

## Retraction

# Retracted: A Study of Language Use Impact in Radio Broadcasting: A Linguistic and Big Data Integration Approach

### Journal of Sensors

Received 23 January 2024; Accepted 23 January 2024; Published 24 January 2024

Copyright © 2024 Journal of Sensors. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Manipulated or compromised peer review

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

### References

- [1] Y. Praise Chukwunalu, A. U. N. Nwankwere, D. A. Orji, and M. Shah, "A Study of Language Use Impact in Radio Broadcasting: A Linguistic and Big Data Integration Approach," *Journal of Sensors*, vol. 2022, Article ID 1440935, 16 pages, 2022.

## Research Article

# A Study of Language Use Impact in Radio Broadcasting: A Linguistic and Big Data Integration Approach

Young Praise Chukwunalu <sup>1,2</sup>, Angela U. N. Nwankwere,<sup>1</sup> Dereck A. Orji,<sup>1</sup>  
and MohdAsif Shah <sup>3</sup>

<sup>1</sup>Department of Linguistics, Nnamdi Azikiwe University, Awka, Nigeria

<sup>2</sup>Department of Linguistic Data Sciences, University of Eastern Finland, Joensuu, Finland

<sup>3</sup>Kebri Dehar University, Ethiopia

Correspondence should be addressed to MohdAsif Shah; ohaasif@kdu.edu.et

Received 24 July 2022; Revised 19 August 2022; Accepted 5 September 2022; Published 24 September 2022

Academic Editor: Praveen Kumar Donta

Copyright © 2022 Young Praise Chukwunalu et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Broadcasting more culturally educating and language-reviving contents are ways radio stations can help revitalize indigenous languages in Delta North in Nigeria. The challenges faced in communicating through indigenous dialects on radio stations are majorly caused by the lack of indigenous language professionals and linguists in the broadcast stations. The absence of these professionals is a major constraint to the development of the community. The broadcast media can help manage multilingualism through the introduction of new words which would give little or no room for lexicon dearth but would expand the language lexicon. Using these dialects during broadcast gives relevance to all dialects, reduces language dearth, and keeps people connected to their culture. Programmes anchored in indigenous dialects enhance the vocabulary, comprehension, and language vitality of the language. The study examined the impact of local language used in radio broadcasting using a descriptive big data survey research design. The study's population comprises of all the inhabitants of Delta North from which a sample of 10 broadcast staff and 120 radio listeners in Delta North Senatorial District in Nigeria was drawn using a stratified random sampling technique. The instrument of data collection was a structured questionnaire with closed questions and a self-structured interview. The sample employed frequency distribution tables, percentages, and charts in the presentation and analysis of data. The results revealed that majority of the respondents in Delta North listened to radio broadcast indicating that the use of indigenous dialects/language can have massive impact on the people. The study also found that majority of the respondents use indigenous languages in their day-to-day activities, with English being used majorly only in schools. The study recommends, among others, that the National Broadcasting Commission review their policy on the allocated time of broadcast in indigenous languages and that more indigenous language experts and linguists should be incorporated into the broadcast system.

## 1. Introduction

Language is a form of communication which allows humans to share their thoughts, beliefs, ideas, experiences, etc. and is presumably known to the sender and receiver of such communication [1]. Language can determine and influence the thoughts of man and is needed for man's daily communication. It is used for domestic, religious, and commercial pur-

poses. Eka in [2] confirmed the usefulness of language, as it enables man to conceptualize, depict, and even portray the complexities and nature of his environment. The effectiveness of communication in a society is largely dependent on how well that society uses the language peculiar to their geographical area. Language serves as a major instrument of exchange through varied media such as electronic media, of which radio is one of the oldest electronic media of communication. The

need for community radio stations, especially in communicating their messages to the society via the use of indigenous languages, cannot be overemphasized.

Over the past decades, radio has played a significant role. It has helped maintain peace, unity, and harmony among people all over world. It has always been used during any matter of national security or emergency and has helped foster peace and unity among people. Radio as an electronic medium serves three major purposes—informing, educating, and entertaining. If some information is to be disseminated and the appropriate language is not used, the audience may not be able to comprehend such information. The language employed by a media-house goes a long way in determining the listenership strength and effectiveness of its services. Most of the electronic media operating in Nigeria are English-based. This is so because English language has grown all over the world as the predominant language at the expense of other languages. Using indigenous languages to interact with the masses through the media, especially the radio, enhances the effectiveness of mass communication. Studies have shown that indigenous language radio broadcasting is the most effective channel of mass communication because it reaches more peripheral areas than other media and is easily understood by the audience [3]. Many scholars argue that the global spread and acceptance of English as a world lingua franca poses a serious threat to the existence of most indigenous languages in Africa and the world in general [4, 5]. The authors in [6] argued that stronger indigenous languages like “Shona” and “Ndebele” also contribute to the killing of other smaller indigenous languages in Zimbabwe. They allege that due to their recognition as national languages, other languages are considered minor and remain on the fringes of the sociolinguistic milieu. The authors in [7] also argue that despite the multiplicity of dialects such as Mandarin dialect, the Cantonese dialect, the Kazakh dialect, and the Chinese Pidgin English in China and their use in the society, English language is still needed, used, and given a big platform. The same can be said for Nigeria, a multiethnic society, with English as the official language of the country and Hausa, Igbo, and Yoruba as the national languages. Despite the presence of national languages, English still enjoys high prestige to the detriment of the indigenous languages (both major and minor) as it remains the official language. Indigenous language in electronic media only carries about 5% of the whole period allotted to news, entertainment, and other programmes in the station.

Despite English being the official language of the country, the fact still remains that there are many out there who are yet to gain mastery of it. This is so because in a society, there exist the literate, semiliterate, and illiterate. People with different academic qualifications who have been privileged enough to be exposed to English language and culture would obviously be much better off than those who have not had such opportunity. In a multilingual society such as Delta North, Nigeria, we have the Enuani dialect, the Ika dialect, the Ukwuani dialect, and the Nigerian Pidgin English. Despite the widespread use of these dialects in the society in promoting their culture and tradition, a bigger platform

is still needed. The question is how well the radio media has contributed to the vitality of these dialects and how they can help improve the vocabulary of these dialects.

In light of the above, big data approach will be used to analyze the data obtained from the studies; this is because big data is data that contains large, hard-to-manage volumes of data, especially from new data sources, and since the research contains such data, a descriptive big data approach will be adopted for the studies. The big data approach is the process of extracting information from raw data through examination and analysis of patterns and behaviors with the use of quantitative and qualitative methods. Because large data cannot be evaluated with traditional tools, the advanced technique called the big data approach is used. They help enhance making of decisions, reduce risks, and discover important information from the data [8, 9]. The big data tool used in this study was Atlas.ti, particularly useful for real-time processing of large volumes of data [10]. This study as shown in Figure 1 examines that the communication breakdown of a society—Delta North Senatorial District—is bound to face when the language used for vital information dissemination by the broadcast media is not the language that is truly understood by all. It also examined the impact indigenous language used in radio broadcasting has on its listeners. The research contributions of this work include the following:

- (1) Determining whether the language used in broadcast stations has an impact on the local dialects in Delta North
- (2) Identifying the role of broadcast media in the management of multilingualism in Delta North
- (3) Examining the internal and external factors that influence the democratic distribution of languages in the radio stations in Delta North
- (4) Identifying the challenges faced in communicating through indigenous languages in the radio stations in Delta State
- (5) Determining how radio stations can revitalize the indigenous dialects through their broadcast in Delta North

The rest of this paper is organized as such: Section 2 gives an overview of related literature. Section 3 discusses the methodology of the research work. Section 4 discusses the results of the research. Finally, Section 5 concludes this paper.

