ROLE OF DIACRITICS IN MARKEDNESS AND NASALITY IN TIV PHONOLOGY

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Abstract
This paper explores the role of diacritics in Tiv phonology, focusing on how they mark nasality and differentiate phonemic contrasts. Using Distinctive Feature Theory as a framework, the study analyses how diacritics systematically represent distinctive features, especially nasalised vowels and consonants. Data were collected from native speakers' intuitions, interviews, and orthographic texts. The findings show that diacritics reliably indicate contrastive features in Tiv, clarifying the phonemic inventory and revealing a internally consistent system that aligns with wider Niger-Congo patterns, enabling cross-linguistic comparison. The study also emphasises the importance of accurate diacritic use in supporting effective orthographic representation, literacy materials, and language education. It is advised that future research continue documenting tone and nasalisation patterns and develop standardised orthographic conventions through collaboration with educators and native speakers. Such efforts will enhance teaching resources, dictionaries, and written communication, aiding in the preservation of the Tiv linguistic heritage and encouraging effective language use among both native speakers and learners.

Keywords: Diacritics, Nasality, Markedness, Tiv, Phonology

Introduction

Phonology, as the primary domain for studying the sound system of Human languages, equips researchers with the tools to understand how speech sounds are systematically patterned and organised. It also addresses the sound processes that enable the simplification of pronunciation and morphological derivation. Anyanwu (2002, p. 14) describes phonology as "the part of grammar which links the higher levels, that is, syntax and

morphology, with phonetics, which in turn is the study of speech sounds." This dependence highlights that the reliability of phonological analysis is grounded in accurate phonetic data. Similarly, Ladefoged and Johnson (2011, p. 309) define phonology as "the description of the systems and patterns of sound that occur in a language."

Phonology plays a crucial role in explaining how speakers organise speech sounds into meaningful contrasts in their language. Diacritics are used as visual marks added to characters to indicate a difference from the usual pronunciation. In the Tiv language, sound distinctions are marked through various phonological processes, with **markedness** and **nasality** being key components shaping the structure and interpretation of phonemes. Diacritics are used in the Tiv language to differentiate oral vowels that are pronounced with air flowing only through the mouth from nasal vowels that are pronounced with air flowing through both the mouth and the nose. For example, the word **hia** (burnt) has the same phonemes as the word **hĩã** (chirp) – which is a sound made by a chick. The diacritic distinguishes the word both in pronunciation and meaning. Despite this important function of diacritics in Tiv phonology, limited research has examined its specific roles in signalling markedness and nasality. This study addresses that gap by investigating how diacritics function within the phonological system of Tiv, focusing on their role in marking nasality and distinguishing marked from unmarked forms. Nasality is a prominent phonological feature in Tiv that interacts with both consonants and vowels, and diacritics help clarify these distinctions in the orthography. By analysing how diacritics represent these phonetic features, the study aims to deepen understanding of the mechanisms governing Tiv phonology and contribute to broader phonological theory.

Markedness in phonological theory refers to the idea that certain sounds are perceived as "marked" or more complex relative to more "unmarked" or natural forms. Marked sounds often carry additional phonetic features, making them less common across languages or within a given language. In Tiv, diacritics are used to indicate marked sounds; for example, the underdot /ọ/ is used to indicate a different pronunciation from /o/. With the diacritic, the phonemes are the same and may

present a challenge in pronunciation in words like soo (like) and sọọ (sting), oo (sunshine) and ọọ (wash), kor (rope) and kôr (catch).

Given the interaction of nasality and tone in Tiv phonology, precise diacritic marking is essential to avoid ambiguity and preserve critical phonological distinctions. The absence or misuse of diacritics can lead to misinterpretation, meaning distortion, and loss of important contrasts, particularly in tonal and nasalised contexts. This paper seeks to answer the question of what the nasal phonemes are in Tiv and how they can be identified and marked with appropriate diacritics, as well as how diacritics help lexical contrast and enhance meaning.

Background on the Tiv language

Tiv is a Nigerian language that is spoken mainly in Benue State and in some other states of Nigeria, such as Nasarawa, Taraba, Plateau, Cross River, Adamawa, and the Federal Capital Territory, as well as in the Northern region of Cameroon (Ishima 2018). It is classified as a Bantu language in the Niger-Congo phylum and is spoken by an estimated population of about 15 million people, both in Nigeria and in Cameroon.

