direct input versus outcome relationship between e-governance and social justice, some participants viewed e-governance as a policy and strategy tool, and a philosophical perspective whose intended output was social justice.

Social justice can be fostered as a result of e-governance, as access to digital educational resources can be broadened by e-governance (Participants A, B, H, and J); among others. For instance, Participant A shared the following sentiment:

*“e-governance is a custodian of social justice because they become the enabler of social justice to take place within our communities and society because they have to define to us what social justice is in relation to equality because I know there is a direct link between social justice and equality and when you look at equality.”*

Participant C qualified the relationship, insisting that it was moderated by the availability of ICT resources to the poor. It is thus a resource-driven relationship:

*“So, the utilisation of ICT, in essence, provide[s] the learners with access to quality education when these resources are utilised for the intended purpose. So, in the end, they’ll be able to reach a certain high level of quality education, compared to those who were able to access these resources in the past.”*

From the strategic or policy-related perspective, e-governance is regarded as a mechanism that can foster a social justice framework, as alluded by Participant A:

*“Secondly it is them providing some sort of framework or guideline in terms of the process of effectively administering this particular social justice through resource allocation and through that policy framework.”*

Participant D stated that the relationship was geared *“to promote social development”*. The objective of promoting social development extends further than simply empowering vulnerable groups towards self-sustainability. The participant assumed that social development facilitates a move towards social justice; in other words, e-governance created social development opportunities that can enable societies to move closer to social justice.

The second perspective, namely the indirect input versus outcome relationship, is discussed next. A direct relationship between the three concepts was highlighted by the preceding sub-theme; however, some participants held views of less direct or indirect relationships. In terms of the less direct relationships, a commonality is that social justice will not occur immediately through the application of e-governance and ICT. Different conditions that make it possible for society to advance towards social justice are created by these mechanisms. The conditions differed across the participants who contributed to this sub-theme. For Participant G, the relationship demanded that

*“everybody should develop at their own pace and capabilities using methods best suited for them”.*

In this way, learners from a vulnerable socio-economic context, who are left behind developmentally, are granted the opportunity to catch up at their own pace. The application of ICT in education fosters this self-paced development.

## ***Theme 2: The Role and Significance of E-Governance in Social Justice Promotion***

Based on the dataset, e-governance is associated with three significant social justice-promoting roles, and each role encompasses several factors. This theme has three sub-themes, namely:

- Accessibility and availability of education;
- Curriculum management; and
- Learner development and emancipation.

- ***Sub-Theme 2.1: Accessibility and Availability of Education***

In terms of availability and accessibility of education, e-governance is considered as a very important factor in education. Under this sub-theme, participants highlighted factors such as the mere provision of education (Participants A, B, C, I, and J), the enhancement of availability (Participant B), the increased availability (Participants A, B, and C), and the equalised availability or education as a service.

Axial coding processes point at social justice being sustained through the provision of access to citizens to available educational opportunities, through the improved and enhanced services through digital means by the government, and by removing access gaps that affect different socio-demographic groups.

The application of digital tools makes education more accessible, and this is fostered through e-governance. The availability of education is considered one of the most basic roles of e-governance, as education opportunities are made available through *“the digitalisation of systems”*, as stated by Participant C. e-governance can also be associated with the enhancement of access to current and new educational services, as mentioned by Participant B. Furthermore, the need to increase the availability of educational opportunities was emphasised by Participants A, B, and C.

Educational services can be made available to a wider population if there is a reduction in cost or if the costs are manageable. This is an element that highlights the move towards social justice. This is highlighted by Participant C, who stated that, through e-governance,

*“[w]e can save time and use cost-effective measures in terms of how we manage both the implementation of curriculum delivery, as well as the monitoring aspect of it”.*

Equality and fairness in education are aspects of social justice that are linked to accessibility and availability, according to Participants D, H, and J.

- ***Sub-Theme 2.2: Curriculum Management***

Based on the collected data, the availability of education can be a mechanism to steer citizens towards social justice; however, there is a need for learning content and context quality. In order for social justice to be manifested through education, it is important to explore curriculum management. e-governance makes this possible through the provision of advanced and more effective methods of monitoring the curriculum. Participant C alluded that e-governance makes the implementation and the monitoring of the curriculum easier; through e-governance, it is possible to *“manage both the implementation of curriculum delivery, as well as the monitoring aspect of it”*. Participant C also mentioned that e-governance reduced the cost of curriculum management. Participant C held the notion that social justice can be attained in society when the quality of education is improved as a result of enhanced monitoring of educational officials.

- ***Sub-Theme 2.3: Learner Development and Emancipation***

The concept of social justice is strongly linked to the empowerment or emancipation of learners. One of the roles of e-governance is to emancipate learners on an academic and socio-economic

level. This emancipation is also technologically oriented due to the fact that digital transformation creates opportunities for learners from both a social and economic perspective. The Fourth Industrial Revolution in schools fosters learner empowerment, as mentioned by Participant B. Participant J mentioned that learners will be ready for the demands of the work environment.