## 2. Literature Review

The author in [11] affirmed radio as an important means of information dissemination and stated that its language should be the language popular to all. His theoretical framework was an eight-stage typology of language shifts and a set of priorities for reverse language shift programmes. According to his findings and suggestions, radio language is formal because most radio stations are operated by the government,

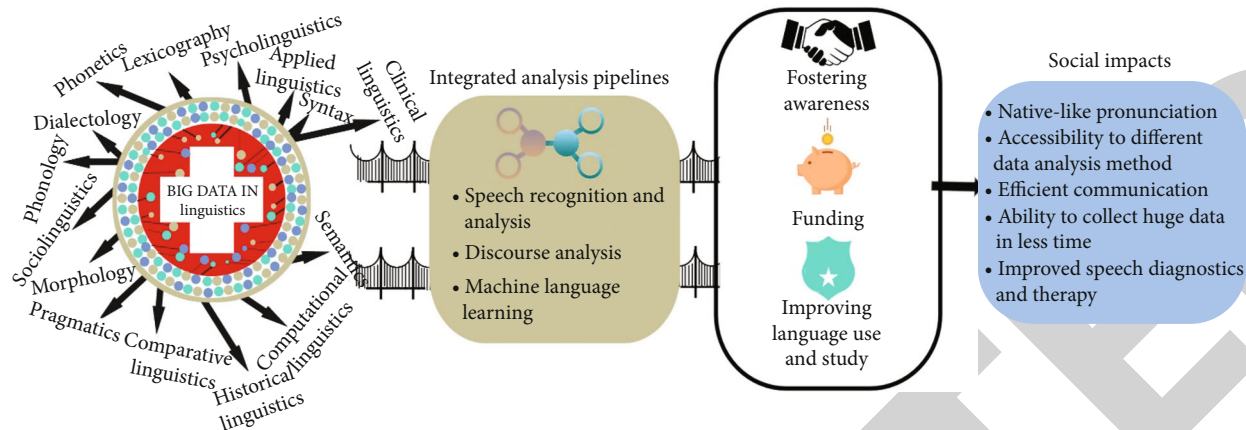


FIGURE 1: Application of big data in linguistics.

TABLE 1: Gender of the respondents.

Description	Frequency	Percent	Valid percent	Cumulative percent
Male	65	43.3	43.3	43.3
Female	85	56.7	56.7	100.0
Total	150	100.0	100.0	

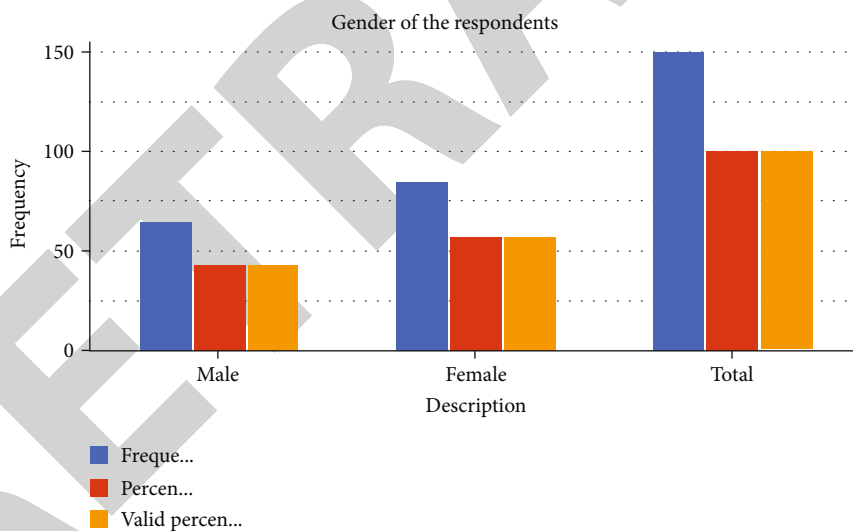


FIGURE 2: Gender of the respondents.

TABLE 2: Age distribution of the respondents.

Description	Frequency	Percent	Valid percent	Cumulative percent
18–30 years	41	27.3	27.3	27.3
31-40 years	66	44	44	71.3
41–50 years	28	18.7	18.7	90
51 years and above	15	10	10	100.0
Total	150	100.0	100.0	

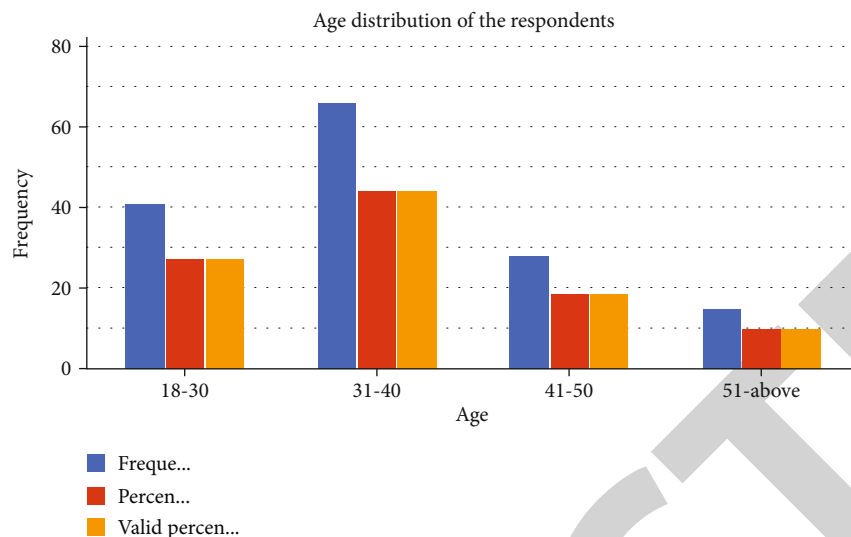


FIGURE 3: Age distribution of the respondents.

TABLE 3: Marital status of the respondents.

Description	Frequency	Percent	Valid percent	Cumulative percent
Single	69	46	46	46
Married	61	40.7	40.7	86.7
Divorced	11	7.3	7.3	94
Widowed	9	6	6	100.0
Total	150	100.0	100.0	

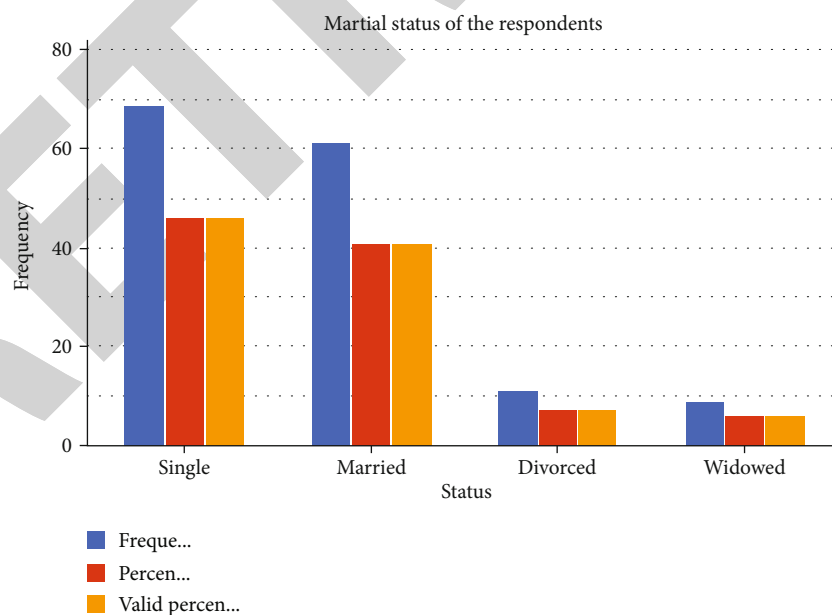


FIGURE 4: Marital status of the respondents.

but at the same time, it is also informal because it is spoken. He suggested here that it is not easy to determine whether radio language is formal or informal due to its two contrasting features: serious topics (governmental affairs) which are

formal and talk shows and programmes, which are informal. He tried to convey the idea of language shift; i.e., if the content on the radio becomes more governmental, then the indigenous language which is used in informal talk would

TABLE 4: Educational qualification of the respondents.