Conceptual Review

Phonology

Phonology is the study of how sounds are organised and function within particular languages. It examines the patterns of sounds, their distribution, and the rules governing their interactions in a language's sound system. Akmajian, Demers, Farmer, and Harnish (2008, p. 109) define phonology as *"the description of the sounds of a particular language and the rules governing the distribution of these sounds."* More recent scholarship emphasises phonology as both a cognitive and linguistic domain, highlighting how phonemes are perceived, stored, and processed in the mind, and how universal principles interact with language-specific patterns (Honeybone, 2019). Phonology is therefore essential for understanding the systematic organisation of sounds in a language. By identifying how speakers use sound contrasts to encode meaning, phonological analysis reveals the structure underlying spoken forms. For languages such as Tiv, phonology explains how tonal and nasal distinctions serve as critical cues for lexical and grammatical

meaning.

Phonological Processes

Phonological processes are systematic sound alterations that occur during speech production, helping maintain phonological harmony and facilitating ease of articulation. Assimilation, for instance, involves a segment becoming more like a neighbouring sound, while deletion entails the loss of segments in particular contexts. Cavirani, Lahiri, & Reetz (2019) describe these processes as regular modifications that preserve communicative efficiency and maintain well-formedness in speech.

Omachonu (2011, p. 48) notes that phonological processes often arise to maintain euphony or to resolve violations of well-formedness constraints, resulting in contextually determined surface realisations of underlying forms. For example, assimilation, vowel harmony, consonant mutation, and epenthesis are cross-linguistically attested strategies that facilitate smooth transitions between articulatory gestures. Similarly, Oyebade (1998, p. 56) argues that phonological processes help maintain the "musical quality" of utterances, reducing articulatory difficulty and ensuring fluid production by adjusting the contact points between adjacent sounds. These processes are not random but reflect systematic patterns that characterise a language's phonology.

Diacritics

Diacritics are orthographic marks added to letters to indicate modifications in pronunciation or to distinguish phonemes that would otherwise appear identical in writing. They play a vital role in representing phonetic detail, especially in languages with contrastive tone, nasality, or vowel quality distinctions. Singler and Ladefoged (2018) describe diacritics as symbols that provide critical phonetic information absent in the base alphabet.

In Tiv, diacritics are essential for distinguishing between nasal and oral vowels and for marking tonal contrasts, both of which are phonemic and crucial for meaning. Ngee (2020) and Mnyam (2021) observe that nasal vowels in Tiv are marked with diacritics because they represent more complex, less frequent (i.e., *marked*) forms than oral vowels. Diacritics thus help maintain phonological clarity in both written and spoken

communication. For example, when nasality spreads from a nasal segment to a neighbouring vowel, the final nasal consonant is lost, as in French: A similar example is in the French language, **bon** => **bõ** (good). A similar thing happens in Tiv. When oral vowels become nasal vowels when triggered by the presence of a nasal consonant at the word-final position, as can be seen in the following examples:

Kon => **kõ** (tree)
Mon => **mõ** (neck)
Iywan => **iwyã** (disability)
Gbon gbon => **gbõ gbõ** (healthy)

Oral interviews of native speakers show that the consonant in the final position is lost in speech. In articulation, the tongue remains low rather than rising to the palate. Unless in interrogative statements, where the last vowel is duplicated at the end.

Ká kònǒ? (Is it a tree?)
á gbà mònǒ? (Has he got neck pain?)
ngù gbõ gbònǒ? (is he healthy?)

It is the presence of the diacritics that makes it clear what is realised in the rapid speech of native speakers. Thus, Ityavyar (2022) argues that diacritics are crucial for accurately representing nasality and other marked features in Tiv orthography. They ensure that distinctions essential to the language's phonological system are maintained in writing. However, challenges remain: Similarly, Karshima (2012) critiques the lack of systematic diacritic use in Tiv texts and calls for renewed scholarly attention to improve on early efforts such as those of R. C. Abraham (1940).

Markedness in Phonology

Markedness is a theoretical concept used to explain asymmetries in linguistic systems. It describes how certain sounds or structures are considered more *marked*—that is, more complex, less frequent, or less natural—relative to simpler, more common *unmarked* forms. Green and Nasukawa (2019) explain

that markedness reflects a hierarchical organisation of phonological features, where marked sounds typically involve additional or less common articulatory efforts. Markedness distinctions often motivate phonological processes and explain why certain sounds are more prone to change or alternation. For instance, voicing contrasts in bilabials can be analysed in markedness terms: voiced bilabials like /b/ are marked relative to voiceless ones like /p/. Similarly, in morphology, unmarked forms are typically simple singulars, while marked forms carry additional affixes indicating plural or other grammatical information.

