

Overcoming Language Barriers in Multilingual Chad: Practical Strategies for Inclusive Communication

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Abstract

In multilingual postcolonial contexts, the choice of language plays a crucial role in determining access to education, public services, and broader social participation. This study explores how language practices in key public sectors affect comprehension, engagement, and inclusion in multilingual Chad. Drawing on theories of language policy, power dynamics, and language as an access infrastructure, the research adopts a convergent mixed-methods approach. Data were gathered from 240 participants across four sectors, including education, healthcare, governance, and media. This spans diverse linguistic backgrounds and urban-rural settings. Quantitative findings reveal that French-only communication in institutions is linked to significantly lower levels of understanding and participation, especially in rural areas. In contrast, the use of Chadian Arabic and indigenous languages enhances comprehension, boosts confidence, and encourages greater institutional engagement. Qualitative insights further explain these patterns, emphasizing the importance of trust, comfort in interaction, and opportunities for meaningful communication. The findings highlight how language barriers act as structural obstacles to learning and participation, which affects not just formal education but also everyday interactions with public institutions. This study argues that adopting additive multilingual strategies can improve inclusive communication and promote access without diminishing the importance of official languages. These results carry significant implications for educational policy, language-in-education frameworks, and communication practices in multilingual societies.

Keywords

Multilingualism, Language Policy, Additive Multilingualism, Educational Access, Inclusive Communication, Chad

1. Introduction

Chad stands out as one of Africa's most linguistically diverse nations, with over 120 languages spoken across its vast territory (Eberhard et al., 2024). This diversity is a product of centuries of population movements, ethnic interactions, and cultural exchanges among its various communities. The languages in Chad predominantly belong to three major African language families: Afro-Asiatic, Nilo-Saharan, and Niger-Congo (Batibo, 2005: pp. 3-6). This linguistic variety is linked to specific geographic regions and social groups within the country.

French and Arabic are the official languages of Chad, a legacy of both its colonial past and its historical ties to the trans-Saharan world (Batibo, 2005: pp. 52-55). French, a product of colonial rule, continues to serve as the primary language in government, formal education, and the legal system. Arabic, particularly the Chadian variant, functions as a crucial lingua franca; it facilitates communication across ethnic and linguistic groups, especially in urban centers and commercial settings (Owens, 2008: pp. 245-247). In addition to these official languages, a host of indigenous languages such as Sara, Kanembu, Toubou, Hadjarai, and Moundang dominate everyday communication in rural areas. These languages are vital to cultural identity, oral traditions, and local knowledge transmission, yet they remain largely absent from formal domains such as education and the media (Lewis et al., 2016: pp. 183-186).

This linguistic plurality enriches the country culturally but also presents significant structural challenges. Although many Chadians are multilingual, the disconnection between languages used in daily life and those in official institutions often creates barriers to education, healthcare, and civic participation (UNESCO, 2010: pp. 21-23). Understanding Chad's linguistic diversity is crucial for developing inclusive communication strategies that reflect the realities of its people.

The linguistic landscape of Chad is shaped by the interplay of official languages, lingua franca, and a wealth of indigenous languages. French and Arabic dominate national-level communication, while indigenous languages prevail in local and community-based interactions. French remains the primary language for government administration, formal education, and the judiciary. However, its use is largely confined to urban areas and among those with access to formal education, making it a marker of socioeconomic status and political participation (Batibo, 2005: pp. 61-63). This reliance on French in formal institutions excludes many Chadians who are not fluent in the language.

Arabic in Chad exists in two main forms: Modern Standard Arabic and Chadian Arabic. Modern Standard Arabic is primarily used in religious contexts, formal writing, and some official settings, whereas Chadian Arabic serves as a widely spoken lingua franca throughout the country (Owens, 2008: pp. 248-250). Its widespread use in markets, trade, and informal communication means it holds significant social utility, even though it lacks institutional support.

Alongside these official languages, over one hundred and twenty indigenous languages are spoken across Chad. These languages are not just means of com-

munication but are intricately tied to ethnic identity and local governance. Despite being the first language for most Chadians, these languages are rarely included in formal education or public service provision, contributing to communication gaps and exclusion from national policy frameworks (Eberhard et al., 2024).

