



Hiatus and Diphthongs in Wawonii Language: Distribution and Syllable Structure Implications

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Abstract. This study examines the phenomena of hiatus and diphthongs in the Wawonii language, aiming to describe the vowel inventory, distribution, and their implications for syllable structure. The data were drawn from phonological documentation of Wawonii and analyzed using a descriptive qualitative method with a distributional and phonotactic approach. The findings reveal that Wawonii has five basic vowels (/a, e, i, o, u/), all of which can occur in initial, medial, and final positions. Hiatus in Wawonii occurs when two adjacent vowels are pronounced separately, each forming its own syllabic nucleus, while diphthongs involve two vowels pronounced within a single syllabic peak. Hiatus predominantly appears in medial and final positions, whereas diphthongs are more common in final positions. These phenomena have important implications for the syllable structure of Wawonii, which is largely dominated by the (C)V pattern with a high tolerance for vowel sequences. The study highlights the unique phonological features of Wawonii and contributes to broader discussions in phonology and Austronesian language typology.

Keywords: Wawonii language, phonology, hiatus, diphthong, syllable structure..

1 Introduction

The study of phonology constitutes one of the crucial aspects of descriptive linguistics, as it provides an account of the sound system and the phonotactic rules underlying the structure of a language. One particularly interesting phonological phenomenon to examine is that of hiatus and diphthongs. Hiatus refers to the juxtaposition of two vowels that are pronounced separately in two distinct syllables, whereas a diphthong is the combination of two vowels articulated within a single syllabic peak. The distinction between the two is not merely phonetic but also carries implications for syllable structure, speech rhythm, and the phonotactic patterns of a language.

Please note that the first paragraph of a section or subsection is not indented. The first paragraphs that follows a table, figure, equation etc. does not have an indent, either.

Wawonii, a regional language spoken in Southeast Sulawesi, exhibits a distinctive profile with its rich vowel inventory and the presence of vowel sequences that may

behave either as hiatus or as diphthongs. The occurrence of these two phenomena contributes to the phonological complexity of Wawonii, particularly in determining syllable boundaries and in understanding the distributional rules of vowel sounds. Nevertheless, specific studies on hiatus and diphthongs in Wawonii remain very limited, thus making this research a necessary undertaking.

Based on the above background, the research questions of this study can be formulated as follows: (1) what is the vowel inventory of Wawonii, particularly with regard to vowel sequences (hiatus) and diphthongs?, (2) How are hiatus and diphthongs distributed in Wawonii with respect to word position (initial, medial, and final)?, and (3) What are the implications of the presence of hiatus and diphthongs for the phonotactic patterns and syllable structure of Wawonii?

From the research questions outlined above, the objectives of this study are to describe the distribution of hiatus and diphthongs in Wawonii and to analyze their implications for syllable structure

The study of hiatus and diphthongs in Wawonii carries significant urgency, both theoretically and practically. From the perspective of documentation, this research makes an important contribution, as Wawonii—one of the regional languages of Southeast Sulawesi—has received relatively little attention in in-depth phonological studies. By describing the phenomena of vowel sequences, both in the form of hiatus and diphthongs, this study enriches the scientific record of the Wawonii sound system before it may be eroded by processes of language shift.

From a theoretical standpoint, analyzing the distribution of hiatus and diphthongs strengthens our understanding of phonotactics and syllable structure, since these phenomena not only add complexity to the vowel system but also shape the dominant syllabic patterns of the language. Moreover, this research emphasizes the conceptual distinction between hiatus and diphthongs—terms that are often mistakenly conflated—thereby advancing descriptive phonology and opening space for comparative work with other Austronesian languages.

