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Leveraging Information and Communication Technologies to Enhance Parental Involvement in South Africa

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Abstract

The potential of information and communication technologies (ICTs) to improve teaching and learning is gaining traction in South African schools. Previously, economic, social and geographical factors constrained parental involvement and participation in school. However, the ever-increasing ICT-based innovations offer ample opportunities for expanding parental involvement. This article uses the Technology Acceptance Model as a theoretical lens to highlight how ICTs can enhance PI in former Model C schools in South Africa. The study adopted a mixed methods approach and a convergent parallel design to collect quantitative data from 100 parents using structured questionnaires. Additionally, in-depth interviews were used to generate qualitative data from 20 purposively selected teachers from five Tshwane South District schools. The study explored the challenges of PI, the utilisation of ICTs in schools, the impact of ICTs on PI, and proposes how ICT can be used to strengthen PI. The findings show that most parents used phones, followed by emails, and other platforms such as WhatsApp and Facebook to communicate with schools. The study concludes that ICTs can be used successfully to enhance PI. Since many parents have ICT gadgets, schools should use these tools to communicate with them to improve PI.

Keywords: Collaboration, information and communication technologies, parental involvement, Model C schools

Introduction

The dawn of the Fourth Industrial Revolution (4IR) and associated digital technologies have opened avenues for reimagining the world of teaching and learning and managing the link between the two. This dawn has offered new possibilities for reimagining and promoting the involvement of parents or guardians in their children's education. The outbreak of the coronavirus disease (COVID-19) pandemic in late December 2019 unveiled the potential of information and communication technologies (ICTs) as a viable alternative to traditional teaching and learning methods. In response to COVID-19, national lockdowns were implemented worldwide, gatherings were prohibited, and schools were closed in over 160 countries, placing the livelihoods of future generations in danger (Mhlanga & Moloi, 2020; World Bank, 2020a).

Due to the COVID-19 pandemic and national lockdowns, over 1.6 billion children could not attend school (World Bank, 2020a). Accordingly, the ICTs attracted significant attention as potential remote learning tools (Hossain et al., 2024; Rosak-Szyrocka, 2024). Several organisations, such as the World Bank, the Education Alliance, the United Nations Educational, Scientific and Cultural Organisation (UNESCO), and the Commonwealth of Learning, supported implementing ICTs in teaching and learning (World Bank, 2020b). Studies conceptualising the utilisation of ICTs in promoting parental involvement (PI) are still evolving. Hence, this article seeks to address this knowledge gap, which has both practical and policy implications, particularly since parents are vital stakeholders in education. This article focuses on the elite, former Model C (former Whites only) schools in the Tshwane South District, South Africa.

Research on how ICTs can leverage parental involvement in South Africa is non-existent or very limited at best. For instance, Mkuzo and Govender (2024) explored how ICTs can advance technology training in rural schools in the OR Tambo District in the Eastern Cape province. However, they did not explore their potential use in promoting PI. Duku et al. (2023) assessed the potential use of ICTs for school governance in the Buffalo City Municipality in the Eastern Cape. However, they did not cover how the same technology can be deployed to enhance parents' involvement in their children's education. Therefore, no study has directly explored how ICTs can enhance PI in South Africa. Hence, this article seeks to fill this research gap. It is assumed that ICTs can significantly enhance PI in education by facilitating communication, providing access to resources, and empowering parents to participate actively in their child's learning.

The objectives of the study are to (i) explore the challenges of PI in the Tshwane South District schools, (ii) identify ICTs used in former Model C schools, (iii) examine the impact of identified ICTs on PI, and (iv) propose how ICTs can be used to improve PI. This article departs from traditional approaches that use teachers and learners as units of analysis in teaching and learning research. It emphasises parents as the middle link between the learner and the teacher and argues that parents are not mere appendages in the learning process.