In the context of Tiv, markedness is evident in both tone and nasality. Nasal vowels are less frequent and more complex than oral vowels, making them marked forms that require diacritic marking. Tone similarly introduces contrastive complexity that is essential for distinguishing lexical and grammatical meanings. Diacritics thus serve as orthographic tools for representing these marked features, ensuring that the language's phonological distinctions are preserved and clearly communicated in writing.

Morphological Marking and Nasality in Tiv

In Tiv, singular noun forms are generally unmarked and more frequent, while plural forms are morphologically marked through the addition of prefixes. This aligns with the concept of markedness, where unmarked forms are considered more basic, natural, or common. Table 1 below illustrates this distinction:

Table 1: *Examples of singular and plural forms of nouns in Tiv*

Unmarked singular noun Forms	**Gloss**	**Marked noun plural forms**	**Gloss**
Tor	king	utor	kings
kpenga	stool	ukpenga	stools
Bua	cow	abua	cows
Kasua	market	ukasua	markets
Takeda	book	ityakeda	books

As shown in Table 1, plural formation in Tiv typically involves the addition of vowel-initial morphemes (e.g., *u-*, *a-*, *itya-*) to the singular noun stem. These prefixes serve as morphological

markers of number and are less frequent in everyday speech. Sokpo, Ode, Ate, and Yio (2023) observe that unmarked forms are acquired earlier by children and second language learners due to their frequency and phonological simplicity. This suggests that markedness not only reflects structural complexity but also has implications for language acquisition and processing.

Nasality as a Phonological Feature

Goldsmith and Gick (2021) describe nasality as a fundamental property in the phonological systems of many languages, often contributing to phonemic contrasts. In nasal vowels, air flows simultaneously through the mouth and nose, making them perceptually distinct from oral vowels. Nasality is a key phonological feature in Tiv, particularly as it pertains to both vowels and consonants. It involves the lowering of the velum to allow air to pass through the nasal cavity during articulation.

Empirical Review

Aor (2022) investigates nasalisation in Tiv phonology, arguing that despite its prominence, it remains an underexplored area of study. His work highlights that Tiv phonology includes five primary nasal consonants: the bilabial /m/, the alveolar /n/, the velar /ŋ/, the labiodental /ɱ/, and the palatal /ɲ/. These nasal consonants are all voiced and are considered *marked* segments due to their relative complexity and lower frequency in the phonological inventory. Aor contends that Tiv does not possess contrastive, independent nasal vowels in its phonemic inventory. Instead, vowels acquire nasal quality contextually, through coarticulatory processes with adjacent nasal consonants. Specifically, vowels become nasalised when they occur before or after a word-final nasal consonant or when positioned between two nasal obstruents. Examples include forms such as /m̃mẽm̃/, /mãn/, and /m̃em̃bɜ:/, where nasality spreads to neighbouring vowels.

He further argues that oral vowels in Tiv should be written without any diacritical mark, while nasalisation must be indicated using the tilde (˜) over nasalised segments. However, he notes that the current Tiv orthography generally fails to consistently represent these diacritic markers, leading to ambiguity in written forms. Aor also provides a detailed inventory of nasalised vowels observed in Tiv, including forms such as

[ĩ], [ĩː], [ẽ], [ẽː], [ã], [ãː], [ɒ̃], [õː], [ɔ̃], [ɔ̃ː], [ɔ̃], [ũː], [ɛ̃ĩ], [ãĩ], [ɔ̃ĩ], [ĩã], [õõ], [õã], and [õẽ]T. his observation underscores the need for a systematic orthographic approach to marking nasality in Tiv, ensuring phonological distinctions are accurately preserved in writing and aiding in both literacy development and linguistic analysis.

