# Semi - Urban Farmers' Perception of The Roles of English And Indigenous Languages in Agriculture and Farm Development in Imo State, Nigeria

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**Abstract**

Language is critical in communication and plays a crucial role too in agricultural development as it shapes access to knowledge, technology transfer & farmer participation. Using a sample size of 120 farmers selected around the semi-urban areas of Imo state, information was elicited on the roles of the languages mentioned above. Questionnaire and oral interview were used to collect data. The analysis of data was done using descriptive statistics, such as percentages, mean, and standard deviation. Results showed that 68.3% of the farmers attended primary education, 25% attended secondary schools, 57.5% within the age bracket of 60 year and above. The languages commonly used in the area include, English (98.3%), Igbo (99.1%), Hausa (63.3%), Yoruba (75%), Owerri indigenous dialect (91%.). English language is useful in accessing agricultural information (M=2.45), improves effective communication(M=2.51), promotion of effective learning (M=2.38), linkage to wider markets (M=2.42), support farmers in record keeping (M=2.39). Results showed that the farmers have high proficiency in local languages (80%) than in English Language (47.5%). In speaking and writing English, 50% and 58.3% have low proficiency respectively. While they have high proficiency in writing (73.3%), speaking (81.7%), listening (85%), and reading (79.7%), 70.8% preferred local languages to English language. The local language too, especially Igbo language makes agricultural information easier to understand (M=2.33), information becomes more relevant (M=2.47), best for farmers with low literacy level (M=2.50), reduces communication barriers (M=2.44), provides equal access to agricultural programs (M=2.38), among other roles. The challenges faced include; low self esteem of rural farmers (M=2.56), translation of materials takes time (M=2.47), miscommunication due to translation issues (M=2.48), among others.

**Key words:** Language, English, Local, Agriculture/farm, farmers, language proficiency

## Introduction

Climate change poses a significant threat to communities around the world, with far-reaching social, economic, and environmental implications. In Nigeria, ongoing flooding and drought linked to climate change are particularly detrimental, especially given the country's inadequate adaptation strategies (Adodo and Imoudu, 2023). These climate challenges disproportionately affect

717

smallholders and subsistence farmers, putting agriculture and other vital sectors at risk, ultimately threatening Nigeria's economic stability (Amaechina et al., 2022). As agricultural production declines, Nigeria finds itself among the countries struggling with extreme food insecurity (Olunusi et al., 2024), which in turn exacerbates issues related to population displacement and uncontrolled migration. Recognizing the critical nature of addressing these climate-related threats, the Nigerian government has taken steps to create policies and frameworks aimed at improving national and local responses. Nevertheless, the success of these initiatives hinges on effectively communicating them to diverse audiences in an accessible and relevant manner (Federal Ministry of Environment, 2021).

To counter the impacts of climate change and bolster community resilience, effective communication strategies are crucial. These strategies should focus on collaboration among key stakeholders (Andric and Al-Ghamdi, 2019). Discourses from the Intergovernmental Panel on Climate Change (IPCC) have become prevalent in public discussions, aiming to enhance understanding of climate issues (Paglia and Parker, 2021). Many countries are already conveying messages based on IPCC reports, leading governments, media, NGOs, and other organizations to create speeches, news articles, blogs, magazines, and national policies rooted in the complex technical language of the IPCC. This trend poses a challenge for communicators at both national and local levels, who must ensure that climate change messages are conveyed in a way that the public can easily grasp and respond to.

The climate change communication landscape in Nigeria is influenced by a mix of social, economic, linguistic, and cultural elements. The significant disparities in socio-economic conditions across the country (Hoekstra et al., 2024) and the uneven provisioning of basic services restrict the reach of crucial information. As a result, many vulnerable communities remain poorly informed about climate change and the strategies available for mitigation and adaptation. In areas where infrastructure and education are lacking, access to climate change information is severely limited, leading to a restricted understanding of both the causes and consequences of climate change at the community level. In Nigeria, the media landscape is diverse, including radio, television, newspapers, and social media as key avenues for sharing climate change information. However, discussions in these media channels often use technical jargon that may be difficult for the general public to grasp (Okorie et al., 2020). Given that a large segment of the Nigerian population has only received basic education, conveying climate change information laden with technical terms poses a challenge. Radio, particularly in rural areas, is a vital resource, with climate change messages sometimes being delivered in local languages. Religious beliefs and traditional knowledge systems are also crucial in shaping perceptions and understanding of climate change. These belief systems can significantly affect how scientific explanations regarding climate change, risks, and adaptive measures are received (Adeyeye et al., 2021). Moreover, Nigeria's rich ethnic, cultural, and linguistic diversity presents a particular challenge for effective climate change communication. Research indicates that climate change messages often fail to connect with local communities because they aren't customized to fit the cultural and linguistic contexts of these

718

groups (Ogwezi and Umukoro, 2020). While English serves as the official language used in formal education, government, NGOs, and media, it is not the first language for most citizens. Many Nigerians prefer to communicate in their native languages, such as Hausa, Yoruba, or Igbo. With over 250 distinct indigenous languages spoken, the country's linguistic diversity can create significant barriers when climate change information is primarily presented in English (Blench, 2020). Utilizing a global language, especially when it includes complex concepts, can impede the effective sharing of climate change knowledge in a multicultural and multilingual environment. This complexity pertains to the specialized terminology associated with climate change, including terms like carbon emissions and carbon footprints.

Many indigenous languages, including the more than 250 native tongues spoken in Nigeria, were established long before modern climate science emerged and industrialisation triggered significant environmental changes (Litre et al., 2022). As a result, these languages often lack the specific vocabulary and direct equivalents needed to convey the complex ideas tied to climate change and related activities. Language inherently reflects the cultural experiences and historical backgrounds of its speakers. Therefore, when climate change is communicated in complicated English, it overlooks the crucial influences of cultural and linguistic diversity that shape how individuals and communities understand climate change.

