Disiplinlerarası Dil ve Kültür Çalışmaları Dergisi

Interdisciplinary Language and Culture Studies

Article Types: Research Article

Received:12.09.2025
Accepted:28.12.2025
Published:31.12.2025
Doi: 10.5281/zenodo.18084626

Volume/Issue:3(2)
Pub Date Season: Winter
Pages: 123-132

Cite as: Sougoule, M. (2025). Phonologically conditioned allomorphy in the Bamanankan past tense morpheme /ra/. *Disiplinlerarası Dil ve Kültür Çalışmaları. 3*(2), 123-132.

Phonologically Conditioned Allomorphy in the Bamanankan Past Tense Morpheme /ra/

Moussa SOUGOULE

Dr, Université Yambo Ouologuem de Bamako, moussasougoule1@gmail.com,

ORCID:0009-0009-8647-82

ÖZET

This study examines the allomorphic variation of the past tense morpheme /-ra/ in Bamanankan, a Mande language of the Niger-Congo family spoken predominantly in Mali, Burkina Faso, and Côte d'Ivoire. The primary objective of the study is to identify the range of past tense allomorphs in Bamanankan and to determine the phonological conditions governing their distribution. The data were collected through a mixed-method approach combining native speaker elicitation with corpus-based analysis, ensuring both controlled and naturally occurring linguistic evidence. A dataset consisting of 100 verbs was analyzed to assess the interaction between segmental phonology and past tense marking. The findings indicate that the Bamanankan past tense morpheme displays three distinct allomorphs: -ra, -na, and -la. The selection of these allomorphs is shown to be systematically conditioned by the phonological properties of the preceding segment. Specifically, -na occurs following nasal sounds, while -la appears after certain consonants, including r, t, w, c, and l. In contrast, -ra is realized after consonants such as s, b, f, y, j, g, and k. Furthermore, -ra can be considered the default or underlying form of the past tense morpheme due to its broader distribution and higher frequency across phonological environments. These results contribute to the description of Bamanankan morphophonology and offer insights into phonologically conditioned allomorphy within Mande languages more generally.

***Key words**: Bamanankan, Past tense morpheme, Allomorphy, Phonological conditioning, Mande languages.*

Bamanankan Dilinde Geçmiş Zaman Biçimbirimi /-ra/'nın Sesbilgisel Olarak Koşullanmış Alomorfisi

ABSTRACT

Bu çalışma, Nijer-Kongo dil ailesine bağlı bir Mande dili olan ve başta Mali, Burkina Faso ve Fildişi Sahili'nde konuşulan Bamanankan dilindeki geçmiş zaman biçimbirimi /-ra/'nın alomorfik varyasyonlarını incelemeyi amaçlamaktadır. Çalışmanın temel amacı, Bamanankan'da geçmiş zaman ekinin sergilediği alomorfları belirlemek ve bu alomorfların dağılımını belirleyen sesbilgisel koşulları ortaya koymaktır. Veri seti, ana dili konuşurlarından yapılan yönlendirilmiş derlemeler ile derlem temelli analizlerin bir arada kullanıldığı karma bir yöntemle elde edilmiştir. Toplam 100 fiil, kesimsel sesbilgisi ile geçmiş zaman işaretlemesi arasındaki etkileşimi incelemek amacıyla analiz edilmiştir. Elde edilen bulgular, Bamanankan geçmiş zaman biçimbiriminin -ra, -na ve -la olmak üzere üç farklı alomorf sergilediğini göstermektedir. Bu alomorfların seçimi, kendilerinden önce gelen sesbirimlerin sesbilgisel özelliklerine sistematik olarak bağlıdır. Buna göre, -na burun ünsüzlerinden sonra ortaya çıkarken, -la ise r, t, w, c ve l gibi belirli ünsüzlerden sonra kullanılmaktadır. Buna karşılık -ra, s, b, f, y, j, g ve k gibi ünsüzlerden sonra gerçekleşmektedir. Ayrıca -ra, daha geniş bir dağılıma sahip olması ve birçok sesbilgisel bağlamda ortaya çıkması nedeniyle geçmiş zaman biçimbiriminin varsayılan ya da temel biçimi olarak değerlendirilebilir. Bu çalışma, Bamanankan'ın

biçimbirim-sesbilgisi yapısının betimlenmesine katkı sağlamakta ve Mande dillerinde sesbilgisel koşullanmaya dayalı alomorfiye ilişkin daha genel çıkarımlar sunmaktadır.