Chad's multilingualism has deep historical roots, shaped by factors such as trade, migration, and political organization. Before colonialism, Chad was a crossroads for trade and cultural exchange between North Africa and Sub-Saharan Africa. The trans-Saharan trade routes facilitated the spread of Arabic and Islam throughout the region (Owens, 2008: pp. 231-234). French colonialism further cemented French as the language of power, governance, and education, relegating indigenous languages to the margins and creating long-lasting linguistic hierarchies (Batibo, 2005: pp. 54-58).

Upon gaining independence in 1960, Chad retained French as its official language, partly due to its perceived neutrality in a linguistically diverse landscape. Arabic was later promoted alongside French, driven by regional, religious, and political considerations. However, these language policies often deepened social divisions rather than promoting national unity (UNESCO, 2010: pp. 27-29). Indigenous languages, which play a vital role in community life, continued to be excluded from national language policies. This reinforces inequalities that persist today. As a result, the multilingual landscape of contemporary Chad reflects a combination of historical legacies and sociopolitical inequities. Language remains a powerful determinant of access to education, public services, and political participation.

1.1. Objectives

- To identify the key language barriers that affect the sectors of education, healthcare, governance, and media in Chad, and explore how these barriers impact social and developmental outcomes.
- To propose practical and context-sensitive communication strategies that are inclusive and reflect Chad's linguistic diversity.

1.2. Research Problem

Despite the multilingual reality of Chad, communication in key sectors such as education, healthcare, governance, and the media is dominated by French and Chadian Arabic, which creates significant barriers for speakers of indigenous languages. In education, students often begin their schooling in a language they do not speak fluently, which undermines both comprehension and learning outcomes. Similarly, in healthcare and public administration, limited linguistic accommodation exacerbates misunderstandings, hampers access to services, and erodes trust between institutions and communities. The media further amplifies these disparities by prioritizing the official languages, leaving many citizens without access to vital information. Collectively, these language barriers encourage social exclusion, limit civic engagement, and hinder the effectiveness of develop-

ment initiatives, especially in rural and marginalized areas.

1.3. Research Questions

- ❖ How do language practices involving French, Chadian Arabic, and indigenous languages in education, healthcare, governance, and media influence communication, access to services, participation, and social inclusion in Chad?
- ❖ What context-specific communication strategies can be developed to reduce language-based exclusion in these sectors?

1.4. Thesis Statement

This article argues that overcoming language barriers through inclusive, locally grounded communication strategies is crucial for improving access to essential services, promoting social inclusion, and advancing sustainable development in multilingual Chad.

2. Literature Review

This literature review explores key empirical and theoretical research related to language barriers, multilingualism, and access to education within African and postcolonial contexts. It aligns with the theoretical framework of this study, which integrates concepts of language policy, additive multilingualism, and language as a means of enhancing access to essential services.

Language plays a central role in shaping access to education, public services, and civic participation, especially in multilingual societies such as those in Africa. In many postcolonial African countries, including Chad, European languages like French function as the official languages. This often creates a disconnection between institutional communication and the linguistic realities of the majority population. This results in significant barriers to inclusion (Bamgbose, 2011: pp. 3-6). Mismatches between institutional language policies and daily language practices contribute to social inequalities, particularly between urban and rural communities, as well as between educated elites and those with limited formal schooling (Trudell, 2016: pp. 7-11; Djité, 2008: pp. 67-72).

Chad's linguistic landscape is particularly complex, with French as the official language, Chadian Arabic as a widely spoken lingua franca, and over 120 indigenous languages in use (Djité, 2008: pp. 67-72). While this linguistic diversity enriches the culture, it also presents governance and service delivery challenges (Batibo, 2005: p. 57). Despite widespread multilingualism at the individual and community levels, institutional settings largely fail to reflect this diversity. As a result, it creates a gap between everyday language use and formal communication (Lewis et al., 2016: p. 182). For instance, although Chadian Arabic serves as an essential lingua franca, particularly in commerce (Owens, 2008: p. 245), it is seldom used in formal institutions like education and government. This contributes to exclusionary practices.

The legacy of colonial language policies persists in many postcolonial African

states, where European languages continue to dominate education, governance, and economic opportunities (Bamgbose, 2000: p. 54; Batibo, 2005: p. 63). In Chad, French remains the dominant language for state functions, despite being spoken fluently by only a small segment of the population. The justification for retaining colonial languages often revolves around the idea of linguistic neutrality in a diverse society (Heugh, 2011: p. 91), yet this policy marginalizes indigenous languages and restricts access to services for non-French speakers. UNESCO (2010: p. 27) emphasizes that such language policies exacerbate social inequalities, particularly in rural areas, where the majority of the population lacks proficiency in official languages.