Although researchers have examined how local perspectives shape actions and attitudes toward climate change in Nigeria, the impact of the complex English language on these perceptions and behaviors warrants further investigation. This exploration is crucial because discourses often reveal significant power imbalances, where language plays a key role in marginalizing certain voices and perpetuating dominance within communities (Zinn and Muller, 2022). Language serves as a potent tool that molds our thoughts, perceptions, and modes of communication. Those who can control language and discourse gain the power to define the framework of climate risk communication. The significance of language skills in organizations cannot be overstated, yet this concept remains underexplored in Nigeria. It is essential to investigate how individuals perceive the importance of English in a multilingual workplace, aiming to adopt strategic initiatives that assist employees in agricultural organizations with language challenges unique to their settings. Additionally, the National Graduate Employability Blueprint (2012–2017) pointed out that more than 50% of graduates lack proficiency in key areas such as subject knowledge, English language skills, communication, writing abilities, and overall work attitude (Ministry of Education, 2016). Given English's dominant role in today's globalized landscape, employee perceptions reflect a bottom-up perspective, shedding light on the language's significance in relation to job prospects and career advancement.

In organizations, language plays a crucial role, acting either as a bridge or a barrier in essential functions like communication, collaboration, and coordination (Bordia & Bordia, 2014). Research by Marschan et al. (1997) emphasizes that organizations should not overlook the importance of language in the workplace; rather, they should recognize it as a strategic element. Additionally, studies indicate that graduates who speak English as a second language can

719

significantly influence their starting salaries, future earning potential, urban relocation, and overall labor market success (Guo & Sun, 2014; Zhou et al., 2020; Wang et al., 2017). While previous research has concentrated on English language education and employability, a gap remains in understanding how English language proficiency specifically impacts employees in the agricultural sector and the negative consequences it can have on their career trajectories. This study investigates the perceptions of employees (farmers) regarding the significance of English in agriculture, an area with limited existing literature. This work examines the influence of socioeconomic variables in climate information; examines farmers' English and local languages proficiency; available local languages; perceived roles of both English and Local languages in agricultural and development; challenges of using complex English in climate change communication within Nigerian communities where local languages dominate; and sensitive cultural strategies to address the challenges identified.

## Methodology

The research took place in the peri-urban communities of Imo State, located in South-East Nigeria. Imo State is divided into three primary urban zones: Owerri, Orlu, and Okigwe. These areas are home to numerous small-scale and medium-scale farmers engaged in various agricultural activities such as crop production, poultry, fish farming, and vegetable gardening. The region is characterized by linguistic diversity, with English as the official language for education, extension services, and media, while Igbo and other local dialects are commonly used in daily conversations. The study aimed to explore the perspectives of peri-urban farmers in these three zones regarding the significance of both English and local languages in accessing agricultural information, interacting with extension officers, and enhancing farm development (FAO, 2017; World Bank, 2020). To achieve this, a descriptive survey research design was employed, which was deemed appropriate as it allowed for the collection of direct insights into the farmers' opinions, experiences, and attitudes towards the use of English and local languages in agriculture. A mixed-methods approach was utilized, integrating both quantitative and qualitative techniques. Quantitative data were gathered through structured questionnaires, while qualitative insights were obtained via brief interviews with selected farmers and extension officers. This dual approach enabled the triangulation of findings, thereby enhancing the validity of the results (Creswell, 2014; FAO, 2017). The target population included all registered and non-registered urban farmers within the chosen peri-urban communities of Obinze, in Owerri, Umuaka, in Orlu, and Okigwe, in Okigwe of Imo State. A sample of 120 peri-urban farmers was selected for the study using a multistage sampling technique. In the first stage, the three peri-urban zones (Owerri, Orlu, and Okigwe) were deliberately chosen due to their significant peri-urban farming activities. In the second stage, communities within each zone were randomly selected. Finally, in the third stage, respondents were identified through proportional sampling based on the estimated number of registered farmers in each community. This methodology ensured a representative sample across the three zones and improved the generalizability of the findings within the study area (Yamane,

1967; Creswell, 2014). Data collection was done with a structured questionnaire and to gain a richer understanding of language usage during trainings, demonstrations, and field visits, we conducted short semi-structured interviews with a select group of farmers and agricultural extension officers. The research instruments were validated by experts in agricultural extension and language education, and a pilot study was performed to ensure reliability (FAO, 2017). We analyzed the quantitative data using descriptive statistics, including frequencies, percentages, means, and standard deviations. Mean scores helped us gauge the level of agreement or disagreement among respondents regarding the roles of English and local languages in agricultural and farm development activities. For the qualitative feedback gathered from interviews, we utilized thematic analysis. The responses were transcribed, coded, and organized into key themes, such as language preference, understanding of extension messages, participation in training, and technology adoption. This comprehensive analysis offered valuable insights into how language impacts urban farmers' access to agricultural information and services (Creswell, 2014; World Bank, 2020). Again, **English language proficiency** among farmers was measured by evaluating basic literacy skills—reading, writing, listening, and comprehension—using structured tools such as short reading passages, comprehension questions, or self-reported proficiency scales (e.g., Likert scales ranging from high proficiency to low proficiency.

## Results and Discussion

### Influence of Socioeconomic Variables on Climate Information Perception

Table 1 revealed that 68.3% of the respondents attended primary education, 25.6% attended secondary school, while 6.6% attended tertiary education. Again, 16.6% are within the youthful age of 20–40 years, 25.8% are within 41–60 years, while about 57.5% are sixty years and above. There are 62.5% of male respondents, while 37.5% are females. On income, 53.3% has a monthly income of ₦101–200,000.00. Others (28.3%) and (18.3%) have ₦50–100,000.00 and above ₦200,000 as their monthly income. Majority (72.5%) have access to communication tools while 27.5% lack access to communication tools. Majority (58.3%) belong to farmers' cooperative societies where they get information and interact with other farmers. About 53.3% have 0.1–3 hectares of farmland, 35.8% have 3.1 to 5 hectares while 13.1% have between 5.1–10 hectares.