Anahtar Sözcükler: *Bamanankan, Geçmiş zaman biçimbirimi, Alomorfi, Sesbilgisel koşullanma, Mande dilleri*

INTRODUCTION

Morphology is a branch of linguistics which mainly focuses on the formation of words in a given language. How verbs are transformed into noun, adjectives into verbs, verbs into adjectives etc. are the questions morphologists seek answers. Similarly, Lieber (2009 p.2) defines: "morphology is the study of word formation, including the ways new words are coined in the languages of the world, and the way forms of words are varied depending on how they're used in sentences". (Booij, 2005 p. 4) states "morphology deals with the internal constituent structure of words as well". Similarly, Aronoff & Fudeman (2011) defines morphology as "the mental system involved in word formation or to the branch of linguistics that deals with words, their internal structure, and how they are formed" (p. 2). The above definitions highlight that morphology is not just about word formation but also about analysing how words are structured internally. This means examining how morphemes (roots, prefixes, infixes, suffixes) combine to create meaning and grammatical functions.

Alternatively, phonology is concerned with sound structure. According to Akmajian et al (2010, p. 109), "Phonology is the subfield of linguistics that studies the structure and systematic patterning of sounds in human language. Morphology and phonology interact in languages in such a complex way that usually it leads to systematic variation in the realization of morphemes. One exciting instance of phonologically conditioned allomorphy that is not very much documented is in Bamanankan, a widely spoken Manding Language, the past tense suffix /ra/. The present study is an investigation into these variations.

Morphemes are the smallest unit of meaning in a language, and they are categorised in two types: free morphemes and bound morphemes. Wardhaugh (1972, p. 70) states: "morphemes are the minimal units of meaning out of which meaningful utterances are built in ways still to be determined". According to Rahman (2010, p. 53), the term morpheme is used to refer to "those parts of words which mean something on their own or when they are used with other morphemes". Aronoff & Fudeman (2011) add that it is "the smallest linguistic pieces with a grammatical function". However, they state that the above definition does not include all morphemes in the sense that a morpheme can be a word, such "book" or part of a word, such as plural "-s" in the word "books".

Concerning, the types of morphemes, we talk about free morphemes, when they can stand alone and still be meaningful like the words: book, apple, and school. Thus, a free morpheme is referred as monomorphemic, pronounceable and meaningful (Wardhaugh, 1972). In other words, a free morpheme is a "simple word like ***cat*** that can be segmented into only one morpheme" according to (Tokar, 2012, p. 26). Alternatively, bound morphemes are realised through the use of affixes. For example, the /s/ in "dogs" and the /ed/ in "stopped" are suffixed to free morphemes "dog" and "stop". These suffixes cannot stand alone. According to Wardhaugh (1972, p. 76) "A bound morpheme must co-occur with at least one other morpheme". To put it simply, bound morphemes are affixes (prefixes, infixes or suffixes) attached to a morpheme. So, they are always attached to free morphemes, however, some free morphemes cannot be affixed like article "the" or "quite" (Wardhaugh, 1972). Therefore, free morphemes can be lexical or functional. Lexical free morphemes are words like book, chair, and school. These morphemes can stand alone, and be meaningful, but cannot be separated into further parts or units. However, the functional free morphemes can also stand on theirs but play a functional role in the sentence as their name indicates. For example, in the sentence below:

It is on the table.