Theoretical Framework and Literature Review

This article uses the Technology Acceptance Model (TAM) introduced by Fred Davis in 1989 as a theoretical lens. It emerged in response to concerns about people's resistance to new technology and the frequent underperformance or failure of new systems. TAM is designed to predict the likelihood of individuals or organisations accepting new technologies. It asserts that the features and user-friendliness of the new technology influence people's motivation to adopt it. The model holds that the attitudes and perceptions of people towards technology determine their willingness to use it (Davis, 1989). It is used to predict and explain the users' acceptance of technology. TAM is based on two key factors: perceived ease of use and perceived usefulness (Davis, 1989). The former refers to how easy or user-friendly potential users believe the new technology is to operate without, while perceived usefulness assesses whether they think the technology will aid them to achieve desired tasks or improve their performance or productivity. These factors collectively shape the users' attitudes towards technology and predict whether they will accept and use it (Dziak, 2024).

This article identifies the users as parents and school personnel, including teachers and administrators. TAM can enhance parents' involvement in their children's education by improving their perceptions of the usefulness and ease of technology use (Dziak, 2024). For instance, online learning platforms can bolster parent-teacher communication and facilitate virtual parent-teacher conferences, helping stakeholders stay connected and collaborate to improve children's education (Ngozwana, 2023). These technologies can also simplify how parents communicate with teachers, access academic resources, and monitor their children's progress (Dlamini et al., 2022).

As Lwoga and Chigona (2019) noted, potential barriers to implementing TAM to enhance PI in education include a lack of access to technology. In rural areas, for instance, many parents do not have access to computers and reliable internet connectivity, making it difficult for them to use technology for PI (Maphosa & Dube, 2020). A lack of ICT skills and knowledge is another barrier to parents' involvement in their children's education and participation in relevant school affairs (Ngozwana, 2023). Addressing these barriers requires governments, school administrators, teachers, and parents to work together to identify areas that must be prioritised. Stakeholders may also require training on utilising ICTs for effective PI.

Reimagining Parental Involvement in the 21st Century

The literature on PI in education has increased in recent decades, and different definitions and conceptualisations of the concept have emerged (Epstein, 1995; Epstein et al., 2002; Hoover-Dempsey & Sandler, 1997, 2005; Hoover-Dempsey et al., 2005). While discussions on the role of technology in improving teaching and learning have intensified, there is a limited focus on how technology influences parents' participation. This section reviews two strands of literature related to PI, namely conceptualisation of PI and the role of ICTs in education, particularly in promoting PI.

Revisiting Parental Involvement

While the concept of PI has been defined differently, available definitions concur that it entails the involvement of parents or guardians in their children's education (Jacobs, 2024). Alimohammadi et al. (2017) defined PI as a process involving parents' active participation in their children's educational activities. Such activities range from occasional presence at school functions to being intensively involved in the child's learning process at home and

school. Antony-Newman (2019) described PI as the practical input of a parent or guardian in the education process of their children, both within the school and typically outside the school premises, to ensure that they enjoy the education process and improve their academic performance. For Dereli and Türk-Kurtça (2022), PI involves collaboration between teachers and parents in supporting the child's learning to optimise their academic success.

PI also entails playing educational games to improve the child's reading or mathematical problem-solving skills (Hamlin & Flessa, 2018). Jezierski and Wall (2019) describe PI as introducing home-based behaviours to a child. It includes monitoring the completion of homework activities and participating in school-based activities such as attending school events and communicating with the child's teachers. Nye et al. (2006, p. 1) view PI as "the effective engagement of a parent with their child outside of the school day in an activity which centres on enhancing academic performance." It involves monitoring home-based behaviours like overseeing homework and school-based activities, such as communicating with teachers and participating in school events. Parental time spent with the child is the best investment to build their human capital (Kantova, 2024), particularly during the formative years, as this significantly influences their cognitive development, literacy and numeracy skills (Mcdowell et al., 2018).

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In synthesising different definitions of PI, Schouten (2019) argued that it occurs when a parent or guardian is conscious of, participates in schoolwork, understands the interface between parenting skills and pupils' school success, and communicates regularly with teachers about the child's successes and challenges. Desforges and Abouchaar (2003) were the first to conceptualise PI as an umbrella and catch-all term that includes activities comprising at-home good parenting, providing homework assistance to children, communicating with teachers, attending school functions and participating in school governance. Solvason et al. (2019) confirm that PI is an all-encompassing concept that involves parents or guardians attending school functions, committing to school responsibilities, assisting children in improving their schoolwork, providing support and encouragement, monitoring studies, and ensuring a conducive study environment within the home.

