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Language Policy of BRICS Countries in Virtual Linguistic Landscape

Mikhail A. Osadchiy
Independent researcher, Portugal, Lisbon
eLibrary Author SPIN: 4774-7323
Scopus Author ID: 57130983100
osadchiymik@gmail.com

Abstract: This study explores the intersection of the language policy and digital infrastructure in BRICS countries focusing on the problem of state regulations of the linguistic representation in a virtual linguistic landscape. With the rapid expansion of internet access, particularly through mobile technologies, governments increasingly implement policies that promote official languages while managing the online multilingualism. The research examines state interventions in the sphere of digital communication in Russia, China, India, Brazil, and South Africa. The study highlights the paradox: while countries with the most advanced digital infrastructure, such as China and Russia, impose a stringent control on online communication, those with more democratic freedom, like Brazil, India, and South Africa, struggle with accessibility and affordability. It also demonstrates how government policies reinforce dominant national languages in a digital environment often at the expense of linguistic diversity.

Keywords: language policy, virtual communication, BRICS countries, digital infrastructure, multilingualism, state regulation, internet governance, linguistic diversity, digital inclusion, online censorship

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оригинальная статья

Языковая политика стран БРИКС в виртуальном лингвистическом пространстве

Осадчий Михаил Андреевич
независимый исследователь, Португалия, Лиссабон
eLibrary Author SPIN: 4774-7323
Scopus Author ID: 57130983100
osadchiymik@gmail.com

Аннотация: В статье рассматривается взаимодействие языковой политики и цифровой инфраструктуры в странах БРИКС с учетом того, как государственное регулирование влияет на языковое представление в виртуальном лингвистическом ландшафте. В связи с быстрым расширением доступа к Интернету, особенно через мобильные технологии, правительства все чаще внедряют политику, направленную на продвижение официальных языков во Всемирной сети, одновременно с этим контролируя многоязычие в онлайн-среде. Проанализировано вмешательство государства в цифровую коммуникацию в России, Китае, Индии, Бразилии и Южной Африке. Выявлен следующий парадокс: в то время как страны с наиболее развитой цифровой инфраструктурой, такие как Китай и Россия, вводят строгие ограничения на онлайн-коммуникацию, страны с более высокими демократическими свободами, такие как Бразилия, Индия и Южная Африка, сталкиваются с техническими проблемами. Установлено, что государственная политика укрепляет доминирование национальных языков в цифровой среде (часто в ущерб языковому разнообразию).

Ключевые слова: языковая политика, виртуальная коммуникация, страны БРИКС, цифровая инфраструктура, многоязычие, государственное регулирование, управление Интернетом, языковое разнообразие, цифровая инклюзия, онлайн-цензура

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Introduction

The instruments of the language policy in BRICS countries manifest themselves both in spaces of real and virtual communication, encompassing a range of legislative measures, educational framework, and media regulations. This study focuses on the virtual communication as a new sphere of implementation of the state language policy, examining the tools and measures applied to the internet in general and social network in particular.

This study has been conducted exclusively on the basis of the data from Russia, China, India, Brazil, and South Africa as these countries provide sufficient statistics for the analysis. Other BRICS nations have not been included due to the lack of comprehensive and consistent statistical information in their internet infrastructure, digital policies, and language representation in virtual spaces.

Virtual communication – the newest subject of language policy

In real life, language policy is primarily enacted through legislation, educational system, and state support of publishing and media. In a virtual space, the language policy is increasingly relevant as governments seek to regulate online communication. This regulation often aims to promote the use of official languages while managing the complexities of multilingualism in the digital environment.

The impact of the language policy on a social network and messaging platforms is profound. Policies that promote the use of official languages can enhance the user engagement and content creation in those languages while also fostering the sense of national identity [De Bres 2015]. However, the English language dominance in the global digital communication is a challenge for non-anglophone countries, as they strive to maintain their linguistic and cultural identities. This is particularly evident in academic publishing, where non-anglophone journals face pressure to publish in English to reach a wider audience potentially undermining the linguistic diversity [Li 2023].

While the role of the language policy in a digital communication is expanding, BRICS nations are simultaneously engaged in broadening the internet accessibility for their population. These two processes – the development of the digital infrastructure and the implementation of the language policy in virtual spaces – are deeply interconnected. As governments expand the internet access to previously underserved communities, they also encounter the challenge of the linguistic representation in a digital space.