The function of "on" is to indicate location. Examples of functional morphemes are articles, conjunctions, demonstratives, quantifiers and prepositions. Bound morphemes are composed of derivational morphemes and inflectional morphemes. These two morphemes are realised through the use of affixation. Thus, derivational morphemes create new words by using affixes. For example, the suffix –er in drive makes driver, a new word. The first word was a verb, and when the suffix –er is added, it becomes a noun. So, there is a change of grammatical category, from verb to noun. This type of derivational morpheme is referred to as "the pure derivational morpheme" (Rahman 2010, p.56). However, derivational morpheme when added to another morpheme does not always change the grammatical category of the words. Sometimes it remains unchanged as in:

Re + act --------- react (both act and react are verbs)

Re + play -------- replay (both play and replay are verbs)

Unlike derivational morphemes, inflectional morphemes do not change the grammatical category of words affixed. These morphemes are suffixed to words in accordance to grammatical rules. For example, the morpheme s is attached to nouns to make plurals as in:

Book + s -------- books

School + -------- schools

Similarly, the morpheme –ed is suffixed to verbs to make the past tense of the verbs as in:

Stop + ed -------- stopped

Play + ed -------- palyed

Thus, the morpheme –ed represent the past tense marker in English language. This past tense marker when attached to verb varies in pronunciation depending on the surrounding sounds. For example, it is /t/ in stopped; it is /d/ in moved; and it is /id/ in responded. So, these three different pronunciations of the same morpheme are called allomorph. So, allomorphs are "different, or variant, forms of morphemes" (Rahman 2010, p. 58). The discipline which deals with the study of the sounds of morphemes is referred as morphophonemics or morphophonology (Rahman 2010). Morphophonemics has been defined as the study of "the variation of morphologic elements as they enter into different combinations" (Kilbury 1973, p. 245).

Allomorphy is the property whereby a morpheme has different forms in different phonological, morphological or lexical conditions. In many languages, an allomorph gets its distribution according to phonological rules thereby keeping the phonotactic harmony within them. The present study thus focuses on itself with phonological conditions that trigger the past tense suffix /ra/ alternation in the Bamanankan verb morphology. Allomorphs are realised in two conditions, phonological and morphological conditions. These conditions contribute to the creation of different variants of the same morpheme. According to Wardhaugh (1972), phonological conditioning is referred "when the distribution of the various allomorphs can be stated in terms of their phonemic environments" (p.70). For example, the morpheme /s/ takes different forms in the words "cats", "dogs", and "bridges". Alternatively, morphological conditioning of allomorphs is arbitrary. There are no clear rules as in phonological conditioning of allomorphs. For example, it is difficult to determine the cases of the plural of "man" as in "men", "child" as in "children".

Morphs are considered as "the phonological (spoken) or orthographic (written) forms to realize morphemes, and they are minimal carriers of meaning" (Cao 2020, p.324). In other words, morph is the spoken and written realization of a morpheme (Aronoff & Fudeman, 2011). Haspelmath (2019) asserted that "morph is a minimal linguistic form because it is the basis for the definitions of *affix*, *prefix*, *suffix*, *root* and other frequently used terms, and is thus a very important basic term" (p.117). Several studies have attempted to explain the rules governing the formation of past tense allomorphs in Bamanankan. For instance, Birds et al. (1977, p. 219) proposed that **-ra** is the basic form, which changes to **-na** after nasal consonants and vowels and to -la when followed by **/r/** or **/l/**. While this explanation is straightforward, it does not fully account for all aspects of past tense formation. Our study takes a different approach by identifying and describing all phonemes involved in the alternation of **-ra** in various contexts. The primary research question guiding this study is: What are the phonological conditions governing the selection of the past tense morpheme **-ra** in Bamanankan? So, the objective of this study is to identify environments where **-ra** remains unchanged, and where it shifts to **-na** or **-la**. Additionally, it aims to establish phonological rules governing these changes. Additionally, it aims to establish clear and concise rules for teaching and learning the Bamanankan past tense.

THEORETICAL AND METHODOLOGICAL FRAMEWORK

As mentioned earlier, this study examines the past-tense allomorphy in Bamanankan, where the morpheme –ra alternates with –na and –la depending on phonological context. To explain these alternations, this research is grounded in ***Morphophonemic Theory*** and ***Optimality Theory (OT)***. These frameworks provide complementary perspectives: Morphophonomic theory accounts for the rule-based nature of the alternations, while OT models them as the result of competing phonological constraints.

