



FROM PILOT TO POLICY: INSTITUTIONALIZING HYBRID E-PARTICIPATION IN SOUTH AFRICAN RURAL MUNICIPALITIES

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Public participation is fundamental to good governance principle in South Africa, yet its implementation at the municipalities remains constrained by institutional capacity, technological, and socio-economic challenges. This study examined the perceived benefits of hybrid e-participation in enhancing citizen involvement in the Integrated Development Planning (IDP) process within the Greater Tzaneen Local Municipality (GTM). The increasing adoption of digital governance, accelerated by the COVID-19 pandemic, has created opportunities to strengthen transparency, accountability, and inclusivity in line with the Batho Pele principles. However, persistent digital inequalities, inadequate infrastructure, limited internet access, and low digital literacy continue to exclude many rural citizens from meaningful participation. A mixed-methods approach was employed, using questionnaire data collected from 312 community members and qualitative interviews with three municipal officials. Data were analysed using descriptive statistics, Pearson correlation, regression analysis, and thematic content analysis. The findings reveal that although hybrid e-participation improves access to municipal information and services, its effectiveness in promoting meaningful citizen engagement remains limited, with participants expressing predominantly neutral perceptions. Education level and residential location significantly influenced participation, while inadequate infrastructure, weak institutional responsiveness, and one-way communication practices constrained effective engagement and diminished public trust. The study concludes that sustainable hybrid e-participation requires more than technological adoption and should be supported by robust legal and governance frameworks. It recommends expanding digital infrastructure, improving digital literacy, strengthening two-way feedback mechanisms, institutionalising hybrid participation models, and ensuring compliance

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with the Protection of Personal Information Act to promote inclusive, transparent, and accountable local governance.

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1. INTRODUCTION

E-participation refers to the application of information and communication technologies (ICTs) to enhance citizen engagement in governance processes, including public decision-making, policy formulation, and service delivery. It encompasses key dimensions such as e-information, e-consultation, and e-decision-making, all of which seek to promote more transparent, collaborative, and inclusive governance. Common e-participation platforms include social media, dedicated government websites, mobile applications, and specialised online portals (Benlahcene et al., 2024). Through these digital mechanisms, governments can improve access to information, strengthen accountability, and empower citizens to actively influence public policy and municipal decision-making. Growing evidence demonstrates that e-participation has become an important instrument for fostering civic engagement, improving government responsiveness, and strengthening democratic governance by enabling meaningful interaction between citizens and public institutions (Masueme, 2015; Benlahcene et al., 2024). Within South Africa, the institutionalisation of hybrid e-participation represents an emerging shift towards more inclusive and citizen-centred local governance. Hybrid e-participation combines conventional participatory mechanisms, such as ward committee meetings, public hearings, and community forums, with digital platforms including WhatsApp, SMS, Unstructured Supplementary Service Data (USSD), and social media (Plantinga, 2026). USSD is particularly significant in rural contexts because it enables real-time communication through basic mobile phones without requiring internet connectivity, thereby extending digital participation to citizens with limited technological resources. Plantinga, Dlamini and Gordon (2024) note that USSD- and application-based civic technologies enable communities with low-end mobile devices and limited bandwidth to organise collectively, engage government stakeholders, participate in discussions, and coordinate community action. Consequently, hybrid e-participation provides municipalities with multiple communication channels that can broaden participation

while accommodating the diverse technological capabilities of rural communities. This blended approach is particularly relevant to the IDP process, where meaningful citizen participation is fundamental for aligning municipal development priorities with community needs (Mamokhere & Meyer, 2025). By integrating traditional face-to-face engagement with digital communication platforms, hybrid e-participation has the potential to overcome geographical and temporal barriers, improve transparency through continuous information sharing, facilitate structured consultation, and ultimately strengthen collaborative decision-making within local government (Gonçalves, 2025; Molobela, 2025).

Despite these opportunities, the successful implementation of hybrid e-participation remains dependent upon a complex interaction of technological, organisational, social, and political factors. Access to digital technologies alone does not guarantee effective participation, as citizens also require adequate digital literacy, affordable connectivity, and the necessary skills to engage meaningfully with online platforms. Similarly, the accessibility, usability, and security of digital systems influence the extent to which marginalised populations are included in governance processes. Public institutions must therefore possess sufficient organisational capacity to procure appropriate technologies, manage digital communication strategies, facilitate community outreach, and ensure compliance with relevant regulatory frameworks. Furthermore, political commitment, stakeholder relationships, institutional coordination, and resource allocation significantly influence the sustainability and effectiveness of e-participation initiatives (Ayebare & Sam, 2025; Plantinga, 2026). These challenges are particularly evident in rural municipalities in South Africa, where persistent socio-economic inequalities and inadequate digital infrastructure continue to undermine meaningful citizen participation. Although public participation is recognised as a constitutional and democratic imperative intended to promote accountability, inclusivity, and responsive governance, its implementation frequently remains symbolic rather than transformative (Kgobe, 2024; Gonçalves, 2025). While governments increasingly utilise ICTs to strengthen citizen engagement, digital platforms often function primarily as one-way communication channels rather than mechanisms that facilitate genuine deliberation and collaborative decision-making (Firtin et al., 2025). Existing international research has largely focused on technological determinants of e-participation adoption, yet growing evidence demonstrates that social, cultural, political, and institutional factors, including trust, education, digital literacy, political efficacy, and local context are equally critical in determining citizens' willingness and ability to participate electronically (Aljazzaf, Al-Ali & Sarfraz, 2020; Ayebare & Sam, 2025; Djatmiko, Sinaga & Pawirosumarto, 2025).

Within rural South African municipalities piloting, these challenges are compounded by fragmented institutional arrangements, limited organisational capacity, inadequate digital infrastructure, unreliable internet connectivity, and insufficient coordination among government stakeholders responsible for implementing participatory initiatives (Plantinga, 2026). Although hybrid e-participation offers considerable potential to address these barriers, there remains limited empirical evidence regarding how such systems can be effectively institutionalised within the unique socio-economic, technological, and governance realities of rural municipalities. Existing literature pays insufficient attention to legally institutionalised, context-sensitive hybrid e-participation frameworks that integrate traditional participatory practices with digital innovations while accommodating stakeholder dynamics, organisational capacity, technological design, and local cultural contexts (Ochara & Mawela, 2015; Plantinga et al., 2024). Consequently, the central research problem addressed by this study is the absence of robust, inclusive, and institutionalised hybrid e-participation frameworks capable of overcoming the persistent digital divide and promoting meaningful citizen participation in municipal planning processes within rural South Africa. Therefore, the study examines the perceived benefits of legally institutionalising hybrid e-participation as an alternative approach to enhancing citizen engagement in the Integrated Development Planning process, with specific reference to the GTM. It further analyses the relationship between citizens' perceived benefits of e-participation and selected demographic characteristics to determine how these factors influence participation patterns. Finally, the study proposes context-sensitive strategies for the inclusive integration and institutionalisation of hybrid e-participation within South African municipalities.

2. LITERATURE REVIEW

The institutionalization of e-participation is essential for enhancing citizen engagement in governance, defined by the UN e-Government Survey through stages of information dissemination, consultation, and active involvement. Despite promoting transparency and inclusivity, its application is inconsistent, particularly in rural South Africa, hindered by the digital divide, which affects access to infrastructure, connectivity, and digital literacy. Effective e-participation requires a holistic approach that considers technical, social, cultural, and political factors, ensuring systems are accessible and inclusive, especially for marginalized groups. Stakeholder roles vary by participation type, necessitating collaboration among government officials and communities (Zhang, Zhang & Wang, 2025; Firtin et al., 2025). Additionally, organizational capacities,

regulatory frameworks, and resource allocation are vital for integrating e-participation into local governance. Continuous learning and cultural sensitivity are crucial, yet political dynamics can complicate adoption (Ayebare & Sam, 2025). This study aims to explore how hybrid e-participation can be institutionalized to surmount socio-technical barriers and enhance citizen engagement in Integrated Development Planning within Greater Tzaneen Local Municipality.