Language barriers certainly impact how farmers understand agricultural information, but we need to recognize that other socioeconomic factors are equally important in shaping their perceptions and decisions. For example, a farmer's income level directly affects their access to various information sources, training opportunities, and agricultural materials. Those with higher incomes can usually adopt new innovations more easily and connect with formal communication channels, while those with lower incomes often rely on local networks and verbal communication (Adekola et al., 2020). Education and literacy also play a significant role. Farmers who have higher educational levels tend to have a better grasp of written or technical materials—whether in their first language or in English. In contrast, those with less education generally depend on more straightforward, vernacular explanations and might be more susceptible to misunderstandings (Obi

& Eze, 2019). Age is another factor that influences how farmers engage with communication technologies. Younger individuals are often more adept at using digital platforms, which helps them navigate language barriers, while older farmers may stick with traditional sources and find it challenging to adapt to new languages or tools (Mubarak et al., 2021). Gender dynamics can further affect access to information. Women farmers often have less exposure to formal training and institutional resources due to cultural or social expectations, leading them to rely on local-language networks, whereas men typically have wider access to extension services (World Bank, 2018). Finally, access to technology—including smartphones, internet service, and social media—can help overcome language barriers by providing multilingual resources and translation tools. This enables farmers to receive timely and accurate information (FAO, 2020). By analyzing these socioeconomic factors along with language issues, we can gain a deeper understanding of farmers' perceptions. This comprehensive approach enhances the validity of our findings and shapes our recommendations for targeted interventions in agricultural communication and capacity-building efforts.

**Table 1: Selected Socioeconomic Characteristics of Respondents**

| Educational Level Percentage | Frequency | |
|---|---|---|
| Primary | 82 | 68.2 |
| Secondary | 30 | 256 |
| Tertiary | 18 | 6.6 |
| **Age** | | |
| 20-40 | 20 | 16.6 |
| 41-60 | 51 | 25.8 |
| 61-above | 69 | 57.5 |
| **Gender** | | |
| Male | 75 | 62.5 |
| Female | 45 | 32.5 |
| **Income (Monthly )000** | | |
| 50-100 | 34 | 28.3 |
| 101-200 | 64 | 53.3 |
| 201-above | 22 | 18.3 |
| **Access to Communicate tools** | | |
| Yes | 87 | 72.5 |
| No 027.5 | 33 | |

| Membership of Cooperation | | |
|---|---|---|
| Yes | 70 | 58.3 |
| No | 50 | 41.6 |
| **Farm Size** | | |
| 0.1-3 | 64 | 53.3 |
| 3.1-5 | 43 | 35.8 |
| 5.1-10 | 23 | 19.1 |

**Languages commonly used in communicating Agricultural Information in the study Area**

Table 2 showed that several languages exist for communication of agricultural and non-agricultural information in the study area. These languages include English language (98.3%), Igbo language (99.1%), Indigenous Owerri Dialect (91.6%), Yoruba language (75%) and Hausa (63.3%). The area is multicultural and multi-linguistic in nature as it accommodates people from diverse ethnic nationalities in Nigeria. The predominant languages are English and Igbo languages. The Igbos are the major native owners and inhabitant of the area, and speak Igbo language mostly. The Owerri indigenous dialect is another major language spoken in the study area. The dominant Owerri dialect is due to the city, being the capital city of the state. All adjoining communities tend to develop like the capital city. The Hausa live mostly in Obinze, a sub urban town in Owerri, due to high presence of military personel, living in their barracks. Most people understand the Hausa language. These languages serve as major channels for disseminating climate change messages to a broad audience. The substantial use of indigenous languages further indicates that climate information is tailored to reach rural and less-educated farmers, thereby improving understanding, awareness, and participation in climate change adaptation and mitigation activities.

**Table 2: Common Languages Used for Communicating Climate Change Information**

| Common Language | Frequency | Percentage (%) |
|---|---|---|
| English Language | 118 | 98.3 |
| Igbo Language | 119 | 99.1 |
| Hausa Language | 76 | 63.3 |
| Indigenous Owerri Dialect | 110 | 91.6 |
| Yoruba Language | 90 | 75.0 |

**\*Multiple responses**

**Perceived Role of English Language in Agriculture and Farm Development**

With a discriminating mean index of 2.0, Table 3 showed that English language plays important roles in agricultural and farm development. These roles include providing access to agricultural information and innovations (M = 2.45), improving effective communication (M = 2.51), enabling

723

quick understanding of modern farm technologies (M = 2.38), and supporting effective learning and skills acquisition (M = 2.41). English also supports record keeping and documentation (M = 2.39) and provides linkage to wider and external markets (M = 2.42). Farmers view English as important for obtaining up-to-date information on improved seeds, seedlings, pest control, climate change, farm management, and other essential agricultural knowledge.

Others roles include for interactions with other farm-base association (M=2.30), for making business declarations (M=2.31), improve farmer confidence during training selection (M=2.44), for quick and easy adoption of innovation (M=2.39), and promotion of digital and international market (M=2.47). English language helps farmers understand market prices, quality and standard participation in export trade communicate with buyers, investors and development partners.

One of the key roles of the English language in agriculture is that it serves as a vital tool for accessing information and innovations related to the field. A significant amount of scientific research, agricultural journals, online resources, and training manuals are published in English. The FAO (2017) points out that having access to timely and reliable agricultural information greatly enhances farmers' ability to make informed decisions and increases productivity. This means that extension officers, researchers, and educated farmers can tap into global knowledge about climate-smart practices, pest and disease management, soil fertility enhancement, and post-harvest technologies through English. Additionally, the World Bank (2020) highlights that digital agriculture platforms, early warning systems, and market information services are predominantly created and documented in English. The ability of agricultural professionals to comprehend and apply this information largely relies on their proficiency in the language. With a good command of English, agricultural stakeholders can also engage in international training programs, webinars, and professional networks, which help boost their technical skills and innovative capabilities. Agricultural extension services act as the bridge between research institutions and farmers. In numerous developing countries, extension manuals, training resources, and policy documents are originally produced in English before being translated into local languages. This illustrates the foundational role that English plays in the creation and dissemination of extension content. Davis and Sulaiman (2014) note that effective extension systems require ongoing training for extension agents and access to the latest technical information. Since much of the training and professional materials are offered in English, extension workers who are fluent in the language are more adept at interpreting research findings and tailoring them to fit local contexts. English facilitates communication among extension personnel, researchers, development partners, and donor agencies, thereby enhancing collaboration and the execution of programs. Furthermore, English is the primary language of instruction in agricultural colleges, universities, and vocational training institutions, helping cultivate a skilled workforce for agriculture and agribusiness. According to UNESCO (2016), proficiency in global languages like English significantly improves the quality of technical and vocational education and fosters effective knowledge transfer.

The integration of modern agricultural technologies often necessitates that farmers and extension officers grasp various technical concepts, equipment manuals, and safety protocols.