The data for this study were collected from a combination of native speaker elicitation and corpus analysis. A sample of 100 verbs was analysed to determine the phonological conditions influencing past tense allomorph. Native Bamanankan speakers, including the researcher himself, were consulted to confirm the acceptability of accuracy. The study also drew on existing Bamanankan linguistic descriptions and grammatical texts for comparative verification. In terms of analysis, phonological analysis was conducted to identify patterns in the distribution of past tense allomorphs. Verbs were grouped based on their final syllable's phonetic properties, and their past tense were examined to determine the systematic alternations. The analysis focused on identifying environments where **-ra** remains unchanged versus where it shifts to **-na** or **-la**, and establishing phonological rules governing these changes.

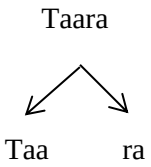
RESULTS

The following section presents the results of the analysis, detailing the distribution of allomorphic forms (-ra, -na, -la) in relation to the phonetic properties of verb-final syllables and outlining the phonological rules that account for these alternations. /-ra/ is used to represent the past tense morpheme in Bamanankan. For example, English regular past tense morpheme is represented by /-ed/. Similarly, Bamanankan uses /ra/ for the same purpose.

Through detailed phonological analysis, verbs were grouped based on the phonetic properties of their final syllables, and their past tense forms were analysed for systematic alternations. This process led to the identification of three distinct cases in the distribution of the past tense allomorphs *-ra*, *-na*, and *-la* -each governed by specific phonological environments. The following section outlines these three cases and the phonological rules underlying each alternation.

Case 1: /-ra/ remains unchanged in environments where the final syllable sound of the verb begins with after **s, b, f, y, j, g,** and **k** letters as in examples below:

Ka kasi (to cry)	Kasira (cried)
Ka latubi (to repent)	Latubira (repented)
Ka sɔsɔ (to contradict)	sɔsɔra (contradicted)
Ka fofo (to pull / drag)	fofora (pulled/ dragged)
Ka lajɛ (to see)	lajɛra (seen)
Ka tobi (to boil)	tobira (boiled)



The table below presents one example for each case in which *–ra* remains unchanged as *-ra*, depending on the phonological environment.

Table 1.
–Ra remains unchanged after s, b, f, y, j, g, k as onsets of the final syllable of the verbs

Past tense morpheme **-ra**	Root verb	Past form	Meaning
/s/	Ka**s**i (cry)	Kasira	Cried
/b/	Latu**b**i (repent)	Latubira	Repented
/f/	Fo**f**o (pull/drag)	Fofora	Pulled
/y/	Kala**y**a (heat)	Kalayara	Heated
/j/	La**j**ɛ (see/observe)	Lajɛ	Seen
/g/	Si**g**i (sit down)	Sigira	Sat down
/k/	Tu**k**u (link)	Tukura	Linked

As presented, -ra remains -ra when followed by the following letters at the beginning of the last syllable sound of the verb: s, b, f, y, j, g, and k. For example, "Kasi" is composed of two syllables: "Ka" (first syllable) and "si" (last syllable). The last syllable begins with "s". So, in this verb, the past tense will be: kasira (cried). It is the same for all the stated letters (b, f, y, j, g, k) at the beginning of the last syllable of the verb.

Case 2: /-ra/ changes to **/-na/** when the final syllable sound of the verb begins with **n, m, ɲ, ŋ,** letters and **after nasalised vowels (an, -en, -ɛn, -in, -on, -ɔn, and -un)** as in examples below:

Ka na (to come)	nana (came)
Ka dimi (to get angry)	dimina (got angry)
Ka bin (to fall down)	binna (fell down)
Ka fin (to darken)	finna (darkened)
Ka kalan (to learn)	kalanna (learned)

The table below presents one example for each case in which *–ra* changes to *–na* depending on the phonological environment.