Description	Frequency	Percent	Valid percent	Cumulative percent
OND/NCE	48	32	32	32
HND/B.Sc/BA	62	41.3	41.3	73.3
PGD/M.Sc	40	26.7	26.7	100.0
Total	150	100.0	100.0	

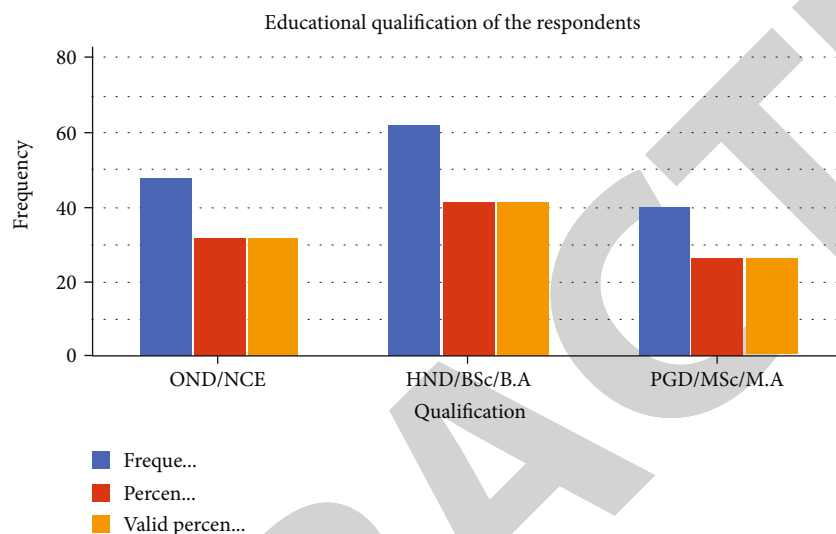


FIGURE 5: Educational qualification of respondents.

TABLE 5: Years of work experience of the respondents.

Description	Frequency	Percent	Valid percent	Cumulative percent
0-4 years	71	47.3	47.3	47.3
5-9 years	37	24.7	24.7	72
10-14 years	11	7.3	7.3	79.3
15-19 years	19	12.7	12.7	92
20 years and above	12	8	8	100.0
Total	150	100.0	100.0	

be replaced by English which is used for formal topics. The authors in [12] also examined the radio language. Using phenomenology as a theory, they researched on most radio stations in the United States and came up with the findings that language in radio is a mixture of spoken and written forms and that the social variables that determine the speech styles in radio situations are not the same as those in other situations. Going by this statement, it appears they are trying to say that language in radio is not fixed. In [13], the authors carried out a research on Yoruba language covering areas like technology, politics, football, economy, education, sports, and law. Orisun FM (89.5) located in Osun State was used as a case study. The paper zeroed in on the electronic media for its source of data and did not employ the use of any specified theoretical framework. At the end of the research, the researchers noted that the electronic media and its personnel have contributed in the development of

Yorùbá language and in the dissemination of information to the public. They concluded by opining that academia should endeavor to work hand-in-hand with the media in the formation of new words for the concepts being introduced to the society.

The authors in [14] researched and used Sinhala FM in Sri Lanka as their case study. The researchers used respondents which were drawn from among university undergraduates, language teachers, radio and television staff, and people randomly selected from the society (FM radio listeners). The results of the data proved that people are increasingly turning to radio, increasing radio listenership. The findings from the research further show that there is an increased level of competition between FM (frequency modulation) channels, now that increasingly listeners opt for radio. In [15], the authors proposed the agenda-setting theory in a study on the American presidential election in

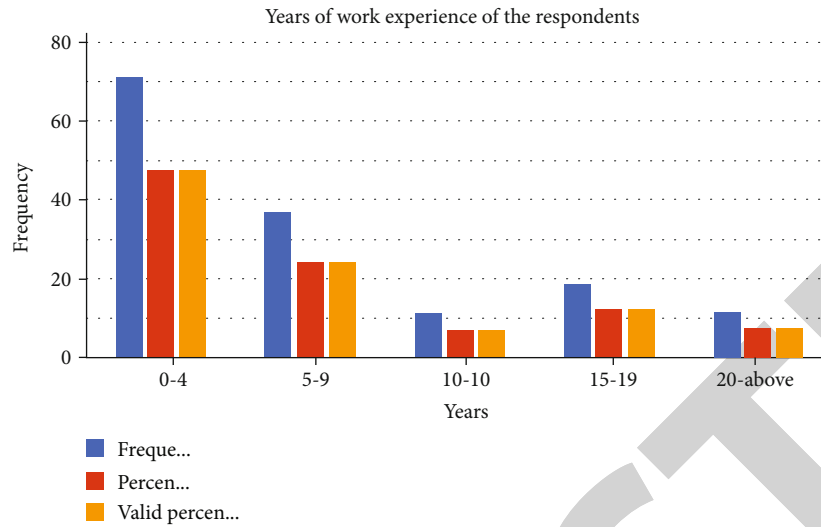


FIGURE 6: Years of work experience of the respondents.

TABLE 6: Nativity of the respondents.

Description	Frequency	Percent	Valid percent	Cumulative percent
Enuani	62	41.3	43.3	41.3
Ika	41	27.3	30.8	68.6
Ukwuani	47	31.3	25.8	100.0
Total	150	100.0	100.0	

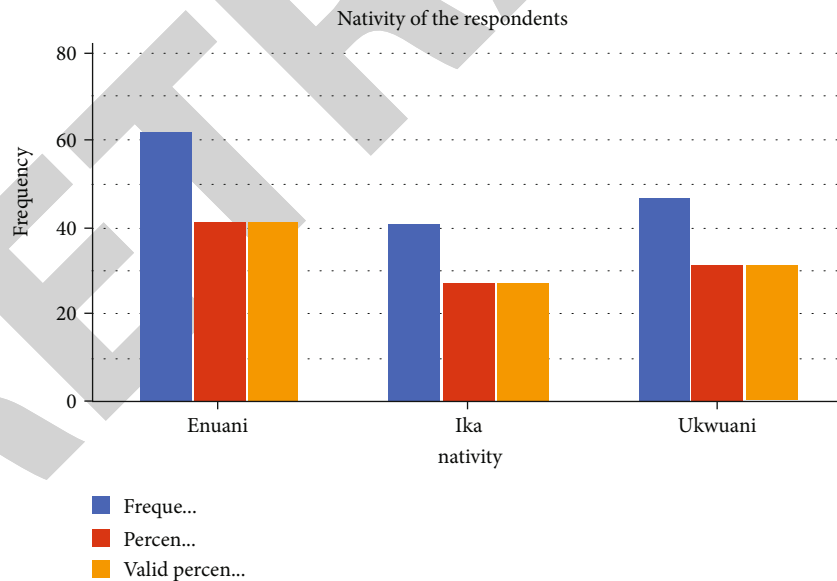


FIGURE 7: Nativity of the respondents.

1968, which states that the media are not always successful in telling us what to think, but they are quite successful in telling us what to think about. This means the media has a great influence on their audience. The authors in [16] believed that the notion of this theory can be traced to [17]. The authors were of the view that the media were responsible for the pictures in our head. According to the

authors in [18], the theory of agenda-setting by the media proposes that the public agenda or the things people discuss, think, and worry about is powerfully shaped and directed by what the media choose to publicize. In [19], the authors stated that the use of indigenous languages in the media can give rise to the revitalization of those indigenous languages that are endangered. This notion is reasonable as it

TABLE 7: How long the respondents have been in Delta North.