State institutions increasingly recognize the importance of digital platforms as the tool for public engagement, particularly in multilingual societies. The expansion of the internet coverage and mobile broadband penetration allows more citizens to participate in a digital space, yet without parallel language policy measures, these newly connected populations may find themselves excluded from the meaningful engagement due to linguistic barriers.

As digital platforms become primary channels for interaction between governments and citizens, the implications of the language policy in a virtual space are increasingly significant. State websites serve as crucial communication channels, where the representation of languages can significantly impact public perception and accessibility [Berezkina 2015]. The effectiveness of these platforms in conveying official messages is contingent upon the language and the inclusivity of the provided content.

The concept of the "virtual linguistic landscape" is essential in understanding how language policies manifest themselves in a digital space. M. Berezkina argues that state websites are not merely repositories of information but interactive platforms that can either facilitate or hinder communication based on the language choice [Berezkina 2016]. This perspective emphasizes the need for state institutions to adopt a proactive approach in managing the multilingual content to ensure that all citizens can access information in their preferred languages.

Despite the growing awareness of a digital linguistic inclusion, challenges remain. State institutions often struggle to balance the official language regulation

with the practical digital need. M. Berezkina indicates that institutional employees frequently navigate tension between enforcing language policies and addressing the user preference in the multilingual online environment [Berezkina 2017].

The impact of the COVID-19 pandemic on virtual communication

The COVID-19 pandemic has led to a substantial increase in a digital communication as individuals turned to online platforms for social interaction, education, and work. According to the study [Hedderson et al. 2023], the recreational screen time among children increased by 0.89 hours per day during the first pandemic period and by 0.70 hours per day in the second period, compared to the prepandemic time of 4.0 hours. This shift indicates a significant rise in the volume of communication by digital channels.

Moreover, the use of social media platforms rose during the pandemic, with many individuals relying on these channels to maintain social connections. Although the specific study by A. Doğaner does not directly address a social media engagement, it is well-documented that platforms like WhatsApp, Facebook[1], and Zoom became essential tools of communication during this period [Doğaner 2020]. Users reported an increased engagement in conversations and virtual gatherings, reflecting a broader societal shift towards the digital communication as a primary means of interaction.

The pandemic prompted changes in the language use and communication styles across various contexts. For instance, the use of local languages and songs to communicate health information became more prevalent, as demonstrated by R. Thompson et al., who noted that songs composed in local languages were effective in raising awareness about COVID-19 in Ghana [Thompson et al. 2021]. This approach highlights the adaptability of communication strategies in response to the pandemic, emphasizing the role of cultural and linguistic diversity in public health messaging.

Additionally, the increased use of digital platforms for language learning and teaching has transformed the educational landscape. C. Kwee's study indicated that language teachers adapted to online teaching methods during the pandemic, leading to a shift in pedagogical practices and communication strategies [Kwee 2022]. This transition has implications for the future of language education, as educators explore new ways to engage students in a virtual environment.

It seems that we can say that the COVID-19 pandemic accelerated the shift in the volume of speech communication from the real sphere to the virtual one. This process did not go unnoticed by state institutions, which during the pandemic realized the importance of virtual communication and the need for the government control and regulation in this area. In the aftermath of the COVID-19 pandemic, the language policy is increasingly becoming the policy implemented in a virtual space.

Results

Russia: Digital expansion under state control

Over the past two decades, Russia has undergone a remarkable transformation in internet usage, reflecting broader trends in digital expansion and government regulation. In 2000, only 2% of the population had access to the internet. By 2014, this figure rose to 67%, and by 2023 it reached an impressive 92%[2]. This rapid growth highlights both the widespread adoption of digital technologies and the increasing accessibility of the internet across the country.

A similar trend is evident in a household internet access. In 2014, just under half of Russian households (47.92%) had an internet connection, whereas by 2023, this number climbed to 80.66%. At the same time, the frequency of internet use has intensified. The share of daily users grew from 64.09% in 2015 to 91.64% in 2023, while those accessing the internet less than once a week declined to a mere 0.86%. This shift reflects not only the greater internet availability but also its deep integration into an everyday life.