PI is associated with highly positive outcomes for learners. For instance, Hamlin and Flessa (2018) argue that PI in children's education significantly impacts their success in school. Dodge (2018) concurs that PI in the child's education is the most decisive factor that improves learner achievement significantly. Similarly, Dodge (2018) concluded that the more parents get involved in their children's education, the more their grades improve. Active parental involvement, particularly in the lower grades, is one of the most critical determinants of learner success (Black, 2022). Alimohammadi et al. (2017) associated PI with higher learner achievement outcomes, arguing that when parents or guardians purchase additional reading and writing material to augment those provided by the school, create a favourable learning atmosphere within the home and spend some time discussing school matters with their children, children tend to learn effectively and improve their achievement significantly. Similarly, Pelemo (2022) established that children whose parents provide them with a safe place to do their schoolwork and review their homework not only enjoy attending school but also tend to excel academically.

There are two main types of PI: school-based and home-based PI (Schmid & Garrels, 2021). Equally, there are two types of school-based PI (Schmid & Garrels, 2021). The first is school communication, which relates to regular contact between parents and school staff (Amunga et al., 2020; Schmid & Garrels, 2021). This type of PI ensures information sharing between parents and school staff. The information shared includes the behaviour of the learner and academic progress. School communication seeks to build good relations between parents and teachers to deal with emergent challenges collectively during the child's learning process (Costa & Faria, 2017). The second type of school-based PI is school participation. It involves parents offering services, labour, and presence in school activities, being present at school functions, or being part of school governance structures (Garbacz et al., 2018). It also entails payment of school fees, purchase of study materials, and contributions towards constructing or maintaining school infrastructure or furniture and fittings, among others (Højholt & Kousholt, 2019).

Scholars have identified two types of home-based PI: *home discussion* and *home supervision*. Home discussion requires parents to discuss with their children regularly the activities or events of particular interest to the child (Pelemo, 2022). Dedicating time to discuss school-related activities such as reading and communicating with their children wields much potential for improving their academic performance (Oswald et al., 2018). The home discussion also yields more positive results than demonstrative aspects of involvement, such as the announcement of household rules (Kingston, 2021). Home-based PI entails parents actively encouraging children to do learning activities within the home setting and providing them with learning opportunities and materials (Black, 2022). Reviewing a child's homework and working with them on reading and writing skills substantially impact their academic progress (Dodge, 2018).

Another home-based PI is *home supervision*, which entails monitoring the child's out-of-school activities (Højholt & Kousholt, 2019). It relates to how parents reinforce discipline by ensuring children complete homework successfully and on time (Antony-Newman, 2019). As part of supervising children at home and maximising their time on task, parents should take the necessary steps to limit potentially disturbing activities, such as playing computer games and watching television (Pelemo, 2022). These parental contributions are considered helpful in creating a conducive learning environment within the home context (Black, 2022). Home supervision includes various activities such as reading to and with the child, making library visits with them, playing with numbers and letters, painting and drawing together and teaching them the alphabet through play, among others (Costa & Faria, 2017; Dereli & Türk-Kurtça, 2022).

ICT in Education

Some obstacles to PI include social and economic factors, such as limited time due to parents' work commitments. ICTs could bridge this gap and ensure parents' participation in this context. Using ICTs to enhance PI in children's education wields significant potential (Mkuzo & Govender, 2025). From their study in Zimbabwe, Maphosa and Dube (2020) affirmed that ICTs have a significant potential to promote productivity and develop collaboration between teachers and learners. Technology can enhance PI in education across all levels (Mhlanga & Ndhlovu, 2023; Ndhlovu, 2020) by giving parents additional platforms to engage with teachers and support their children's learning meaningfully.

Technology can enable parents to understand their child's progress at school and increase their engagement with the school community (Maja, 2023). It can also enable parents to communicate more effectively and efficiently with teachers, receive timely updates on school events, and access learning resources supporting their children's learning (Dlamini et al., 2022). Technology facilitates communication between parents and teachers, allowing them to work together more effectively and share information about their children's academic and social progress (Cuocci & Marnani, 2022). During the COVID-19 pandemic, when many countries went through rolling lockdowns, educational institutions adopted online or blended learning using different ICT tools, such as innovative and mobile technologies, to continue teaching and learning (World Bank, 2020b).