Description	Frequency	Percent	Valid percent	Cumulative percent
11 months and below	24	16	16	16
1-3 years	27	18	18	34
4-7 years	46	30.7	30.7	64.7
8 years and above	53	35.3	35.3	100.0
Total	150	100.0	100.0	

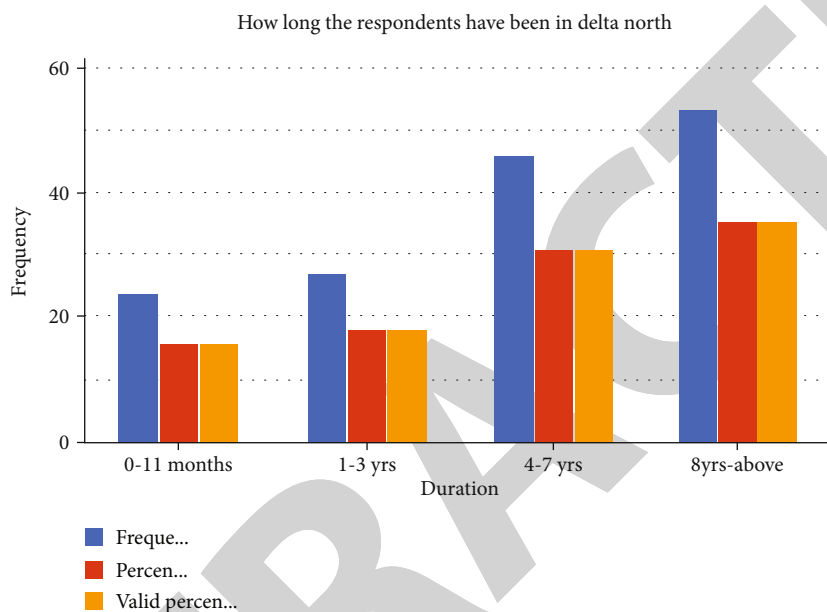


FIGURE 8: How long the respondents have been in Delta North.

TABLE 8: Frequency and percentage of statement of listenership strength of radio stations (audience response).

Do you listen to radio broadcasts?	Frequency	Percentage	Valid percentage	Cumulative percent
Yes	86	71.7%	71.7%	71.7%
No	34	28.3%	28.3%	100.0%
Total	120	100.0%	100.0%	

gives a voice to the neglected languages of the society by setting an agenda that would pave the way for the standardization and documentation of these languages.

The theory is relevant to the study because the media can be used to set the agenda for the use of indigenous languages in radio broadcasting. The use and gratification theory was propounded in [20]. The theory advocates that people use certain media based on the gratification derived from it. Specifically, the use and gratification theory directly places power in the hands of the users. The authors in [21] further described this theory as gratifications or benefits that attract and hold audiences to diverse types of media and the types of content that satisfy their social and psychological demands. The theory stresses how and why the audience uses the media. It also expatiates on the theory in [22]. The main point of the theory is the notion that there are dis-

tinct benefits consumers of social media messages need, get, or anticipate getting from the media; otherwise, they may desert the channel and look for alternative ones to satisfy their needs. However, the gratification theory holds that people are responsible for choosing a particular media to meet their needs in terms of the language they understand [20].

Large amounts of data have become accessible for decision-making in this digital era. Big data are datasets that have high velocity and variety, making them challenge to deal with making use of traditional techniques and methods. Big data has a wide range of applications including customer interactions, social network data, and daily transactions. In [21], the authors examined the various analytics tools and methods that can be applied to big data and how they are used in different decision domains. In [22], the authors



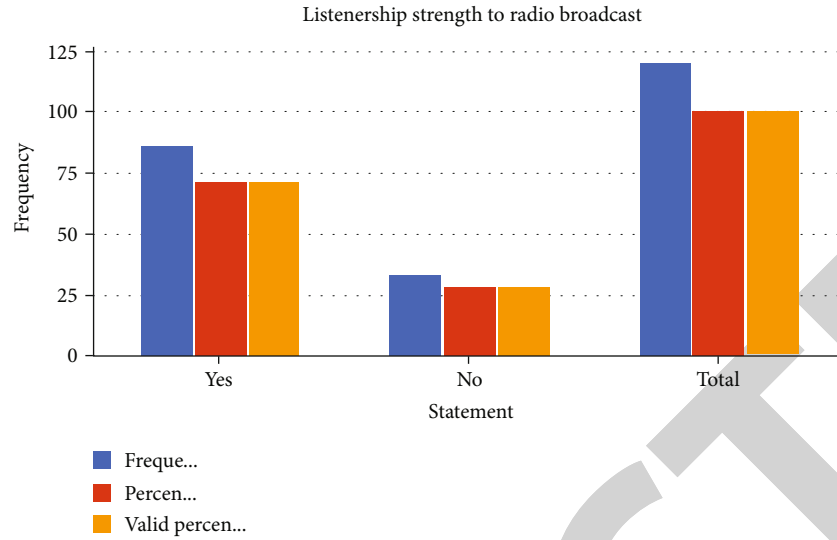


FIGURE 9: The listenership strength of radio broadcast.

TABLE 9: Frequency and percentage of statement of listenership strength of radio stations (audience response).

Do you listen to these radio stations?	Yes	No	Total
Voice of Delta (97.9)	80 (66.7%)	40 (33.3%)	120 (100.0%)
Trend FM (100.9)	70 (58.3%)	50 (41.7%)	120 (100.0%)
Crown FM (94.7)	65 (54.1%)	55 (45.9%)	120 (100.0%)

sought to develop a highly efficient platform to effectively examine big data and a suitable mining algorithm to pick out useful information from the data. In [23], the authors provided a comprehensive study of the concepts, applications, tools, techniques, and research challenges of big data. The use and gratification theory is also pertinent to this study as it will help explain the extent of impact the radio stations in Delta North can have on the listening audience through its use of indigenous languages. The proponents of the grounded theory method (GTM) [24] explained it as the “discovery of theory from data systematically obtained from social research,” and allow the researcher to explore and unfold the core issues of interest first from the perspective of the key participants involved. We believe the theoretical framework adopted for this study will help gather the required data and information necessary for a proper research.

### 3. Methodology

This section analyzes data collected from the sample population (30 broadcast staff and 120 radio listeners in Delta North Senatorial District) and makes an appropriate interpretation of the analysis using a big data approach with a view of ensuring that the objectives of this research work are achieved. The study adopted a descriptive big data survey

research design in analyzing the quantitative and qualitative data from the two questionnaire surveys and the interview conducted [7]. A total of 150 questionnaires were administered. To get a clearer picture of the classes of responses, the quantitative data were modeled on a four-point rating scale [25] with a response mode of strongly agree (SA) = 4, agree (A) = 3, disagree (D) = 2, and strongly disagree = 1. The interview responses were arranged to form themes around the research questions, and all results were discussed in line with the impact of language use in radio broadcasting in Delta North. All questionnaires and interviews served as a basis for the presentation for the analysis and interpretation of data.

*3.1. Sociodemographic Data.* Table 1 and Figure 2 reveal that 43.3% of the respondents are male, while 56.7% are female.

The results in Table 2 and Figure 3 show that 27.3% of the respondents interviewed are between the ages of 18 and 30 and 44% are between 31 and 40 years of age. 18.7% are in the age bracket of 41-50 years, while the remaining 10% are 51 years and above. Those that are within the ages of 31-40 years have the highest frequency of 66, which implies that majority of the employees in the radio broadcasting stations in Delta State North are within the productive years of their life.

Table 3 and Figure 4 show that 46% of the respondents are single, 40.7% are married, 7.3% are divorced, and 6% are widowed. This result shows that the majority of the respondents are single.

The information in Table 4 and Figure 5 shows that 32% have OND/NCE, 41.3% are HND/B.Sc/BA degree holders, and 26.7% are PGD/M.Sc degree holders. This result shows that the majority of the respondents are HND/B.Sc/BA degree holders.

Table 5 and Figure 6 show that 47.3% of the respondents have been working for 0-4 years, 24.7% of them have been working for 5-9 years, 7.3% have been working for 10-14

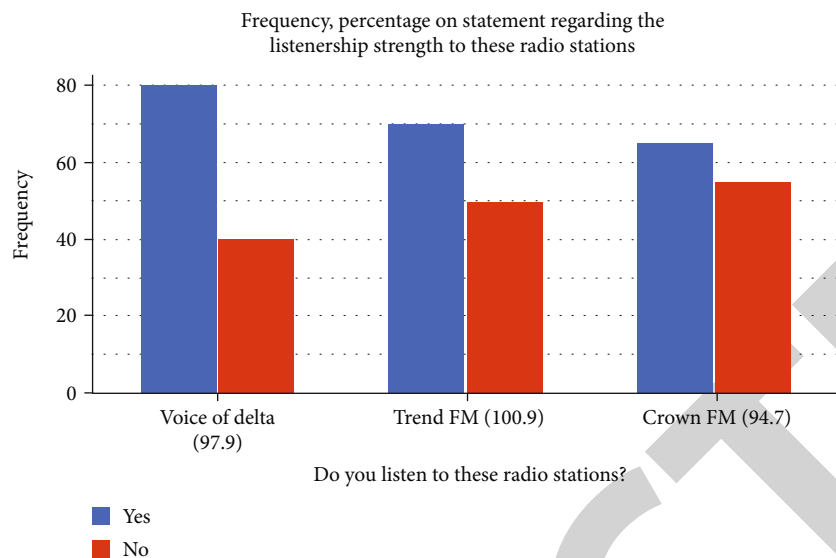


FIGURE 10: The listenership strength of these radio stations.

years, 12.7% have been working for 15-19 years, and 8% have been working for 20 years and above.