A mobile technology has been a key driver of this digital expansion. The number of mobile phones per 100 residents increased from 191 in 2014 to 219 in 2023. By the end of 2023, 92% of Russians had used a mobile device to access the internet in the previous three months, underscoring the dominance of smartphones as the primary means of online engagement.

The corporate sector has also undergone a digital transformation, though recent trends indicate some shifts. In 2014, 89% of organizations in Russia

[1] *Meta Platforms, the parent company of Facebook and Instagram, is banned in the Russian Federation as an extremist organization.*
[2] BRICS Joint Statistical Publication 2024. URL: https://brics.ibge.gov.br/downloads/BRICS_Joint_Statistical_Publication_2024.pdf (accessed 27 Feb 2025).

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reported using the internet, a figure that peaked at 91.2% in 2019 before declining to 79% in 2023. This change may be attributed to evolving business models, increased reliance on proprietary digital networks, and regulatory shifts. At the same time, the number of personal computers in workplaces has steadily increased, rising from 47 per 100 employees in 2014 to 65 in 2023, suggesting that while businesses may be using the internet differently, a digital infrastructure remains integral to operations.

Alongside these technological advancements, the Russian government has implemented significant regulatory measures that shape the internet usage, particularly in the realm of online communication and language policy. The "Sovereign Internet" law, enacted in 2019, aims to create an independent Russian internet infrastructure granting the government greater control over the online content. This regulation has direct implications for a language use on social media and messaging platforms, as it facilitates the promotion of the Russian language content while restricting an access to foreign platforms that do not comply with local regulations.

The language policy in Russia is deeply intertwined with digital communication. The Russian language, established as the official state language in the 1993 Constitution, is overwhelmingly dominant. According to the Federal State Statistics Service (Rosstat), in 2021 approximately 99.7% of the population identify Russian as their primary language. However, Russia is characterized by a significant linguistic diversity. The 2020 Census recorded 182 languages spoken in the country, with 35 languages recognized as official in various republics. For example, Tatarstan recognizes Tatar as an official language alongside Russian, and Yakutia does the same for Yakut.

Despite legal provisions supporting linguistic minorities, the impact of the language policy on social networks and digital platforms reinforces the Russian language dominance. Platforms like VKontakte predominantly feature the Russian language content, with over 90% of posts and interactions occurring in the language. While there are efforts to promote regional languages online, they struggle to gain traction in a digital landscape overwhelmingly shaped by the Russian language content and government oversight.

Furthermore, state regulations mandate that social media platforms provide the content in Russian and remove inappropriate materials. In 2021 alone, over 1,500 posts were taken down from various platforms for violating language regulations, demonstrating the extent of the governmental influence over the online communication. This reflects a broader trend in the Russia digital landscape: while internet access continues to expand, the state control over the digital content and linguistic expression remains a defining characteristic of the country's online space.

China: Technological dominance and linguistic uniformity

Over the past two decades, China has undergone a dramatic transformation in its internet infrastructure and usage, driven by a massive state investment and a rapidly expanding digital economy. In the early 2000s, the internet access was relatively limited, but by 2014, broadband subscriptions had reached 14.66 per 100 inhabitants. This number more than tripled by 2023, rising to 45.14 per 100 inhabitants, reflecting the country's commitment to enhancing digital connectivity[3].

The most significant expansion has occurred in a mobile internet usage. In 2014, there were 42.59 mobile broadband users per 100 inhabitants, the figure that surged to 93.57 per 100 inhabitants by 2023. This rapid adoption of smartphones and wireless connectivity has been supported by the country's vast telecommunication infrastructure, with the number of mobile base stations increasing from 3,508 in 2014 to 11,620 in 2023. This expansion has facilitated the seamless internet access, even in remote areas, making mobile networks the dominant means of connectivity in China.

Despite this, a shift has been observed in how people access the internet. The number of households with a computer peaked at 51.2% in 2016 but declined to 37.6% in 2023, likely due to the increasing reliance on smartphones for everyday tasks. However, this decline in computer ownership has not hindered the internet penetration. By 2023, 94.3% of individuals accessed the internet daily, compared to 93.4% in 2022, indicating that digital engagement continues to intensify. The internet usage in business has also remained consistently high, with 97.9% of businesses reporting internet usage in 2014, showing only minor fluctuation in the following years.