Perceived benefits of institutionalizing hybrid e-participation as an alternative approach to enhancing citizen engagement in the planning process

The institutionalization of e-participation in rural municipalities in South Africa presents significant transformative benefits for governance, particularly when implemented through hybrid models that integrate digital and face-to-face engagement. One of the primary advantages is enhanced inclusion, as digital platforms such as WhatsApp, SMS, and web-based tools enable participation by citizens who are geographically distant, time-constrained, or have limited mobility (Plantinga, Dlamini & Gordon, 2024). Empirical evidence from Western Cape municipalities, including Knysna, Theewaterskloof, and Kai! Garib, demonstrates how SMS-based two-way communication systems broaden participation among citizens with limited access to smartphones or data-intensive platforms. Similarly, the MobiSAM initiative in Makhanda illustrates how mobile-enabled platforms facilitate real-time reporting of service delivery issues, thereby strengthening citizen voice and inclusivity. These innovations contribute to improved data collection and analysis, allowing municipalities to gather timely and context-specific inputs for IDP, budgeting, and service delivery (Plantinga et al., 2024; Molobela, 2025; Wirtz et al., 2018; Benlahcene et al., 2024). Furthermore, platforms such as e-Tshwane in the City of Tshwane demonstrate how digital systems can be leveraged beyond administrative functions to incorporate citizen feedback, thereby enhancing evidence-based planning and responsiveness (Plantinga et al., 2024). In addition to improving inclusion and data utilization, institutionalized e-participation enhances transparency, accountability, and trust between municipalities and communities. Continuous digital engagement enables citizens to monitor government performance and hold officials accountable, contributing to improved governance outcomes and reduced corruption (Agostino, Arnaboldi, & Lema, 2022; Firtin et al., 2024). For example, Mofokeng, Ramolobe and Bogopa (2025) indicate that the eThekweni Municipality implemented virtual consultation platforms to ensure the continuity of urban planning and participatory governance during and after the COVID-19 pandemic. Reddy and Govender (2019) indicate that this shift is part of a broader strategy to accelerate the city's

transformation into a "Smart City" and "Smart Society". The hybrid model further strengthens trust by combining digital engagement with traditional face-to-face interactions, thereby addressing concerns related to data privacy and the legitimacy of online inputs. Moreover, e-participation plays a critical role in strengthening local democracy and community empowerment by enabling citizens to actively influence decision-making processes, in line with constitutional mandates for participatory governance (Themba & Selepe, 2020; Ouwencamp & van der Walddt, 2024; Mamokhere & Meyer, 2025). Initiatives such as the Human Sciences Research Council-led ePPMOSA project further demonstrate how civic technology education, peer-learning networks, and simplified digital content can empower communities, foster local ownership, and enhance collaborative governance (Plantinga et al., 2024).

E-participation offers significant opportunities to strengthen the IDP process in rural South African municipalities by improving service delivery, promoting transparency, enhancing accountability, and enabling citizens to participate more actively in municipal decision-making through digital platforms (Alarabiat et al., 2020; Mamokhere & Meyer, 2025). It empowers communities to monitor municipal performance, influence policy priorities, contribute to participatory budgeting, and co-produce development solutions, thereby strengthening democratic governance and the legitimacy of municipal decisions (Tshabalala & Lombard, 2009; Themba & Selepe, 2020; Fourie, 2021). Furthermore, e-participation facilitates greater coordination across government spheres and expands participation opportunities for marginalised communities, contributing to more inclusive development (Strauss, 2019). However, the effectiveness of e-participation remains constrained by the digital divide, inadequate internet connectivity, high data costs, low digital literacy, institutional resistance, limited technical capacity, and concerns regarding data security and compliance with the Protection of Personal Information Act (POPIA) (Sparks, 2013; Ayebare & Sam, 2025; Zhang et al., 2025). Consequently, sustainable implementation requires the formal institutionalisation of hybrid e-participation within municipal planning processes through supportive policies, adequate resources, political commitment, and complementary face-to-face engagement to ensure inclusive, responsive, and effective local governance (Benlahcene et al., 2024).

Factors that influence the successful integration and implementation of e-participation

Research on the factors influencing the successful implementation of e-participation has made notable progress; however, much of this scholarship has predominantly emphasized technical determinants while overlooking the non-technical

dimensions linked to user contexts. Focusing solely on technological aspects is insufficient, as it captures only one component of a broader, multi-dimensional challenge affecting the adoption and effective use of e-participation systems. Although extensive studies have examined technical enablers such as infrastructure and system functionality, much of this evidence is derived from contexts outside Africa (Ayebare & Sam, 2025). For example, studies conducted in China highlight the importance of psychological and behavioral factors, showing that citizens' participation is shaped by political efficacy, literacy levels, and trust in government responsiveness. Similarly, research in developed countries identifies language proficiency and confidence in data privacy as critical non-technical determinants, underscoring the significance of social, cultural, and political factors in shaping user engagement (Mobini & Hansson, 2014). Despite growing recognition of the importance of non-technical factors, scholars argue that isolating either technical or non-technical elements does not provide a comprehensive understanding of e-participation. Instead, a holistic approach that integrates social, technical, and socio-technical dimensions is required. Empirical studies using global datasets demonstrate that social factors such as education and literacy enhance participation, while technical factors like internet access and telecommunications infrastructure facilitate usage. At the same time, socio-technical conditions, including access to electricity, income levels, affordable connectivity, and availability of digital devices, play a crucial role in enabling effective participation (Aljazzaf et al., 2020). Complementary evidence from studies in Kuwait further highlights the interaction between these dimensions, showing that infrastructure availability, user-friendly system design, social influence, trust in government, political engagement, and perceived usefulness all shape citizens' willingness to engage in e-participation. Collectively, these findings emphasize that successful implementation depends on the alignment of technological systems with broader social, institutional, and political contexts (Ayebare et al., 2025).

The goals of public participation include educating and informing the public, integrating public values into decision-making, enhancing the quality of decisions, fostering trust in municipalities, reducing conflict, and achieving cost-effectiveness (Mamokhere & Meyer, 2025). Improving municipal service delivery can be supported through citizen engagement that disseminate information to the local community. However, stakeholders often hesitate to endorse projects if they perceive that the disadvantages outweigh the advantages, and mere promotion of the project may not alter this perception. Therefore, sustained communication and transparency tailored to the needs of various local stakeholders can reduce negative sentiments toward proposed initiatives, albeit to a limited degree. Furthermore, citizens frequently do not hold the position of key stakeholders in decision-making processes, which has contributed to an

escalation of protests related to inadequate service delivery, as discussed in studies by Maphazi, Raga, Taylor and Mayekiso (2013), and others (Heldt et al., 2016; Bello et al., 2017; Ngamlana, 2019). To determine what is necessary for viable e-participation, Ngamlana (2019) indicated that the efficacy of public participation, including e-participation, depends on various outlined factors. E-participation in local government facilitates the integration of community voices in local economic development, decision-making, and service delivery improvements. It underlines the significance of stakeholder engagement and technological considerations, advocating for customized strategies that address each municipality's specific needs to promote equitable and inclusive citizen involvement through emerging technologies. In a democratic setting, local governments are vital in enhancing living conditions and creating genuine opportunities for civic participation in policy formulation. Implementing e-participation enhances transparency, accountability, and citizen engagement within decision-making frameworks. In South Africa, this digital shift resonates with the *Batho Pele* principles, which prioritize citizen-centric public service delivery, emphasizing consultation, transparency, and accountability, thereby laying a foundation for building trust and cooperation between municipalities and citizens in the digital era (Dlamini et al., 2025). Table 1 below presents the factors required to have effective public participation.



