

MORPHOPHONEMIC RULES OF THE TONTEMBOAN MAKALA'I DIALECT IN MINAHASA: A FORM OF REGIONAL LANGUAGE PRESERVATION

Morf fonemik Dialek Makala'i Bahasa Tontemboan di Minahasa:
Sebuah Bentuk Pelestarian Bahasa Daerah

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Abstract

This study observes and finds the process of sound changes (morphophonemics) in the Tontemboan Language (BT) Makala'i dialect which is rarely found in this era of globalization, even threatened with extinction. The aim is to describe sound changes which are the result of morpheme meetings in the formation of words and phrases. Based on qualitative data obtained through surveys, recordings of sermon content, and direct interviews with the community in Taraitak Village, Langowan District, Minahasa Regency, North Sulawesi. Using Crystal's theory for the morphophonemic process combined with Nida's theory and the theories of Alwi, Sumadi and Ramlan. Based on the qualitative data obtained, it shows that the discovery of morphophonemic forms in the BT Makala'i dialect consists of: 1) sound changes, /N/ then, /N/ in the particle aN. Variations in /N/ changes depend on the initial phoneme conditions of the basic form or the word it is attached to. Other phoneme changes also occur in /w/ to /b/, /r/ to /d/ if these sounds are in the initial position. 2) The addition of sound occurs in the second part of the basic form with the initial phoneme of the vowel that undergoes the process of mən-+R. The meeting between /a/ and /a/, the meeting between /i/ and /a/, and the meeting between /u/ and /a/. 3) The loss of phoneme sound occurs in /N/ which is found in the affixes maN-, p'aN-, paN—an, mən—an, mən-+R when combined with the basic form with the initial phoneme /l/. /m/, /n/, are also found in the basic form with the initial phonemes /p/, /w/, and /t/. The morphophonemic rules of the Tontemboan language show complexity but have order and system.

Keywords: morphophonemic; sound change; makala'i tontemboan language

Abstrak

Studi ini mengamati dan menemukan proses perubahan bunyi (morf fonemik) dalam Bahasa Tontemboan (BT) dialek Makala'i yang jarang ditemukan di era globalisasi ini, bahkan terancam punah. Tujuannya adalah untuk mendeskripsikan perubahan bunyi yang merupakan hasil pertemuan morfem dalam pembentukan kata dan frasa. Berdasarkan data kualitatif yang diperoleh melalui survei, rekaman isi khotbah, dan wawancara langsung dengan masyarakat di Desa Taraitak, Kecamatan Langowan, Kabupaten Minahasa, Sulawesi Utara. Menggunakan teori Kristal untuk proses morf fonemik yang dikombinasikan dengan teori Nida dan teori Alwi, Sumadi, dan Ramlan. Berdasarkan data kualitatif yang diperoleh, menunjukkan bahwa penemuan bentuk morf fonemik dalam BT dialek Makala'i terdiri dari: 1) perubahan bunyi, /N/ kemudian, /N/ dalam partikel aN. Variasi perubahan /N/ bergantung pada kondisi fonem awal bentuk dasar atau kata yang melekat padanya. Perubahan fonem lainnya juga terjadi pada /w/ menjadi /b/, /r/ menjadi /d/ jika bunyi-bunyi ini berada di posisi awal. 2) Penambahan bunyi terjadi pada bagian kedua bentuk dasar dengan fonem awal vokal yang mengalami proses mən-+R. Pertemuan antara /a/ dan /a/, pertemuan antara /i/ dan /a/, dan pertemuan antara /u/ dan /a/. 3) Hilangnya bunyi fonem terjadi pada /N/ yang ditemukan pada imbuhan maN-, p'aN-, paN—an, mən—an, mən-+R ketika dikombinasikan dengan bentuk dasar

dengan fonem awal /l/, /m/, /n/, juga ditemukan dalam bentuk dasar dengan fonem awal /p/, /w/, dan /t/. Aturan morfofonemik bahasa Tontemboan menunjukkan kompleksitas tetapi memiliki keteraturan dan sistem.