Language policies in postcolonial African states have been widely studied as mechanisms that perpetuate social hierarchies. Bourdieu (1991: pp. 66-68, 109-113) argues that official languages function as symbolic capital, granting legitimacy to those who can use them within institutions. Bamgbose (2000: pp. 28-35, 87-94) further highlights that policies favoring colonial languages systematically exclude the majority from civic, educational, and economic participation. Alexander (2009: pp. 72-78, 103-110) extends this argument by showing that language choice mediates access to public goods, reinforcing inequalities between urban elites and rural populations. UNESCO (2010: pp. 6-9, 18-22) frames language as essential infrastructure for development by linking language proficiency to effective engagement in education, healthcare, and governance.

Research on multilingual education consistently supports additive approaches, where learners maintain proficiency in their first languages while also learning official languages. Heugh (2011: pp. 109-118, 132-136, 141-147) demonstrates that additive multilingualism improves comprehension, participation, and academic performance without undermining proficiency in official languages. Trudell (2016: pp. 14-19, 27-31) provides evidence from Eastern and Southern Africa that instruction in familiar languages significantly enhances learning outcomes. In education, it is widely acknowledged that teaching students in an unfamiliar language can hinder literacy development, academic success, and parental involvement (Heugh, 2011: pp. 108-114; UNESCO, 2016: pp. 24-29). Mother-tongue-based multilingual education (MTB-MLE) has shown positive impacts on literacy and the acquisition of official languages (Heugh, 2011: pp. 108-114), yet there is limited research on the effects of French-only instruction in Chad, particularly for indigenous language speakers. Most studies focus on Southern and Eastern Africa, leaving a gap in understanding the impact of French-only education in Chad (UNESCO, 2016: pp. 24-29).

In healthcare, language barriers significantly affect patient comprehension and health outcomes (Schvyve, 2007: pp. 361-363; WHO, 2017: pp. 14-18). While some studies have explored the role of local languages in health communication, most focus on specific diseases or public health campaigns. A more comprehensive investigation is needed to examine the role of language across various health services in Chad, especially in rural contexts (Djité, 2008: pp. 67-72). Addressing language

barriers is crucial for improving health outcomes and ensuring equitable access to healthcare.

The dominance of official languages, such as French, also restricts access to public services and diminishes civic participation (Alexander, 2009: pp. 45-49). Research from other African countries shows that providing public information in widely spoken local languages increases engagement and trust in government institutions (Trudell, 2016: pp. 7-11; Djité, 2008: pp. 67-72). However, there is a lack of research on how language practices, especially the use of indigenous languages and Chadian Arabic, affect governance and administrative communication in Chad. This presents an opportunity to explore how language practices influence political participation and social inclusion.

Local-language media are recognized as effective tools for reaching marginalized communities, particularly in rural areas (Myers, 2014: pp. 83-88; Prah, 2009: pp. 17-22). However, existing studies primarily focus on specific regions, and research on how multilingual media interacts with sectors such as governance, education, and health in Chad is limited. This represents another gap in the literature that warrants further investigation.

The concept of additive multilingualism, where local languages coexist with official languages, has been suggested as a way to enhance social inclusion without displacing official languages (Bamgbose, 2011: pp. 3-6; Trudell, 2016: pp. 7-11). While this approach has been applied in educational and linguistic planning, empirical research on its impact across sectors like health, governance, and media in Chad is scarce. Further studies are needed to understand how language practices in these sectors influence outcomes in comprehension, participation, and social inclusion.

Hornberger (2003: pp. 3-9, 27-33, 43-47) introduces the concept of the continua of biliteracy; he highlights that learners' multilingual skills are vital for cognitive development and literacy. Street (2003: pp. 77-80, 82-86, 88-90) complements this view by framing literacy as a socially situated practice, where informal language use affects comprehension and participation. Studies by Alexander (2009: pp. 72-78, 103-110) and UNESCO (2010: pp. 6-9, 18-22) highlight that language choice influences access to services across various sectors, and that excluding local languages limits equitable access. These perspectives reinforce the importance of examining language use not only in classrooms but also across public institutions. This is in line with the framework of language as infrastructure for access.