2 Theoretical Framework and Literature Review

Phonological studies focus on the sound system of a language, including the phonemic inventory, distribution, and the rules governing the combination of sounds. [1] One important aspect of phonology is syllable structure, which is typically analyzed in patterns such as (C)V, (C)VC, and their variations. The syllable is regarded as the smallest phonological unit, playing a central role in speech rhythm and determining the possible distribution of sounds within a language. [2] A syllable usually consists of one vowel and one or more consonants. As a rhythmic unit, a syllable has a sonority peak, which usually falls on a vowel, and sometimes on a consonant known as a syllabic consonant.[3]

In the context of vowel structure, two phenomena deserve particular attention: hiatus and diphthongs. Hiatus is defined as the occurrence of two adjacent vowel sounds in different syllables, without an intervening consonant. Thus, hiatus is not a diphthong, but rather a vowel sequence in which each vowel maintains its own syllabic identity. In

contrast, a diphthong is defined by Crystal (2008) as a vowel sound in which there is a perceptible change in quality during a single syllable. In other words, a diphthong constitutes a single syllabic nucleus characterized by a glide or shift in vowel quality.

Kridalaksana (1982) defines hiatus as the transition between two contiguous monophthongs that form two successive syllables without a pause or intervening consonant (as opposed to diphthongs, which involve a change in vowel quality within a single syllable). A diphthong, or double vowel, is a speech sound characterized by a single shift in timbre during its articulation and functioning as the nucleus of a syllable—for example, [ay] in *lambai*.

Diphthongs can be classified into ascending/rising diphthongs and descending/falling diphthongs. An ascending or rising diphthong is one in which the most sonorous element occurs after the glide. In other words, it begins with a high vowel (less prominent) and moves toward a lower or more sonorous vowel that serves as the nucleus. A descending or falling diphthong, by contrast, is one in which the most sonorous element precedes the glide; that is, it begins with a fuller, lower, or more sonorous vowel and then glides toward a higher vowel (less sonorous), functioning as the closing element. [4], [5]

Furthermore, Kridalaksana also distinguishes between wide diphthongs and narrow diphthongs. A wide diphthong is one that involves a relatively large change in tongue position, with a considerable articulatory distance between the first and the second vowel (a wide displacement of the tongue). A narrow diphthong, on the other hand, involves only a slight change in tongue position, with a small articulatory distance between the first and the second vowel (a minimal displacement of the tongue). [4]

In many languages, hiatus is considered a marked (i.e., dispreferred) structure, and is often resolved through various phonological strategies, such as the insertion or addition of a consonant (a glide [j]/[w] or a glottal stop [ʔ]); deletion of one of the vowels; coalescence (merging of the vowels); or their fusion into a diphthong. [6]; see also [7], [8]. By contrast, a diphthong is the combination of two vowels articulated within a single breath and forming a single syllabic peak. Diphthongs are characterized by a shift in vowel quality, either from a semivowel toward the syllabic nucleus or in the reverse direction. [9]

From these perspectives, the defining characteristic of diphthongs is the change in vowel quality within a single syllabic nucleus, producing one syllabic peak. This stands in contrast to hiatus, which consists of two adjacent vowels that each form a separate syllabic nucleus. Hiatus thus differs fundamentally from diphthongs, which are invariably processed as a single syllabic nucleus with a quality shift in the vowel.

Dixon notes that vowel sequences are an important phenomenon to record in language description. He discusses diphthongs and hiatus from a typological perspective, emphasizing that the two must be distinguished in linguistic descriptions, and that the strategies employed by languages in dealing with hiatus constitute an essential part of phonotactics. [10]

Within the Austronesian language family, the distinction between hiatus and diphthongs is often discussed under the terms vowel sequences or vowel clusters. [11] A vowel sequence refers to the presence of two vowels that form separate syllables,

whereas a diphthong contains only a single syllabic nucleus. This distinction is significant because it has implications for syllable count, stress patterns, and the rhythmic structure of speech. Thus, the analysis of vowel sequences provides deeper insight into phonotactic rules, namely the principles governing permissible sound combinations in a language.[12]

A number of previous studies have highlighted this phenomenon in both Austronesian and non-Austronesian languages. Blust notes that many Austronesian languages possess complex vowel systems, including vowel sequences that frequently occur in medial or final word positions. [11] Donohue [13] (see also lexical data in [14]) discusses vowel sequences in *Tukang Besi* (or *Bahasa Pulo*, according to the Language Development and Fostering Agency of Indonesia) of Southeast Sulawesi as part of the phonotactic system of *Tukang Besi*, observing that sequences of vowels are allowed under certain conditions. Zorc also reports the phenomenon of hiatus in several dialects of Bisayan languages in the Philippines, where some dialects preserve vowel sequences as hiatus, while others tend to transform them into diphthongs, typically [aw], [ay], [iw], [uy], and so forth. In other words, some dialects consistently maintain hiatus, while others are more productive in diphthongizing vowel sequences. [15]