Kata-kata kunci: morfofonemik; perubahan bunyi; bahasa makala'i totemboan

INTRODUCTION

Tontemboan (BT) is one of the regional languages in North Sulawesi which is located in Minahasa district, functioning as a medium of communication and social media between families and between regions for the speaking community in non-formal situations. BT consists of two dialects, namely the Makala'i dialect and the Matana'i dialect (Meruntu 1989). The area of use covers a small part of Central Minahasa to the south, Danie (1986), Tambuwun (1986a: 8-9), Rattu, et al (1993: 4) refer to areas included in the Makala'i and Matana'i dialects in map form and details of area names. The Makala'i dialect is used in West Langowan, North Langowan, East Langowan, South Langowan, Tompasso, Tareran, and Suluun-Tareran, while the Matana'i dialect is used in the sub-districts of Sonder, Kawangkoan, North Kawangkoan, Kumelembuai, Tompasso Baru, Motoling, Motoling West, East Motoling, Maesaan, Ranoyapo, Tenga, Modinding, Tatapaan, and Tumpaan. The main differences in these two dialects are in phonological elements and there are several differences in morpheme elements. This research focuses on the Tontemboan Makala'i language.

Based on observations, BT was found to still be used by a small portion of the speaking community. Initially there were several villages in Minahasa that used it through copy worship which was carried out every Sunday using a BT, but as time went by only one village still maintained the Copy culture, namely in Taraitak village, Langowan sub-district, Minahasa, whose worship meetings were attended by all age groups. At this moment it is very appropriate to continue to maintain this copy culture which is part of an oral tradition that is worth preserving.

Therefore, researchers are interested in researching this community because in general it is at a critical level, meaning it cannot be used and is heading towards extinction.

Tontemboan is one of hundreds of regional languages in Indonesia and thousands of languages in the world. Even though there are many languages, one thing is certain, that there are certain characteristics that all languages have. The characteristic of language is that it is unique. Unique can be briefly interpreted as a characteristic/special characteristic. Language is unique, meaning that language has its own characteristics in each system and its use. These characteristics apply to all languages in the world. Regarding this uniqueness, Chaer (2012: 52) states that uniqueness occurs in a group of languages that are in one language family or group, the characteristics of that language family or group. This includes the sounds of language and their sequence, which are produced according to sequence and rules so that the sounds and sequence are regular, forming the nature of language as a system of elements and rules.

In BT as a language of course there are also characteristics like those mentioned. These characteristics include the phonological system, morphological system and syntactic system. These systems will become distinctive and differentiate BT from other language systems. The sequence of sounds in BT can be identified with units of words, phrases and sentences controlled by a system of rules, so that there are no units that do not have rules. Morphophonemic rules that show complexity but have regularity, for example: $m\text{ə}N- + s\text{ə}nso'$ becomes $man\text{ə}nso'$, $m\text{ə}N + s\text{ə}nso' + an$ becomes $m\text{ə}n\text{s}\text{ə}nsoan$, /s/ as the initial phoneme of a word if it gets the prefix $maN-$ will melt away /N/ in $maN-$ changes

becomes /n/, whereas if you get the affix mən—an /s/ it doesn't melt, it's nasal /N/ in mən—an changes to /ñ/. Likewise, aN+oko becomes amoko, aN+oak becomes anoak, even though oko and oak both have the initial phoneme /o/ but the /N/ in oko becomes /m/. and /N/ in oak becomes /n/.

Based on the description of the morphophonemic construction, it appears that there are changes in the form of sounds, additions of sounds and deletions of sounds. This can answer the problem in this research, namely: how the rules and systems of sound elements change in BT due to the process of combining two morphemes or words, both in deriving words and in forming phrases.

Relatively little BT research has been carried out, so the various BT rules have not been revealed. Research in morphophonemics does not yet have a complete and extensive description to reveal. Even though it is very necessary for the application and testing of linguistic theory as well as contributing to the development of linguistic theories which continue to be developed to this day. The data source for this research was taken from a group of Minahasa community in Taraitak Village and its surroundings in Langowan District, Minahasa Regency, North Sulawesi who still use BT in sermons at the Salinan worship event. Through this research, it is hoped that we can enrich the repertoire of BT sounds in terms of systems, in terms of language rules that will become unique in their own right. Apart from that, it can also differentiate the Tontemboan language from other language systems and rules that can be maintained and developed so that it does not become extinct in the current era of globalization.

FRAMEWORK THEORY

There are several studies that examine the Tontemboan language and other languages in relation to the field of language at the morphophonemic level. First, research conducted by Tambuwun

(1986), namely Tontemboan grammar. His research discusses Tontemboan grammar in the study of phonology and morphology of the Tontemboan language. The study of phonology in this book also contains morphophonemic aspects, but only a basic introduction and not very straightforward. He said that the stress in the Tontemboan language always stands on the second to last syllable (penultimate syllables), regardless of the root of the word undergoing the affixation process, and generally does not change the place of stress on the syllable (Tambuwun, 1986a: 83).