Although ICT is beneficial, its use in education has many challenges. One of the main challenges undercutting its utilisation is a lack of resources for parents and schools (Rosak-Szyrocka, 2024). These resources include insufficient infrastructure, inadequate funding, and limited access to devices such as computers and reliable internet connectivity (Ngozwana, 2023). Ultimately, this affects how parents can participate in their children's education using ICTs. However, these tools significantly improve PI**,** where ICT-related infrastructure and resources are adequate (Maja, 2023; Ngozwana, 2023).

Research Methodology

This study adopted a pragmatic paradigm, which dismisses a single paradigm. Instead, a pragmatic paradigm advocates using a realistic and pluralistic approach that mixes multiple methods (Kaushik & Walsh, 2019; Kivunja & Kuyini, 2017). Consistent with this view, a mixed methods research approach involving the collection, analysis and integration of quantitative and qualitative data was employed in this study (Creswell, 2009; Kaushik & Walsh, 2019). The study was conducted in Tshwane South District, which had 205 public and 68 private schools in 2024 (Hlongwane, 2025). According to the 2024 headcount, the district had about 180,000 learners (DBE, 2024). Out of 205 public schools, 76 are classified as Quantile 5 schools, which designates that they are affluent former Model C schools (DBE, 2024).

The study adopted a convergent parallel design where quantitative and qualitative data were collected simultaneously during the same phase. However, it was analysed separately and compared to see if data from both strands confirmed or disconfirmed each other (Sharma et al., 2023). Using a structured questionnaire, quantitative data was gathered through a survey from 100 parents/guardians of learners at five former Model C schools in the Tshwane South District, Gauteng. Convenience sampling was used to select participants, as only

those who attended parents' meetings were selected to participate in the study. For the qualitative strand, 20 teachers (14 classroom teachers, five principals and one deputy principal) from the five sampled schools were purposively selected to participate in in-depth interviews. To protect their identities, the schools are coded as School A to School E. Similarly, the interview participants were assigned codes 1 to 4, linked to their school codes.

Basic descriptive statistics involving frequencies and percentages are used to analyse quantitative data, while tables, charts and figures are used to summarise and display data. These tools made it easy to detect the patterns that emerged from the data. They made it possible to identify various factors that determine PI, the emergent challenges and opportunities, and the exact impact of PI on learners. Qualitative data was analysed thematically, meaning that the analysis was based on the themes that emerged from the data (Samuels & Garbati, 2019). Data was reported using direct quotations, summaries and syntheses where appropriate. Data mixing was conducted concurrently, both in reporting and discussion.

To uphold ethical standards, the researchers applied for ethical clearance from the University of South Africa College of Education Ethics Review Committee, which issued the certificate, Ref.: 2023/02/08/32474199/22/AM after thoroughly reviewing the application and ensuring that the rights of the participants would be protected. Afterwards, permission was sought from the Gauteng Province Department of Education, which authorised data collection in selected schools after assessing the application. Before data collection could commence, the researchers fully disclosed the purpose of the study to all the participants, including their right to privacy and to withdraw from the study at any time without retribution. Data collection only commenced after they agreed to participate and signed the informed consent form.

Research Findings

The data presented here includes participants' demographic details, the challenges of PI, and the methods teachers and parents use to communicate with each other. The findings emerge from an empirical investigation conducted in the Tshwane South District and a literature review on ICT usage in educational institutions.

Demographic Details

Two categories of participants participated in the study: parents and teachers (teachers, deputy principals, and principals). Teachers acted as key informants based on their in-depth knowledge of PI and the utilisation of ICTs in their schools to promote it. Purposive sampling was used to ensure that selected teachers were distributed evenly across the schools and to eliminate potential biases. Ultimately, eight teachers were male, while 12 were female. For parents, convenience sampling was used to select them during the scheduled parents' meetings. Hence, their numbers and gender differed across schools, leading to 21 males and 79 females, as displayed in Table 1. This gender composition suggests that females tend to engage in PI more than males (Akellot & Bangirana, 2019) or outnumber males. This imbalance is problematic since successful learning requires the collaborative involvement of both parents to motivate the child. Table 1 summarises the distribution of parents who participated in the study in different schools, coded from School A to School E.

