18 September 2025

Digital divide contributes to lack of service delivery to poor communities – UCT study

Dr Tapfuma Pashapa   Photo: Supplied

The spread of digital technology, or information and communication technology (ICT), has changed how services are delivered, but not always in ways that benefit everyone equally. At present, the system often tilts in favour of service providers and wealthier groups, leaving poorer or rural communities at a disadvantage.

A University of Cape Town (UCT) study has found this happens because those in charge of services usually control the digital spaces where information is shared and have more resources and skills to manage these systems.

"For rural communities, especially those with limited resources, the most useful tools are simple and affordable ones: mobile phones, mobile apps and mass media. These technologies act as information channels, libraries of knowledge and communication lifelines. They help people connect and stay informed, but the advantages are still limited," says Dr Tapfuma Pashapa in his PhD thesis titled: "Rurality and the people-centric approach to public service delivery in the digital age – a study of South African rurality as a proxy for low- and middle-income country contexts."

Pashaba says that instead of empowering communities to use information to oversee or influence services, the flow of information usually goes in one direction – top-down from providers to consumers.

"In practice, this means that while rural residents may be asked to provide information or data to support service delivery, they have far fewer opportunities to shape decisions or hold providers accountable," he adds. Pashapa graduated with his PhD in Information Systems at Sarah Baartman Hall on Wednesday, 10 September 2025.

Around the world, public service delivery is changing. "In the past, it was mostly about administration and top-down management. Today, the focus is shifting to people-centric models, where communities are not just passive recipients but active partners in shaping services. Technology, especially digital tools, plays a key role here, helping people share their needs and making services more accessible," he says.

However, large social and economic inequalities in South Africa complicate this shift. "This study looked at rural areas in the digital age and how technology can support people-centred service delivery. It drew on public value theory, which says public services should reflect the shared values and priorities of society, from economic growth to cultural, social and environmental wellbeing."

The study also considered two other key ideas. The first is information asymmetry: when one side, for example service providers, has more or better information than the other, it creates imbalances in the quality of services people receive. The second is Communication for Development (C4D), a framework used by international organisations. C4D sees communication as central to development in three ways:

- Access and knowledge – giving people the information they need to improve their lives;
- Voice – enabling communities to speak up and be heard by decision-makers;
- Networks and dialogue – creating spaces where people and service providers can exchange ideas, debate, and shape solutions together.

"Rurality means how "rural" a place is, based on its everyday conditions and characteristics. Measuring this accurately is important because it helps governments and organisations design development programmes that match the real needs of local communities," says Pashapa.

The service accessibility indexes developed through this research provide a practical tool for South Africa's planning efforts. "These indexes are especially valuable for initiatives such as

the National Spatial Development Framework (NSDF) and the National Health Insurance (NHI), which seek to direct services to the places where they are most urgently needed and will have the greatest impact," says Pashapa.

"In South Africa, rural areas were often grouped too broadly, either as "formal rural" or "urban-rural", without capturing the real differences between them. Older measures also didn't fit neatly with municipal boundaries or census data, making it harder to plan effectively.

"This study tackled those gaps by standardising municipality sizes and creating indexes that measure how accessible essential services are. These include water, sanitation, housing, electricity, ICTs, and healthcare. The indexes make it possible to compare service delivery across areas more fairly and to track changes over time," he says.

The research also lays the groundwork for measuring access to education and policing services in the future. By providing clearer tools to understand rurality and service access, this work helps policymakers and communities better identify where resources are most needed, supporting more targeted and equitable development.

Pashapa argued that while the digital age brings excitement and new possibilities, it's important to recognise that the digital divide can actually deepen inequalities. Many online services are designed to empower citizens. Still, in practice they often reinforce a top-down flow of information, leaving little room for real collaboration between service providers and consumers.

"This is especially true in rural areas, such as sparsely populated regions, commercial farming zones, and mountainous areas – where it is simply unprofitable for network providers to invest in coverage. Even relatively well-off communities in these areas face high costs just to access or maintain digital connections," he says.

"Services created for the public good, like municipal websites or online portals, often remain underutilised by the very communities they're meant to serve. To bridge this gap, there needs to be more than just digital rollout – there must be sustained investment in education, digital literacy and affordability. Above all, digital transformation should not run ahead of basic connectivity. Communities struggling with something as fundamental as a stable mobile phone signal cannot meaningfully benefit from internet-based services until these core gaps are addressed," he concludes.

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