Figure 1. Factors that influence effective public participation

Source: Ngamlana (2019)

The successful implementation of e-participation in municipalities depends on effective institutional mechanisms, supportive legal frameworks, adequate resources, and reliable digital infrastructure. Governance structures such as ward committees, IDP representative forums, and municipal councils, together with the participatory governance provisions of Section 16 of the Municipal Systems Act (2000), provide the foundation for citizen engagement, while e-participation enhances these mechanisms by facilitating continuous, inclusive, and accessible participation in municipal planning and decision-making (Ngamlana, 2019; Mehlape, 2022; Yende, Mahlangu & Mkhwanazi, 2025). Meaningful participation further requires stakeholder inclusivity, citizen empowerment, digital literacy, and multilingual digital platforms to ensure that diverse groups, including youth, academia, businesses, and marginalised communities, can contribute effectively (Ismail & Said, 2015; Kaseya & Ephantus, 2016; Malemane & Nel-Sanders, 2021; Zhang et al., 2025). Sustained investment in public education, financial and human resources, transparency, and continuous engagement strengthens public trust and improves service delivery outcomes (Pagatpatan & Ward, 2017). Moreover, successful e-participation requires strong political commitment, responsible information technology and data governance, protection of citizens' personal information, risk management, and secure digital platforms that comply with privacy standards, thereby enhancing trust, accountability, and the long-term sustainability of digital participation initiatives (Dlamini et al., 2025).

Case Study: E-Participation Pilots in South African Municipalities

In South Africa, several municipalities have piloted e-participation initiatives aimed at enhancing citizen engagement, transparency, and service delivery, with support from national research institutions such as the Human Sciences Research Council (HSRC), the Council for Scientific and Industrial Research (CSIR), and the University of KwaZulu-Natal (UKZN), alongside oversight from the South Africa Local Government Association (SALGA) and Cooperative Governance and Traditional Affairs (CoGTA). The multi-year e-Participation and Policy Modelling Platform for South Africa (ePPMOSA, 2022–2025) represents a flagship effort to test and integrate digital tools into municipal planning and IDP processes across several selected municipalities. Pilot techniques have included the use of low-cost, accessible technologies such as WhatsApp groups, SMS-based two-way communication channels, interactive dashboards, annotated maps, virtual meetings through Zoom and Microsoft Teams, and zero-rating initiatives to remove data cost barriers for low-income residents (Dlamini et al., 2026). Key municipal pilots illustrate diverse approaches and outcomes. The City of Tshwane established an e-participation

unit in 2017 and, during the COVID-19 pandemic, leveraged social media and virtual platforms to sustain community input in the IDP process. Western Cape municipalities, including Kai! Garib, Knysna, and Theewaterskloof, implemented SMS-based engagement to facilitate direct, two-way citizen communication. Policy Action Network (2026) and Dlamini et al. (2026) outline several municipalities in South Africa that have engaged with the COMPACT initiative to enhance digital participation tools and e-participation strategies. Key partners include the city of uMhlathuze and JB Marks Local Municipality, which participated in pilot activities and the national learning forum. eThekweni Metropolitan Municipality is noted for piloting digital innovations in urban planning and service delivery. OR Tambo District Municipality and Waterberg District Municipality are recognized as sites for the District Development Model (DDM) and for studying civil society's role in e-participation. Other municipalities, such as Cape Winelands District and Theewaterskloof, have implemented ICT systems and SMS-based e-participation, while City of Tshwane is highlighted for its shift toward digital governance. Recently, studies from Greater Tzaneen show that the municipality has piloted online surveys and digital consultation platforms, revealing challenges related to providing timely feedback and bridging the digital divide (Mamokhere & Meyer, 2025). Mbombela Municipality focused on assessing operational readiness for e-governance, while Sol Plaatje Municipality evaluated digital literacy initiatives and mobile-optimized platforms to increase citizen participation (Dlamini et al., 2026). Looking at these pilots, findings indicate that digital tools can improve responsiveness, transparency, and stakeholder involvement, yet institutionalization remains a significant challenge. Persistent barriers include inadequate ICT infrastructure, low digital literacy, limited multilingual support, and insufficient trust and awareness among residents. The success of e-participation depends on establishing clear municipal processes, aligning initiatives with the Municipal Systems Act and constitutional mandates, providing structured feedback to participants, and embedding digital engagement into standard governance frameworks to ensure sustainability, inclusivity, and long-term integration into municipal decision-making.

3. RESEARCH METHODOLOGY AND DESIGN

The study adopted mixed-methods research methodology using a triangulation design. This approach enabled the integration of quantitative and qualitative data to provide a more comprehensive understanding of the research problem. The use of methodological triangulation enhanced the validity and reliability of the findings by

capitalizing on the strengths of both quantitative and qualitative methods, while mitigating the limitations associated with each approach when used independently.

Study site

The study was conducted in the GTM in Limpopo Province, South Africa. The municipality was selected because it represents a predominantly rural context where challenges associated with digital governance and e-participation are prevalent. Rural communities in the area often experience limited internet connectivity, varying levels of digital literacy, and a persistent digital divide, which may influence citizens' ability to engage effectively in electronic participation initiatives. Consequently, the municipality provided an appropriate setting for examining the factors affecting the institutionalization and effectiveness of hybrid e-participation in rural local government.

Population target

The study population comprised community members within the jurisdiction of GTM and municipal officials responsible for IDP implementation and public participation in the municipality.

Sampling Technique and Size

The study used a combination of probability and non-probability sampling techniques, yielding a sample size of three hundred and twelve respondents (N=312) and three key informants (n=3) from the study site.

Data collection and Ethical considerations

Quantitative data were collected using a structured questionnaire testing community members of GTM, and qualitative data were obtained from semi-structured face-to-face interviews conducted with municipal officials. Ethical considerations were strictly adhered to, with ethical clearance (Certificate Number: 24PMGPP 145) obtained from the University of Johannesburg's College of Business and Economic Research Ethics Committee in 2024, thereby ensuring the protection of participants' rights and the integrity of the research process.

Data Analysis

Quantitative data were analyzed using descriptive statistics, Pearson correlation, regression analysis, analysis of variance (ANOVA), and coefficient of determination (R^2) employing SPSS version 29.0 and Microsoft Excel, enabling the identification of relationships among variables, prediction of outcomes, and explanation of variance in public participation (Ali & Bhaskar, 2016; Schneider et al., 2010). These statistical techniques provided a robust basis for generating evidence-based insights into factors influencing e-participation. The following regression equation was estimated:

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + e$$
$$y = 2.638 - 0.058x_1 + 0.025 + 0.100x_3 - 0.080x_4 + 0.174x_5 \dots\dots\dots (1)$$

Where:

Y = To analyze the relationship between perceived benefits of e-participation in the IDP process and selected demographic variables in the Greater Tzaneen Rural Municipality.

Qualitative data were analyzed using thematic content analysis to identify recurring themes and patterns related to the challenges and opportunities of digital public participation.

4. RESULTS AND DISCUSSION

This section discusses empirical results that integrate both quantitative and qualitative research methodologies. It begins by detailing the demographic information of the respondents involved in the study. Following this, the study presents the results derived from both quantitative measurements and qualitative interviews, providing a comprehensive analysis of the findings.

Demographic Information of the Respondents

This study examined participants' demographic characteristics, including age, gender, education level, employment status, residential location, and internet access, to provide context for interpreting the findings. Analysing these variables enabled a better

understanding of the study population, identification of participation trends, and the development of context-specific interventions. Table 1 presents a summary of the participants' demographic profile.

Table 1. Demographic information of the participants

		Frequency	Percent
Age Group	under 18 years	19	6.1
	18-24 years	66	21.2
	25-34 years	83	26.6
	35-44 years	46	14.7
	45-54 years	33	10.6
	55-64 years	40	12.8
	65 years and older	25	8
Gender	Male	132	42.3
	Female	117	37.5
	Prefer not to say	63	20.2
Educational level	No formal education	41	13.1
	Primary education	34	10.9
	Secondary education	69	22.1
	Vocational/technical	40	12.8
	Bachelor's degree	46	4.7
	Postgraduate degree	20	6.4
	Prefer not to say	62	19.9
Occupational Status	Employed	59	18.9
	Unemployed	144	46.2
	Self-Employed	55	17.6
	Prefer not to say	54	17.3
Residential Area	Rural	164	52.6
	Urban	79	25.3
	Prefer not to say	69	22.1
Internet Access	Always have access	65	20.8
	Occasionally have access	49	15.7
	Rarely have access	88	28.2
	Never have access	75	24
	Prefer not to say	35	11.2

Source: Researcher's Compilation (2024)

The demographic profile indicates that most participants were young adults, with the largest proportion aged 25–34 years (26.6%), followed by those aged 18–24 years (21.2%), suggesting a relatively youthful population with greater potential for digital engagement. Although males (42%) slightly outnumbered females (38%), a notable proportion of participants chose not to disclose their gender (20%). Educational attainment varied considerably, with most respondents possessing secondary education (22.1%), while only a small proportion held postgraduate qualifications (6.4%). Socio-economic conditions were characterised by high unemployment (46.2%) and a predominantly rural population (52.6%), where limited digital infrastructure remains a significant concern. Correspondingly, most respondents reported either rare (28.2%) or no internet access (24%), with only 20.8% indicating consistent connectivity. These findings suggest that while the relatively young age profile may favour the adoption of hybrid e-participation, structural barriers, including inadequate internet access, educational disparities, and socio-economic constraints are likely to hinder meaningful participation. This finding supports previous studies emphasising that effective e-participation depends not only on technology but also on broader social, institutional, and socio-technical factors such as infrastructure availability, education, income, digital literacy, and political context (Aljazzaf, Al-Ali & Sarfraz, 2020; Ayebare & Sam, 2025; Plantinga, 2026).