The reviewed literature supports three key themes: 1) Structural inequality through language policy, where the dominance of French perpetuates social hierarchies (Bourdieu, 1991; Bamgbose, 2000; Alexander, 2009); 2) Additive multilingualism as a pedagogical strategy, where incorporating first languages improves comprehension and participation (Heugh, 2011; Trudell, 2016; Hornberger, 2003); and 3) Language as access infrastructure, where language proficiency mediates access to services in education, healthcare, governance, and media (Alexander, 2009; UNESCO, 2010).

In conclusion, existing literature emphasizes the significant impact of language

barriers on education, healthcare, governance, and media across Africa. However, there is limited integrated research on the cross-sectoral effects of multilingual communication in Chad. Few studies have investigated the effectiveness of French, Chadian Arabic, and indigenous languages in promoting social inclusion and participation. This study aims to fill this gap by assessing language comprehension and participation across four key sectors: education, healthcare, governance, and media. It will compare the effectiveness of French, Chadian Arabic, and indigenous languages in fostering inclusion, while also exploring practical strategies to mitigate language-based exclusion in Chad's multilingual context.

3. Theoretical Framework

This study draws upon three interconnected strands of sociolinguistic and educational theory: language policy and power, additive multilingualism, and language as access to public goods.

First, *critical language policy* research emphasizes how official language choices contribute to the reproduction of social hierarchies and uneven access to state resources, particularly in postcolonial contexts. Language is not simply a neutral medium of communication; rather, it serves as a form of symbolic capital, which confers legitimacy and authority within institutions (Bourdieu, 1991: pp. 66-68, 109-113). In many African postcolonial states, language policies often create barriers that reinforce elite dominance, privileging a minority of formally educated language users while systematically excluding the majority of the population (Bamgbose, 2000: pp. 28-35, 87-94). In Chad, the dominance of French in formal domains can be understood as a structural mechanism of exclusion, not just a neutral or purely technical choice. This linguistic hierarchy limits participation in education, governance, and other state-driven activities for those who do not speak French. This further entrenches social inequality.

Second, the concept of *additive multilingualism* offers a theoretical alternative to monolingual or substitution-based language policies. Instead of replacing indigenous languages with official or international languages, additive multilingualism promotes the use of learners' *first languages* alongside official languages (Heugh, 2011: pp. 109-118). Evidence from African education systems shows that such approaches improve comprehension, participation, and learning outcomes, without diminishing access to official languages (Heugh, 2011: pp. 132-136; Trudell, 2016: pp. 14-19, 27-31). This framework is particularly pertinent to Chad, where multilingualism is widespread at the community level, yet underutilized in formal institutions. The study shows that additive multilingualism could enhance institutional communication and learning outcomes by validating and integrating local languages alongside official languages.

Third, this study incorporates the concept of *language as access infrastructure* in development studies. This perspective views language choice as a critical factor in determining individuals' ability to access essential public services, participate in governance, and fully engage in civic life (Alexander, 2009: pp. 72-78, 103-110).

Language barriers, much like physical or economic barriers, can significantly limit effective engagement with institutions. International development research emphasizes the direct relationship between language choice and access to critical services, such as education, healthcare, and governance, particularly for marginalized populations (UNESCO, 2010: pp. 6-9, 18-22). In this study, language practices in *education, healthcare, governance, and media* are framed as central mechanisms influencing social *inclusion* and *participation*.

By integrating these theoretical perspectives, the study links empirical findings related to language comprehension and access to larger structural and educational processes. The framework provides a lens through which language practices can be understood as powerful tools for shaping educational opportunities and promoting inclusive participation across sectors.

4. Methodology

4.1. Research Design and Rationale

The study employs a convergent *mixed-methods design*, wherein quantitative and qualitative data were collected simultaneously, analyzed separately, and later integrated. This approach allows for the measurement of sector-wide patterns of language access, while also providing a detailed exploration of individual experiences with institutional communication. The four sectors analyzed (education, healthcare, governance, and media) were selected because they represent essential interfaces between citizens and the state, where language choice has significant implications for access, comprehension, and participation.

4.2. Sampling Strategy and Participant Selection

A *stratified purposive sampling* strategy was used. The sample was first stratified by sector to ensure representation across education, healthcare, governance, and media. Within each sector, participants were selected purposively to reflect variation in linguistic background (French, Chadian Arabic, and indigenous languages) and geographical location (urban vs. rural).