Table 6 and Figure 7 show that 41.3% of the respondents are Enuani natives, 27.3% are Ika natives, and 25.8% are Ukwuani natives. This result shows that the majority of the respondents are natives of Enuani speaking communities.

The result from Table 7 and Figure 8 shows that 16% of the respondents have been in Delta North for 11 months and below, 18% have been in Delta North for 1-3 years, 30.7% have been in Delta North for 4-7 years, and 35.3% have been in Delta North for 8 years and above.

**3.2. Data Presentation and Analysis.** This section analyzes the data obtained from the respondents according to the research questions for this study.

- (1) Research Q1. Do the indigenous dialects have any impact on the listening audience of radio stations in Delta North?

The results in Table 8 and Figure 9 show that 71.7% of the respondents listen to radio broadcast, while 28.3% do not.

Table 9 and Figure 10 show that 66.7% of the respondents listen to Voice of Delta (97.9), 58.3% listen to Trend FM (100.9), and 54.1% listen to Crown FM (94.7). The result revealed that majority of the respondents in Delta North listen to radio broadcast.

Table 10 and Figure 11 show that 33.3% of staff respondents which comprises of one broadcast station (Voice of Delta) broadcasts in English, Pidgin, Enuani, Ukwuani, and Ika dialects. The result also showed that the remaining 20 staff respondents which comprises of Trend FM and Crown FM broadcasts only in English and Pidgin.

The results from Table 11 and Figure 12 show that at home, majority of the respondents (44.7%) use Enuani,

10% use English, 5.3% use Pidgin, 14% use Ika, and 26% use Ukwuani. At work, 48% use English, 12% use Pidgin, 16% use Enuani, 10.7% use Ika, and 13.3% use Ukwuani. In school, 46.7% use Pidgin, 46% use English, 5.3% use Enuani, 2% use Ika, and none use Ukwuani. When interacting with friends, 14.7% use English, 32% use Pidgin, 22% use Enuani, 18% use Ika, and 13.3% use Ukwuani. In their place of worship, 40.7% use English, 27.3% use Enuani, 12.7% use Ika, 19.3% use Ukwuani, and none use Pidgin.

- (2) Research Q2. What are the roles of the broadcast media in the management of multilingualism in the radio stations in Delta North?

Table 12 and Figure 13 reveal that majority of the respondents (33.3%) and 37.5% are undecided and disagree that radio stations in Delta North help expand the language lexicon. 17.5% strongly agree, and 11.7% agree. It was affirmed by the supportive claim of 19.2% and 38.3% of the respondents who strongly agreed and agreed, respectively, that the use of indigenous dialect during radio broadcast gives relevance to all the dialects in Delta North. Although 21.7% were undecided, 15.8% and 5.0% disagreed and strongly disagreed with the statement, respectively. 64.2% strongly agreed and agreed that the use of indigenous dialect in radio broadcasts has helped improve their speaking and understanding of the dialect, 23.3% of them were undecided, and 12.3% disagreed with the statement.

68.3% of the respondents strongly agreed and agreed, respectively, that programmes anchored using indigenous dialects keeps people connected to culture and tradition, while 22.5% were undecided, and 9.2% disagreed with the statement. 66.7% agreed that programmes broadcasted in local dialects will help in the reduction in language dearth and increase in language vitality, 20.0% were undecided, and 13.3% disagreed with the statement. 64.2% of the

TABLE 10: Frequency and percentage on statement regarding the language of broadcast in your radio station (staff response).

Radio station	English	Pidgin	Enuani	Ukwuani	Ika
Voice of Delta (97.9)	10 (33.3%)	10 (33.3%)	10 (33.3%)	10 (33.3%)	10 (33.3%)
Trend FM (100.9)	10 (33.3%)	10 (33.3%)	—	—	—
Crown FM (94.7)	10 (33.3%)	10 (33.3%)	—	—	—
Total	30 (100%)	30 (100%)	10 (33.3%)	10 (33.3%)	10 (33.3%)

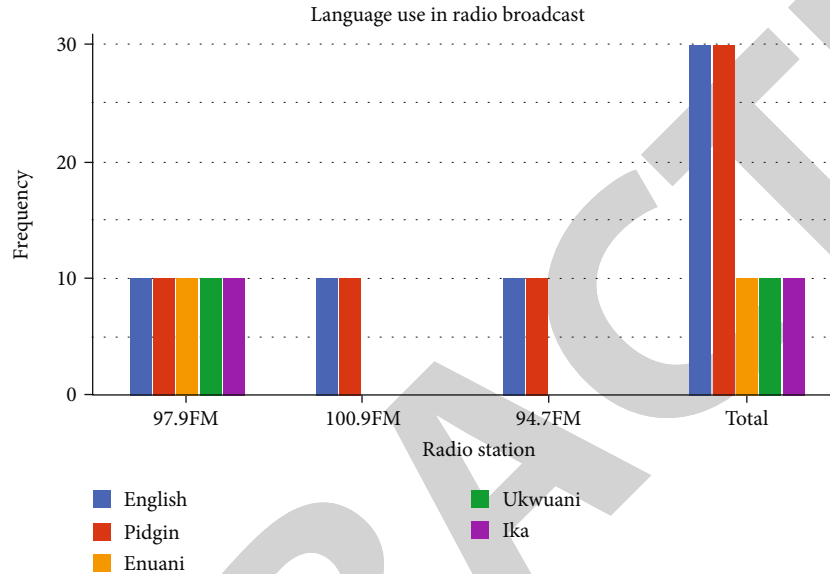


FIGURE 11: Language of broadcast in the radio stations.

TABLE 11: Frequency and percentage of language use in Delta North (staff/audience response).

Please tick the language you use in the following places	English	Nigerian Pidgin	Enuani	Ika	Ukwuani
At home	15 (10%)	08 (5.3%)	67 (44.7%)	21 (14%)	39 (26%)
At work	72 (48%)	18 (12%)	24 (16%)	16 (10.7%)	20 (13.3%)
In school	69 (46%)	70 (46.7%)	08 (5.3%)	03 (2%)	- (0%)
With friends	22 (14.7%)	48 (32%)	33 (22%)	27 (18%)	20 (13.3%)
In the place of worship	61 (40.7%)	- (0%)	41 (27.3%)	19 (12.7%)	29 (19.3%)

respondents agreed that use of indigenous dialect in radio broadcasts reduces the vocabulary dearth of the dialect, 16.7% were undecided, and 19.2% disagreed with the statement.

- (3) Research Q3. What are the factors that influence the democratic distribution of languages in the radio stations in Delta North?

Table 13 and Figure 14 show that the majority of the respondents (50%) agree with the claim that the NBC rules is an influencing factor to the distribution of language in radio broadcasting. This is followed by 23.3% who are undecided about the claim and 26.7% who disagree with the claim. It was affirmed by the supportive claim of 26.7% and 43.3% of the respondents who agreed and strongly

agreed, respectively, that the listenership strength of the audience is a factor that influences the democratic distribution of language. 6.7% were undecided about this claim, 20% disagreed, and 3.3% strongly disagreed with this claim. 16.7% and 40% of the respondents strongly agree and agree, respectively, that national language policy is an influencing factor of the democratic distribution of language in broadcast station in Delta North, while 43.3% disagreed with the statement. 23.3% and 36.7% strongly agreed and agreed, respectively, that sponsorship level is a factor that influences the democratic distribution of language in radio broadcast, while 26.7% and 13.3% disagreed and strongly disagreed to the claim.