Presentation of Quantitative Descriptive Results: Perceived Benefits of E-participation

Various communities were sampled through surveys to gather their perspectives about perceived benefits of e-participation, and the results are presented in figures and tables utilizing percentages and frequencies.

E-participation enhances the inclusiveness of the IDP process

The researcher investigated the impact of e-participation mechanisms on the inclusiveness of the IDP process through an online survey. The primary question aimed to assess whether e-participation enables a wider range of citizens to express their views freely and without bias. Results, illustrated in Figure 2, revealed that a majority of respondents (21.2%, n=66 and 15.7%, n=49) strongly disagreed that e-participation enhances inclusiveness in the IDP process of the GTM. Meanwhile, 38.9% (n=119) remained neutral on the issue. Conversely, a smaller proportion of participants believed in the positive impact of e-participation on inclusivity, with 18.9% (n=59) agreeing and

6.1% (n=19) strongly agreeing that it facilitates citizen engagement in the IDP process without prejudice or limitations.

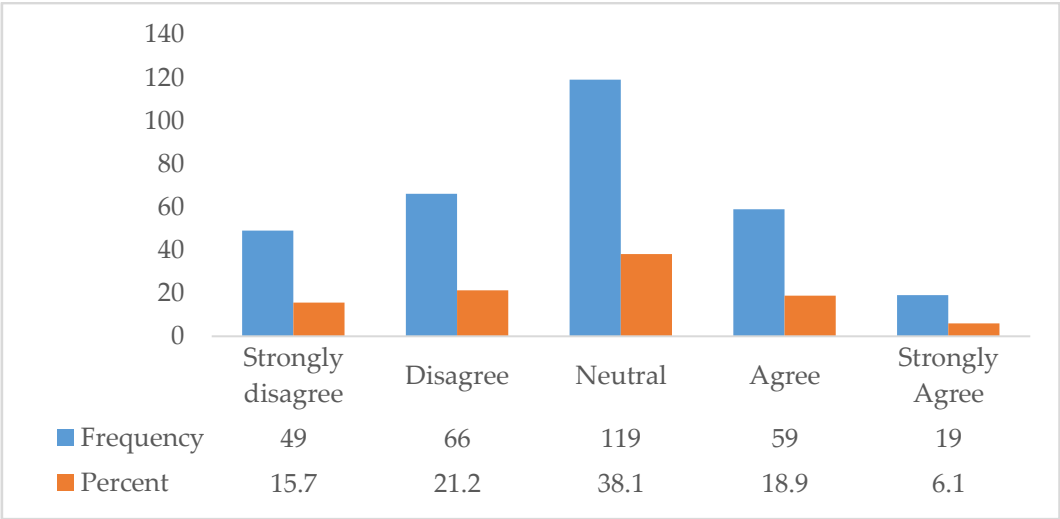


Figure 2. E-participation and inclusiveness of the IDP process

Source: Researcher's Compilation (2024)

Figure 2 indicates that e-participation alone is insufficient to ensure inclusiveness in the IDP process within the GTM. South African municipalities are legally mandated to promote inclusive participation through frameworks such as the Municipal Systems Act 32 of 2000 and the Constitution of 1996, which require stakeholder involvement in planning and decision-making (Ouwencamp & van der Walddt, 2024; van der Walddt & Fourie, 2021). An effective IDP should integrate sectoral plans and incorporate mechanisms for community engagement, including ward committees and public forums (Dywili & Draai, 2019). However, challenges such as limited two-way communication and gaps in participation mechanisms, particularly e-participation, hinder meaningful inclusivity (Dywili et al., 2019). Although e-participation tools such as social media and digital platforms can broaden access and include previously excluded groups, especially those unable to attend physical meetings (Lin & Kant, 2021; Gwakwara & Niyitunga, 2024), their effectiveness is constrained by the digital divide. Factors such as high data costs, limited digital skills, poor connectivity, and inadequate infrastructure reduce participation, particularly in developing contexts (Gwakwara & Niyitunga, 2024). Therefore, integrating both online and traditional participation methods is essential to

achieve inclusive, equitable, and effective community engagement in municipal planning processes.

Security and privacy implemented in the e-participation platforms during the IDP process of the GTM

In the context of the IDP process, a study assessed participants' confidence in the security and privacy measures of e-participation platforms. Findings in Table 2 indicate that 40.1% of participants were neutral regarding these measures, while 17.3% disagreed and 13.5% strongly disagreed that the municipality's e-participation ensures privacy and security. Conversely, 21.5% agreed, and 7.7% strongly agreed, that security and privacy were considered by the municipality during the implementation of e-participation in the IDP process.

Table 2. E-participation platforms' security and privacy measures

	Frequency	Percent
Strongly disagree	42	13.5
Disagree	54	17.3
Neutral	125	40.1
Agree	67	21.5
Strongly Agree	24	7.7
Total	312	100

Source: Researcher's Compilation (2024)

In terms of Table 2, most participants expressed neutrality regarding the municipality's e-participation security and privacy measures, highlighting uncertainty and the critical importance of these factors in the IDP process. South African legislation, including the Constitution (1996) and the Protection of Personal Information Act (2013), emphasizes the protection of privacy and personal data. Ensuring system security, privacy, and quality is essential for building trust and promoting effective use of e-participation platforms (Kanaan et al., 2023). While e-participation can improve government efficiency and convenience (Liu & Carter, 2018), concerns over data misuse, third-party access, and privacy violations may undermine public confidence (Hawamleh et al., 2020, cited in Kanaan et al., 2023). Therefore, robust data protection measures are necessary to safeguard sensitive information, prevent risks such as fraud, and enhance trust and participation in digital governance systems (Kanaan et al., 2023).

E-participation in IDP can accelerate service delivery in our community

In this section, the researcher asked the participants if they believed that e-participation in integrated development planning could contribute to speeding up service delivery in their community. The responses, regarding e-participation and speedy service delivery, are presented in Figure 3 below in terms of frequencies and percentages. In terms of Figure 3, the study reveals that a minority of the participants, with 13.1% (n=41), strongly disagree, while 14.7% (n=46) disagree that e-participation platforms are not contributing to speeding up service delivery within the municipality. However, other participants were neutral, concerning whether e-participation platforms contribute to enhancing service delivery. Moreover, most of the participants, with 27.2% (n=85), agreed, while 8% (n=25) of the participants strongly agreed that e-participation platforms contribute to speeding up service delivery within the municipality.