Karshima (2012) discusses the use of diacritic marks for nasalised sounds in Tiv. He argues that the early orthographic practice introduced by R.C. Abraham (1940), which employed the tilde (˜) to mark nasality, should be maintained, noting that the tilde is widely used in many languages to represent nasal vowels. However, Karshima (2012, p. 48) later introduces a degree of inconsistency by suggesting the adoption of an alternative diacritic, specifically a dot placed above the bilabial nasal consonant /m/. This contradiction underscores ongoing debates regarding standardisation in Tiv orthography and highlights the need for consensus on diacritic conventions to ensure clarity and uniformity.

In a related context, Omachonu (2001) provides a detailed examination of phonological processes in Igala, a Yoruboid language spoken in central Nigeria. His study focuses on nasalisation, vowel assimilation, and vowel elision as key processes shaping the phonological system. Omachonu's analysis shows that nasalisation in Igala is predominantly progressive (left-to-right), such that oral vowels are nasalised when they occur after a nasal consonant. This is exemplified in lexical items such as *ingo* 'bee', *unga* 'position', and *onganga* (the name of a bird), where vowels like /i/, /u/, and /o/ exhibit systematic nasalisation triggered by preceding nasal segments. Further, Omachonu identifies vowel assimilation as a robust regressive (anticipatory) process. In this context, the first vowel assimilates completely to the second vowel, resulting in full vowel harmony that aligns the phonetic features of adjacent segments across morpheme boundaries. This process plays an important role in morphophonemic alternation, contributing to the cohesion of vowel sequences in Igala word formation.

Additionally, Omachonu (2001) documents the occurrence of coalescent assimilation in Igala phonology. He observes that both vowel coalescence and consonant coalescence are permitted, whereby adjacent segments merge to form a new segment bearing features of both original sounds.

The reviewed literature underscores the typological importance of tone and nasality in many Niger-Congo languages. While each language adapts these features differently in orthography and phonology, a common thread is the need for diacritics or other markers to distinguish meaning where tone and nasality are contrastive. In Tiv, as with Yoruba, Igbo, and Ewe, the phonological significance of tone and nasalisation justifies systematic representation in writing. However, unlike these languages where tone marking has been more consistently codified, Tiv continues to suffer from orthographic inconsistencies, especially in the application of diacritics. This study seeks to bridge that gap by providing a structured analysis of how diacritics function within Tiv phonology, focusing specifically on their role in marking nasality and tone as instances of phonological markedness.

Data for the Study

Data were collected from multiple sources, including existing linguistic research, fieldwork in Tiv-speaking regions, structured interviews with native speakers, and phonetic transcription. Fieldwork was conducted in communities where Tiv is predominantly spoken to ensure that the data reflect authentic usage. Structured interviews targeted native speakers—including linguists and Tiv language experts—to verify the correct pronunciation and usage of words, especially those marked with diacritics. Participants were asked about the use of nasal vowels and tonal distinctions in everyday speech and were prompted to produce minimal pairs designed to highlight the phonemic role of nasality and tone. During these interviews, participants' speech was recorded and subjected to careful phonetic transcription to capture diacritical markings and associated phonological features precisely. The resulting recordings were systematically analysed to ensure accuracy in representing tonal patterns and nasalisation. The phonemic analysis focused on identifying the distinctive features of nasality and tone, mapping diacritics onto features such as [±nasal] for vowels and [±high]/[±low] for tone. This methodological framework was designed to uncover systematic patterns in the marking of these features in Tiv orthography and phonology.

Theoretical Framework

This study is grounded in Distinctive Feature Theory, first introduced by Roman Jakobson and later developed by Noam Chomsky and Morris Halle (Jakobson, Fant & Halle, 1952; Chomsky & Halle, 1968). This theoretical framework provides a systematic approach for analysing how phonological features such as nasality and tone are represented and distinguished in Tiv, particularly through the use of diacritics. Distinctive Feature Theory treats phonemes not as indivisible units but as bundles of binary features. Each feature can be either present (+) or absent (“) in a given phoneme. This approach allows for the precise and consistent description of phonemes across languages. For example:

- [±voice]: distinguishes sounds with vocal cord vibration (e.g., /b/ [+voice] vs. /p/ [“voice]).
- [±nasal]: distinguishes airflow through the nasal cavity (e.g., /m/ [+nasal] vs. /b/ [“nasal]).
- [±consonantal]: marks significant vocal tract constriction (e.g., stops are [+consonantal], vowels [“consonantal]).
- [±continuant]: differentiates continuous airflow (e.g., /s/ [+continuant] vs. /t/ [“continuant]).
- [±labial]: identifies articulation with the lips (e.g., /p/, /b/ [+labial]).
- [±coronal]: identifies articulation with the tongue tip/blade (e.g., /t/, /d/ [+coronal]).