Several studies geographically close to Wawonii provide lexical data that can serve as points of comparison concerning diphthongs and hiatus. Although these studies did not specifically focus on diphthongs and hiatus, relevant data can nevertheless be found, particularly in the phonological sections. In the context of Eastern Indonesian languages, Sikki et al. note a clear distinction between hiatus and diphthongs in Buginese, with diphthongs restricted to final word position [16] (see also [17]). A similar study by Sailan et al.[18] on Tolaki shows that diphthongs occur only in final position, while hiatus is found in medial position. In medial contexts, only homogeneous vowel sequences tend to occur. A comparable situation is reported for Mekongga.[19] By contrast, research on Moronene[20] presents relatively more vowel sequences, both in the form of diphthongs and hiatus. Likewise, the data provided by Mead on the Bungku-Laki languages can serve as a useful point of comparison for analyzing diphthongs and hiatus in that subgroup, including Wawonii. These findings underscore the fact that the distribution of hiatus and diphthongs varies considerably across Austronesian languages.[21]

However, phonological research on Wawonii remains limited. Although the vowel and consonant inventories have been described in general terms, no study has specifically examined hiatus and diphthongs along with their implications for syllable structure. Therefore, this research is significant in complementing the phonological description of Wawonii while also contributing to the typological study of Austronesian phonotactics.

3 Methods

This study employs a qualitative descriptive approach within the framework of descriptive linguistics. The primary focus of the research is to identify, describe, and analyze

the phenomena of hiatus and diphthongs in Wawonii, based on the available phonological data.

3.1 Data Sources

The data for this research consist of documents from phonological studies of Wawonii that include the vowel and consonant inventories, phoneme distribution, as well as lexical lists containing vowel sequences and diphthongs. These data were obtained from previously documented fieldwork in the form of audio and video recordings, along with some written materials. Part of the data is already available in the form of a phonological description.

3.2 Data Collection

The data collection technique was carried out through stages of language documentation[22] by recording observable linguistic behavior. The data were then transcribed and translated. The data were carefully observed and listened to, with particular attention focused on the phonological corpus of the Wawonii language. The steps undertaken included: compiling an inventory of basic vowels, vowel clusters, vowel sequences, and diphthongs; recording word forms containing hiatus or diphthongs; and classifying the data based on their positional distribution (initial, medial, and final position in words).

3.3 Data Analysis

The analysis was carried out using phonological methods, specifically: (a) a distributional method to identify the positional occurrence of hiatus and diphthongs within words; (b) a comparative method to contrast vowel sequences functioning as hiatus with those forming diphthongs, in order to clarify their phonological differences; and (c) a phonotactic analysis to examine the implications of hiatus and diphthongs for the syllable structure of Wawonii.

3.4 Data Validation

Data validation was ensured through theoretical triangulation by drawing on the phonological literature. [1], [2], [9], [11] In this way, the results of the analysis are not only descriptive but can also be compared with similar phenomena in other languages, particularly within the Austronesian family.

4 Results and Discussion

4.1 Vowel Inventory of Wawonii Language

The Wawonii language has five basic vowel phonemes, namely /a, e, i, o, u/. These five vowels can occur in all word positions (initial, medial, and final). The following is the distribution of vowels based on their positions (Table 1).