In addition to the expanding connectivity, China has significantly improved the speed and efficiency

[3] Ibid.

of its digital infrastructure. The country's international internet bandwidth has grown from 3,157 bps per person in 2014 to 18,601 bps in 2023, enabling a faster and more stable connection for both individual users and business. At the same time, the number of registered websites peaked at 5,333 in 2017 before declining to 3,870 in 2023, reflecting a shift in the content distribution from traditional websites to mobile apps and platform-based ecosystems.

This technological expansion has taken place within the broader framework of the China language policies, which strongly emphasize the Mandarin Chinese, or Putonghua, as the national language. The Law on the National Common Language enacted in 2000 aims to promote the use of Mandarin as a means of fostering the national unity and improving communication across the China diverse linguistic landscape. In 2020, 70% of the Chinese population reported using Mandarin as their primary language [Jia, Pai 2021]. The Ministry of Education reported that by 2021, over 95% of students in urban areas were proficient in Mandarin by the time they completed their compulsory education [Huang, Fang 2021].

However, China is home to 55 recognized ethnic minorities, each with its own language and cultural identity. While the government officially supports minority languages, their use has been increasingly overshadowed by the Mandarin dominance. According to the 2010 census, only 8% of the population spoke a minority language as their first language, while the Tibetan, Uighur and Mongolian languages face growing endangerment due to policies favoring Mandarin [Hu 2023].

For instance, in Tibet, while Tibetan is still taught in school, the medium of instruction has increasingly shifted towards Mandarin. The study by L. Jia and Q. Pai highlights how this shift has contributed to a decline in Tibetan usage in educational settings, reinforcing a broader trend of language erosion [Jia, Pai 2021]. Similarly, the number of Uighur speakers has decreased by 20% since the early 2000s, as many young people adopt Mandarin to improve their economic prospects [Hu 2023]. The gradual phasing out of regional languages in official and educational domains has raised concerns about the long-term viability of the linguistic diversity in China.

The digital landscape further reflects the impact of these language policies. The Chinese government exerts strictly control the online communication, shaping how languages are used on social media and digital platforms. The Great Firewall of China restricts access to foreign websites, favoring domestic platforms like WeChat and Weibo, which comply with government regulations. By 2022, WeChat alone had over 1 billion active users, with the vast majority communicating in Mandarin [Zhao 2017].

In addition to structural barriers, the government has implemented strict content monitoring regulations for online platforms. Social media companies are required to censor material that does not align with state policies, and in 2021 alone, over 10,000 posts were removed for violating language and content regulations [Fang 2017]. This regulatory environment has further marginalized minority languages online as digital platforms predominantly operate in Mandarin. Critics argue that this control over a digital discourse limits the ability of minority communities to advocate for their linguistic rights and cultural preservation [Sun et al. 2022].

Brazil: The persistence of Portuguese on a mobile-first internet

Over the past two decades Brazil has undergone a profound digital transformation with internet access expanding rapidly and reshaping communication, work, and education. This growth has been largely driven by the mobile connectivity, which has become the dominant means of accessing the internet. In the early 2000s, the internet penetration was minimal, but by 2014, the number of fixed broadband subscribers reached 11.8 per 100 inhabitants, while mobile broadband subscriptions surged to 77.8 per 100 inhabitants. By 2023, the mobile broadband penetration had further increased to 90.9 per 100 inhabitants, solidifying Brazil's shift toward a mobile-first digital culture[4].

This technological shift has not only influenced how people access information but also on the digital language communication. As Portuguese is the country's official language, enshrined in the 1988 Brazilian Constitution, its dominance in digital spaces has become even more pronounced with the expansion of the mobile internet. According to the 2010 Census, 98% of Brazilians speak Portuguese as their first language [Wang, Steiner 2015], reinforcing its role as the primary language of online interaction.

While the internet access has expanded significantly, the way it is used differs across socioeconomic groups. In 2016, 69.4% of households had an internet connection, increasing to 79.1% in subsequent years, but this growth

[4] Ibid.