The study was conducted in N'Djamena, Abéché, and Moundou, all of which are classified as urban areas due to their role as administrative capitals with high population density and concentrated institutional infrastructure. Koumra and Léré were categorized as rural areas, marked by their distance from regional capitals and limited access to public services. The sample included 240 participants, distributed as follows:

- ✓ **Education:** 72 participants (students, parents, teachers)
- ✓ **Healthcare:** 60 participants (patients and frontline nurses in public clinics)
- ✓ **Governance:** 54 participants (service users and local administrative staff)
- ✓ **Media:** 54 participants (radio listeners and local broadcasters)

The participants spoke various languages, with the following distribution of first languages: 64% spoke indigenous languages, 23% spoke Chadian Arabic, and 13% spoke French. This distribution closely mirrors national linguistic patterns

and facilitates the comparison between institutional language practices and the linguistic repertoires of the community.

4.3. Research Instruments

4.3.1. Quantitative Instrument

A structured questionnaire was used to assess linguistic background, language use in service delivery, and three key outcome constructs: comprehension, participation, and social inclusion/confidence. Each of these constructs was measured through five Likert-scale items ranging from 1 (strongly disagree) to 5 (strongly agree). Items were averaged to produce continuous scores, with higher values reflecting more positive outcomes.

- ✓ **Comprehension:** Assessed understanding of institutional information, clarity of explanations, and perceived accuracy.
- ✓ **Participation:** Measured willingness to ask questions, follow instructions, and engage actively with institutions.
- ✓ **Social Inclusion/Confidence:** Evaluated comfort, trust, and perceived respect in interactions with service providers.

This approach aligns with existing multilingual access research, which emphasizes measurable, user-centered outcomes (UNESCO, 2010; Batibo, 2005). The questionnaire was initially developed in French and professionally translated. For participants whose first language was indigenous, trained research assistants provided oral translations to ensure clarity and comprehension.

4.3.2. Qualitative Instrument

Semi-structured interview guides were created for each sector to focus on communication success or failure, the perceived impact of language choices on trust and participation, coping strategies, and recommendations for improving institutional communication. Interviews were audio-recorded and later translated into French for consistency and accuracy.

To ensure the validity of the language mediation process, translated questionnaires and interview transcripts were reviewed by a second bilingual research assistant. Any discrepancies were resolved through discussion. This approach minimizes interpreter bias and follows best practices for cross-linguistic qualitative research (WHO, 2017).

4.4. Data Analysis Procedures

4.4.1. Quantitative Analysis

Quantitative analysis was conducted in three stages. First, descriptive statistics summarized language use, comprehension, participation, and social inclusion across sectors. Second, comparisons were made to examine differences in outcomes based on the language of communication. Finally, a multiple linear regression analysis was performed, with comprehension score as the dependent variable (the average of five items) and language of communication (French-only, Chadian Arabic, indigenous language, mixed), sector, and location (urban vs. rural) as pre-

dictor variables. Education level and age were included as control variables. French-only communication and urban location were treated as reference categories. Regression assumptions were met with no violations detected (Table 1).

Table 1. Multiple linear regression predicting comprehension scores.

Predictor	B	SE B	β	95% CI
Constant	2.11	0.18	—	[1.76, 2.46]
Chadian Arabic (vs. French)	0.62*	0.09	0.41	[0.44, 0.80]
Indigenous language (vs. French)	0.94*	0.11	0.56	[0.72, 1.16]
Mixed language use	0.71*	0.10	0.47	[0.51, 0.91]
Rural (Koumra, Léré)	-0.38*	0.12	-0.21	[-0.62, -0.14]
Education level	0.29*	0.07	0.26	[0.15, 0.43]
Age	-0.04	0.03	-0.08	[-0.10, 0.02]

Note. N = 240. Dependent variable: comprehension score (average of five Likert items, 1 - 5 scale). French-only communication and urban location served as reference categories. * $p < 0.05$.

4.4.2. Qualitative Analysis

Qualitative data were analyzed using *thematic analysis*. Codes were generated inductively and deductively, focusing on themes such as access, trust, and exclusion. These themes were compared across sectors to identify both common and context-specific patterns. Quantitative and qualitative data were integrated to provide a fuller understanding of the relationship between language and institutional outcomes.