10% and 50% strongly agreed and agreed that the location of the radio station is a big influence to the distribution of languages during broadcast in Delta North. According to

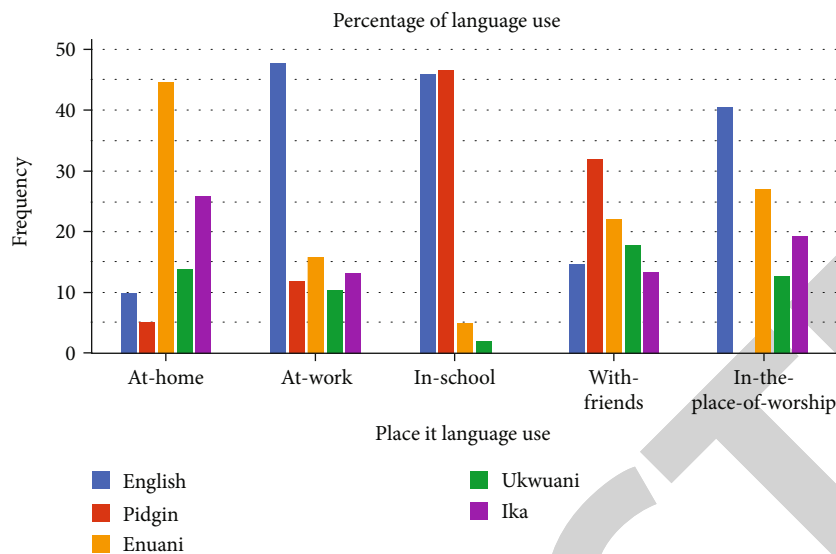


FIGURE 12: Percentages of languages in use.

TABLE 12: Frequency and percentage on statement regarding the roles of radio broadcast media in the management of multilingualism in Delta North (audience response).

S/N	Statements		Response					Total
			SA	A	U	D	SD	
1	Radio stations in Delta North has helped expand the language lexicon.	F	21	14	40	45	—	120
		%	17.5	11.7	33.3	37.5	—	100.0
2	The use of indigenous dialect during radio broadcast helps gives relevance to all the dialects in Delta North.	F	23	46	26	19	6	120
		%	19.2	38.3	21.7	15.8	5.0	100.0
3.	The use of indigenous dialect in radio broadcasts helps improve speaking and understanding of the dialect.	F	23	54	28	15	—	120
		%	19.2	45.0	23.3	12.3	—	100.0
4.	Programmes anchored using indigenous dialects keeps people connected to culture and tradition.	F	24	58	27	11	—	120
		%	20.0	48.3	22.5	9.2	—	100.0
5.	When programmes are broadcasted in the indigenous dialects, there will be reduction in language death and increase in language vitality.	F	26	54	24	16	—	120
		%	21.7	45.0	20.0	13.3	—	100.0
6.	The use of indigenous dialect in radio broadcasts reduces the vocabulary death of the dialect.	F	24	53	20	15	8	120
		%	20.0	44.2	16.7	12.5	6.7	100.0

an interview about this factor, these respondents said that the location of a radio station determines the language use. Citing an example, one of the respondents mentioned that a radio station situated in a multilingual environment like Delta North will end up broadcasting in the generally understandable language which in this case is Pidgin. 10% of the respondents were undecided, and 23.3% and 6.7% disagreed and strongly disagreed with the statement.

- (4) Research Q4. What are the challenges faced in communicating through the indigenous dialects in the radio stations in Delta North?

Table 14 and Figure 15 reveal that 63.3% of the respondents agreed that poor provision for indigenous language professionals in radio stations is also a challenge faced by broadcast stations in communicating through indigenous

dialects. 30% were undecided and 6.7% disagreed with the statement. 70% agreed that lack of linguists in radio broadcast stations is a challenge faced by broadcast stations. 10% were undecided, and 20% disagreed with the statement.

- (5) Research Q5. In what ways can radio stations revitalize the indigenous dialects in Delta North?

Table 15 and Figure 16 reveal that 69.2% of the respondents agreed that broadcasting more in indigenous dialects will help revitalize the indigenous dialects in Delta North. 7.5% were undecided, and 23.3% disagreed with the statement. 69.2% agreed that broadcasting more culturally educating and language-reviving contents by radio stations will help revitalize the indigenous dialects in Delta North. 11.7% were undecided, and 19.2% disagreed with the statement.

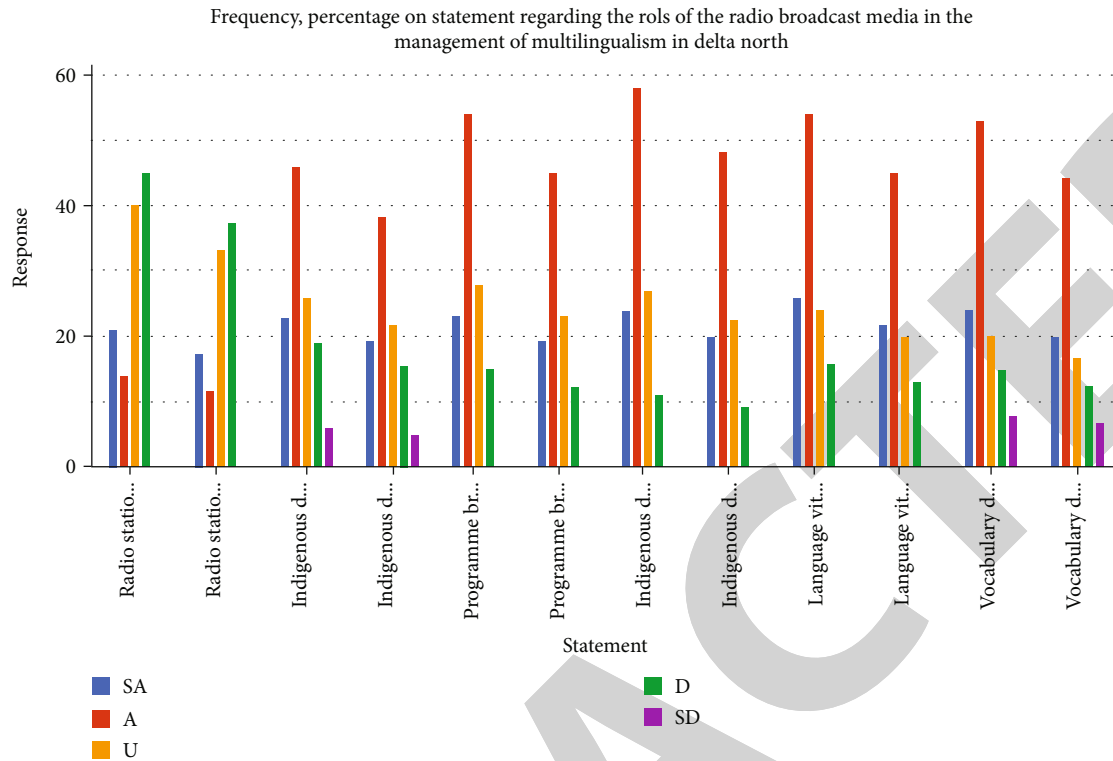


FIGURE 13: Roles of radio broadcast media in the management of multilingualism in Delta North (audience response).

TABLE 13: Factors that influence the democratic distribution of languages in the radio stations in Delta North (staff response).

S/N	Statement		Response					Total
			SA	A	U	D	SD	
1	Nigeria broadcasting commission rules	F	9	6	7	8	—	30
		%	30	20	23.3	26.7	—	100.0
2	Listenership strength	F	8	13	2	6	1	30
		%	26.7	43.3	6.7	20	3.3	100.0
3	National language policies	F	5	12	—	13	—	30
		%	16.7	40	—	43.3	—	100
4	Sponsorship level	F	7	11	—	8	4	30
		%	23.3	36.7	—	26.7	13.3	100
5	Location of radio station	F	3	15	3	7	2	30
		%	10	50	10	23.3	6.7	100

### 4. Results

The study was carried out to assess the impact of language use in radio broadcasting on local languages in Delta North senatorial zone. Based on the results of the data analysis, the following findings emerged:

- (1) Research Q1. Do the indigenous dialects have any impact on the listening audience in radio stations in Delta North?