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was uneven. The decline in computer ownership from 51.2% in 2016 to 41.0% in 2023 highlights how many Brazilians now rely on smartphones for a connectivity. This shift reflects broader trends in digital inclusion and exclusion – while mobile internet has made the online access more widespread, it has also limited the access to a long-form written content and in-depth educational materials, which are often better suited for a desktop use. The dominance of a mobile-based, fast-consumption content reinforces the use of Portuguese in informal, everyday communication, while limiting the visibility of minority languages, which are already marginalized in public life.

The role of the internet in a daily life also intensified. By 2023, 88% of individuals accessed the internet regularly, up from 66.1% in 2016, with the vast majority – 91.8% of users – accessing the internet from home. As digital platforms become central to a social interaction and information sharing, the language of the internet becomes a key factor of inclusion and representation. Platforms such as Facebook, Twitter, and WhatsApp are overwhelmingly used in Portuguese, with over 90% of the content generated in the language [Puia, Ofori-Dankwa 2013]. While these platforms technically allow the linguistic diversity, in practice they offer little support for indigenous and minority languages already underrepresented offline.

Brazil is home to over 200 languages, including indigenous and immigrant languages, yet their presence in digital spaces remains minimal. The 2010 Census found that only 0.4% of the population speaks an indigenous language as their first language [Stumpf, De Quadros 2022], illustrating their fragile status. Although the Brazilian Constitution recognizes the cultural and linguistic rights of indigenous peoples, the reality is that Portuguese is overwhelmingly dominant in education, government, and media. With the internet access now as a crucial part of social and economic life, the absence of indigenous languages online further marginalizes these communities, reducing their visibility and weakening their chances of survival.

The Brazilian Internet Civil Framework (Marco Civil da Internet), enacted in 2014, set out to regulate the internet use, emphasizing principles such as the freedom of expression and the privacy protection. However, it does not explicitly address the language diversity in digital spaces, meaning that the dominance of Portuguese remains unchallenged by policy. In contrast, government-led online campaigns have actively reinforced Portuguese as the default language of digital communication. For example, during the COVID-19 pandemic, official public health campaigns prioritized Portuguese on social media to ensure clarity in communication [Castro e Silva, Hünemeier 2025]. While this approach aimed to maximize the outreach, it also excluded linguistic minorities from accessing vital information, as translation into indigenous languages was scarce and often unavailable online.

In addition to a linguistic exclusion, the unequal access to technology exacerbates these disparities. Many indigenous and rural communities lack stable internet connections and reliable mobile networks, making it even more difficult for their languages to gain a foothold in the digital world [De Quadros 2012]. The same mobile-first internet model that has made digital access widespread for Portuguese speakers left indigenous communities with limited means to document, share, or preserve their languages online. This digital divide mirrors broader socioeconomic inequalities, where the expansion of connectivity does not necessarily translate into a cultural and linguistic inclusivity.

India: Rapid digital growth amidst linguistic complexity

Over the past two decades, India has experienced an extraordinary digital transformation, with the internet access expanding rapidly due to the widespread adoption of a mobile technology and government-led digital initiatives. In 2014, the number of total internet subscribers stood at 21.37 per 100 inhabitants, and by 2023, this figure had more than tripled to 67.03 per 100 inhabitants, demonstrating the effectiveness of policies aimed at a digital inclusion[5].

A key driver of this expansion was the mobile broadband connectivity, which had overtaken the traditional internet infrastructure as the primary mode of access. In 2014, only 5.59 mobile broadband subscribers per 100 inhabitants were recorded, but by 2023, this number soared to 61.96 per 100 inhabitants. The increasing affordability of smartphones and data plans, along with the rapid deployment of 4G networks enabled millions to connect to the internet, particularly in rural and underserved areas. However, this mobile-first approach also shaped digital communication patterns, reinforcing the dominance of languages

[5] Ibid.

already prominent in digital spaces, particularly Hindi and English.

Despite this progress, the fixed internet penetration remains relatively low. Fixed broadband subscribers grew modestly from 1.22 per 100 inhabitants in 2014 to 2.75 per 100 inhabitants in 2023, showing a much slower adoption rate compared to mobile connectivity. Meanwhile, wired narrowband connections, once a staple of India's early internet infrastructure, nearly disappeared. This reflects a broader shift toward instant, mobile-based digital consumption, where accessibility is prioritized over stability and the depth of engagement, the trend that has significant implications for linguistic representation online.