Table 1: Breakdown of Parents by Gender

School	Male	Female	Total
School A	3	17	20
School B	4	16	20
School C	5	15	20
School D	3	17	20
School E	6	14	20
Total	**21**	**79**	**100**

Table 2 shows the distribution of teachers (teachers, deputy principals, and principals) who participated in the study from the five selected schools, their gender, and the codes assigned to them. As Table 2 reflects, four teachers were selected from each school, and the code name assigned to each teacher denotes the school and the code number given to each teacher.

Table 2: Schools, Teachers, Gender and Codes

School	Participant	Gender	Code
School A	Teacher	Male	SAT1
School A	Teacher	Female	SAT2

School A	Teacher	Female	SAT3
School A	Teacher	Female	SAT4
School B	Teacher	Male	SBT1
School B	Teacher	Male	SBT2
School B	Teacher	Male	SBT3
School B	Teacher	Female	SBT4
School C	Teacher	Male	SCT1
School C	Teacher	Female	SCT2
School C	Teacher	Female	SCT3
School C	Teacher	Female	SCT4
School D	Teacher	Female	SDT1
School D	Teacher	Female	SDT2
School D	Teacher	Male	SDT3
School D	Teacher	Male	SDT4
School E	Teacher	Male	SET1
School E	Teacher	Female	SET2
School E	Teacher	Female	SET3
School E	Teacher	Female	SET4

Challenges of Parental Involvement

The challenge of PI can be observed simply by parents' low attendance at meetings, the general support given to children in their schoolwork and homework and the quality of matric (School-leaving Grade 12) results (Barron et al., 2018). This study found that parents did not simply abstain from participating in their children's education, but several reasons contributed, as summarised in Table 3.

Table 3: Challenges of Parental Involvement

No	Description	Very much	Very little	Neutral
1	Political factors	19	60	21
2	School factors	62	24	14
3	Community factors	47	37	16
4	Economic factors	65	26	9
5	Religious factors	28	56	24
6	Other factors	24	22	54

Economic and school factors were the main challenges of PI in the Tshwane South District, with economic factors confirmed by 65% while school factors were cited by 62% of the parents. Some 24% of parents cited other factors as the challenges of PI. These factors included the long distances between homes and schools and the awkward timing of school events, which clashed with their personal, business or employment obligations.

Teacher participants also raised several issues that affected PI in schools, as reported below.

"*Some parents are too busy to make time or are less interested in their children's education. Secondly, family structures and lifestyles also affect parental involvement. Most of our learners come from broken families, where, in some situations, parents are divorced or going through a divorce, and this affects their academic work. Some challenges include parents' negative perceptions and attitudes towards school. Some parents feel that teachers are not welcoming at school. Maybe such parents once interacted with teachers and felt they would never return to school because teachers were unfriendly"* (SDT4).

Another participant added another dimension to parents' non-involvement in their children's education:

"The challenge is that parents are too busy to create time for their children's studies. When we call them, they tell us that they are busy. We call them for meetings; again, they tell us they are working. However, when they must pay school fees, they don't pay because they say they are not working. So, they are just playing hide-and-seek. This changing narrative shows they lack interest in their children's studies" (SAT1).

Another participant mentioned parents' negative attitudes towards school as another challenge facing PI:

"*One of the challenges of PI is the parents' negative attitude since some do not regard this school as their first choice. They wanted to take their kids somewhere else. However, because of the placement policy, they had to bring their children here. So, they are simply not interested in school* affairs" (SBT3).

Teachers also mentioned the language barrier as another challenge that weakens PI. In this regard, one participant clarified:

"There is also a language barrier that inhibits some parents from participating in the education of their children. There have been situations where I had to call the learner's parent to school. However, the language barrier made communicating difficult because she did not understand English. For some parents, a language barrier is a big challenge" (SDT3).

Economic factors were also said to constitute a significant barrier to PI. One participant clarified this as follows:

"There are also factors like social and economic conditions. Some learners come from disadvantaged backgrounds. So, even though their parents are willing to get involved in their education, they cannot because they lack finances. Therefore, they cannot go the extra mile to help their children" (SAT1).