724

English is pivotal in interpreting and sharing these innovations. Many agricultural inputs, including enhanced seeds, agro-chemicals, and mechanized tools, come with instructions primarily in English. According to Rogers' diffusion of innovations theory, communication channels play a significant role in how new technologies disseminate within social systems (Rogers, 2003). English acts as a key conduit for introducing, explaining, and promoting agricultural innovations on both national and international stages. Development projects funded by international organizations typically utilize English for their reporting, training, and stakeholder interaction. As a result, the language significantly enhances the adoption of innovations and boosts farm productivity. Today's agriculture encompasses not just production but also processing, marketing, and value chain development. English assists farmers, cooperatives, and agribusiness operators in reaching broader markets, establishing business collaborations, and engaging in international trade. Market information platforms, export regulations, and quality certification guidelines are commonly published in English (World Bank, 2020). For farmers involved in exporting crops like cocoa, sesame, vegetables, and horticultural products, English facilitates communication with buyers, certification bodies, and logistics providers. It also improves their ability to negotiate contracts, comprehend pricing structures, and adhere to quality and safety standards. As noted by IFAD (2019), effectively linking smallholder farmers to lucrative markets hinges on solid communication skills and access to business information, much of which is offered in English.

English plays a crucial role in shaping agricultural policies, enabling research collaborations, and fostering institutional growth. Many national agricultural policies, proposals from donors, and project documentation are drafted in English to align with global standards. This practice allows governments and development organizations to interact effectively with international stakeholders. Furthermore, the majority of international research networks and agricultural development efforts operate in English, creating a shared language that facilitates collaboration among scientists, policymakers, and practitioners in the field. The FAO (2017) emphasizes that agricultural research and innovative systems depend on the exchange of knowledge, proper documentation, and policy discussions, which predominantly occur in English on a global scale. Additionally, English contributes significantly to capacity building within agricultural institutions. Training workshops, professional development initiatives, and leadership courses often utilize English as their primary language of instruction. Consequently, proficiency in English enhances the efficiency, transparency, and accountability of agricultural development initiatives.

Given the increasing challenges posed by climate change, land degradation, and food insecurity, access to climate-smart agricultural knowledge has become increasingly important. Most global reports on climate and agriculture, policy documents, and adaptation guidelines are produced in English. Farmers and extension workers who are proficient in English can more effectively access information related to weather forecasting, risk management strategies, and sustainable farming techniques. According to the FAO (2017), the successful dissemination of climate-smart agricultural practices relies heavily on effective communication and access to global

knowledge resources. Thus, English serves as a vital gateway to scientific knowledge and international best practices that promote sustainable agricultural development and resilience.

**Table 3: Farmers Perception of Role of English Language in Agric/farm Development**

| Perception Statement | Mean | SD |
|---|---|---|
| Access to agricultural information and innovation | 2.45 | 0.57 |
| Improves effective communication with stakeholders | 2.51 | 0.61 |
| Enables quick understanding of modern farm technologies | 2.38 | 0.47 |
| Supports farmers in record keeping and documentation | 2.39 | 0.74 |
| Provides linkage to wider and external markets | 2.42 | 0.52 |
| Useful for interactions with farm-based associations | 2.30 | 0.61 |
| Important for marketing and business dealings | 2.31 | 0.56 |
| Improves farmers' confidence during training sessions | 2.44 | 0.51 |
| Encourages quick and easy adoption of innovations | 2.39 | 0.59 |
| Promotes digital agriculture and e-agriculture | 2.47 | 0.49 |

**Accepted Mean = 2.0**

**Role of Local Languages in Agricultural and Farm Development**

Table 4 showed the roles of local languages in agricultural and farm development, using a discriminating mean index of 2.0. The findings indicate that local languages make agricultural information easier to understand (M = 2.33) and more relevant to farmers' daily experiences (M = 2.47). They are especially useful for farmers with low literacy levels (M = 2.50) and help preserve indigenous knowledge and practices (M = 2.61). Local languages also reflect environmental conditions (M = 2.54), build trust, and encourage community participation (M = 2.41). They promote inclusion of rural and elderly farmers (M = 2.38), reduce communication barriers (M = 2.44), provide equal access to agricultural programmes (M = 2.38), and increase acceptance of agricultural innovations (M = 2.41).

Oral interview with key informants showed that Participants in the interviews emphasized that discussing climate change in the local language is crucial for making the information accessible to everyone in the community. They pointed out that simply translating the content isn't enough; it needs to be tailored to reflect the local culture and traditions that align with community values and beliefs. For instance, integrating proverbs that highlight the need to protect environmental resources—particularly those that personify the earth as a nurturing mother—can be very impactful. One participant shared, "Using proverbs like 'A man who throws dirt against the wind soils his own face' makes conversations about waste management and its climate impact much more relatable".

Another participant noted, "When we share messages in our local languages with familiar stories, they resonate more. For example, using a proverb that connects soil fertility to respectful land use" (Interviewee 3). Some participants also suggested incorporating proverbs that portray nature both as a nurturer and a potential threat in climate discussions. One participant remarked,

726

"Using the saying, 'The rivers are our brothers; they quench our thirst,' highlights the significance of conserving our water resources. Such proverbs can effectively frame conversations about the effects of climate change, such as water scarcity. The interviews revealed that the complexity of the English language makes it tough for many individuals to grasp the concept of climate change. Participants voiced their concerns that information available only in English poses challenges for those who may be less literate or communicate solely in their local language. One participant explained, "Many people impacted by climate change lack the education to tackle the issue. It's not just about having a degree; it's about understanding the causes and effects of climate change.

The less literate often depend on their personal experiences and traditional knowledge passed through generations to make sense of climate change. "As an elder, I can say that our understanding comes from our lived experiences: years of floods, droughts, and shifts in farming seasons. This knowledge has been passed down by our ancestors to guide us," shared one participant, The challenge of environmental literacy is further compounded by economic disparities, as many individuals cannot afford formal education or access to media sources such as television. One participant pointed out, "Many people, due to poverty, can't afford schooling, and some lack the resources for TV or internet". As a result, they turn to community gatherings and local radio stations for information on climate change.