While mobile networks have made India one of the most digitally connected nations in the world, disparities remain in terms of household internet access. In 2023, only 14.5% of Indian households had a direct internet access, an improvement from 11.1% in 2014, but still lagging behind India's overall internet penetration rate. This gap suggests that the individual mobile connectivity is advancing faster than the shared, structured access, which often benefits education and multilingual engagement. A lack of a fixed broadband also limits the ability of minority language speakers to create and access the digital content in their native languages, as mobile-first platforms tend to favor dominant, widely spoken languages such as Hindi and English.

The Indian digital revolution has been propelled by initiatives such as Digital India, which seeks to promote a universal internet access and improve the digital literacy. While this program has accelerated the internet adoption, it has not explicitly addressed the linguistic inclusivity. As a result, the language representation in digital spaces is shaped more by market forces than by the policy, reinforcing the existing dominance of Hindi and English while sidelining less widely spoken languages.

This pattern reflects the Indian broader linguistic landscape. The Constitution of India recognizes Hindi as the official language of the central government, while English is designated as an associate official language. However, India is home to an exceptional degree of linguistic diversity, with the Eighth Schedule of the Constitution listing 22 officially recognized languages, including Bengali, Telugu, Marathi, Tamil, Urdu, and Gujarati, among others [Kakde, Padalikar 2022]. According to the 2011 Census, 43% of Indians speak Hindi as their first language, while 25% speak other languages included in the Eighth Schedule [Banerjee et al. 2020]. However, 22% of the population speaks languages that are not recognized in the Eighth Schedule, meaning that millions of Indians do not receive an adequate government support for their linguistic rights [Ibid.].

The People's Linguistic Survey of India has documented over 780 languages, many of which are classified as endangered [Jolad, Agarwal 2021]. While some states developed programs to promote regional languages, others did not prioritize such efforts, resulting in unequal access to language resources [Rastogi, Kakoti 2021]. Additionally, the exclusion of languages with fewer speakers from official recognition means that 18.7 million Indians speak languages that lack the government acknowledgment further marginalizing them from education, governance, and digital participation [Jolad, Agarwal 2021].

As India's internet penetration grows, the role of the language in digital spaces becomes increasingly important. The Information Technology Act of 2000 provides a legal framework for electronic communication, but it does not regulate the language use on digital platforms. As a result, social media platforms such as Facebook, Twitter, and WhatsApp are overwhelmingly dominated by Hindi and English, with over 70% of the content generated in these two languages [Dixon et al. 2011]. The lack of structured policy interventions to promote a multilingual digital engagement means that many minority languages remain underrepresented online, leading to a gradual erosion of their presence in modern communication.

The lack of a fixed broadband infrastructure, combined with the dominance of Hindi and English in digital platforms, creates additional barriers for linguistic minorities seeking to participate in the India's rapidly growing digital economy. Like in Brazil, the reliance on the mobile-first connectivity means that much of India's online activity occurs in spaces that favor a fast consumption and informal interactions, rather than a long-form content, education or formalized multilingual representation. In this sense, the digital divide is not only technological but also linguistic, limiting the access to information, digital literacy, and economic opportunities for speakers of less-represented languages.

South Africa: Digital expansion at the cost of linguistic diversity

Over the past two decades, South Africa made significant strides in the digital connectivity, primarily driven by a mobile broadband expansion. In 2014,

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mobile broadband subscriptions stood at 46.7 per 100 inhabitants, rising to 59.5 per 100 inhabitants by 2017[6]. This rapid growth underscores the pivotal role of a mobile technology in bridging the digital divide, especially in the country where socioeconomic disparities and infrastructure challenges historically limited the internet access. By contrast, a fixed broadband penetration remains relatively low, with 3.21 fixed broadband subscriptions per 100 inhabitants in 2014, the figure that has since declined slightly, reflecting the dominance of a mobile-based internet access over traditional wired connections.

The household internet access grew, albeit at a slower pace. In 2014, only 11.1% of households had the internet access, increasing to 14.5% by 2023. This growth, though steady, remains relatively low compared to a mobile adoption, suggesting that the internet access is more individualized rather than household-based, as many South Africans rely on mobile devices instead of shared home internet connections. The number of households with computers has also remained limited, fluctuating between 21.2% and 27.3% over the past decade, further reinforcing the trend of the mobile-first connectivity.