The parents' education level was also cited as a significant determinant of how much parents could participate in their children's education. One teacher explained thus:

"There is also an issue of education, which is a barrier to PI. Since we give children homework, some of them will need help from their parents. However, the challenge is that some parents cannot help their kids with homework. Some parents are willing to assist, but cannot, due to their low level of education" (SBT2).

Participants found these factors problematic because they coalesce to weaken learners' academic performance. This view can be summarised by the words of one participant who stated:

"All these factors are problematic because they lead to poor performance" (SBT4).

The long distance from school was also mentioned as another barrier to PI, as some parents lived far from school, making it difficult to attend when needed. One teacher clarified as follows:

"Sometimes, a parent cannot afford to leave their workplace and come to school for a meeting or hearing. Some parents live 60 kilometres away from the school, and they would require a large amount of money for transport to fetch a report. So, most of them will just check that at the end of the year. Therefore, distance and economic factors impede PI" (SAT2).

The participants also reported that some parents avoided participating in school activities due to financial constraints, which caused a barrier to PI. One participant mentioned that:

"One factor I did not mention previously is finances. Some parents are struggling financially and are unable to pay school fees. They avoid coming to school because they fear that they might be asked to explain why they don't pay. As a result, most do not participate in the school activities. They are uninvolved because they fear that they owe the school" (SET1).

Some teachers believed learners frustrated their parents' participation because they did not give them the correct information to enable them to participate meaningfully in their learning. One teacher revealed:

"Some children do not want their parents to know what is happening at school. Sometimes, we give students letters and messages to deliver to their parents. However, some do not deliver these to their parents, which compromises their participation in school" (SBT4).

Across all the interviews, participants indicated that the parents of younger learners in lower grades tended to attend school activities more than those of older learners in higher grades because they conveyed messages from the school to their parents. This practice confirms the view that it is not only the attitudes of parents that impact PI, but the children's attitudes also have an important bearing on how their parents participate in their learning journey (Ngcobo & Chisasa, 2018; Pranathi & Lathabhavan, 2021).

Methods of Communication

The study also uncovered that parents used several means to communicate with schools, as Figure 1 displays. Using different modes of communication shows that parents have reasonable levels of technological competence. Regarding TAM (Davis, 1989), this competence shows that most parents in former Model C schools accept technology as a means of communication when carrying out PI.

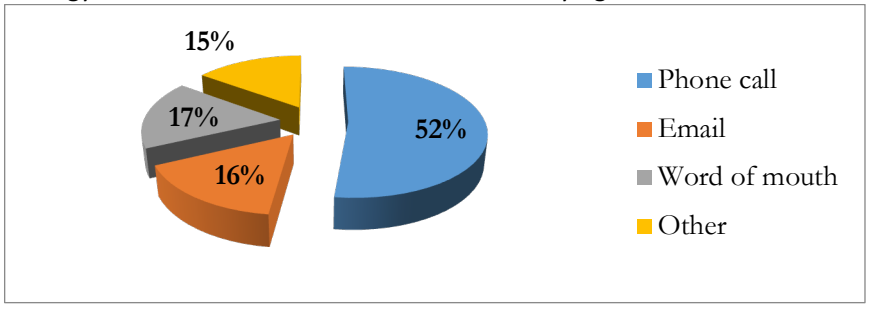

Figure 1: Methods of Communication Used by Parents

Figure 1 shows that 52% of the parents communicated with the schools using phone calls, 16% used emails, and 17% used word of mouth. Another 15% used various communication methods, including letters and social media platforms.

Teachers also revealed that they used digital communication to reach out to parents because they were aware that work and other commitments rendered face-to-face meetings with some parents difficult. In this respect, one deputy principal stated:

"*We would love to sit with parents and discuss issues concerning their children and the school. However, in most cases, we use phone calls or letters because parents could be busy at work and cannot manage to come here for meetings. Sometimes, parents are available on weekends, when our teachers should be resting. This situation makes arranging for a face-to-face meeting difficult. So, we resort to phoning parents"* (SBT3).

The use of phone calls was supported by another participant who reported:

"I find phone calls more convenient because we can discuss issues in real time. In most cases, I can reach conclusions with parents on the phone. So, where a parent was supposed to lose time and money for physically coming to school, they just lose 10 minutes on a phone call" (SCT3).