Second, Meruntu (1989, 1991) Differences between the Makela'i and Matana'i dialects, examining changes in the meeting or combination of two morphemes in forming a new construction, both words and phrases, will cause changes in sounds (phonemes) in the Tontemboan language of the Matana dialect. 'i. Not the sound changes that occur in a basic word.

Third, research by Ticoalu, et al, research published by the Ministry of Education and Culture in 1984, namely the Structure of the Tontemboan Language. The results of their research have been documented in book form, namely examining the entire internal structure of the Tontemboan language, namely phonology, morphology and syntax. Fourth, there is also Johann Albert T. Schwarz, namely Hoofdstukken uit de Spraakkunst van het Tontemboansch (Articles on Tontemboan Grammar) which was published in 1908. In this book, grammar is explained, especially phonology, morphology and syntax of the Tontemboan language written in Dutch.

Fourth, research conducted by Robot (2019) on the Tontemboan language, phonetic suprasegmental aspects are in the form of pitch, duration and intensity, while systemic suprasegmental aspects are in the form of intonation and stress. The systemic suprasegmental aspect in this language does not contain tones

because the pitch movement itself does not differentiate the lexical meaning in lexemes of similar segments, in this case it is different from Mandarin. Furthermore, in this research, it was found that intonation in interrogative sentences, especially interrogative sentences which use question words, tends to rise at the question word and decrease at the last word in the sentence. In statement or declarative sentences, intonation tends to decrease at the end of the sentence. Apart from that, if you look at word stress, this language has fixed word stress, and the position of the stressed syllable is generally in the position of the penultimate syllable or the second to last syllable in a word. This research suggests that intonation in the Tontemboan language in both interrogative sentences that use question words and statement sentences tends to decrease at the end of the sentence. Apart from that, word stress in this language is generally in the penultimate syllable position and this language is a language that has fixed word stress.

Furthermore, outside BT there is the morphophonemic process of the Balinese language. Generative study by Darsana (2016) uses Schane's (1992) theory. The results of the research are that there is a process of combining two consonants that are next to each other and are replaced by one consonant that has the same characteristics as the two original consonants. It can be explained that nasal consonants are an affix with the symbol N- attached to a base form that begins with a dental consonant /t/ which changes to a dental nasal. /n/, and through sequential order the phoneme /t/ is deleted. In Balinese, the sound changes in the morpheme N- if the morpheme is added with a basic form starting with a consonant phoneme and a vowel phoneme so that the realization becomes /n,m,n,n and n/.

What differentiates this research from several previous researchers and in book works is: it has not provided a

detailed explanation regarding the morphophonemic aspects, only providing statements regarding word changes in the Tontemboan language, although at the phonological level in the suprasegmental aspects of the Tontemboan language, morphology and syntax but At the morphophonemic level, we have not yet reached the detailed formulation of rules, whereas this research describes the process of sound changes as a result of the meeting of two morphemes in a construction (morphophonemic) in words. formations and phrases. Next, the rules for changing sounds in the Tontemboan dialect of Makela'i will be formulated.

According to Alwi et al. (2024), Sumadi (2010:140), Zainal (2007:8), Ramlan (2009) can be concluded in the similarity of perception, namely: the Indonesian morphophonemic process says that a morpheme can change its basic form as a result of meeting that morpheme with another morpheme. others in word formation. Morphophonemic processes include:

1) the process of changing phonemes, the phoneme /N/ in the morphemes meN- and peN- changes to the phoneme /m/ if the basic form that follows begins with /p, b, f/. The phoneme /N/ in meN- and peN- changes to the phoneme /n/ if the base form that follows begins with /t,d,s/. The phoneme /s/ is only specific to several basic forms originating from foreign languages, changing to /ñ/ if the basic form that follows begins with /s, š, c, j/. The phoneme /N/ in meN- and peN- changes to /ŋ/ if the base form that follows begins with /k, g, x, h/ and a vowel. Apart from the morpheme change process above, Ramlan also mentioned several other phoneme change processes, namely: the phoneme /N/ becomes /ŋ/. There is also the addition of the phoneme /ə/. The phoneme /r/ in ber- and per- changes to /l/ due to the meeting of this morpheme with its basic form. changes to /k/ due to the meeting of the morpheme with the morphemes ke-an, peN-an, and -i.