The widespread adoption of mobile phones was instrumental in closing connectivity gaps. By 2023, 96.6% of households owned a mobile phone making it the primary gateway to the internet for millions of South Africans. At the same time, fixed telephone lines become nearly obsolete, with household ownership dropping from 12.9% in 2014 to just 5% in 2023. South Africa also made notable progress in a mobile network coverage, with 99.2% of the population covered by at least a 3G network, and 77.6% covered by LTE/4G as of 2017. These developments extended the online access to rural areas, ensuring that more South Africans can participate in the digital economy, education, and communication networks.

Despite these improvements, barriers to a full digital inclusion remain, particularly high data costs and limited fixed broadband infrastructure. These challenges are particularly detrimental to the language representation in digital spaces, as the internet access plays a critical role in preserving, promoting, and expanding the linguistic diversity. The dominance of the mobile access over fixed broadband means that most South Africans engage with the short-form, quick-access content, which tends to favor widely spoken languages, particularly English, over indigenous languages with fewer digital resources.

This technological landscape directly interacts with South Africa's complex linguistic environment. The Constitution of South Africa (1996) recognizes 11 official languages, including Afrikaans, English, isiZulu, isiXhosa, Sesotho, Setswana, Xitsonga, siSwati, Tshivenda, and isiNdebele [Nugraha 2019]. This legal framework aims to promote linguistic equality, ensuring that government services, education, and public communication are available in multiple languages. The Use of Official Languages Act (2012) further mandates that national and provincial departments develop language policies that incorporate these official languages [Mohlahlo, Ditsele 2022]. However, the implementation of multilingual policies remains inconsistent, and certain languages – particularly indigenous ones – continue to face challenges in gaining a full institutional support.

Despite legal recognition, the linguistic landscape of South Africa remains uneven, both offline and online. The 2011 Census revealed that approximately 9.6% of the population speaks Afrikaans, 8.2% speaks isiXhosa, and 7.6% speaks isiZulu as their first language [Banerjee et al. 2020]. However, many indigenous languages are at risk, as limited resources, educational materials, and digital infrastructure hinder their widespread use. The Pan South African Language Board (PanSALB) was established to promote and protect all official languages, but critics argue that budget constraints and weak enforcement mechanisms prevent it from effectively safeguarding indigenous languages [Ntombela 2018]. One major concern is the lack of educational materials in indigenous languages, which limits their presence in formal education and reduces literacy rates in these languages, making English the de facto language of an upward mobility.

This linguistic marginalization in the digital sphere is exacerbated by education policies and digital literacy gaps. Many educational institutions prioritize English as the medium of instruction, which can disadvantage students who are not proficient in the language [Ibid.]. As digital platforms increasingly become central to learning and economic participation, speakers of indigenous languages face additional barriers to gaining an equal access to knowledge and opportunities.

The interplay between South Africa's mobile-driven digital expansion and its multilingual policies presents both opportunities and challenges. On the one hand, the mobile internet has dramatically increased

[6] Ibid.

connectivity, allowing millions to participate in an online discourse. However, because mobile platforms prioritize speed and accessibility, indigenous languages with fewer digital resources struggle to compete with the dominant presence of English. The lack of structured efforts to promote multilingualism online, combined with the continued socioeconomic barriers to digital access, risk deepening the marginalization of indigenous languages in the South Africa's evolving digital landscape.

Conclusion

Across the BRICS nations, a striking paradox emerges: countries with the most advanced internet infrastructure and the highest penetration rates often impose the greatest restrictions on the digital freedom, while those with greater democratic freedoms struggle with accessibility, affordability, and service quality. This pattern raises fundamental questions about the relationship between state control, technological progress, and freedom of information.

China and Russia, the two BRICS nations with the most sophisticated digital infrastructures, also enforce some of the most restrictive internet policies. China boasts an extensive fiber-optic network, widespread 5G coverage, and the highest number of mobile broadband users among BRICS nations, with the penetration exceeding 93.57 per 100 inhabitants in 2023. However, these technological advancements are accompanied by a rigid state control over the online content. China's Great Firewall, one of the world's most comprehensive internet censorship systems, blocks foreign websites, restricts the access to global social media platforms, and monitors the domestic digital activity.