4.4.3. Integration of Quantitative and Qualitative Data

To ensure transparency and coherence, the analysis process followed these steps:

- *Empirical pattern identification*: Quantitative results identified patterns of comprehension difficulty associated with specific languages and sectors (for instance, higher difficulty with French-only communication);
- *Comparative validation*: These patterns were compared across sectors and geographic contexts to assess consistency;
- *Qualitative explanation*: Interview data were used to explain why these patterns exist to show how language choices affect understanding, trust, and willingness to engage;
- *Theoretical interpretation*: Findings were interpreted through the lenses of language policy, additive multilingualism, and language-as-access theory. For example, the finding that indigenous languages enhance comprehension in healthcare was supported by both higher comprehension scores and qualitative accounts of clearer explanations, greater trust, and better adherence to medical advice when local languages were used.

By linking empirical patterns directly to theory, the study illustrates how inclusive communication strategies can reduce language-based exclusion without un-

dermining the role of official languages.

4.5. Ethical Considerations

- All participants provided informed consent before participation;
- Anonymity and confidentiality were strictly maintained throughout the study;
- Data collection procedures were adapted to meet participants' linguistic needs;
- Ethical approval was obtained from a relevant institutional authority.

5. Results and Analysis

5.1. Participant Profile and Linguistic Distribution

The participant group displayed a wide range of linguistic backgrounds, with indigenous languages such as Sara, Kanembu, Hadjarai, Ngambay, and Moundang commonly spoken. In interactions where multiple languages were used, respondents indicated the primary language of communication, while interpreter-mediated interactions were recorded separately.

5.2. Language of Communication and Comprehension Patterns

5.2.1. French-Only Institutional Communication

Across all sectors, the majority of participants reported challenges in understanding institutional communication that was delivered exclusively in French. In total, 68% of participants indicated experiencing moderate to severe comprehension difficulties. These issues were more prominent in rural areas, where 78% of respondents faced difficulties, compared to 54% in urban areas. This trend shows that geographic location plays a significant role in exacerbating language-based exclusion. Breaking this down by sector:

- *Education*: 72% of students and parents reported difficulties understanding school-related communication or instruction in French, particularly in the early grades.
- *Healthcare*: 61% of participants struggled to understand diagnoses, treatment instructions, and preventive health messages delivered in French.
- *Governance*: 66% of respondents reported challenges with understanding official documents and administrative procedures in French.
- *Media*: 59% of participants reported having difficulty fully understanding national broadcasts and print media, which were predominantly in French.

These findings reveal that French-only communication across sectors acts as a systemic barrier that limits effective engagement and participation in institutional activities. It emphasizes the need for more inclusive language practices in formal settings.

5.2.2. Chadian Arabic as a Lingua Franca

Participants who received communication in Chadian Arabic generally reported higher comprehension levels compared to those who only encountered French. A total of 58% of respondents indicated high or very high comprehension when

communication occurred in Chadian Arabic. This effect was most noticeable in urban and peri-urban areas, where Chadian Arabic functions as a shared lingua franca across different ethnic groups. However, the effectiveness of Chadian Arabic varied by sector. While it facilitated better communication in governance and media contexts, its role in education, particularly for early-grade instruction, was more limited due to varying levels of exposure to Arabic among children. Therefore, Communication in Chadian Arabic resulted in higher comprehension rates, with 58% of participants reporting high or very high comprehension. This was especially evident in governance and media sectors, though its effectiveness was less pronounced in early education, where children's exposure to Arabic varied.

5.2.3. Indigenous Languages and Comprehension Effectiveness

Indigenous languages resulted in the highest reported levels of comprehension across all sectors. 76% of participants indicated the high comprehension rate when communication occurred in their first language. This was especially obvious in healthcare and governance, where clear communication is critical for building trust and ensuring proper understanding. Regression analysis further confirmed that the language of communication was a significant predictor of reported social inclusion, even when accounting for education levels and urban-rural location. Communicating in indigenous languages was positively correlated with greater confidence in engaging with institutions and a higher likelihood of asking follow-up questions or seeking clarification.

5.2.4. Qualitative Explanations of Quantitative Patterns

Qualitative interviews provided valuable insights into why these language patterns emerged. Many participants viewed French as a formal and authoritative language, often creating feelings of distance and intimidation. In many cases, participants reported relying on intermediaries such as teachers, family members, or informal translators, to navigate French-only services, especially in healthcare and governance contexts. In contrast, communication in indigenous languages was linked to clearer explanations, increased trust in service providers, greater participation, and better adherence to instructions, particularly in healthcare settings. One healthcare participant explained that receiving instructions in their first language allowed them to ask follow-up questions without fear of embarrassment. This highlights how language choice affects not only comprehension but also interaction dynamics.