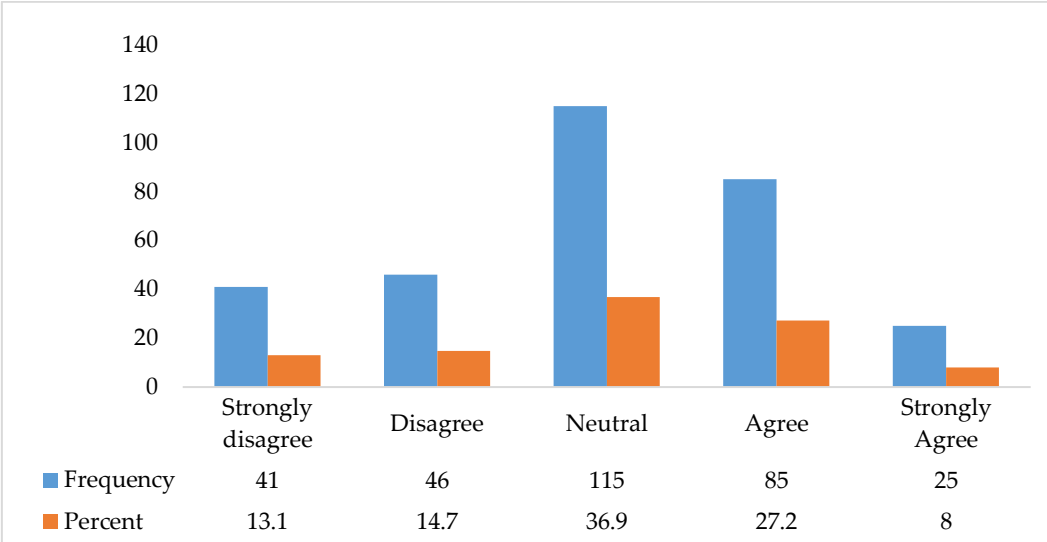


Figure 3. E-participation and service delivery

Source: Researcher's Compilation (2024)

E-participation in municipal planning presents both benefits and limitations. In contrast, it can hinder service delivery due to poor responsiveness from municipal officials, as complaints submitted through platforms such as email and social media often go unattended because of capacity constraints, thereby contributing to public

dissatisfaction and service delivery protests (Kaunda, 2021). This suggests that without adequate institutional support and responsiveness, e-participation platforms may be ineffective. On the other hand, e-participation enhances governance by improving service delivery, increasing access to information, and strengthening transparency, accountability, and citizen empowerment (Kanaan et al., 2023). As local government is mandated to involve citizens in decision-making, the integration of digital tools alongside traditional methods can improve efficiency, reduce costs, and foster more effective interactions between government, businesses, and communities, particularly with the growing access to mobile and internet technologies in South Africa (Kaunda, 2021; Ndlovu & Muringa, 2026).

E-participation in the IDP process empowers community members

The researcher explored participants' views on whether e-participation in the IDP process empowers community members to engage in decision-making and contribute to community development. According to the survey results presented in Figure 4, out of 312 participants, a significant portion (40.4%, n=126) remained neutral on the issue of e-participation's empowering effect. Meanwhile, 10.3% (n=32) strongly disagreed, and 18.9% (n=59) disagreed with the notion that these platforms empower community voices in the IDP process. Conversely, 21.5% (n=67) agreed, and 9% (n=28) strongly agreed that the municipality's e-participation platforms allow them to express their concerns and impact decision-making in the IDP's development for the following five years.

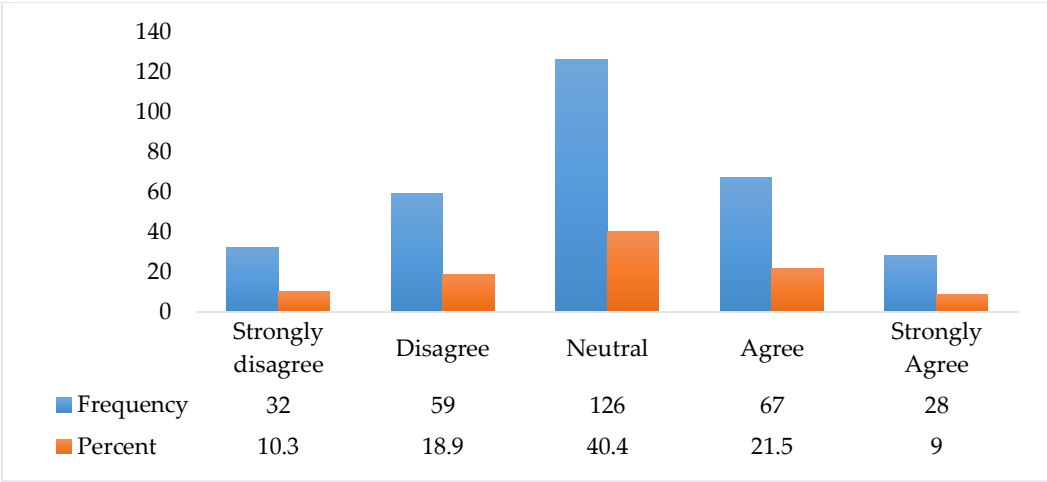


Figure 4. E-participation and community empowerment
Source: Researcher's Compilation (2024)

The findings indicate that a significant proportion of respondents were neutral (40.4%, n=126) regarding whether e-participation platforms empower communities to influence decision-making in the IDP process. This neutrality suggests that while such platforms provide opportunities for citizens to voice concerns, their actual influence on decision-making remains uncertain. Nonetheless, e-participation tools, including social media, are increasingly used to complement traditional participation methods and can range from merely informing citizens to empowering them to actively shape decisions (Lin & Kant, 2021). At higher levels, e-participation enhances participatory democracy, builds trust, and promotes long-term social benefits (Naranjo-Zolotov et al., 2018). Furthermore, these tools facilitate citizen involvement, strengthen empowerment, and contribute to improved development outcomes by incorporating public input into municipal planning processes (Okeke-Uzodike & Dlamini, 2019).

The crucial role of e-participation in strengthening participatory democracy

In this section, the researcher examined participants' inputs on the significance of public participation, specifically e-participation, in enhancing democracy within the Greater Tzaneen Rural Municipality. The findings, illustrated in Figure 5, reveal that the majority of respondents (41.7%, n=130) held a neutral stance regarding the impact of e-participation on democracy. Additionally, 10.6% (n=33) strongly disagreed, and 14.4% (n=45) disagreed, citing limitations in public participation that restrict inclusivity across

different age groups and geographical regions. Conversely, a portion of the participants recognized that e-participation can bolster democracy by facilitating citizen engagement in the IDP without bias, with 20.8% (n=65) agreeing and 12.5% (n=39) strongly agreeing with this assertion.

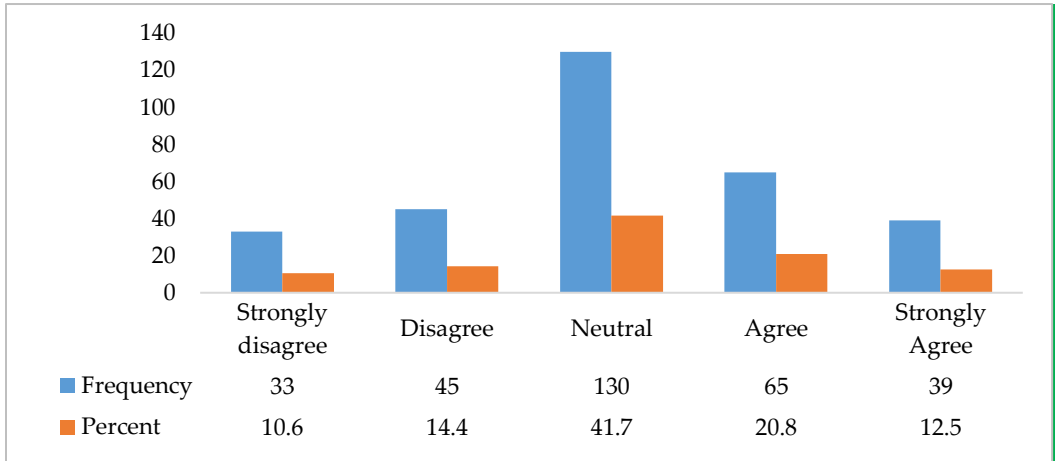


Figure Error! No text of specified style in document.. E-participation in strengthening democracy

Source: Researcher's Compilation (2024)

The findings suggest that e-participation has the potential to promote democracy in the IDP process, although perceptions remain mixed, with the majority of participants neutral (41.7%, n=130) and a smaller proportion agreeing (20.8%, n=65). This aligns with existing literature, which emphasizes the role of local government in fostering democracy, accountability, transparency, and citizen participation, as supported by South African legislative frameworks such as the Constitution and the Municipal Systems Act (Okeke-Uzodike & Dlamini, 2019; Mamokhere & Meyer, 2025). E-participation, particularly through electronic consultation, enhances citizen empowerment and aligns with initiatives such as the National e-Government Strategy and Roadmap aimed at improving service delivery and access to information (Naranjo-Zolotov et al., 2018; Okeke-Uzodike et al., 2019). However, challenges such as the digital divide, limited digital skills, poor infrastructure, and inadequate connectivity can undermine inclusivity and democratic participation, as evidenced in Zimbabwe (Gwakwara & Niyitunga, 2024). Addressing these barriers through inclusive policies and improved ICT infrastructure is essential to ensure effective and equitable e-participation (Dlamini et al., 2025).