Minimal pairs illustrate how these features contrast meaningfully in languages—for example, English *bat* vs. *pat* differ only in [±voice].

By applying this framework to Tiv, the study examines how diacritics systematically encode distinctive phonological features such as [±nasal] in vowels and tonal distinctions like [±high] or [±low].

DATA PRESENTATION AND ANALYSIS

This section presents the data collected on tone and nasality in Tiv and provides an analysis of the phonological patterns they reveal. The data are organised into categories to answer the research questions of what nasal vowels are and how to identify and mark them in Tiv orthography.

Oral vowels acquire nasal quality when they are in certain environments in Tiv phonology. The data below shows nasal vowels:

Table 2: *Nasal Vowels*

Tiv Word	IPA	Gloss	Feature Noted
Áọndò	**[áɔⁿdò]**	God	Nasal Vowel
úngwá	**[úŋgwá]**	hear	Nasal Vowel
ínjá	**[ínʤá]**	worth	Nasal Vowel
ìmbyà	**[ìᵐbyà]**	type	Nasal Vowel
bùndè	**[bùⁿdè]**	postpone	Nasal Vowel

In Table 2, the data taken from a Tiv text (Akpagher, 2016), show that vowels are affected in the environment where they are adjacent to nasal consonants.

Table 3: *Nasal Consonant*

Tiv Word Noted	IPA	Gloss	Feature
Hùm	**Hùŋ**	cameleon	Nasal
Consonant			
Kòn	**Kòn**	tree	Nasal
Consonant			
Bùm	**Bùŋ**	swear	Nasal
Consonant			
Mòn	**Mòn**	neck	Nasal
Consonant			

In Table 3, the data show nasal consonants in the word-final position, which trigger the nasal vowels, confirming the progressive nasality of Tiv language, unlike the retrogressive Igala nasality with Omachonu (2001) talks about.

Table 4: *Minimal Pairs*

Tiv Word Contrast	IPA	Gloss	Feature
ndór	**[ⁿdór]**	boundary	H H
ndòr	**[ⁿdòr]**	wet	L L
mbá	[ᵐ**bá**]	are	H H
mbà	**[ᵐbà]**	people	L L

Table 5 shows the minimal pairs with tonal differentiation, which affects the meaning of the word, showing that tone has a phonemic feature in Tiv.

Analysis

Nasalisation Patterns

The data in Table 3 illustrate how nasal vowels in Tiv arise in specific phonological environments, particularly in the context of adjacent nasal consonants. Words such as ***áọndò*** **[áɔⁿdò]** 'God', ***úngwá*** **[úŋgwá]** 'hear', and ***ínjá*** **[ⁱⁿdʒá]** 'worth' all feature oral vowels that acquire nasality due to proximity to nasal consonants within the syllable structure. This suggests a progressive, left-to-right pattern of nasal spreading, where the [+nasal] feature of the consonant extends onto the following vowel. This directionality contrasts with patterns observed in related languages such as Igala. Omachonu (2001) documents predominantly regressive (right-to-left) nasal assimilation in Igala, where a nasalised vowel can influence a preceding oral vowel. In Tiv, however, the data support a consistent progressive assimilation pattern, aligning with cross-linguistic tendencies for nasal spreading to proceed from nasal consonants onto adjacent vowels (Hyman, 2011; Ayagah & Akpagher, 2024).

Table 4 further demonstrates the presence of nasal consonants in word-final position (*Hùm*, *Kôn*, *Bùm*, *Mòn*), confirming that the language maintains a robust set of nasal segments that can serve as triggers for vowel nasalisation. The clear orthographic and phonetic marking of these nasal vowels in Tiv suppõrts the analysis that nasality is a distinctive, phonemic feature, systematically represented through diacritics in the writing system.

Analysis of Tonal Contrasts

Table 5 presents minimal pairs in Tiv that differ only in tonal specification, such as *ndór* [ndór] 'boundary' (High-High) versus *ndòr* [ndòr] 'wet' (Low-Low), and *mbá* [mbá] 'are' versus *mbà* [mbà] 'people of'. These pairs clearly show that tone functions phonemically in Tiv, distinguishing lexical meaning even when segmental content remains identical.