Table 1: Distribution of Vowels in Wawonii Language

Vowel	Initial	Medial	Final
/i/	iyaro 'widow'	molino 'calm'	tahi 'sea'
	iya 'vein'	pasiki 'splash'	lowi 'lake'
/e/	era 'sister-in law'	keke 'armpit'	wembe 'goat'
	eje 'nose'	benu 'belt'	kude 'I, me'
/a/	asade 'one'	saru 'borrow'	tinaja 'debt'
	ahu 'smoke'	tako 'hide'	tila 'divide'
/o/	ondu 'dew'	wola 'rat'	kundo 'cloud'
	onia 'raft'	konde 'termite'	kulo 'soot'
/u/	usa 'rain'	puri 'blow'	moolu 'shady'
	uwa 'grand father,	dumapa 'fly'	gawu 'fog'
	grand mother'		

This inventory shows that the Wawonii vowel system is symmetrical, and it forms the basis for the emergence of vowel sequences, both in the form of hiatus and diphthongs.

4.2 Hiatus in Wawonii Language

Hiatus in Wawonii occurs when two vowels come into contact but are pronounced separately, each forming its own syllable nucleus. The data reveal the presence of homogeneous vowel sequences (such as [aa], [oo], [ee]) as well as heterogeneous ones (such as [uo], [ae], [ei]), both of which may be categorized as hiatus. Hiatus may consist of either heterogeneous or homogeneous vowel sequences that are separated into two syllables. Hiatus does not necessarily occur across word boundaries, but may also appear within a single word when two adjacent vowels do not merge into a diphthong or a long vowel. Some examples are presented in Table 2.

Table 2: Hiatus in Wawonii language

Sequence Vowel	Initial	Middle	Final
[aa]	-	/taama/ 'father'	/waa/ 'current'
		/kaaka/ 'crow'	/misaa/ 'defecate'
[oo]	-	/moolu/ 'shady'	/mewoo/ 'inhale'
		/toorio/ 'know'	/hoo/ 'yes'
[uu]	-	/tuuna/ 'fall'	/wuu/ 'hair'
			/suu/ 'carry on the head'
[ee]	-	/meelu/ 'orphan'	-

		/teewu/ ‘spill’	
[ii]	-	/tiina/ ‘mother’	/nii/ ‘coconut’
[uo]	-	-	/bituo/ ‘star’ /moluo/ ‘weak’ ‘soft’
[ae]	-	/paekompo/ ‘sibling’	/pae/ ‘rice’ /bae/ ‘hang’ /tae/ ‘word’
[ai]	-	/baiki/ ‘ringworm, tinea’ /wainto/ ‘pity’	/rai/ ‘forehead’ /nai/ ‘not, no’ /mopai/ ‘bitter’
[oi]	/oiya/ ‘ketombe’	/moila/ ‘wild’ /loiya/ ‘ginger’ /moiri/ ‘left (side)’ /moiko/ ‘good’	/woi/ ‘face’ /oloi/ ‘middle finger’ /mehoi/ ‘whistle’
[au]	-	/kalauma/ ‘hermit crab’	/pau/ ‘pour’ /ondau/ ‘long’ /tau/ ‘year’
[ou]	-	/mouso/ ‘blue’ ‘green’	/tumou/ ‘bark’ /sou/ ‘eel’ /mondou/ ‘drink’
[ui]	-	/kuita/ ‘octopus’	/motui/ ‘dry’
[ei]	-	/teipua/ ‘the day after to-morrow’	/kapalei/ ‘grieve’ /pilei/ ‘choose’
[ao]	-	-	/bao/ ‘roof’ /ratao/ ‘flat’ /mosao/ ‘ugly’
[oe]	-	/moena/ ‘weave’	/meloe/ ‘glance back’

Based on the data, it is evident that homogeneous hiatus occurs, since two identical vowels are not merged into long vowels such as [a:], [o:], or [i:], but are instead pronounced separately. Each vowel nucleus constitutes an independent syllable. Hiatus in Wawonii also appears with heterogeneous vowels (au, uo, ae, ua, ou, ui, ao, oe).

In these examples, each vowel maintains relatively equal stress and does not merge into a single syllabic peak. Therefore, the vowels are treated as hiatus. Hiatus in Wawonii primarily occurs in medial and final positions within words.

From a phonotactic perspective, Wawonii is highly tolerant of hiatus. Sequences of vowels are not lengthened into long vowels, nor are they necessarily fused into diphthongs, but are instead maintained as two distinct vowels, each forming a syllable nucleus.