Presentation of Correlation and Regression Analysis

This section examines the correlation and regression analysis concerning the potential benefits of e-participation as an alternative approach for involving citizens in the integrated development planning process, particularly focusing on demographic variables within the context of the Greater Tzaneen Rural Municipality. The results are presented below:

Correlation analysis

The correlation analysis for the potential benefits of e-participation as an alternative method for engaging citizens in the IDP process in Greater Tzaneen Rural Municipality reveals several significant relationships among the variables. Objective 2.1.2 shows a positive correlation with gender ($r = .139, p < .05$), level of education ($r = .265, p < .01$), and residential Area ($r = .206, p < .01$), indicating that these factors are significantly related to the third objective of the study. Specifically, the level of education has the strongest positive correlation with Objective 2.1.2, followed by residential area and gender. On the other hand, there is a weak negative correlation between age group and Objective 3 ($r = -.055, p = .330$), which is not statistically significant. Occupation has no significant correlation with Objective 2.1.2 ($r = .013, p = .814$), suggesting that it does not play a notable role in relation to the third objective. These findings highlight that educational background, gender, and residential area are important factors in understanding the dynamics associated with Objective 2.1.2 of the study. The results are presented in Table 3 below:

Table 3. Correlation analysis

		Age group	Gender	Level of education	Occupation	Residential area	Objective 2.1.2
Age group	Pearson correlation	1	.129*	.145*	.171**	.249**	-.055
	Sig. (2-tailed)		.022	.010	.002	<.001	.330
	N	312	312	312	312	312	312
Gender	Pearson correlation	.129*	1	.395**	.321**	.397**	.139*
	Sig. (2-tailed)	.022		<.001	<.001	<.001	.014
	N	312	312	312	312	312	312

Level of education	Pearson correlation	.145*	.395**	1	.294**	.353**	.265**
	Sig. (2-tailed)	.010	<.001		<.001	<.001	<.001
	N	312	312	312	312	312	312
Occupation	Pearson correlation	.171**	.321**	.294**	1	.292**	.013
	Sig. (2-tailed)	.002	<.001	<.001		<.001	.814
	N	312	312	312	312	312	312
Residential area	Pearson correlation	.249**	.397**	.353**	.292**	1	.206**
	Sig. (2-tailed)	<.001	<.001	<.001	<.001		<.001
	N	312	312	312	312	312	312
Objective 2.1.2	Pearson correlation	-.055	.139*	.265**	.013	.206**	1
	Sig. (2-tailed)	.330	.014	<.001	.814	<.001	
	N	312	312	312	312	312	312

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Researcher's Compilation (2024)

The table shows how different demographic factors are related to each other and to Objective 2.1.2. Overall, education level and residential areas have a small but meaningful positive relationship with the outcome, while gender has a weak effect. Age and occupation do not show a significant relationship with the main outcome.

Regression Model

The regression model summary Table 4 below provides the key statistics for analyzing the relationship between perceived benefits of e-participation in the IDP process and selected demographic variables in the Greater Tzaneen Rural Municipality.

Table 4. Regression model summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson
1	.328 ^a	.107	.093	.79547	1.730

a. Predictors: (constant), residential area, age group, occupation, level of education and gender.
b. Dependent variable: To analyze the relationship between perceived benefits of e-participation in the IDP process and selected demographic variables in the Greater Tzaneen Rural Municipality.

Source: Researcher's Compilation (2024)

The regression model ($R=.328$) in Table 4 indicates a moderate positive relationship between the predictors and the dependent variable. The R-squared value (.107) reveals that approximately 10.7% of the variance in the perceived benefits of e-participation is explained by the model, which includes residential area, age group, occupation, level of education, and gender. The adjusted R-squared value (.093) is slightly lower, adjusting for the number of predictors in the model, and suggests that the model's explanatory power is modest. The standard error of the estimate (.79547) measures the average distance that the observed values fall from the regression line, indicating the model's precision. The Durbin-Watson statistics (1.730) is close to 2, suggesting that there is no significant autocorrelation in the residuals. Overall, the model explains a modest portion of the variability in the benefits of e-participation, with educational level and residential area being significant contributors.

Analysis of Variance (ANOVA)

The analysis of variance in Table 5 below evaluates the overall significance of the regression model predicting the potential benefits of e-participation as an alternative method for engaging citizens in the IDP process in GTM. The regression model explains a significant portion of the variance in the dependent variable, as indicated by the F-value (7.359) and the associated p-value ($p < .001$). The regression sums of squares (23.283) and the mean square (4.657) reflect the variability explained by the model, while the residual sum of squares (193.630) and the mean square (.633) represent the unexplained variability. With a total sum of squares of 216.913 and 311 degrees of freedom, the model significantly fits the data, implying that the predictors (residential area, age group, occupation, level of education, and gender) collectively contribute to the perception of the benefits of e-participation.

Table Error! No text of specified style in document.. Analysis of Variance

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	23.283	5	4.657	7.359	<.001 ^b
	Residual	193.630	306	.633		
	Total	216.913	311			

a. Dependent variable: To analyze the relationship between perceived benefits of e-participation in the IDP process and selected demographic variables in the Greater Tzaneen Rural Municipality.

b. Predictors: (constant), residential area, age group, occupation, level of education, and gender.

Source: Researcher's Compilation (2024)

Coefficient of determination

The coefficients in Table 6 below examine the factors that influence the perceived benefits of e-participation as an alternative method for engaging citizens in the IDP process in the GTM.

Table 6. Coefficient of determination

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
	B	Std. error	Beta			Tolerance	VIF
1 (Constant)	2.638	.163		16.185	<.001		
Age group	-.058	.027	-.119	-2.123	.035	.926	1.080
Gender	.025	.069	.023	.360	.719	.743	1.346
Level of education	.100	.025	.242	3.949	<.001	.778	1.285
Occupation	-.080	.051	-.094	-1.586	.114	.837	1.195
Residential area	.174	.064	.169	2.707	.007	.752	1.329

Dependent variable: To analyze the relationship between perceived benefits of e-participation in the IDP process and selected demographic variables in the Greater Tzaneen Rural Municipality.

Predictors: (constant), residential area, age group, occupation, level of education, and gender.

Source: Researcher's Compilation (2024)

The results show the constant ($B = 2.638$, $p < .001$) indicates a baseline benefit level. Age group ($B = -0.058$, $p = .035$) has a small but significant negative impact, suggesting that older individuals perceive fewer benefits from e-participation. Gender ($B = 0.025$, $p = .719$) has a non-significant effect, indicating that gender does not substantially influence perceptions of e-participation benefits. Level of education ($B = 0.100$, $p < .001$) and residential area ($B = 0.174$, $p = .007$) both have significant positive impacts, highlighting that higher education levels and certain residential areas are associated with a stronger perception of the benefits of e-participation. Occupation ($B = -0.080$, $p = .114$) shows a negative but non-significant impact. The collinearity statistics (tolerance and VIF) confirm that there is no severe multicollinearity among the predictors, with all VIF values close to 1, inferring that the independent variables are not highly correlated with each other.

Presentation of Qualitative Results: Perceived Benefits of using E-participation

This section outlines the qualitative findings derived from semi-structured interviews conducted with three primary informants from the GTM office. The results are systematically organized by themes for clarity and ease of understanding.

Public participation in e-participation initiatives, such as WhatsApp and Facebook, benefits communities within the municipality

In this section, the researcher asked the participants this question: “Do you believe that public participation in the municipality’s e-participation initiatives, like WhatsApp and Facebook, is a good idea for your communities? The key participants were further probed to indicate whether they affirm or deny and outline how viable it is. The responses to this question are presented below.