5.2.5. Media Use and Linguistic Accessibility

Media consumption patterns further corroborate these findings. While national media predominantly use French, 67% of participants reported regularly listening to local-language radio broadcasts. Many participants described local-language media as more relevant, understandable, and closely aligned with community concerns. This shows that audiences actively seek out linguistically accessible information, and that inclusive language practices are already being implemented in informal or community-based media spaces. These findings underscore the po-

tential of local-language media in fostering linguistic accessibility and promoting social inclusion in the public sphere.

5.3. Summary of Key Findings

The integration of both quantitative and qualitative data leads to the following central claims:

- *French-only* institutional communication limits comprehension and participation, especially in rural areas;
- Chadian *Arabic* improves comprehension in specific domains, such as governance and media, but it does not fully address exclusion, particularly in the education sector;
- Indigenous *languages* lead to the highest levels of comprehension and engagement, making them crucial for inclusive communication strategies.

Each of these claims is grounded in measurable patterns from the data, sectoral comparisons, and participants' lived experiences, ensuring that the conclusions are transparent.

6. Discussion and Findings

This study explored how language practices, specifically the use of French, Chadian Arabic, and indigenous languages, affect communication, access, participation, and social inclusion in Chad, across key sectors such as education, healthcare, governance, and media. The findings reveal persistent language barriers tied to the exclusive use of French, while also highlighting the significant role of Chadian Arabic and indigenous languages in improving comprehension and fostering inclusion.

The results underscore that the language of communication is a structural determinant of comprehension, participation, and social inclusion. Regression analysis showed that compared with French-only communication, Chadian Arabic ($B = 0.62, p < 0.05$) and indigenous languages ($B = 0.94, p < 0.05$) significantly improved comprehension scores. In contrast, rural locations (Koumra and Léré) negatively impacted comprehension ($B = -0.38, p < 0.05$), revealing compounded geographic and linguistic exclusion.

Sectoral differences were evident, with 72% of education participants, 61% in healthcare, 66% in governance, and 59% in media reporting difficulty with French-only communication. Indigenous languages led to the highest comprehension rates (76%), and 67% of participants reported regular access to local-language radio.

6.1. Practical Strategies and Implications

Education

Given that 72% of participants reported difficulty understanding French-only communication in education, it is recommended that early-grade instruction and school-family communication prioritize indigenous languages. French can be introduced gradually, allowing students to build a stronger foundation in their first

languages.

Healthcare

Since 61% of participants in healthcare reported difficulty with French-only communication, and 76% showed high comprehension when indigenous languages were used, clinics should implement multilingual strategies. This includes providing trained interpreters and multilingual health materials, which would ensure better understanding and more effective patient care.

Governance

The 66% of participants in governance who reported difficulty understanding French administrative procedures suggests that municipal offices should offer oral explanations in Chadian Arabic and dominant local languages, particularly in rural areas such as Koumra and Léré.

Media

Local-language radio, which 67% of participants regularly accessed, was found to be the most accessible form of communication. Expanding indigenous-language public broadcasting and bilingual programming can further enhance inclusive public communication.

6.2. Language, Education, and Structural Inequality

The study confirms that French-only communication in public institutions, especially in rural areas, acts as a structural barrier to educational access and participation. A large proportion of students and parents reported comprehension difficulties, which aligns with research showing that schooling in an unfamiliar language constrains learning, limits parental involvement, and reinforces social inequality (Bamgbose, 2000; Heugh, 2011).

These findings emphasize that language is not a neutral medium in education. It plays a central role in shaping the learning environment. Beyond classroom instruction, language barriers affect administrative communication between schools and families, school-related media messages, and interactions with local authorities. All these factors contribute to students' educational trajectories and influence their sense of belonging and identity in educational settings. When students encounter schooling in a language they do not fully understand, exclusion starts even before academic content is addressed.

6.3. Additive Multilingualism and Educational Access

The study highlights that Chadian Arabic and indigenous languages significantly improve comprehension, reinforcing the effectiveness of additive multilingualism in educational contexts. The findings suggest that local languages should not be viewed as competing with French. Instead, multilingual practices can facilitate access to official languages while also improving overall understanding.

This approach aligns with research on first language development, which sees multilingual repertoires as resources for learning rather than deficits. Indigenous languages, particularly, were found to be highly effective in early education and in

communication with families. This supports the argument that early literacy and conceptual development are most effectively supported when learners are taught in their first languages.