The results from the survey and interviews indicate that the use of complex English in communicating climate change is a significant barrier to effectively sharing information in Nigerian communities where local languages dominate. This finding supports the conclusions of Nerlich, Koteyko, and Brown (2010), who highlight the way language can both clarify and obscure understandings of risk-related issues. We observed a notable gap in climate change engagement, with many participants showing a lack of interest in discussions due to this language barrier. This disengagement indicates that crucial information about climate change and necessary response measures is not reaching the community effectively (Oramah, et al.,2025) The low level of understanding and participation in climate-related initiatives underscores the urgent need for communication strategies that are more accessible and engaging. The complexity of English can make community members feel alienated and exacerbate their feelings of exclusion, impacting both those who are literate and those who are not. This observation aligns with the argument presented by Renn and Levine (1991) that messages should be clear and pertinent to the audience's context. Additionally, the study highlights the significance of cultural narratives and indigenous knowledge systems in shaping perceptions of climate change. Respondents clearly preferred receiving information in their local languages, which emphasizes the need for communication that is both culturally and linguistically appropriate, as suggested by Ombati (2021). Insights from the interviews reinforced the community's desire for information that resonates with their culture and language, an essential factor for enhancing perceptions and responses to climate change. The impact of spiritual beliefs and cultural metaphors, such as interpreting climate changes as "the angers of the gods" or referencing deities like Amadioha, demonstrates how traditional beliefs shape understanding, even among the literate. This connection is vital for effectively perceiving

727

and responding to climate change since traditional beliefs and cultural metaphors significantly inform understanding. Sanganyado, Teta, and Masiri (2021) argue that traditional worldviews heavily influence climate risk perceptions in areas with rich indigenous cultures. When there is a disconnect between scientific explanations and traditional understandings of environmental changes, it can lead to skepticism or misunderstanding, which hampers engagement in climate change discussions and actions. The implications of these findings are significant. If community members struggle to comprehend the language used in climate change communications, they may be less likely to question their religious beliefs about climate change being a divine punishment.

The implications of these findings are significant. When community members struggle to grasp the language surrounding climate change communications, they are less likely to question the belief that climate change is a punishment from God. This is particularly evident among respondents who associate climate change with divine displeasure, echoing Abegunde's (2017) research that highlights the considerable impact of such beliefs on climate response efforts in Nigerian communities. The perception that climate change is beyond human control can foster a sense of helplessness and inaction, which is especially troubling given the urgent nature of climate impacts. Makwanya (2013) advocates for the rephrasing of climate change discussions in a manner that acknowledges and respects cultural interpretations, facilitating a more positive dialogue.

**Furthermore,** oral discussions with the respondents revealed that in Nigeria, language practices are often dynamic, with multilingual communities switching between languages depending on context, audience, and purpose. Nigeria stands out as one of the most linguistically rich nations globally, boasting over 500 languages that reflect its diverse ethnic, regional, and religious communities (Bamgbose, 2011). In daily conversations, Nigerians often engage in vibrant language switching, selecting their words based on who they're talking to, the social setting, the purpose of the interaction, and the context at hand. This fluidity in language use not only captures personal communication styles but also mirrors broader sociolinguistic shifts influenced by technology, social networks, and generational trends. a) Code-switching and language mixing are widespread in Nigerian speech, particularly in urban and peri-urban areas where speakers seamlessly navigate various linguistic backgrounds (Adegbija, 2004). For instance, in bustling cities like Lagos and Abuja, people frequently switch between English, Pidgin English, Yoruba, Hausa, and Igbo during conversations. This linguistic versatility has practical and social roles, like establishing group identity, managing social distance, and negotiating power dynamics (Eze, 2013). The education sector in Nigeria, which prioritizes English as the main language of instruction while incorporating indigenous languages into the curriculum, further fosters this multilingual climate in both formal and informal settings (Oluikpe, 2012). In classrooms, students often alternate between English, Pidgin, and their home languages to enhance understanding and peer communication, particularly when English proficiency varies. b) The surge of digital media has catalyzed new forms of multilingual communication among Nigerians. Platforms like WhatsApp, Facebook, Twitter, and TikTok create environments where people creatively mix linguistic features from different languages to express identity, solidarity, and humor (Moyo &

728

Figueroa, 2018). For example, it's common for Nigerian users to incorporate Pidgin phrases into their written messages—like "Una dey ok?"—which convey both closeness and informality (Bamgbose, 2011). Digital tools also foster the emergence of new linguistic norms. Emojis, abbreviations, and expressions rooted in Naija slang add to a lively, localized written conversation that challenges traditional ideals of literacy and standard language (Oloruntoba Oju, 2019). These trends highlight how digital media empower multilingual users to manipulate languages and styles instantaneously, often bridging generational and educational divides. c) Social network theory illustrates the impact of personal connections on language use. Individuals engaged in rich, multilingual communities often showcase diverse linguistic skills and adjust their communication styles to align with social norms (Milroy & Milroy, 1992). In Nigeria, the influence of extended family bonds, peer groups, and community ties plays a significant role in shaping language practices both offline and online. Particularly among youth networks, there's a vibrant mix of English, Pidgin, and local languages that not only reflects creativity but also signifies a sense of belonging (Akinwale, 2008). These social networks also shape language attitudes. While older generations might prioritize indigenous languages for passing down culture, younger individuals frequently favor English and Pidgin, valuing them for their social standing and global relevance, especially in digital settings (Bamgbose, 2011). Consequently, language choice becomes a subject of social negotiation, mirroring both group norms and individual goals. d) The dynamics between generations are key to understanding the evolving linguistic landscape in Nigeria. Urban youth regularly engage in translanguaging—the blending of languages without strict boundaries—to enhance communication (García & Wei, 2014). This approach contrasts with traditional views in sociolinguistics that categorize languages as separate entities. With educational policies and globalization reinforcing English as a tool for advancement, many younger speakers now prioritize it alongside Pidgin in their daily and online interactions. In contrast, indigenous languages remain vital within family contexts, rituals, and cultural knowledge sharing (Oluikpe, 2012). These intergenerational interactions reveal a tension between preserving cultural heritage and embracing modern communication practices. Understanding the evolving language dynamics in Nigeria carries practical implications for education, policy, and communication strategies in digital contexts. First, recognizing the diverse multilingual capabilities of learners can enhance teaching methods by incorporating translanguaging approaches that validate students' linguistic abilities (Creese & Blackledge, 2010). Additionally, communication initiatives—especially in areas like healthcare, civic engagement, and public service—should consider how messages will resonate with various linguistic communities and across digital platforms to ensure effectiveness. Overall, an in-depth examination of Nigeria's linguistic environment shows that language is not a fixed asset but a dynamic and negotiated practice influenced by social circumstances, technology, and generational changes.