4.3 Diphthong in Wawonii Language

In contrast to hiatus, diphthongs in Wawonii involve two vowels pronounced within a single breath, thus forming one syllable nucleus. The following data illustrate a number of productive diphthongs (Table 3).

Table 3: Diphthongs in Wawonii language

Diphthong	Initial	Medial	Final
/ea/	-	/leali/ 'earthquake' /seami/ 'seami' /meanta/ 'tomorrow'	/wea/ 'ember' /monea/ 'tame' /rea/ 'blood'
/io/	-	-	/osio/ 'none' /mahalio/ 'difficult' /bio/ 'egg'
/ue/	-	/suere/ 'other'	/limbue/ 'whirlpool' /toroue/ 'rainbow' /pue/ 'wind'
/ua/	-	/saluara/ 'trousers'	/towua/ 'wasp' /kolopua/ 'turtle' /mokua/ 'diligent'
/eu/	-	/leuha/ 'louse egg'	/keu/ 'wood' /membeu/ 'pound' /leu/ 'come'
/ia/	-	-	/mia/ 'person' /mompobia/ 'divorce' /kiniwia/ 'afternoon' /tenanjia/ 'lose'
/iu/	-	-	/komiu/ 'you (pl)' /diu/ 'dugong' /oniu/ 'saliva'
/oa/	-	/roani/ 'bee' /moana/ 'right' (side) /moahi/ 'salty'	/koa/ 'crow' /owoa/ 'low' /owoa/ 'short' 'shallow'
/eo/	-	-	/heo/ 'ant' /moreo/ 'fever' /oleo/ 'day'

Diphthongs in Wawonii are formed through the co-occurrence of two vowels realized as a single syllable nucleus, with the presence of a semivowel [j] or [w] that surfaces between them. It is important to note that in certain cases, the first vowel does not necessarily change into a semivowel; rather, there is an additional glide [j] or [w] that links the two vowels.

In the case of [ea], the first vowel /e/ (mid front) may glide into the second vowel /a/ (low central), as in *wea* 'ember', *monea* 'tame', and *leali* 'earthquake'. Its phonetic realization may be perceived as [ja], with the impression of a brief palatal glide insertion.

In vowel sequence /io/, as in *bio* 'egg', *osio* 'nine', and *mahalio* 'difficult', the transition between /i/ and /o/ is not realized as hiatus [i.o], but rather with the insertion of a glide [j], resulting in [bijo], [osijo], [mahalijo].

A similar pattern appears with /ia/. In words such as *mia* 'person', *kiniwia* 'afternoon', and *tenanjia* 'lose', the pronunciation is not compressed as [mja], [ki.niw.ja], or [te.nan.ja], but rather surfaces as [mija], [kiniwija], and [tenanjija], giving the impression of an -iya sequence in speech.

The same holds for /iu/, as in komiu ‘you (pl.)’ and diu ‘dugong’. These forms are not compacted as [kom.ju] or [dju], but are instead realized as [komiju] and [diju], as if an -iyu element is present in the phonetic output.

The same phenomenon can be observed with /eo/, for example heo ‘ant’ and oleo ‘day’. The pronunciation is not [hjo] or [o.ljo], but more naturally [hejo] and [olejo], suggesting the presence of an -eyo element in speech.

Just as [j] indicates a palatal glide, [w] denotes a brief labiovelar glide that arises between two vowels. For example, in koa ‘crow’ [ko^wa], there is a slight w-like transition between /o/ and /a/.

Superscript notation [j] and [w] means that the sound is not a full segment, but only a transitional nuance. Thus, if [j] is a brief palatal transition (similar to [y]), then [w] is a brief labiovelar transition (similar to [w]). Both are used to indicate that the glide is not a new phoneme, but rather the automatic result of the transition between two vowels in a diphthong.

The occurrence of glides [j] and [w] in vowel sequences in Wawonii is closely related to the articulatory properties of vowels. The vowels [i] and [e], which are front vowels, are physiologically articulated with the tongue positioned high and advanced forward, close to the palatal consonant region. This condition naturally produces an additional semivowel [j] during the transition from [i] or [e] to another vowel. Therefore, words such as bio ‘egg’ and mia ‘person’ tend to be pronounced as [bi^jo] (biyo) and [mi^ja] (miya), as if there were an inserted [j] linking the vowels.