Table 2.

–Ra shifts to –na after n, m, ɲ, ŋ as onsets of the final syllable of the verb and after nasalised vowels (an, -en, -ɛn, -in, -on, -ɔn, and -un)

Past tense morpheme –**ra**	Root verb	Past form	Meaning
/n/	**N**a (come)	Nana	Came
/m/	Taa**m**a (walk)	Taamana	Walked
/ ɲ/	Si**ɲ**ɛ (scratch)	Siɲɛna	Scratched
/ ŋ/	Se**g**in (return)	Seginna	Returned
/an/	Sir**an** (feel afraid)	Siranna	Felt afraid
/en/	Bil**en** (get red)	Bilenna	Got red
/ ɛn/	Yɛlɛ**n** (open)	Yɛlɛnna	Opened
/in/	M**in** (drink)	Minna	Drank
/on/	B**on** (shoot)	Bonna	Shot
/ɔn/	Sɔ**n** (accept)	Sɔnna	Accepted
/un/	D**un** (eat)	Dunna	Ate

In Bamanankan, vowels can be nasalised and influence the preceding sounds. Birds et al (1977) identified the following nasalised vowels: -an, -en, -ɛn, -in, -on, -ɔn, and -un. So, in the cases of nasalised vowels, -ra (basic form) changes to -na even though they the last syllable sound begins with phonemes that normally make -ra shifted to -la or remained -ra as in examples below:

San (to buy) ⟶ sanna (bought)

In the above verb, the syllable sound begins with s, which means that it should be -ra according to the rules. It is not so, because despite that the syllable sound begins with an s, but it ends in a nasalised vowel -an which shifts immediately the preceding sound to a nasal sound. Another example can be that of:

Segin (to return) ⟶ seginna (returned)

Similarly, according to the stated rules, since the last syllable sound of the verb begins with g, it should be shifted to -ra instead of -na, but thera already exists a nasalised vowel which nasalised immediately -ra.

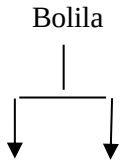
Therefore, in order -ra to change to -na, there are two conditions:

- ✓ The first condition is when the last syllable sound begins with n or m, ɲ, ŋ -ra shifts to -na.

The second condition is when the verb ends nasalised vowels like -an, -en, -ɛn, -in, -on, -ɔn, and -un.

Case 3: /-ra/ changes to **/-la/** when the final syllable sound of the verb begins with **r, t, w, c,** and **l** letters as in examples below:

Ka kuru (to curl)	kurula (curled)
Ka tɔrɔ (to give birth	tɔrɔla (gave birth)
Ka boli (to run)	bolila (ran)
Ka yiriwa (to prosper)	yiriwala (prospered)
Ka dagakolonci (to destroy)	dagakoloncila (destroyed)



Boli la

(run) (Past tense morpheme: P.T.M)

The table below presents one example for each case in which *–ra* changes to *–la* depending on the phonological environment.

Table 3.

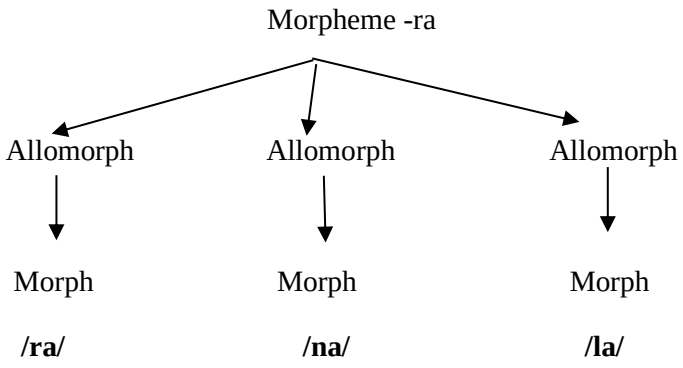
–Ra shifts to –la after r, t, w, c, l as the onset of the final syllable of the verb