Participant A indicated that:

“Yes, electronic participation (hereafter e-participation) initiatives are a good idea. They offer a viable way to reach a broader society within the jurisdiction of the municipality, including those who may not be able to attend imbizos and public meetings or forums due to other commitments. This initiative promotes transparency and accountability”.

Participant C indicated that:

“Yes, it is a good idea as it adheres to the Municipal Systems Act about creating systems, structures and procedures for stakeholders’ participation. E-participation may not be viable overall, meaning there is minimal community participation, but with the right tools to teach and inform

affected communities about electronic means of participation, it can become viable in the long run. After all, the world is adapting to the fourth industrial revolution (4IR) post the COVID-19 pandemic era”.

On the other hand, Participant B indicated that:

“No, while e-participation has potential, it is not fully viable for all community members. Many residents lack access to reliable Internet and electricity and are uneducated to use these kinds of tools, which can exclude them from the process”.

Based on the above findings, many studies concur that e-participation is feasible and attainable. For example, in the study of Alarabiat, Soares and Estevez (2020), there was a significant agreement that e-participation in the form of Facebook and other social media platforms is a good idea based on citizens’ perceptions. Furthermore, Lin and Kant (2021) indicated that public participation in IDP planning and decision-making processes can lead to transparent, inclusive, and fair outcomes. Social media, particularly Facebook, plays an essential role in informing citizens and collecting their input in real time. This open and detailed nature allows citizens to participate anytime, anywhere, capturing a wider audience. However, given that other participants in the study indicated that e-participation is not a good idea due to a lack of inclusiveness, Lin and Kant (2021) agreed but indicated that offline participation methods can also be beneficial in engaging local communities. The combination of online and offline methods can involve various social groups in planning practices. For instance, in the iBike Alkmaar Campaign, there were no offline participation methods for engagement and communication, while social media discussions lacked in-depth communication. Effective communication in the case of Overvecht in the Netherlands was primarily attributable to the combination of online and offline participation.

The municipality’s e-participation significantly impacts the achievement of its strategic objectives

In this section, the participants were asked to answer the question of whether by implementing e-participation initiatives, the municipality yields a significant impact in achieving the set strategic objectives, or if it is just for compliance. The participants were probed to indicate either yes or no and justify their answers. The responses to this question are outlined below.

All the participants indicated that:

“No, the limitations are that fewer people are reached, and the Internet availability and affordability of data impact negatively”.

In this regard, it can be argued that even though e-participation mechanisms are used as an alternative mechanism to strengthen public participation in the IDP process, there are still challenges which limit the municipality from reaching its strategic objectives. Bennett (2015) indicated that there is a digital divide between rural-urban areas and those who have and have-nots. These inequalities are caused by a lack of Internet access, affordability, digital literacy, poor infrastructure, and insufficient political commitment. The study of Zheng, Schachter and Holzer (2014) explored the impact of government e-participation and found that the mechanism is often used mainly in an informational capacity and not designed to promote interactivity. So, this finding can prove why municipalities are not achieving significant objectives because it seems like the citizens' involvement is just for compliance, while their involvement or participation should influence policymaking and decision-making in the allocation of basic services. Similarly, Mawela, Ochara and Twinomurinzi (2017) proffered that the failure of e-participation in South African municipalities can be attributed to a lack of human capital, skills, and a supportive strategy. Other factors include a complex global political environment, change management issues, citizen trust, resistance from public sector employees, and a lack of integrated project planning, effective management and funding support.

E-participation strategies promote good governance

In this section, the three key informants or participants were asked the following question during the interview: “Do the municipality's e-participation strategies or initiatives promote good governance in terms of two-way communication, accountability, and transparency?” The participants were requested to answer this with either a “yes” or “no” and further justify their answers. The answers to this question are presented below.

All the participants indicated that:

“Neither yes nor no; the municipality's e-participation initiatives promote good governance; however, the participants further stated that the strategies also have weaknesses. Hence, the municipality uses both traditional and electronic strategies to ensure inclusiveness of all citizens in the IDP process, regardless of their age, gender, race, disabilities, socio-economic status and location”.

The findings suggest that although e-participation has considerable potential to strengthen good governance, transparency, and citizen engagement, its effectiveness remains constrained by persistent digital inequalities, limited digital literacy, and exclusion of marginalised communities. The continued reliance of municipalities on digital platforms for one-way information dissemination, rather than meaningful dialogue and feedback, undermines participatory governance. These results indicate that successful e-participation requires adherence to the Batho Pele principles by promoting transparency, accountability, responsiveness, and active citizen consultation. Furthermore, low levels of public trust and inadequate incorporation of citizen input into decision-making reduce participation, reinforcing the need for municipalities to adopt hybrid participation approaches that combine traditional face-to-face engagement with digital platforms to ensure more inclusive, accessible, and effective public participation (Bennett, 2015; Alarabiat et al., 2020; Kaunda, 2021; Tejedo-Romero et al., 2022; Ndlovu & Muringa, 2026).

The municipality actively includes citizen inputs and opinions, offering feedback both during and after the e-participation process

In this section, the researcher asked the participants this interview question: “Does the municipality consider the citizens’ input and opinions and further provide citizens with feedback during and post e-participation?” The answers to this question are presented below.

All the participants indicated that:

“Yes, the GTM does consider citizens’ inputs and opinions during e-participation. We have structured forums and online platforms, such as a Facebook page, where citizens can voice their concerns and suggestions during the IDP process. The suggested inputs are then reviewed and incorporated into our planning processes. We also ensure that feedback is provided through various communication channels, including our website and social media, to keep communities informed about how their contributions have shaped municipal decision-making. But, because with e-participation, it’s more of one-way communication wherein citizens lodge their inputs and often do not get any response to their concerns immediately, but the comments are compiled for consideration when planning”.

The findings suggest that although e-participation is widely recognised as a vital mechanism for strengthening democratic governance and community participation in municipal planning, its effectiveness remains constrained by limited citizen influence

over decision-making processes. The low integration of public feedback into policy formulation and the IDP reduces trust and discourages continued participation, as citizens perceive their contributions to have little practical impact (Alarabiat et al., 2020; Lin & Kant, 2021). This reflects a broader challenge where e-participation often functions as an information-sharing exercise rather than a genuine platform for collaborative governance. Consistent with international evidence, meaningful e-participation requires municipalities to move beyond merely collecting public opinions by ensuring transparency, demonstrating how community inputs influence decisions, and utilising interactive digital platforms that facilitate two-way communication (Katzef et al., 2022; Tejedo-Romero et al., 2022). Such an approach is likely to enhance citizen trust, increase engagement, and strengthen participatory governance within the IDP process.

Municipality utilizes e-participation initiatives via Facebook and other social media to address service delivery challenges, promote inclusiveness, empower citizens, and enhance democratic rights, including freedom of expression, opinion, and information

In this section, the researcher asked the participants this interview question: “By employing e-participation initiatives through Facebook and other social media platforms, does the municipality resolve service delivery challenges; ensure inclusiveness; empower citizens and strengthen democratic rights such as freedom of expression, opinion, and information?” The responses to this question are presented below.

Participant B indicated that:

“No, relying merely on electronic participation initiatives like Facebook and other social media platforms is insufficient to resolve service delivery challenges. We are aware that these platforms enhance communication and public engagement, but they often exclude marginalized individuals without Internet access in their locations and education, thereby failing to ensure true inclusiveness”.

However, Participant C gave a different opinion:

“That social media like Facebook can sometimes amplify misinformation and lead to poor and irrelevant discussions, which might hinder effective problem-solving and governance”.

Participant A offered an affirmative view, but with limitations:

“Electronic participation via social media can enhance service delivery by providing transparent communication between the municipality and citizens, empowering them with immediate access to information, and citizens can also hold the municipality accountable for

unfulfilled promises. This has been evident in the past, where we have noticed citizens taking out their frustration on social media and exposing the officials and political office-bearers”.