Meanwhile, the vowels [u] and [o], which are back rounded vowels, are articulated with lip rounding and the tongue raised toward the back. This articulation is close to the labiovelar semivowel [w]. As a result, when [u] or [o] meets another vowel, the articulatory transition tends to produce an inserted [w]. For example, keu ‘wood’ is pronounced [ke^wu] (kewu) and koa ‘crow’ as [ko^wa] (kowa).

It should be further explained that in Wawonii there are examples such as keu ‘wood’ or leu ‘come’, where the vowel /e/ does not produce [j], but rather [w], becoming [ke^wu], [le^wu]. In keu and leu, the sequence is /eu/. The target vowel /u/ is a high–back–rounded vowel, which naturally attracts the articulatory transition toward the labiovelar [w]. Thus, although /e/ is a front vowel, the transition toward /u/ requires lip rounding, resulting in the labiovelar [w] rather than [j]. In this position, [e] is effectively “rounded” by the following /u/, producing the labiovelar transition. In other words, the glide that emerges is more influenced by the target vowel than the initial vowel. In the Wawonii system, there appears to be a tendency that if the second vowel is /u/, the transition almost always produces [w], even when the first vowel is not /o/ or /u/. Therefore, keu and leu are more likely pronounced [kewu], [lewu], rather than [keju] or [leju].

The classification of diphthongs in the Wawonii language, based on analysis and explanation, can be seen in Table 4.

Table 4: Classification of Diphthongs in Wawonii Language

Classification	Example (pair & description)
Rising — Wide	mia [mi ^j a] — /i/ → /a/ (high → low)

Rising — Narrow	bio [bijo], mahalio [mahaliʒo] — /i/ → /o/; koa [ko.wa], moana [mowana] — /o/ → /a/; limbue [limbu ^w e], toroue [torou ^w e] — /u/ → /e/; wea [we ^a a], leali [le ^ʷ a.li] — /e/ → /a/
Neutral / Narrow (same-height)	heo, oleo, moreo — /e/ → /o/ (mid→mid); diu [di ⁱ u] — /i/ → /u/ (high→high)
Falling — Narrow	keu [ke ^w u], leu [le ^w u] — /e/ → /u/ (mid → high); sou [so ^w u] — /o/ → /u/ (mid → high)
Falling — Wide	(no clear examples in this corpus)

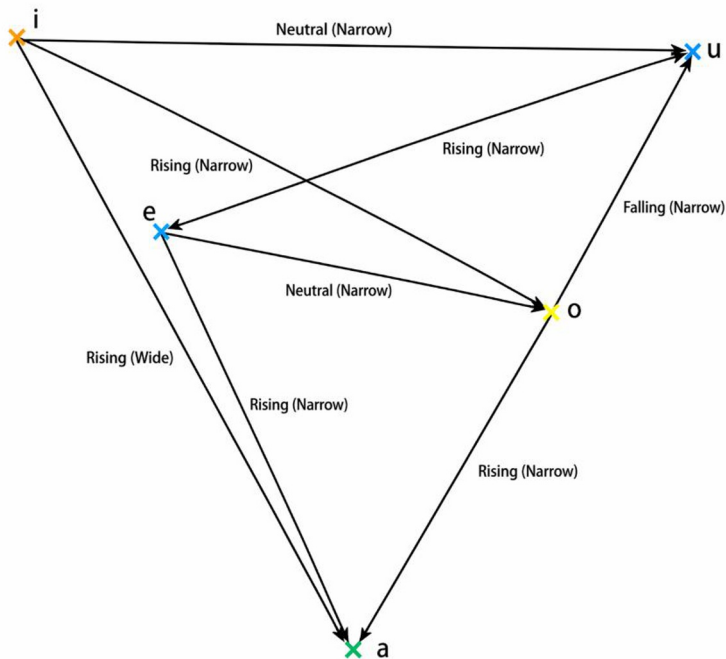


Fig. 1: Transition Scheme of Diphthongs in Wawonii Language

Explanation of the Scheme:

Rising–Wide: transition from a high vowel to a low vowel, with a large articulatory distance. Example: mia [mija] (/i/ → /a/).