Participant J discussed the significance of e-governance in bridging the gap between previously and currently disadvantaged societies that are disadvantaged as a result of digital transformation. The role of e-governance in social justice should therefore also be centred around the need

*“to educate and prepare the population of less developed regions and encourage e-readiness”.*

Participants B and J referred to the fact that empowerment can be fostered through e-governance as a result of the digital aspect of e-governance, which can serve as a mechanism to steer digital transformation, in addition to the digital learning content that learners are exposed to.

One of the key findings of this theme is that e-governance can promote social justice through the application of several mechanisms, such as the availability and accessibility of education, which are both a quality and quantity issue, and socio-economically empowering learners despite the past and present being marred with social, economic, and digital gaps and divides. The quality of content and the relevance to the context of the learner were highlighted under the curriculum management aspect. e-governance systems foster intervention opportunities in terms of monitoring learner performance. All these directly and indirectly emancipated the learner.

## **Discussion of Findings**

The common notion of ICT in education, according to the participants, is that it can be used as a tool to enhance learning through the aid of ICT tools when applied successfully, as stated by Fu (2013). Furthermore, Participants B, C, and J, also highlighted that ICT in education can be utilised as a mechanism that fosters “learner emancipation and social justice in education and this is directly linked to the CST. According to (Ha, 2023, p. 144), the CST is defined as a “multidisciplinary framework with the implicit goal of advancing the emancipatory function of knowledge” and this also corresponds to Jennings et al. (2006, p. 40), that emphasis the “emancipatory processes”. Through these processes, there is an increase in community action, and social justice is also promoted.

Eight challenges in implementing ICT in education have been highlighted by the participants, and the sub-themes that were identified were accessibility, adaptability or equality, capacity, skills and preparedness, policies and strategy, quality, resources and technical and technological. Budget constraints are linked to resources as indicated by Participant A, C, D, E, G, I, and J, and this aligns with the notion of Hakikur (2016), that he cost implications make it impossible for a population to have Internet access (Hakikur, 2016, p. 30). Capacity, skills and preparedness, as highlighted by participants A, B, C, D and H, are aligned with the notion of Tomei (2016). Training and the lack thereof are also a huge challenge in ICT in education. The sub-theme resources are linked to the availability of infrastructure that is required for ICT to be implemented successfully; however, based on the responses from Participant F, H, and I and the view of Pholotho and Mtsweni (2016), ICT connectivity is one of the overarching challenges in terms of ICT infrastructure.

Social justice is concerned with equal rights for all human beings and strives to ensure that all human beings can progress economically and socially (Kent State University, 2020). Social justice can be fostered as a result of e-governance, as access to digital educational resources can be broadened by e-governance, the latter is directly linked to the CST, because the CST seeks to explore how a society finds ways to reap the benefits associated with technological innovations. In terms of sub-theme 2.1, availability and accessibility of education, e-governance is considered as a very important factor in education. This sub-theme is also directly linked to the CST, because the CST seeks to explore how a society finds ways to reap the benefits associated with technological innovations. Sub-theme 2.2 makes reference to curriculum management and highlights that e-governance can contribute towards curriculum management through the provision of advanced and more effective methods of monitoring the curriculum. One the key findings of sub-theme 2.3: Learner Development and Emancipation is that e-governance can promote social justice through the application of several mechanisms, such as the availability and accessibility of education, which are both a quality and quantity issue, and socio-economically empowering learners despite the past and present being marred with social, economic, and digital gaps and divides. The quality of content and the relevance to the context of the learner were highlighted under the curriculum management aspect. e-governance systems foster intervention opportunities in terms of monitoring learner performance.

## **Conclusion**

The findings of the study suggest that GDE made various efforts; however, there are still some challenges associated with the successful implementation of ICT in education in order for social justice to be promoted. The outcomes of this article suggest that e-governance can be effective towards promoting social justice; however, it is imperative that the implementation of policies is executed in such a manner that buy-in from stakeholders are obtained from the beginning stages of the implementation phases and that stakeholders are not just informed about the policies.

## **Limitations, Implications and Recommendations**

This research has inherent limitations in terms of the sampling methods and sample size. Firstly, non-probability sampling, namely, purposive and snowball sampling, limits the replicability of the study. Furthermore, the small sample size limits the generalisability of the findings. However, the study is based on a qualitative research paradigm; hence, the study did not aim to generalise or replicate findings, but rather to interpret and understand the role of e-governance in facilitating social justice. This research provides recommendations for policy and decision-making in provincial government. Firstly, for e-governance, the provincial government should facilitate stakeholder buy-in for the implementation of e-governance. Secondly, upskilling of teachers' ICT skills in the School is required. There is a need to bridge the gap between previously and currently disadvantaged societies as a result of digital transformation. The availability of training and resources for educators and their willingness to incorporate ICT tools into their teaching and learning pedagogies can be the subject of future research. Additional case studies in other provinces comparing rural versus metropolitan case studies can also provide more insights into the role of e-governance in facilitating social justice. There is a need to explore funding mechanisms that can be used to mitigate infrastructure challenges and ensure the successful implementation of ICT in education.

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