In this regard, e-participation is a critical component of good governance, but its effectiveness is constrained by several challenges, including the digital divide, limited digital literacy, and insufficient human and financial resources (Bennett, 2015; Mawela et al., 2017). Additional barriers, such as weak strategic support, poor change management, lack of trust, resistance from public officials, and inadequate project integration, further hinder its success. Moreover, moderate citizens’ willingness to engage, often due to uncertainty about the influence of their input on decision-making, contributes to ongoing service delivery challenges (Alarabiat et al., 2020). Although e-participation enables communities to voice their concerns, low usage and weak integration of citizen inputs into policy processes reduce participation and limit empowerment (Katzef et al., 2022; Lin & Kant, 2021).

Municipalities can leverage social media platforms such as Facebook to foster and increase public participation through e-participation initiatives

In this section, the participants were probed to answer this question: “Do you think that e-participation initiatives through social media platforms like Facebook widely open new prospects for municipalities to attract and enhance public participation?” The participants were requested to either indicate “yes” or “no” and justify their answers. The responses to this question are presented below.

Participants A and B indicated that:

“Yes, electronic participation initiatives through social media platforms like Facebook do open new prospects for municipalities to attract and enhance public participation. Social media provides a convenient and accessible platform for a broader segment of the population to engage with municipal affairs. It allows for quick feedback, transparency, and fosters a sense of community involvement, especially among youth and educated residents”.

While participant C was against the idea by indicating that:

“Not all residents within the jurisdiction of GTM have equal access to or familiarity with social media, which could exclude vulnerable groups such as the elderly or low-income households”.

The findings suggest that although e-participation has significant potential to strengthen digital governance by improving inclusivity, transparency, and citizen

engagement, its effectiveness depends on more than the availability of digital platforms. While hybrid participation models have demonstrated their value in sustaining public participation, particularly during the COVID-19 pandemic, persistent digital inequalities, especially in rural communities, continue to constrain meaningful engagement (Gwakwara & Niyitunga, 2024; Bennett, 2015). The evidence indicates that successful e-participation requires an integrated approach that combines digital and traditional participation mechanisms while addressing socio-economic and institutional barriers such as digital literacy, trust, education, infrastructure, and political context. Therefore, the institutionalisation of hybrid e-participation should prioritise both technological accessibility and supportive governance environments to achieve equitable and sustainable citizen participation (Aljazzaf, Al-Ali & Sarfraz, 2020; Ayebare & Sam, 2025; Djatmiko, Sinaga & Pawirosumarto, 2025).

5. DISCUSSION

The quantitative and qualitative findings of this study jointly provide a comprehensive understanding of perceived benefits of e-participation in the Integrated Development Plan (IDP) process within the Greater Tzaneen Municipality (GTM). Quantitatively, the results show a generally mixed perception among respondents, with high levels of neutrality across most indicators such as inclusiveness, empowerment, and democratic strengthening. For instance, large proportions of respondents remained neutral on whether e-participation enhances inclusiveness (38.9%), empowerment (40.4%), and democracy (41.7%), while smaller proportions expressed agreement or disagreement. Correlation and regression analyses further indicate that education level and residential area are the most consistent predictors of positive perceptions of e-participation benefits, while age and occupation are largely insignificant ($r = .265$, $p < .01$; $\beta = .100$, $p < .001$) (Table 3–6). This suggests that socio-demographic factors shape how citizens evaluate digital participation tools. In contrast, qualitative findings provide deeper explanatory insights into these statistical patterns. Participants acknowledge that e-participation platforms such as WhatsApp, Facebook, and municipal websites enhance transparency, broaden access, and promote accountability (Participant A; Participant C). However, they also highlight critical limitations, including digital exclusion, lack of responsiveness, weak feedback loops, and the digital divide affecting rural, elderly, and low-income groups (Participant B). These concerns explain the high neutrality observed in the quantitative results, as citizens are uncertain about the actual effectiveness and inclusiveness of e-participation despite its perceived potential. The integration of both

datasets shows convergence: both quantitative and qualitative findings confirm that e-participation is viewed as beneficial but not fully effective in practice. For example, while statistical results show only moderate positive relationships between education, residential area, and perceived benefits, qualitative evidence explains that higher education and urban residence improve digital literacy and access, thereby increasing perceived value of e-participation. Similarly, regression findings indicating modest explanatory power ($R^2 = .107$) align with interview evidence that structural barriers, such as limited connectivity and one-way communication, restrict meaningful participation (Bennett, 2015; Mawela et al., 2017). Overall, the triangulation demonstrates that while e-participation has potential to strengthen service delivery, democracy, and empowerment, its effectiveness in GTM remains constrained by inequality of access, limited interactivity, and institutional capacity challenges.

6. CONCLUSION AND RECOMMENDATION

This study explores hybrid e-participation's potential to enhance citizen engagement in the IDP process within the GTM. While e-participation fosters inclusivity, transparency, and accountability, its effectiveness is hampered by structural, socio-economic, and institutional barriers. Key demographic challenges, such as a predominantly rural population, high unemployment, and limited internet access, create inequalities that affect digital platform usability. Younger individuals exhibit technological inclination, yet infrastructural and literacy issues persist. Findings indicate mixed perceptions regarding e-participation's impact on inclusiveness and governance, revealing uncertainty in its decision-making influence. E-participation tools are often one-way and lack responsiveness, diminishing trust and engagement. Education level and location significantly shape perceptions, highlighting socio-economic disparities. Successful integration of e-participation in governance demands supportive policies, clear processes, and legislative reforms. Municipalities must address privacy concerns under existing laws while fostering collaborations with research entities and NGOs to enhance participatory frameworks. Therefore, the study makes the following recommendations based on the findings:

- Move beyond institutionalization to a phased and inclusive implementation strategy for e-participation: While formalizing e-participation through policy and legal frameworks remains important, municipalities should avoid treating institutionalization as an end in itself. Instead, a phased implementation approach should be adopted, starting with pilot projects in diverse wards to test accessibility,

usability, and inclusivity across different demographic groups. This should be accompanied by continuous monitoring and evaluation to ensure that digital participation does not deepen exclusion but progressively expands meaningful participation. National and local policy reforms should therefore prioritize practical implementation guidelines, not only regulatory recognition.

- Address structural inequalities before scaling e-participation systems: The effectiveness of e-participation is fundamentally constrained by the digital divide; therefore, strengthening ICT infrastructure alone is insufficient without addressing affordability and skills gaps. Municipalities should adopt a comprehensive digital inclusion strategy that combines infrastructure expansion with subsidized data initiatives, community access points (libraries, Thusong Centres), and targeted digital literacy programs. These interventions should prioritize vulnerable groups such as rural communities, the elderly, and low-income households to ensure equitable participation rather than passive inclusion.
- Strengthen institutional readiness, coordination, and accountability mechanisms: Beyond establishing policies and units, municipalities must ensure that institutional structures are functional, coordinated, and outcome driven. This includes integrating e-participation into performance management systems, assigning clear accountability for citizen engagement outcomes, and ensuring interdepartmental coordination between ICT, planning, and service delivery units. Officials should be trained not only in technical systems but also in participatory governance, responsiveness, and citizen engagement ethics to prevent e-participation from becoming compliance exercise.
- Institutionalize mandatory feedback loops and responsiveness standards: A key weakness identified is the lack of meaningful two-way communication. To address this, municipalities should implement enforceable service standards for responding to citizen inputs, including response timeframes, tracking systems for complaints and suggestions, and public dashboards showing how inputs influence IDP decisions. Feedback should be made legally or administratively mandatory rather than discretionary to build trust and prevent perceptions of tokenistic participation.
- Implement an integrated hybrid participation ecosystem supported by capacity building: given persistent inequalities in access and digital literacy, e-participation should not replace but strengthen traditional participation mechanisms. Municipalities should deliberately design an integrated participation ecosystem that synchronizes online platforms (social media, portals, mobile apps) with offline methods (ward committees, imbizos, outreach programs). Importantly, civic

education and sustained community engagement programs should be introduced to build participation capacity over time, ensuring that citizens not only access platforms but can meaningfully influence decision-making processes.

7. ETHICAL CONSIDERATIONS

This article followed all ethical standards for research. Human participants were used, and a written consent form was obtained from the participants prior to data collection. The University of Johannesburg, College of Business and Economics Research Ethics Committee granted ethical clearance. The certificate number is 24PMGPP 145.

8. CONFLICT OF INTERESTS

The authors have declared that no conflict interests exist.

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