Rising–Narrow: transition from a high vowel to a mid vowel, or from mid to low, with a small articulatory distance. Examples: bio [bijo], mahalio [mahaliʒo] (/i/ → /o/); koa [ko^wa], moana [mowana] (/o/ → /a/); wea [we^aa], leali [le^ʷa.li] (/e/ → /a/); limbue [limbu^we], toroue [torou^we] (/u/ → /e/).

Neutral–Narrow: both vowels are of the same height (high→high, mid→mid), the change is small, usually producing a short glide. Examples: heo [hejo], oleo [olejo], moreo [morejo] (/e/ → /o/); diu [diu] (/i/ → /u/).

Falling–Narrow: transition from a mid vowel to a high vowel, with a small distance. Examples: keu [ke^wu], leu [le^wu] (/e/ → /u/); sou [so^wu] (/o/ → /u/).

Thus, diphthongs in Wawonii are formed due to the natural transition from a high vowel to another vowel. The high front vowels /i/ and /e/ produce the palatal glide [j], while the rounded back vowels /u/ and /o/ produce the labiovelar glide [w]. This pattern is not unique to Wawonii but is also a universal phonetic phenomenon found in many languages. However, in Wawonii, its realization is more productive and systematic. In certain cases, the vowel /e/ can also produce the labiovelar glide [w], influenced by the target vowel. For instance, when the second vowel is /u/, the transition almost always results in [w].

4.4 Distribution of Hiatus and Diphthongs

The phenomenon of vowel sequences in Wawonii shows two distinct realization patterns, namely hiatus and diphthongs. Both arise as a consequence of the Wawonii vowel system, which is symmetrical and consists of five basic vowels /a, e, i, o, u/. This view is in line with Berti's study. [23]

Hiatus in Wawonii is characterized by the occurrence of two vowels that are maintained as two separate syllable peaks. In other words, each vowel forms an independent syllabic nucleus and does not merge into a long vowel or diphthong. Hiatus can take the form of homogeneous vowel sequences, such as [aa], [oo], [ii], [uu], and [ee], or heterogeneous ones, such as [ae], [ai], [au], [ao], [ei], [eo], [oi], [ou], [ua], [uo], [ui], and [oe].

The distribution of hiatus mainly occurs in medial and final word positions, although cases at the initial position also exist. Some examples include taama 'father' [ta.a.ma] and tiina 'mother' [ti.i.na] as homogeneous forms, as well as leali 'earthquake' [le.a.li], wea 'embers' [we.a], and bao 'roof' [ba.o] as heterogeneous forms. The fact that these vowels do not merge into long vowels or diphthongs indicates that, phonotactically, Wawonii is highly tolerant of hiatus.

In contrast, diphthongs in Wawonii are formed from the meeting of two vowels realized within a single breath, thus forming one syllable nucleus. This phenomenon is marked by the presence of a glide sound [j] or [w] that functions as a transition between the two vowels.

The distribution of diphthongs is limited to medial and final word positions, while no diphthongs were found in initial position based on the available data. Some examples of diphthongs include bio 'egg' [bijo], mia 'person' [miya], komiu 'you (pl.)' [komiyu], heo 'ant' [hejo], koa 'crow' [ko^wa], and keu 'wood' [ke^wu].

Articulatorily, diphthongs are formed due to the physiological properties of the vowels involved. High front vowels /i/ and /e/ tend to produce a palatal glide [j], while rounded back vowels /u/ and /o/ tend to produce a labiovelar glide [w]. However, glide realization may also be influenced by the target vowel. For instance, in the sequence

/eu/ as in *keu* ‘wood’, the second vowel /u/—a high back rounded vowel—forces a labiovelar transition, so the actual realization is [ke^wu], not [keju].