Russia follows a similar trajectory: with 92% of its population online, supported by a high-speed broadband and a vast mobile network, Russia has built a technologically advanced yet tightly controlled digital ecosystem. In recent years, the government intensified internet regulations, blocking independent news sources, enforcing data localization laws, and limiting the access to foreign digital platforms. The sophistication of the digital infrastructure in these nations enables a greater state control, allowing governments to prioritize the dissemination of state-approved narratives while restricting alternative viewpoints.

In contrast, Brazil, India, and South Africa, countries with relatively greater democratic freedoms, face more significant challenges in the digital accessibility and infrastructure development. India has seen the rapid growth in the internet penetration, reaching 67.03 per 100 inhabitants in 2023, yet the fixed broadband adoption remains low, and the connectivity is largely dependent on mobile networks. The country also struggles with urban-rural disparities, where metropolitan regions have a strong digital infrastructure, but rural areas face a limited access and slower speeds. Similarly, South Africa has expanded mobile broadband coverage, but affordability remains a major barrier, with the household internet penetration at just 14.5% in 2023. Brazil, despite being one of the most digitally connected nations in Latin America, continues to grapple with high data costs and uneven distribution of internet services, particularly in remote regions.

This paradox suggests that countries with less democratic freedoms may prioritize the investment in a digital infrastructure as a tool for control, ensuring the widespread internet access while retaining the power to monitor and restrict the usage. In these states, a strong, state-controlled digital network allows for the efficient content regulation, suppression of dissent, and centralized management of information flows. Conversely, in democracies where the freedom of expression is a priority, market-driven internet expansion, economic inequality, and regulatory constraints often lead to an inconsistent digital development, leaving underprivileged population with the limited or low-quality internet access.

This trade-off between the digital freedom and digital infrastructure is further reflected in each country's approach to language policies. All BRICS nations have established official languages, which are promoted through legislation and government initiatives. Brazil prioritizes Portuguese, Russia enforces Russian, India recognizes Hindi and English, and China mandates Mandarin as the national standard. The promotion of the dominant national language aligns with the desire to reinforce the national identity and unity, much like the way of a state-controlled internet infrastructure is used to reinforce government narratives.

At the same time, each BRICS nation acknowledges the presence of linguistic minorities, though the extent of support varies significantly. Brazil formally recognizes indigenous languages, Russia provides the limited institutional support for regional languages, and India lists 22 languages in its Eighth Schedule, offering an official recognition to multiple linguistic communities. South Africa stands out as the only

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BRICS nation with 11 official languages, reflecting a constitutional commitment to multilingualism. However, as with the digital infrastructure, the government acknowledgment of linguistic diversity does not always translate into an effective support, and the degree to which minority languages are integrated into education, media, and digital platforms varies widely.

The intersection of digital policies and language policies is particularly evident in education systems and online communication. In India, English is frequently used as the primary medium of instruction, often disadvantaging students from non-English-speaking backgrounds. Similarly, in South Africa, while the language-in-education policy officially promotes indigenous languages, its implementation remains inconsistent, leading to the English dominance in academic and professional spaces. This means that though the internet access is expanding, it remains unevenly distributed, leaving marginalized communities at a disadvantage both linguistically and digitally.

The regulation of online communication also reflects the political structures of each country. China enforces a strict control on a digital content, promoting Mandarin while censoring foreign and minority languages. Russia similarly regulates the online discourse, reinforcing Russian as the dominant digital language while limiting alternative sources of information. In contrast, South Africa encourages the use of multiple languages on social media, but English remains dominant online, particularly on global platforms such as Twitter and Facebook.

The historical context of language policies played a major role in shaping current frameworks. South Africa's multilingual policies are deeply rooted in its apartheid history, during which the language was used as a tool of segregation and control. In contrast, Brazil's approach to the language is shaped by its colonial past, with Portuguese serving as the primary unifying language, while indigenous languages struggle for visibility. This historical backdrop mirrors the trajectory of the digital development in these nations, where legacies of inequality continue to influence the access to resources, whether linguistic or technological.

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