2) The process of adding phonemes occurs as a result of the meeting of the morpheme meN- with a basic form consisting of one syllable. The added phoneme is /ə/, so meN- changes to menge-. The addition of the phoneme /ʔ/ is due to the meeting of the morphemes -an, ke-an, peN-an, per-an with the basic form which ends with the vowel /a/. The addition of the phoneme /w/ is due to the meeting of the morphemes ke-an, peN-an, per-an with the basic form which ends with the vowels /u, o, aw/. The addition of the phoneme /y/ is due to the meeting of the morphemes -an, ke-an, peN-an, per-an with the basic form ending in /I, ay/.

3) The process of losing phonemes occurs in /N/ meN- and peN- due to the meeting of these morphemes with basic forms starting with /l, r, y, w/ and nasal. The loss of the phoneme /r/ in the morphemes ber-, per-, and ter- is due to the meeting with a base form that begins with /r/ and a base form whose first term ends with /ər/. The phonemes /p, t, s, k/ are lost due to the meeting of meN- and peN with the basic form that begins with these phonemes.

METHODS

This research uses descriptive research methods, namely trying to describe and interpret objects according to what they are in the status of a group of people, objects, a set of conditions, a system of thoughts or events (Nazir, 2003). Through this method, the research is merely a description based on existing facts or phenomena that are empirically lived by the speakers, so that what is produced and recorded is in the form of language descriptions or presentations as they are. The description intended in this research is how the BT morphophonemic phenomenon is approached descriptively, in this case the phenomenon is described as it is, although only at the level of describing the phenomenon, not yet at the interpretation or explanation of why the phenomenon behaves. Rather, it examines the problem of the system of elements and

rules for changing sounds in BT due to the process of combining two morphemes or words, both in deriving words and in forming phrases. The primary data sources for this research are the contents of sermons in the copy worship culture and Tontemboan language utterances which show morphophonemic symptoms, which are used by speakers in areas using the BT makela'i dialect in Taraitak village, Tumaratas village and Toraget village, Minahasa Regency. Two to three representative informants were taken from each village with secondary conditions, namely previous research on the Tontemboan language and several books related to this research, although they were very lacking.

To answer the questions in the problem formulation, data was collected using the listening method to observe the use of the Tontemboan language. The term listening here is not only related to the use of spoken language, but also the use of written language (Mahsun, 2005:92). This method has a basic technique in the form of a tapping technique. The purpose of this tapping technique is to tap the use of language verbally both in the content of sermons in copy services and in questions and answers. In practice, this tapping technique is followed by advanced techniques, namely the listening and listening technique, the fishing technique, the face-to-face technique and the technique of recording the informant.

The fishing technique uses a list of questions in Indonesian that have been prepared. This list of questions is used as a provoking tool in the form of face-to-face conversation. The informants' answers and sermons at the prayer services were transcribed or recorded with a digital recording device (Sony PCM-D50 96kHz/24 bit). The targeted data is the respondent's speech and then the data is analyzed. According to Muhammad (2011:233), the data analysis method is a way of describing and grouping lingual units according to patterns, themes,

categories, rules and research problems. The Tontemboan language, which contains morphophonemics, is recorded using phonetic transcripts, especially in sound changes. All data collected is still raw data. From the raw data, data that is truly relevant to the research is selected by selecting, marking and recording.

Analysis of data in the morphophonemic process in BT, the author uses Crystal's theory (2008) that morphology is a branch of grammar that examines the structure or form of words, mainly through the use of morphemes, for the morphological process combined with Nida's theory (1949; 200) in the morphophonemic process. The classification of morphophonemic processes according to Nida is: (1) Assimilation, (2) Dissimilation, (3) Reduction of phonemes, (4) Loss of consonant phoneme, (5) Loss of vowel phonemes, (6) palatalization, (7) Nasalization.

Next, the data is analyzed by identifying, classifying and describing the data by following the steps: (1) Classifying similar data. (2) Explain or describe the BT morphophonemic process along with the phonetic transcript. (3) Formulate or formulate BT morphophonemic rules.

Data classification is carried out based on morphophonemic types, in the form of sound changes, sound additions and sound deletions. All changed sounds are classified according to the type of change. Next, the formulation of morphophonemic rules is based on daily results. Morphophonemic processes are generalized according to their changing behavior, so that a kind of BT morphophonemic system formula is obtained.