The distribution of hiatus and diphthongs in Wawonii shows a clear difference in pronunciation and syllabic function. Hiatus preserves the independence of each vowel, resulting in two syllables, whereas diphthongs merge two vowels into a single syllabic nucleus with the aid of a transitional glide. Hiatus is more dominant in medial and final positions, while diphthongs have a more varied distribution, although they also tend to occur in medial and final positions. This phenomenon highlights the phonotactic richness of Wawonii and shows that vowel interactions in this language are governed by a combination of phonological and articulatory factors.

5 Implications for Syllable Structure

The presence of hiatus and diphthongs in Wawonii provides evidence that its syllable structure is relatively flexible. Hiatus indicates that the language permits two adjacent vowels without merging them into either a long vowel or a diphthong. In this case, each vowel continues to function as an independent syllable nucleus. Consequently, a word may increase in syllable count since each vowel is counted separately. For example, the word *taama* ‘father’ is pronounced [ta.a.ma] with three syllables, not [taa.ma] with two. Similarly, *bituo* ‘star’ is pronounced [bi.tu.o], not [bi.tuwo]. This phenomenon demonstrates that Wawonii syllable patterns are rather loose, as they allow sequential vowel structures (V.V) as a common occurrence.

In contrast, diphthongs reflect a condition in which two vowels are merged into a single syllabic nucleus. In this case, although two vowels are perceived, they are produced within a single breath, resulting in just one syllable. For instance, the word *bio* ‘egg’ is pronounced [bijo], not [bi.o], yielding a monosyllabic structure [bijo]. Likewise, *koa* ‘crow’ is pronounced [ko^wa], not [ko.a]. In Wawonii, diphthongs occur only in medial and final positions, while no instances are found in word-initial position. This suggests that the language restricts diphthongs as syllable nuclei that do not precede initial consonants.

Thus, the implications of this phenomenon for syllable structure can be summarized as follows. First, the presence of hiatus increases the number of syllables, since each vowel remains autonomous. Second, diphthongs expand the content of the syllable nucleus, as the nucleus may consist not only of a single vowel but also of a complex vowel formed from two vowels. In general, the syllable pattern of Wawonii may be simplified as (C)V(C), yet in practice it is more complex, as it accommodates both sequential vowels (hiatus) and complex vowels (diphthongs). Therefore, the syllable structure of Wawonii can be formulated as (C)(G)V(G)(C), with C representing consonants, V representing the vowel nucleus, and G representing the glide [j] or [w] that arises in diphthongs.

6 Conclusion

This study shows that Wawonii has a rich vowel system with five basic phonemes (/a, e, i, o, u/) that can occur in all word positions. From this vowel inventory emerges the phenomenon of vowel sequences, which are divided into two categories: hiatus and diphthongs. Hiatus is characterized by two vowels pronounced separately, thus forming distinct syllable nuclei, while diphthongs are formed from the combination of two vowels into a single syllabic peak with a [j] or [w] glide transition. The distribution of the two shows a clear difference: hiatus is dominant in medial and final positions, whereas diphthongs are more productive in medial and final positions but are not found in initial position. The presence of these two phenomena has implications for the syllable structure of Wawonii, which not only follows the (C)V pattern but also accommodates sequential vowels (hiatus) and complex vowels (diphthongs), thus formulated as (C)(G)V(G)(C). Accordingly, this study affirms the unique character of Wawonii as a vocalic language with high tolerance for vowel sequences, while also making an important contribution to phonological studies, Austronesian typology, and the documentation and preservation of local languages.

Authors' Contributions

Firman A.D.: Conceptualization, methodology, fieldwork, data collection, initial draft writing, data analysis, and proofreading.

Muhammad Darwis: Review of literature, editing, supervision, guidance and suggestion.

Acknowledgments. The authors would like to express their sincere gratitude to their supervisors for the invaluable guidance, constructive feedback, and continuous support throughout the research process. Special thanks are also extended to Hasanuddin University, where the first author pursued doctoral studies, for its academic environment and encouragement, and to the Research Center for Language and Literature Preservation, BRIN, for providing institutional support. The authors gratefully acknowledge the local community members and language consultants who generously shared their time and knowledge. Finally, appreciation is given to colleagues who assisted in reviewing and refining this manuscript.

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