**Table 4: Perceived Roles of Local Languages in Farm Development**

| Perceived Roles Of Local Languages | Mean | SD |
|---|---|---|
| Makes agricultural information easier to understand | 2.33 | 0.61 |
| Makes information relevant to farmers' daily experiences | 2.47 | 0.45 |
| Best for farmers with low literacy levels | 2.50 | 0.57 |
| Helps preserve indigenous knowledge and practices | 2.61 | 0.54 |
| Reflects local environmental conditions | 2.54 | 0.41 |
| Builds trust and encourages community participation | 2.41 | 0.52 |
| Encourages inclusion of rural and elderly farmers | 2.38 | 0.41 |
| Reduces communication barriers | 2.44 | 0.53 |
| Provides equal access to agricultural programmes | 2.38 | 0.40 |
| Increases acceptance of agricultural innovations | 2.41 | 0.46 |

**Accepted Mean = 2.0**

**Farmers English Language Proficiency compared with Local Languages**

**Table 5** showed that most farmers have low to moderate proficiency in English language, particularly in writing and speaking. In contrast, local language proficiency is high, especially in listening (85%) and speaking (81.7%). This suggests that farmers are more comfortable receiving and sharing climate information in their indigenous languages. This is especially so among the predominant lgbo speaking people who are native owners of the land (study area). In Obinze area of the state, a settlement of diverse people, such people as the Hausa/Fulanis, and the Yorubas are plenty due to the presence of the military barracks of the Nigeria Army. The farmers among them have shown to prefer the local languages in getting climate information.

**Table 5: Farmers Actual Proficiency Love in English Compared with Local**

| Language Skill | HP ENG. | MP ENG. | LP ENG | HP LL | MP LL | LP LL |
|---|---|---|---|---|---|---|
| Speaking | 18(15%) | 42(35%) | 60(50%) | 98(81.7%) | 18(15%) | 4(3.3%) |
| Listening | 25(20.8%) | 50(41.7%) | 45(37.5%) | 102(85%) | 14(11.7%) | 4(3.3%) |
| Reading | 30(25.8%) | 38(31.7%) | 52(43.3%) | 95(74.2%) | 20(16.7%) | 5(4.1%) |
| Writing | 15(**12.5%**) | 35(29.2%) | 70(58.3%) | 88(73.3%) | 24(20%) | 8(6.7%) |

**Key: HP ENG= High Proficiency in English: MP ENG: Moderate Proficiency in English, LP ENG –Low Proficiency in English; HP LL-High Proficiency in Local Language; MP LL -Moderate Proficiency in Local Language; Low Proficiency in Local Language**

**Overall Language Proficiency Distribution**

Table 6 revealed a clear disparity between language competencies. While only 18.3% of the farmers demonstrated high proficiency in English Language, about 80% showed high proficiency

730

in Local languages, especially Igbo, and the two local languages (Hausa and Yoruba). This gap indicates that climate communication and agricultural extension programmes in English may not effectively reach many rural farmers. This is true because many farmers struggle to speak English, which to them is a foreign language. Most times, to belong, the farmers speak what is called Pidgin English, which they are not also proficient in speaking.

**Table 6: Overall Language Proficiency Distribution**

| Language | HP | MP | LP | TOTAL |
|---|---|---|---|---|
| English | 22(18.3%) | 41(34.2%) | 57(47.5%) | 120(100%) |
| Local Languages | 96(80%) | 19(15.8%) | 5(4.2) | 120(100%) |

**Farmers Preferred Language for Climate Information**

In table 7, majority, (70.8%) of farmers prefer local languages for receiving agricultural or climate information, highlighting the importance of local languages in communication strategies in rural development and climate literacy programs. Clear communication about climate issues is crucial for helping farmers comprehend environmental changes and embrace climate-smart agricultural methods. However, in many rural areas, farmers often prefer climate information in their native or indigenous languages instead of English. This preference stems from various linguistic, cultural, educational, and socio-economic factors. Recognizing these influences is vital for developing communication strategies that boost climate understanding and inspire changes in behavior among rural farmers. One key reason for this preference is that farmers are generally more comfortable with their local languages than with English. Many rural farmers have limited formal education, which can limit their English proficiency, especially when it comes to reading and technical terms. Climate-related information frequently includes complicated concepts like rainfall variability, greenhouse gas emissions, drought forecasting, and adaptation strategies. When this information is shared in English, farmers may find it challenging to understand accurately. In contrast, local languages provide a familiar linguistic context that enhances comprehension and decreases the chances of misinterpretation. Researches on rural communication shows that messages conveyed in indigenous languages greatly improve the understanding of agricultural innovations and environmental information (Bamgbose, 1995; Benson, 2004). Consequently, farmers are more likely to recognize climate risks and recommended farming practices when the information is communicated in their mother tongues.

Local languages are rich with cultural significance, traditional knowledge, and expressions that often can't be fully captured in English. Climate information tends to resonate more when it aligns with the lived experiences and environmental observations of farmers. Using indigenous languages allows for the explanation of climate concepts through familiar metaphors, proverbs, and locally relevant examples, which makes the information much easier for farmers to connect with in their daily routines. For example, communities might describe rainfall patterns or seasonal changes using terminology that holds special meaning for them. This kind of contextualization not

731

only enhances farmers' engagement with the information but also encourages them to take climate warnings more seriously. Studies indicate that communication grounded in cultural relevance significantly boosts the acceptance of environmental messages in rural areas (Mbaabu, 2008). Language preference is also significantly influenced by the limited English proficiency that many rural farmers experience. In various developing nations, English is predominantly spoken in formal settings like education, government, and official documentation. However, many rural farmers have either limited education or have only completed primary schooling. As a result, their ability to read, write, or understand complex English materials is often minimal. When climate information is delivered through English-based platforms such as newspapers, scientific reports, or official bulletins, it becomes inaccessible for a significant number of farmers. This language barrier can hinder the dissemination of crucial climate knowledge and diminish farmers' capacity to adapt to environmental changes (Adegoju, 2006). By utilizing local languages, we can bridge this communication gap and ensure that vital climate information reaches a broader audience.