Overall, the study found that most parents and teachers preferred phone calls to face-to-face meetings at school. Therefore, parents and teachers accepted the potential of ICTs in boosting PI. This appreciation of ICTs is in keeping with Davis's (1989) TAM and concepts of perceived usefulness and ease of technology.

New Modes of Communication

Several types of ICTs used in teaching and learning were identified in the literature. These included telephones, instant messaging, Email (Gmail, Yahoo, Apple Mail and Windows Mail), social media such as Facebook, X [formerly Twitter], Instagram, and Snapchat, video conferencing and the Internet (Aruleba & Jere, 2022; Mnisi et al., 2024). Some less common ICTs include printers, wearable devices like smartwatches such as Apple Watch and Fitbit, fitness trackers, scanners, GPS devices, fax machines, radio, and television (Mhlanga et al., 2022; Moila et al., 2021).

WhatsApp is one of the most common instant messaging applications. It is a cross-platform, freeware service owned by Meta Platforms. With WhatsApp, users can send instant, voice and video messages, and media like documents, locations and images. In addition, the app allows users to make voice and video calls (Mtshali et al., 2020). WhatsApp is available everywhere and affordable, making it one of the most common solutions for communication between schools and parents (Munje & Jita, 2020). No matter where a person is, they can connect with others through WhatsApp. This app is versatile and can be used in professional work, school, or personal spaces like a family group chat (Patricia et al., 2023). It is also free to download and use.

Video conferencing is another powerful ICT tool that allows people to talk with each other face-to-face, no matter where they are. During the COVID-19 pandemic, video conferencing apps like Zoom, Google Meet and Microsoft Teams gained popularity (Mulaudzi, 2024; Shava, 2022). These apps allow people to use smartphones or computers to participate in video calls or e-meetings. People can also send instant messages in the chat box during calls. During COVID-19, these platforms became the new normal in place of restricted face-to-face interactions (Chomunorwa et al., 2023; Nyathi & Joseph, 2024).

In South Africa, at the height of the pandemic, television, including the public broadcaster, the South African Broadcasting Corporation (SABC), Digital Satellite Television (DStv), and e-TV, was used by teachers to deliver lessons live to learners on TV, mainly those in primary and secondary schools (Mhlanga & Moloi, 2020). The radio was also used to deliver learning (ITWeb, 2020). The public SABC and DStv channel 180 had channels entirely dedicated to education (SABC, 2020). SABC also introduced two studios where teachers delivered lessons in virtual classrooms. TV and radio stations were used to deliver live lessons to learners.

Zero-rated mobile platforms and applications provided by mobile phone companies Vodacom, Cell C, and MTN allowed learners to access learning material from educational and informational (reference) websites (Muyambi & Ramorola, 2025). The Gauteng Department of Education partnered with DStv, Vodacom, and Telkom to broadcast various school lessons during the lockdown period (Moloi & Marwala, 2020). It also improved online learning through its DStv partnership, where the mindset on channel 318 offered lessons to all other grades except for Grades 4–9. Lessons for these grades were offered through a pop-up channel on 317 (Mhlanga & Moloi, 2020). Tertiary institutions also moved towards online learning using YouTube, Microsoft Teams, Zoom, Skype, WhatsApp, and DStv (Mulaudzi, 2024). When used properly, these ICT tools can boost learning and enable parents to support it. Therefore, parents should acquire technological resources that enrich their children's learning. It is also important to monitor their use to ensure that it is primarily for educational purposes.

Another digital platform popularised in the former Model C school in the Tshwane South District is the D6, a cloud-based platform schools use in communication and school management (D6, 2025). The tool is reputable

because it can streamline school administrative processes, improve general communication with parents, and manage many aspects of school operations, including finance and curriculum (Lebone II College, 2025). The D6 app keeps parents updated on school news, events, and information about their child's progress (Haffejee et al., 2024). Through D6, parents can monitor their children's school attendance and access their marks, grades, and other relevant information (D6, 2025). Most importantly, D6 can connect all education stakeholders, parents, students, staff and the community.

Discussion

The research findings show that different types of ICTs are already in use and widely accepted by all stakeholders in education in the Tshwane South District, including teachers, learners, and parents. Concerning TAM, the findings indicate that the perceptions and attitudes of these stakeholders to technology are positive and show their willingness to use it (Davis, 1989). A phone is one of the most affordable technologies, with over 50% of parents confirming that they have used it to contact schools. All the teachers also reported using phone calls to communicate with parents regularly.