The results from Research Q1 indicated that indigenous dialects have significant impact on the listening audience in radio stations in Delta North given that majority of the respondents agreed to the claim of using indigenous dialects in their day-to-day activities with English being used majorly in school. The result also revealed that the majority of the respondents listen to radio broadcast, and this indicates that the radio media could have a big impact on the audience through radio broadcast especially when using indigenous

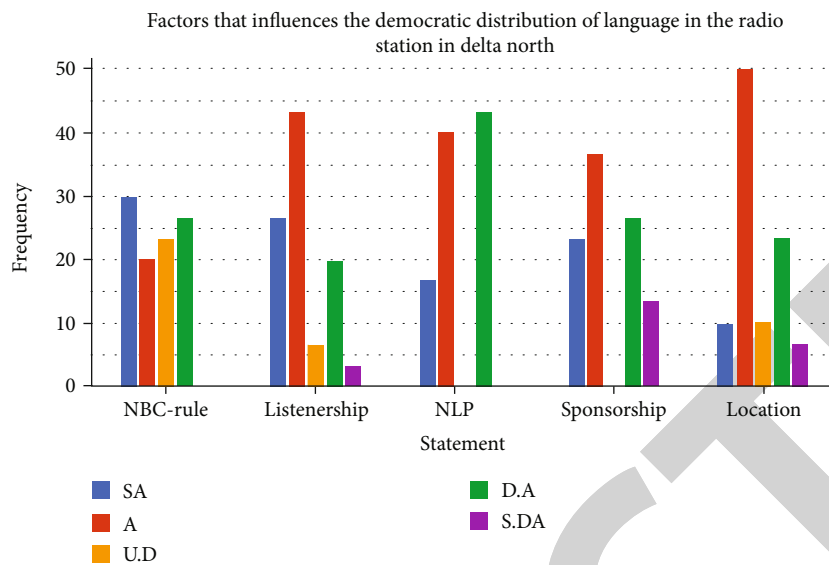


FIGURE 14: Factors that influence the democratic distribution of languages in the radio stations in Delta North.

TABLE 14: Challenges in communicating through the indigenous dialects in the radio stations in Delta North (staff response).

S/N	Statement		Response					Total
			SA	A	U	D	SD	
1	Poor provision for indigenous language professionals in the radio stations.	F	16	3	9	2	—	30
		%	53.3	10	30	6.7	—	100.0
2	Lack of linguists in radio broadcast stations.	F	8	13	3	6	—	30
		%	26.7	43.3	10	20	—	100.0

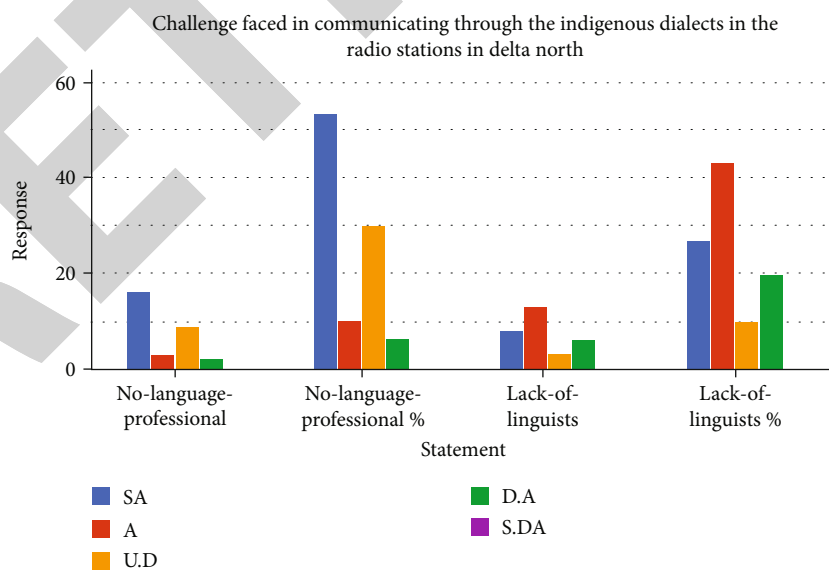


FIGURE 15: Challenges in communicating through the indigenous dialects in the radio stations in Delta North.

TABLE 15: Frequency and percentage on statement regarding the ways radio stations can revitalize the indigenous dialects in Delta North (audience response).

S/N	Questions		Response					Total
			SA	A	U	D	SD	
1	Broadcasting more in indigenous dialects	F	30	53	9	18	10	120
		%	25.0	44.2	7.5	15.0	8.3	100.0
2	Broadcasting more culturally educating and language reviving contents	F	42	41	14	11	12	120
		%	35.0	34.2	11.5	9.2	10.0	100.0

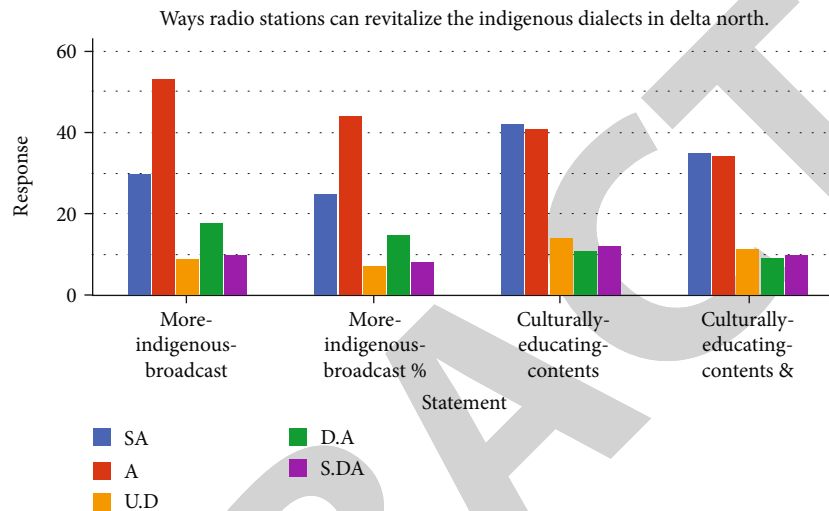


FIGURE 16: Frequency and percentage on statement regarding the ways radio stations can revitalize the indigenous dialects in Delta North.

dialects. This affirms the claim of [3, 26] that indigenous language radio broadcasting is the most effective channel of mass communication since it reaches more peripheral areas than other media and is easily understood by the audience.

- (2) Research Q2. What are the roles of the broadcast media in the management of multilingualism in the radio stations in Delta North?

The results from Research Q2 indicate that the roles of the broadcast media in the management of multilingualism are the expansion of language lexicon through introduction of new words and giving relevance to all the dialects through the use of these dialects during broadcast, which in turn helps in reduction of language dearth and keeps people connected to their culture. In the case of indigenous languages in Delta North, this is not so as English is the major language used in broadcast. This result agreed with the findings in [27] which rightly observed that using foreign languages in the media as the media language is indirectly setting an agenda on those languages at the expense of our indigenous languages.

- (3) Research Q3. What are the internal and external factors that influence the democratic distribution of languages in the radio stations in Delta North?

The results from Research Q3 explained that internal and external factors that influence the democratic distribution of languages in the radio stations in Delta North are National Broadcasting Commission rules, listenership strength, national language policies, sponsorship level, and location of the radio station. The analysis reveals that the majority of the respondents believe that the location of the radio station is a much bigger influence to the distribution of languages during broadcast in Delta North. This result agreed with the findings of [28] which states that the broadcast media in rural areas can hardly broadcast in indigenous dialects because there is lack of attention and allocation given to it. This is followed by the listenership strength with 40% and national language policy having the lowest agreement and highest disagreement of 34%. Proper planning and implementation of these policies (to suit both the urban and rural radio media stations) play vital roles in language use in broadcasting.