Farmers often trust information presented in their native languages more than those delivered in English. Language is a key factor in establishing trust between the messenger and the audience. Messages related to climate change, when conveyed in English by external professionals, can seem remote, overly technical, or disconnected from the farmers' everyday experiences. In contrast, when information is shared in local languages—especially via community radio, leaders, or extension workers—farmers tend to have greater confidence in the content. Using familiar language fosters a sense of community ownership, prompting farmers to engage more actively with the information provided. Research in rural communication stressed that trust plays a vital role in the uptake of agricultural innovations and adaptive practices (Rogers, 2003). Local languages are commonly utilized in community radio, traditional gatherings, and one-on-one conversations, making them some of the most accessible communication methods for farmers in rural areas. Many farmers turn to radio broadcasts, agricultural extension events, and village meetings for updates on weather and farming practices. When these platforms utilize local languages, farmers can easily understand and participate in discussions. On the flip side, platforms that communicate primarily in English may alienate those who are not proficient in the language. Community radio stations that operate in indigenous languages have been proven to significantly enhance farmers' access to information on agriculture and climate issues (Chapman et al., 2003).

An important benefit of utilizing local languages is that it encourages farmers to share knowledge with each other. Within their communities, farmers often engage in informal conversations where they talk about weather patterns, different crop varieties, and strategies for adapting to changes. These discussions usually happen in their native languages. When climate information is provided in English, it can be challenging for farmers to translate or convey it accurately to their peers. However, if the information is shared in local languages from the outset, it becomes much easier for them to discuss and pass it along. This social sharing of knowledge is crucial for promoting climate adaptation practices in rural areas (Rogers, 2003). Local languages are deeply connected to indigenous ecological knowledge, which encompasses traditional

732

techniques for predicting weather, enhancing soil fertility, and conserving biodiversity. Many of these techniques are embedded in local terminology and oral traditions. By communicating climate information in local languages, researchers and extension agents can effectively merge scientific insights with traditional environmental wisdom. This blend can significantly improve the relevance and impact of climate adaptation strategies. Researchers have highlighted that integrating indigenous languages into environmental communication is essential for safeguarding vital knowledge systems that underpin sustainable agriculture (Heugh, 2011).

**Table 7:  Farmers Preferred Language for Climate Information**

| Preferred Language | Frequency | Percentage |
|---|---|---|
| English Language | 15 | 12.5 |
| Local Language | 85 | 70.8 |
| Both Language | 20 | 16.6 |

**Challenges Associated with the Use of Both Languages in Agricultural Communication**

Table 8 presents the challenges associated with using both English and local languages in agricultural communication. With an accepted mean of 2.0, the results show key challenges such as exclusion of non-literate farmers (M = 2.54), difficulty understanding technical terms (M = 2.51), and the tendency of English to ignore local customs (M = 2.45).Other challenges include miscommunication due to translation issues (M = 2.48), reduced effectiveness of practical instructions (M = 2.35), and difficulty expressing technical concepts in local languages (M = 2.48). Respondents also noted limited availability of materials in local languages (M = 2.37), dialect differences that may alter meaning (M = 2.41), time required for translation (M = 2.47), and low self-esteem among illiterate farmers (M = 2.56). Promoting the use of both English and local indigenous languages in agricultural communication is essential, as it allows for better outreach to farmers with varying educational and language skills. In multilingual nations like Nigeria, extension services, development agencies, and NGOs typically blend English with local languages when providing training, advice, and agricultural information. While this strategy enhances information accessibility, it also introduces notable practical and communication challenges. One significant issue is the potential for translation errors and meaning loss. Many agricultural and climate-related concepts are initially created and recorded in English. When translated into local languages, finding equivalent terms for specialized phrases like "soil fertility management," "climate-smart agriculture," or "integrated pest management" can be problematic. Consequently, extension agents may resort to simplified explanations or coined terms, which can misrepresent the intended meaning and compromise technical accuracy. According to the Food and Agriculture Organization of the United Nations, incorrect translations can hinder farmers' understanding and adoption of effective practices. Another challenge is the lack of standardization in local languages. While many indigenous languages have rich oral traditions, they often lack standardized written forms for scientific and agricultural discussions. The United Nations Educational, Scientific and Cultural Organization highlights that this absence hampers the creation of teaching materials and

leads to inconsistencies in information delivery across regions. This situation negatively impacts the quality of extension manuals, radio programs, and digital agricultural resources produced in these languages. Competence among extension personnel also poses an important challenge. Most agricultural extension officers are primarily trained in English. Although they may communicate in local languages in casual settings, they often lack the professional skills necessary to translate complex technical information into these languages effectively. This shortfall can result in vague explanations, confusion for farmers, and misinterpretations of the intended messages. In practice, extension agents may frequently alternate between English and local languages during training, which can disrupt the flow of information and reduce clarity for farmers with limited English proficiency. Additionally, the multilingual diversity within farming communities can create communication obstacles. In many rural areas, several local languages may coexist in the same community or local government region. Providing agricultural information in one prevalent local language may exclude speakers of minority languages, while attempting to offer the same information in multiple languages adds costs, time, and logistical complexity.

A significant hurdle in agricultural communication is the unequal prestige and power dynamics between English and local languages. English often represents formal education, authority, and governmental initiatives. Consequently, farmers might regard information in English as more trustworthy, even if they do not fully grasp it. On the flip side, content in local languages may be perceived as less technical or significant, despite being easier to understand (FAO, 2017). This disparity can hinder the efficacy of communications in local languages and deter the development of indigenous agricultural terms. Additionally, there's the issue of costs and resource limitations. Creating agricultural materials in both English and various local languages demands extra funding for translation, editing, audio recording, and validation from the community.

The World Bank points out that inadequate funding for extension systems in developing countries often limits the ability to invest in multilingual communication tools like community radio programs, translated manuals, and mobile advisory platforms (World Bank, 2020). Moreover, using both English and local languages can result in inconsistent messaging across different communication channels. For instance, information shared in English during formal training may be summarized in a different way in local languages during farm visits or radio shows. These inconsistencies can confuse farmers about recommended practices, input application rates, and climate adaptation strategies, ultimately shaking their trust in extension services (FAO, 2017). In conclusion, while integrating both English and local languages in agriculture is vital for inclusive communication, it comes with challenges such as translation accuracy, lack of standardized terms, limited language skills among extension workers, linguistic diversity, the power disparity between languages, and financial constraints. To tackle these issues effectively, we need a systematic approach to develop agricultural vocabulary in local languages, provide targeted language training for extension staff, and ensure continued investment in multilingual

communication systems. This will help guarantee that farmers receive clear, consistent, and culturally relevant agricultural information.