Contrary to deficit models that view indigenous languages as barriers to educational success, these findings underscore their pedagogical value. Although this study spans multiple sectors, the insights into education are especially pertinent, as learning takes place in both formal and informal settings. In healthcare and governance, participants described how language choices impacted their ability to understand information, ask questions, and make informed decisions. These informal learning environments, where individuals acquire knowledge, negotiate meaning, and develop confidence, demonstrate the broader, lifelong nature of education.

Public institutions' language practices contribute significantly to citizens' ongoing literacy development, transforming their communicative agency. When institutional communication excludes learners' linguistic resources, it not only restricts access to services but also limits opportunities for learning and participation.

6.4. Media, Literacy, and Linguistic Accessibility

The study also highlights the important role of local-language media as a site for literacy and language socialization. Participants' strong preference for local-language radio indicates a desire for linguistically accessible sources of information that align with their daily language practices. This finding supports research emphasizing the importance of authentic, meaningful language use in literacy development. In multilingual settings, local-language media can be seen as an extension of the educational environment, particularly in contexts where formal schooling is unevenly accessible.

Integrating educational content into local-language media could strengthen literacy practices and foster lifelong learning. This research contributes to the field of educational studies by demonstrating how language policy choices influence educational access across multiple domains. It emphasizes the need for educational policy to consider language practices beyond the classroom, particularly regarding how institutional communication shapes learners' linguistic trajectories.

In conclusion, the findings of this study underline the importance of adopting additive multilingual strategies across various sectors. In education, healthcare, governance, and media, the use of indigenous languages and Chadian Arabic alongside French can significantly improve comprehension and social inclusion. This approach can help reduce educational and social inequality, promote access to public services, and ensure that all citizens are able to fully participate in society. By considering language practices beyond the classroom, this research calls for a broader, more inclusive approach to language policy that integrates multilingualism as a resource for learning, identity development, and social cohesion.

7. Conclusion

In Chad, language practices play a pivotal role in determining access, participation, and social inclusion. French-only communication remains a significant barrier, especially in rural areas and for speakers of indigenous languages. In contrast, the use of Chadian Arabic and indigenous languages has proven to enhance comprehension and foster greater engagement. This underscores the value of multilingual and context-sensitive approaches. By implementing additive multilingual policies across key sectors such as education, healthcare, governance, and media, institutions can reduce language-based exclusion, improve service delivery, and promote more equitable participation. Addressing these language barriers is vital for advancing inclusive development and social cohesion in multilingual societies.

Although the study provides valuable cross-sector insights, its cross-sectional design limits conclusions about long-term educational outcomes. Additionally, reliance on self-reported data may have influenced the findings, as participants' responses could reflect personal perceptions rather than objective measures of language use. These limitations suggest that future research should explore long-term effects using longitudinal data to assess the lasting impact of multilingual communication strategies across different sectors.

To build upon these findings and address the study's limitations, future research should focus on the following areas:

- ❖ ***Longitudinal Studies:*** Long-term studies are essential to assess the lasting impact of multilingual communication in sectors such as education, health, governance, and media. These studies could help evaluate how multilingual policies influence outcomes over time, including learning, health behaviors, and civic engagement.
- ❖ ***Role of Indigenous Languages:*** Research should explore the role of indigenous languages in specific regions of Chad. Understanding how these languages function in different contexts will help tailor communication strategies to meet the linguistic and cultural needs of local populations.
- ❖ ***Social Factors and Language:*** Future studies should examine how language intersects with factors such as literacy, gender, and socio-economic status. This research could help identify at-risk populations (e.g., women or rural communities) and develop targeted interventions to address their challenges.
- ❖ ***Cost-effectiveness and Scalability:*** Evaluating the practical feasibility and cost-effectiveness of implementing multilingual communication strategies is an important avenue for future research. Identifying the most impactful interventions relative to their cost will provide policymakers with actionable insights for sustainable implementation.
- ❖ ***Causal Relationships:*** Experimental or quasi-experimental research could establish causal relationships between language practices and inclusion outcomes, helping policymakers understand how changes in language policies may directly enhance access to services and citizen participation.

This study shows that overcoming language barriers is not just about improving services but is fundamentally an educational challenge. Language practices across institutions shape how individuals learn, engage, and make sense of the world. By embracing additive multilingualism and recognizing the linguistic resources of learners, this research offers valuable insights for shaping policy and practice in multilingual educational contexts.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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