Such data support the analysis of tone as a distinctive feature in Tiv phonology, consistent with Yip's (2002) observation that many African languages use tone contrastively to distinguish lexical items and grammatical forms. The systematic use of diacritics in Tiv orthography to mark High and Low tones reflects this phonemic status, ensuring clear differentiation in writing

and reading. Moreover, the presence of both High and low-level tones suggests a two-level tonal system as a baseline, with the potential for more complex tonal phenomena such as contour tones or downstep that may warrant further investigation. Hyman (2011) notes that many Niger-Congo languages exhibit rich tonal systems involving both level and contour tones, underscoring the importance of careful phonetic and phonological documentation.

Comparative and Theoretical Implications

Overall, the data presented support the analysis that both nasality and tone are phonemically contrastive features in Tiv, each systematically marked in the orthography through diacritics. The progressive nature of nasal spreading observed in Tiv contrasts with the regressive assimilation documented in Igala (Omachonu, 2001), highlighting important micro-typological variation within the Niger-Congo family. By adopting Distinctive Feature Theory (Chomsky & Halle, 1968), this study provides a structured approach to understanding how these features function in Tiv. Nasality can be represented as [+nasal] and tone as [±high] or [±low], allowing for a clear, binary, and cross-linguistically comparable analysis of the phonemic inventory. The use of diacritics in Tiv orthography aligns with this feature-based approach, offering a transparent and systematic representation of underlying phonological contrasts.

These findings underscore the status of tone as a phonemic feature in Tiv, consistent with patterns observed across many Niger-Congo languages. For example, Yoruba uses a three-level tone system (High, Mid, Low) to distinguish meaning lexically and grammatically (Pulleyblank, 1986). Similarly, Igbo employs a two-level tone system, with High and Low tones marked orthographically and used in both lexical and grammatical contrasts (Clark & Williamson, 1977; Welmers, 1973). Ewe demonstrates even richer tonal morphology, combining level tones and contours to express both lexical items and grammatical categories (Ansre, 1961). These cross-linguistic comparisons highlight the importance of diacritics and other orthographic strategies for capturing phonemic tone in written form.

Summary of Findings

The study finds that Tiv phonology systematically employs tone and nasality as contrastive features, which can be analysed and represented using diacritics within a feature-based framework. By applying Distinctive Feature Theory, the research demonstrates that Tiv's sound system has an internally consistent structure that aligns with broader patterns found in Niger-Congo languages such as Igala, Yoruba, Igbo, and Ewe, enabling meaningful cross-linguistic comparison. The findings also show that precise marking of these features is crucial for developing effective orthographic standards and literacy materials, supporting improved teaching resources, dictionaries, and written communication. Overall, the study provides new, detailed documentation of Tiv's phonemic inventory and offers practical guidance for preserving and promoting the language.

Recommendations

Based on these findings, it is suggested that future work on Tiv phonology should continue to refine and expand the documentation of tone and nasalisation patterns, ensuring that diacritics are applied consistently across teaching and literacy materials. Researchers could also explore comparative studies with other Niger-Congo languages to deepen understanding of shared and unique phonological features. Additionally, collaboration between linguists, educators, and community members is recommended to develop and standardise orthographic conventions that accurately reflect Tiv's sound system, thereby supporting more effective language teaching, dictionary compilation, and the preservation of the Tiv linguistic heritage.

Contribution to Knowledge

This research makes several important contributions to the study of Tiv phonology and the broader field of African linguistics.

First, it offers a detailed, feature-based analysis of nasality and tone in Tiv, addressing a gap in existing literature by documenting how these features are consistently marked with diacritics. This contributes to a clearer understanding of Tiv's phonemic inventory and the rules governing its sound system.

Second, by applying Distinctive Feature Theory, the study demonstrates how universal phonological frameworks can be used to analyse Tiv in a systematic, replicable way. This approach not only clarifies the internal structure of Tiv phonology but also enables cross-linguistic comparison with other Niger-Congo languages, such as Igala, Yoruba, Igbo, and Ewe, which also use tone and nasality contrastively.

Finally, the study has practical implications for orthographic development and literacy in Tiv. By underscoring the essential role of diacritics in accurately representing phonological contrasts, it provides a foundation for improving teaching materials, dictionaries, and written communication in the language. This contributes to preserving the linguistic heritage of the Tiv people and promoting effective language use for both native speakers and learners.

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