Past tense morpheme **–ra**	Root verb	Past form	Meaning
/r/	Turu (plant)	Turula	Planted
/t/	Mankutu (praise)	Mankutula	Praised
/w/	Yiriwa (prosper)	Yiriwala	Prospered
/c/	Dagakolonci (destroy)	Dagakoloncila	Destroyed
/l/	Fili (throw)	Filial	Threw

From the above the tables, we can infer that the past tense morpheme /-ra/ in Bamanankan has three allomorphs: /-ra/, /-na/, and /-la/. The shift from /-ra/ to /-na/ in verbs ending (phoneme at the beginning of the last syllable) in nasal sounds (n, m) suggests nasal harmony, a common phonological process in Bamanankan. The shift from /-ra/ to /-la/ in verbs ending in r, t, w, c, l may be due to approximant harmony, where /r/ is influenced by surrounding sounds.

An allomorph is usually identified as the basic allomorph, and criteria should be observed before deciding which allomorph should be considered as the basic allomorph. According to Nida (1949 p.45) "the basic allomorph is defined in terms of three characteristics: statistical predominance, productivity of new formations, and regularity of formation". To put it simply, in order to decide which allomorph should be considered as a basic allomorph, one should consider the frequence of occurrences of the allomorph. If an allomorph occurs more than the others in different contexts can be one of the criteria. Furthermore, one should also consider the predominance of the allomorph. So, in the case of Bamanankan, -ra is considered as the basic allomorph in the sense that it remains unchanged in after a great number of phenomes than the others. For example, it remains unchanged after six (07) letters which are **s, b, f, y, j, g,** and k compared to -na after the letters **n, m, ɲ, ŋ** and nasalised vowels, and to -la after five (05) letters which are **r, t, w, c,** and **l.** Furthermore, the number of verbs to which -ra occurs is higher than the other allomorphs.

Bamanankan past tense allomorphs



DISCUSSION

This study has demonstrated that Bamanankan past tense is realised in three forms called allomorphs: **-ra, -na**, and **–la**. The morph –ra is identified as the basic form, and the choice of the allomorph is determined by the "onset of the final syllable of the verb stem". Specifically:

-na appears when the final syllable begins with n, m, g, ɲ, ŋ, and nasalised vowels.

-la appears when the final syllable begins with r, t, w, c, l.

-ra being the basic form, remains unchanged when the final syllable begins with s, b, f, j, g and k.

These findings refine the earlier assumption that allomorphs can be phonologically conditioned in the sense that it is the beginning sound phoneme that determines which form should appear. Thus, this reveals that Bamanankan's past tense morphology is sensitive to onset consonants, acknowledging theories that morpheme selection can be driven by phonotactic constraints rather than purely grammatical rules. Bamanankan exhibits a unique "onset-sensitive allomorphy", which is less commonly documented in African languages. Compared to previous descriptions of Bamanankan morphology, this study provides a more systematic explanation for past-tense suffixation. In sum, this study has uncovered a systematic pattern of past-tense allomorphy in Bamanankan, where the suffix choice depends on the onset of the final syllable rather than the final segment of the verb root. These findings contribute to both Bamanankan linguistics and broader phonology theory, highlighting the importance of onset-sensitive morphology.

Rules for Bamanankan Past Tense Allomorphy

To facilitate the teaching and learning of Bamanankan past tense formation, this section outlines the phonological rules governing the use of the past tense allomorph *-ra* and its variants. Based on the analysis of verb-final syllable sounds, three consistent patterns were identified in the distribution of *-ra*, *-na*, and *-la*. These patterns reflect the natural phonological processes that occur to ensure ease of pronunciation and phonetic harmony. The rules presented below offer a simplified and systematic guide for learners to accurately apply the appropriate past tense form based on the phonological environment of the verb.

Case 1: /-ra/ remains unchanged
Use **-ra** when the verb's final syllable begins with one of the following consonants:
s, b, f, y, j, g, k

Rule: No change is needed. Attach *-ra* directly to form the past tense.