- (4) Research Q4. What are the challenges faced in communicating through the indigenous dialects in the radio stations in Delta North?

The results from Research Q4 revealed that lack of indigenous language professionals and linguists in the broadcast stations are the major challenges faced in communicating

through the indigenous dialects in the radio stations in Delta North. This response was supported by 70% and 63.3% of the respondents. The result agreed with [29] who argued that despite the fact that LPP is an academic discipline grounded in linguistics, it is controlled more by politicians, those with less experience of the discipline rather than the actual experts. It also corroborates the author's findings that the NBC's rule that allocates just twenty-five minutes to programmes or news in local languages is only relegating these languages to the background, making them almost ineffective in broadcast stations.

- (5) Research Q5. In what ways can radio stations revitalize the indigenous languages in Delta North?

The findings from Research Q5 revealed that the major ways radio stations can revitalize the indigenous dialects in Delta North are through broadcasting more culturally educating and language-reviving contents, as this aids promotion of culture and languages, and the use of indigenous languages in radio broadcasting which reduces marginalization of these languages. This affirms the argument in [6] that says the greater use of a language, the stronger the language becomes.

## 5. Conclusion

Radio is considered an effective tool in the dissemination of information quickly. Radio broadcast in Nigeria has been in existence from the colonial era and is still very important in disseminating information. This study examined the impact of language use in radio broadcasting in Delta North. It was aimed at discovering the extent to which the use of indigenous dialects in radio stations in Delta North can impact its listeners and help promote the dialect and culture of the study area. The indigenous language programmes play an important role in the life of the people living in a community as many depend on this radio for their various broadcast needs. The population of the study area makes it imperative for the use of indigenous language during radio broadcast to engender the desired development for the Delta North populace.

To verify the assumption that radio station has made no major impact in Delta North through its use of indigenous dialects, five research questions were raised in the study. This study adopted a big data survey method and made use of a self-constructed questionnaire for the collection of data. The questionnaire enabled the researcher to obtain first-hand information on the subject matter from respondents in some notable communities in the area of study. 150 respondents were randomly selected for the survey. The sample size was determined using stratified random sampling technique. Data was collected using the constructed questionnaire and was quantitatively analyzed using the Atlas.ti tool. The impact of language used in radio broadcasting in Enuani, Ika, and Ukwuani was studied using these selected stations (Voice of Delta 97.9, Trend FM 100.9, and Crown FM 94.7). The study concludes that the broadcasters in Delta North radio stations need to take the issue of indig-

enous language programmes more seriously, or the native languages will continue to suffer in the domineering hands of English language promoters. In the future, we shall apply other big data tools to these raw big, using a wider population and culture, and compare their different results.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The authors declare that they have no conflicts of interests.

## References

- [1] W. Odegbenle, "Enlightenment and attitudes of the Nigerian elite on the roles of languages in Nigeria," *Language Culture and Curriculum*, vol. 16, no. 2, pp. 185–196, 2013.
- [2] D. Eka, *Issues in Nigerian English Usage*, Scholars Press, Uyo, Nigeria, 2000.
- [3] S. Mufwene, "Colonization, globalization and the plight of 'weak' languages," *Journal of Linguistics*, vol. 38, pp. 375–395, 2002.
- [4] M. Ndhlovu, "Mainstreaming African indigenous knowledge systems in higher and tertiary education: the case of Zimbabwe," *South African journal of higher education*, vol. 18, no. 3, pp. 281–288, 2004.
- [5] A. Salawu, "Paradox of a milieu: communicating in African indigenous languages in the age of globalization," in *Indigenous Language Media in Africa*, pp. 1–20, CBAAC, Lagos, 2006.
- [6] B. Maseko and M. Moyo, "Minority language revitalization in Zimbabwe— fundamental considerations for Tonga language in the Zambezi Valley," *International Journal of Arts and Humanities*, vol. 2, no. 10, pp. 248–259, 2013.
- [7] R. Zhang, J. Zhou, T. Hai et al., "A big data study of language use and impact in radio broadcasting in China," *Journal of Cloud Computing*, vol. 1, 2015.
- [8] L. Rabhi, N. Falih, A. Afraites, and B. Bouikhalene, "Big data approach and its applications in various fields: review," *Procedia Computer Science*, vol. 155, pp. 599–605, 2019.
- [9] M. A. Memon, S. Soomio, A. K. Jumani, and M. A. Kartio, "Big data analytics and its applications," vol. 1, no. 1, 2017 <https://arxiv.org/abs/1710.04135>.
- [10] A. Morteza and G. Fatemeh, *Qualitative Data Analysis Using Atlas ti*, Sage, 2015.
- [11] E. D. Fishman, *Who are the Ebiras?*, A Division of Beth-Bekka Academic Publishers Ltd, Maiduguri, 1991.
- [12] K. D. Valentine, T. J. Kopcha, and M. D. Vagle, "Phenomenological methodologies in the field of educational communications and technology," *TechTrends*, vol. 62, no. 5, pp. 462–472, 2018.
- [13] T. Akanbi and O. Aladesanmi, "The use of indigenous language in radio broadcasting: a platform for language engineering," *Open Journal of Modern Linguistics*, vol. 4, no. 4, pp. 563–572, 2014.
- [14] D. Ranasuriya, "Effects of radio and television media on language," *Journal of Mass Communication and Journalism*, vol. 5, no. 6, pp. 1–6, 2015.



- [15] M. McCombs and D. L. Shaw, "The agenda-setting function of mass media," *Public Opinion Quarterly*, vol. 36, no. 2, pp. 176–185, 1972.
- [16] S. M. Asemah, "A reflection on the nature of intergroup relations in Lokoja, Nigeria," *Journal of Sustainable Development in Africa*, vol. 11, no. 2, pp. 325–333, 2011.
- [17] W. Lippmann, *Public Opinion*, Courier Corporation, 2012.
- [18] D. Wimmer and J. R. Dominick, *Mass Media Research: An Introduction*, Wadsworth Publishing Company, Belmont, 2000.
- [19] E. F. Wimmer and H. Dorminick, "Language policy and planning in Nigeria," *Current Issues in Language Planning*, vol. 5, no. 3, pp. 181–246, 2006.
- [20] C. S. Katz, L. I. Anorue, P. M. Obayi, M. Etu, C. A. Onyebuchi, and U. Anorue, "The influence of mother tongue in the broadcasting industry in Nigeria," *AFRREV LALIGENS: An International Journal of Language, Literature and Gender Studies*, vol. 1, no. 3, pp. 48–68, 1974.
- [21] E. Nada and E. Ahmed, "Big data analytics: a literature review paper," *Lecture Notes in Computer Science*, vol. 8557, pp. 214–227, 2014.
- [22] C. W. Tsai, C. F. Lai, H. C. Chao, and A. V. Vasilakos, "Big data analytics: a survey," *Journal of Big Data*, vol. 2, no. 1, p. 21, 2015.
- [23] V. Mohan, "Research in big data-an overview," *Informatics Engineering*, vol. 4, no. 3, 2016.
- [24] B. Glaser and A. Strauss, *The discovery of grounded theory: strategies for qualitative research*, Sociology Press, Mill Valley, CA, 1967.
- [25] S. M. Ransinger, "Lithuanian migrants send crime rocketing: representation of 'new' migrants in regional print media," *Media, Culture & Society*, vol. 32, no. 6, pp. 1021–1030, 2010.
- [26] L. Manyozo, *Mobilizing rural and community radio in Africa*, African journalism Studies, Ecquid Novi, 2009.
- [27] A. Ojebode, "Ethical dilemma revisited: PBO newspapers and the professional elbowroom of the Nigerian journalist," *Journal of African Media Studies*, vol. 5, no. 3, pp. 295–312, 2013.
- [28] P. Oso, *Multilingualism: A Nigerian Case Study*, Africa World Press, Lagos, 2006.
- [29] C. Edwards, "The BBC and the development of broadcasting in British Colonial Africa 1946-1956," *African Affairs*, vol. 83, no. 332, pp. 359–402, 2018.