DISCUSSION

Morphophonemic Process

The morphophonemic process in Tontemboan (BT) can be divided into three processes, namely the process of changing phonemes, the process of adding phonemes, and the process of deleting phonemes. This process occurs in the affix morphemes and the basic morphemes attached to the affix morphemes in the nasal phoneme /N/ are in the final position, namely: maN-, pʷaN-, mən—an, paN—an, mən + reduplication. This nasal phoneme changes its form in a morphophonemic process based on the environment it enters. Apart from affixes with the nasal phoneme /N/ as above, there are also a number of nasal particles. These particles are aN, which expresses a place, which corresponds to a preposition in Indonesian, the particle iN, which states belonging or origin, and əN, which determines something. nemic process in Tontemboan (BT) can be divided into three processes, namely the process of changing phonemes, the process of adding phonemes, and the process of deleting phonemes. This process occurs in the affix morphemes and the basic morphemes attached to the affix morphemes in the nasal phoneme /N/ are in the final position, namely: maN-, pʷaN-, mən—an, paN—an, mən + reduplication. This nasal phoneme changes its form in a morphophonemic process based on the environment it enters. Apart from affixes with the nasal phoneme /N/ as above, there are also a number of nasal particles. These particles are aN, which expresses a place, which corresponds to a preposition in Indonesian, the particle iN, which states belonging or origin, and əN, which determines something.

(1) Process of Changing the Phoneme /N/ to /m/

Table 1. Process of Changing the Phoneme /N/ to /m/ (data analysis source, 2023)

The phoneme /N/ in the affix maN-	Phoneme Change Process	Meaning
maN- + posok	/mamosok/	'used to bypass'
maN- + pongkor	/mamonkor/	'used to fish'
maN- + pa'an	/mamaʔan/	'sneeze'
The phoneme /N/ in the affix pʷaN-	Phoneme Change Process	Meaning
pʷaN- + pangkur	/pʷamanʔkur/	'usually used to hit'
pʷaN- + pu'is	/pʷamuʔis/	'usually used to kidnap'

pʰaN- + pokol	/pʰamokol/	'usually used for cutting'
Phonem /N/ in the suffix mən- an	Phoneme Change Process	Meaning
mən- an + pokey	/məmpokeyan/	'reprimanding each other'
mən- an + po'ok	/məmpoʔkan/	'Brotherhood'
mən-an + pekit	/məmpoʔkitan/	'chasing each other'
Phonem /N/ in the suffix paN- an	Phoneme Change Process	Meaning
paN- an + pekang	/paməkaŋan/	'Usual place to kick'
paN- an + mareng	/pamareŋan/	'Ordinary place to go home'
paN- an + wela'd	/paməlaʔdan/	'A common place to dry'
Phonem /N/ in the suffix mən- + Reduplication	Phoneme Change Process	Meaning
mən- + R. pokol	/məmoko-mokol/	'Cutting'
mən- + R. pendam	/məmənda-məndam/	'Groping'
mən- + R. pasut	/Məmasu-masut/	'Hit-and-Hit'
The phonem /N/ in the suffix maN-	Phoneme Change Process	Meaning
maN- + waya'	/mamayaʔ/	'Ordinary walking'
maN- + wera'	/maməraʔ/	'used to play'
maN- + wa'kes	/mamaʔkas/	'usual binding'
pʰa- + weso'	/pʰaməsoʔ/	'Commonly used attractive'
pʰa- + wekar	/pʰawəkar/	'Commonly used to take off'
pʰa- + wangkil	/pʰawaŋkil/	'commonly used to throw away'
mən—an + we'e	/məmbəʔan/	'giving to each other'
mən—an + weren	/məmbəŋan/	'interdependent'
mən—an + wekar	/məmbəkaran/	'Letting go of each other'
paN—an + wera'	/paməraʔan/	'Usual place to play'
paN—an + wangker	/paməŋkeran/	'An ordinary place to sell'
paN-- an + wangen	/paməŋənan/	'a common place to lean on'
mən- R. + wekar	/məməkar-məkar/	'Escape'
mən- R. + weren	/məməŋən-məŋən/	'hanging'
mən- R. + wilit	/Məmililit-milit/	'sewing-sewing'

This data shows that the phonemes /N/ in the suffixes maN-, pʰaN-, mən—aN-, paN—an, and mən- + R change to /m/ when these suffixes add the basic forms of the initial phonemes /p/ and /w/. Specifically the suffix m - + R changes the phoneme in /p/ and /w/ the initial phoneme of the basic form in the first and second phallus. The change of /N/ to /m/ is only found in the Makela'i dialect.