Some key challenges to PI were reported to be parents' work commitments and the long distance between home and school. Since both parents and teachers already accept the usefulness of ICTs, these tools can be leveraged to compress time and space and allow both stakeholders to receive updates on the child's education. WhatsApp is currently one of the most popular and affordable means of communication. As in most schools, teachers can create class groups in which the number of all parents using the app is captured and provided with school or class-related information. Therefore, although economic factors are implicated as the main problem of PI in South African schools, especially among blacks (Aruleba & Jere, 2022; Hlongwane, 2025; Mnisi et al., 2024), WhatsApp is affordable to most parents and can be a significant communication tool with parents.

Furthermore, some parents and teachers have the skills to use video conferencing apps like Zoom, Google Meet and Microsoft Teams (ITWeb, 2020; Moloi & Marwala, 2020; Muyambi & Ramorola, 2025). This ability was seen during the COVID-19 lockdown when parents helped their children connect to platforms offering school lessons. This gesture shows that these parents accepted these tools and believed in their effectiveness, as Davis (1989) detailed. Therefore, if such parents are provided with an option to connect to a school event virtually, they are likely to connect because they perceive the ICT deployed as easy to use (Davis, 1989). The TAM shows that if people consider a technological tool easy to use, they will adopt it or try to acquire such a technology. Teachers also demonstrated the ability to use various ICT platforms during the pandemic when they delivered lessons on WhatsApp through voice notes, pictures, videos, and texts. This skill shows their acceptance of these ICTs, as Davis (1989) discussed. Therefore, since most schools initiate PI by inviting parents to school and providing them with updates, the school should also play a leading role in popularising the importance and usage of these ICTs for PI.

Hlongwane (2025) argues that schools should be innovative and flexible and use a hybrid communication mode that includes face-to-face and online parent meetings to involve more parents. Schools could try hybrid meetings using digital platforms such as Zoom, Microsoft Teams, and Google Meet to accommodate parents who prefer to attend remotely. The hybrid mode can enable some parents who cannot attend physical meetings to attend virtually. Parents and teachers must collaborate and agree on the preferred meeting mode to ensure maximum response and impact. While a unitary, face-to-face PI mode will likely bring positive results for learners, multiple methods, including traditional, hybrid, and online meetings, should be explored to accommodate more parents for greater impact. Digital means of communication are now ubiquitous in the digital age, and face-to-face communication is no longer the only practical way of interaction. Digital communication is the 'new normal' and should be embraced and used for PI. Therefore, these tools can enhance PI since teachers and parents have positive attitudes towards ICTs and perceive them as easy to use (Davis, 1989). As such, PI should no longer be affected by the lack of physical contact between the parent and the school.

Conclusion

This article explored how ICTs can be leveraged to enhance PI in the Tshwane South District, focusing on Model C schools. It has been argued that many parents and teachers in the district have a positive attitude towards ICTs and consider them generally easy to use, as David (1989) proposes in TAM. ICTs have gained increased currency and usage in education, particularly following the COVID-19 pandemic when most countries were in lockdowns. The virtual meeting platforms do not require parents and teachers to meet physically but offer them a chance to interact remotely. While parents' work commitments and the long distance between the school and home make it difficult for some parents to attend face-to-face meetings at school, ICTs can obviate this hurdle by offering a viable technological alternative. In such a scenario, parents and teachers can meet virtually to ensure that the link between the two stakeholders is not broken by the challenges of time and distance.

To address the challenges of low PI, it is recommended that schools strengthen their use of ICTs, including virtual meeting platforms, to communicate with parents and minimise the low turnout that is common in traditional face-to-face forums like parents' meetings. Schools should play a leading role since much of the communication about learners and what needs to be done comes from them. To promote digital communication between parents and teachers and utilisation of ICTs in schools, the government, private sector and other development partners should support their adoption financially and technically. To this end, conducting a cost-benefit analysis of each technology adopted may be necessary to see if it has some benefits for schools. Continuous adoption of ICTs in schools could improve the quality of teaching and learning and PI, particularly in former Model C schools, as most parents are working and can afford them.

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