Case 2: /-ra/ changes to /-na/
Use **-na** when the final syllable of the verb:

- Begins with a nasal consonant: **n, m, ɲ, ŋ**
- Follows a nasalized vowel ending: **-an, -en, -ɛn, -in, -on, -ɔn, -un**

Rule: Replace *-ra* with *-na* in nasal environments for smoother pronunciation.

Case 3: /-ra/ changes to /-la/
Use **-la** when the final syllable begins with one of these consonants:
r, t, w, c, l

Rule: Replace *-ra* with *-la* to maintain phonological harmony in these contexts.

CONCLUSION

This study set out to investigate the phenomenon of allomorphy in Bamanankan, specifically focusing on the realization of past-tense suffixation. The primary research question sought to identify and analyze the conditions under which different allomorphic forms (-ra, -na, -la) appear and their implications for Bamanankan morphology and phonology. The findings reveal that Bamanankan past tense is realized through three allomorphs: -ra, -na, and -la. The choice of the allomorph is determined by the onset of the final syllable of the verb stem: -na appears when the final syllable begins with n, m, ɲ, ŋ and nasalized vowels; -la appears when the final syllable begins with r, t, w, c, l; and -ra remains unchanged when the final syllable begins with s, b, f, j, y, g, k. This study refines previous assumptions by demonstrating that allomorph selection is phonologically conditioned by the onset consonant rather than purely grammatical or morphological rules. The concept of "onset-sensitive allomorphy" uncovered in this study contributes to a more systematic understanding of Bamanankan past-tense morphology and aligns with broader phonological theories on phonotactic constraints.

The implications of this research extend to both linguistic theory and practical applications. The study enhances our understanding of morphophonemic processes in Mande languages, offering insights into how phonological structure influences morpheme selection. Additionally, the findings may have practical applications in language documentation, linguistic education, and computational linguistics, particularly for developing accurate models of Bamanankan morphology in natural language processing. Despite its contributions, this study has certain limitations. The data were primarily based on elicitation and existing literature, which may not fully account for dialectal variation in allomorph selection. Additionally, the study did not explore phonetic realizations in natural speech, where further nuances may emerge due to connected speech phenomena.

Future research should expand upon these findings by examining a broader range of Bamanankan dialects and employing instrumental phonetic analysis to investigate the fine-grained details of allomorphic variation. Additionally, psycholinguistic studies on native speakers could offer insights into cognitive processing and acquisition of allomorphs. In conclusion, this study provides a systematic account of past-tense allomorphy in Bamanankan, demonstrating that suffix choice is conditioned by onset consonants. These findings contribute to both theoretical and applied linguistics, highlighting the complexity and structure of Bamanankan morphology while paving the way for future studies on language variation and phonological constraints.

REFERENCES

Akmajian, A., Demers, R. A., Farmer, A. K., & Harnish, R. M. (2010). *Linguistics: An introduction to language and communication* (6th ed.). MIT Press.

Aronoff, M., & Fudeman, K. (2011). *What is morphology?* Wiley-Blackwell.

Bird, C., Hutchison, J., & Kanté, M. (1977). *An ka Bamanankan kalan: Beginning Bambara*. Indiana University Linguistics Club.

Booij, G. (2005). *The grammar of words: An introduction to linguistic morphology*. Oxford University Press.

Cao, P. (2023). Distinction and examples of morpheme, morph, and allomorph in English linguistics teaching. *Advances in Social Science, Education and Humanities Research*, *677*, 323–331.

Haspelmath, M. (2019). The morph as minimal linguistic form. *Morphology*, *30*(2), 117–134. https://doi.org/10.1007/s11525-019-09344-4

Kilbury, J. (1973). The emergence of morphophonemics: A survey of theory and practice from 1876 to 1939. *Lingua*, *33*, 235–252.

Lieber, R. (2009). *Introducing morphology*. Cambridge University Press.

Rahman, T. (2010). *Linguistics for beginners: Basic concepts*. Oxford University Press.

Tokar, A. (2012). *Textbook in English language and linguistics (TELL)* (Vol. 5). Peter Lang.

Wardhaugh, R. (1972). *Introduction to linguistics*. McGraw-Hill.