**Table 8: Challenges of Use of both English/Local Languages in Farm Development**

| Perceived Challenges | Mean | SD |
|---|---|---|
| Exclusion of non-literate farmers | 2.54 | 0.61 |
| Difficulty understanding technical terms | 2.51 | 0.81 |
| English language may ignore local customs | 2.45 | 0.63 |
| Miscommunication due to translation issues | 2.48 | 0.57 |
| Reduced effectiveness of practical instructions | 2.35 | 0.51 |
| Difficulty expressing technical concepts in local languages | 2.48 | 0.49 |
| Limited materials and manuals in local languages | 2.37 | 0.52 |
| Differences in dialect may alter meaning | 2.41 | 0.62 |
| Translation of materials takes time | 2.47 | 0.54 |
| Low self-esteem among illiterate farmers | 2.56 | 0.49 |

**Accepted Mean = 2.0**

**Culturally Sensitive Strategies for Implementing Bilingual/Multilingual Approaches**

Table 9 showed sensitive frameworks for implementing bilingual and multilingual approaches. With a discriminating mean (M) index of **2.0**, the following approaches are observed: developing standardized local language terminology: (M = 2.35), training extension staff in multilingual communication: (M = 2.25), leveraging local media channels: (M = 2.41), developing a community-based translation team: (M = 2.28), Interactive farmer learning group: (M = 2.21), Creating mobile/digital platforms: (M = 2.27), monitoring/feedback mechanisms: (M = 2.38). Implementing bilingual and multilingual communication in agricultural extension effectively calls for a well-structured and culturally aware framework that transforms general suggestions into practical, community-centered strategies. Central to this approach is the integration of language development, capacity building, local media involvement, digital tools, and participatory processes, all aimed at enhancing farmers' understanding and adoption of climate and agricultural information. A vital starting point is the creation of standardized agricultural terminology in local languages. Many indigenous languages do not have direct equivalents for technical terms, which can cause inconsistencies in communication (FAO, 2017; Nyamekye et al., 2020). To tackle this issue, a collaborative effort is essential, involving linguists, agricultural experts, extension workers, and farmers. Through processes like lexical mapping, culturally appropriate term adaptations, and validation workshops, communities can work together to develop terminology that is both accurate and meaningful. This approach results in glossaries and communication materials that improve clarity, build trust, and foster engagement among farmers. Building the capacity of extension workers is equally crucial, as they act as key links between scientific knowledge and farming communities (FAO, 2017; Nyamekye et al., 2020). Training programs should focus on equipping them with bilingual communication skills, translation techniques, and

cultural awareness. Emphasizing participatory communication methods such as storytelling and demonstrations, instead of merely pushing information, is important. Hiring extension agents from local communities and utilizing a "train-the-trainer" model can significantly boost trust, scalability, and sustainability (Davis & Sulaiman, 2014). Local media platforms, especially radio and community theater, present excellent opportunities to spread information effectively. Multilingual radio shows can reach wide audiences, particularly when they are interactive and tailored to local needs. Furthermore, community theater leverages storytelling and performances in local languages to break down complex concepts and promote dialogue. These methods not only make information more relatable and memorable but also enhance knowledge retention and spur behavioral change (Boal, 2002; Manyozo, 2012).

Digital and mobile communication tools are increasingly opening up new opportunities, even in the face of challenges like the digital divide. Solutions such as voice messaging systems, SMS in local languages, and mobile apps with audio functionalities can provide timely and accessible information to farmers, including those with limited literacy skills. Platforms like WhatsApp are also effective for peer learning and quick information sharing. Research indicates that localized digital communication substantially enhances access to and comprehension of agricultural information (Aker, 2011; Baumüller, 2018). A fundamental aspect of these approaches is the involvement of the community and the co-creation of knowledge. It is crucial for farmers to actively participate in the design and execution of communication initiatives, utilizing platforms like farmer field schools and community advisory committees. This participatory method guarantees that communication strategies are culturally relevant, context-specific, and more likely to be embraced (Chambers, 1994). Moreover, it is important to prioritize monitoring, evaluation, and pilot testing to ensure these efforts are effective and scalable. Conducting baseline and follow-up assessments, performing comparative analyses, and implementing qualitative feedback mechanisms are vital for measuring impact and refining strategies as needed. Pilot programs provide the essential evidence required to support broader implementation and policy changes. In summary, a successful multilingual communication strategy should be participatory, context-driven, and systematically executed. By harmonizing language use with cultural contexts and enhancing institutional capacities, such strategies can significantly boost climate literacy, foster trust, and advance sustainable agricultural practices among farmers.

**Table 9: Sensitive Strategies for Implementing Bilingual Approach**

| Strategies for Bilingual/Multilingual | Mean | S(1) |
|---|---|---|
| Developing standardized local language horology | 2.35 | 0.45 |
| Training Extension staff in multilingual communication | 2.25 | 0.51 |
| Leverage local media channels | 2.41 | 0.48 |
| Develop a community-based translation team | 2.28 | 0.60 |
| Interactive farmer learning groups | 2.21 | 0.54 |

| | | |
|---|---|---|
| Creative mobile/digital platforms | 2.27 | 0.47 |
| Monitoring and feedback mechanism | 2.38 | 0.56 |

**Accepted mean =2.0**

## Conclusion

The research highlights the complementary and essential roles of both English and local languages in promoting urban agriculture and farm development in Imo State. English plays a crucial role in formal communication, documentation, and interactions with governmental and non-governmental entities. In contrast, local languages, especially Igbo, are more effective for participatory learning, hands-on demonstrations, and community-based outreach. Urban farmers find local languages more helpful for grasping technical information and engaging actively during training sessions, while they consider English beneficial for market connections, formal training programs, and access to digital and print agricultural materials. To enhance farmers' understanding, participation, and adoption of improved agricultural practices, the study advises that agricultural extension services and development initiatives should implement bilingual communication strategies that integrate both English and local languages.

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