Change /N/ to /m/

Table 2. Change of /N/ in particles aN, iN, əN to /m/

Phonem: /N/ to /m/	Phoneme Change Process	Meaning
aN + papalen	/ampapalən/	'at the door'
aN + po'ot	/ampoʔot/	'in the stomach'
aN + puruk	/ampuruk/	'at the top'
aN + wale	/ambalə/	'at home'
aN + wu'uk	/ambuʔuk/	'in the hair'
aN + watu	/ambatu/	'in stone'
aN + bola	/ambola/	'on the ball'
aN + beton	/ambəton/	'in concrete'
aN + bene	/ambəne/	'in the rice'
iN + punti	/impunti/	'from bananas'
iN + pela'	/impəlaʔ/	'from wounds'
iN + po'po'	/impoʔpoʔ/	'from coconut'
iN + wale	/imbale/	'from home'
iN + wu'uk	/imbuʔuk/	'from hair'
iN + wi'ir	/imbiʔir/	'from rice'
iN + bola	/imbola/	'from the ball'
iN + beton	/imbəton/	'of concrete'
iN + bak	/imbak/	'from the tub'
əN + punti	/əmpunti/	'it's a banana'
əN + pela'	/əmpəlaʔ/	'It's a Wound'

əN + pused	/əmpusəd/	'it's the navel'
əN + wale	/əmbalə/	'it's home'
əN + watu	/əmbatu/	'it's a stone'
əN + wene	/əmbəne/	'It's Rice'
əN + bola	/əmbola/	'it's a ball'
əN + beton	/əmbəton/	'it's concrete'
əN + bak	/əmbak/	'That's the tub'

The change of /N/ in the particles aN, iN, əN to /m/ occurs when the particles precede the words with the initial phonemes /p/, /w/, and /b/. In BT, there are actually no words with the initial phoneme /b/, the words in the example above are absorbed words. With this change, it is also illustrated that absorbed words can cause sound changes in the morphophonemic process.

The change of /N/ to /m/ is also found in the string of particles aN, əN in the words with the initial phonemes of the vowels /i/, /ɛ/, /a/, /o/ which indicate direction. As shown in table 3:

Table 3. Changes in the assembly of particles aN, əN

Phonem: /N/ to /m/	Phoneme Change Process	Meaning
aN + io'	/amioʔ/	'below'
aN + eko	/ameko/	'in the south'
aN + ange	/amaŋə/	'above'
aN + oko	/amoko/	'in the west'
əN + io'	/amioʔ/	'down'
əN + eko	/ameko/	'to the south'
əN + ange	/amaŋə/	'up'
əN + oko	/amoko/	'to the west'

In particular, the word unəʔd 'middle' if it is coupled with the particle aN deviates from the above provision, meaning that /N/ in that particle does not change to /m/ will remain /n/, for example aN + unəʔd becomes anunəʔd 'in the middle'.

Changing /N/ to /n/

The phoneme /N/ in the suffixes maN-, pʔaN-, PaN—an, mənN--N, mənN- +R. changes to /n/ as shown in the following process in table 4:

Table 4. Changes to the phoneme /N/ in suffixes

Phonem: /N/ to /n/	Phoneme Change Process	Meaning
maN + talun	/manalun/	'used to hunting in the forest'
maN + taleʔd	/manaleʔd/	'used to intercept'
maN + tintas	/manintas/	'used to run or leave'
pʔaN- + tombol	/pʔanombol/	'what is commonly used to refute'
pʔaN + tebal	/pʔanəbəl/	'commonly used to sharpen'
pʔaN + tengkor	/pʔanəŋkor/	'commonly used to beat'
mənN—an + tulung	/mənNtulujan/	'helping each other'
mənN—an + towa	/məntowaan/	'Calling each other'
mənN—an + tamber	/məntamberan/	'giving to each other'
paN—an + teles	/panələsan/	'Where to buy'
paN—an + taleʔd	/panaleʔdan/	'Ordinary place intercepts'
paN—an + tawoi	/panawoian/	'a place of ordinary work'
mənN- + R. tengkor	/məneŋko-nəŋkor/	'knocking'
mənN- + R. timboy	/mənimbo-nimboy/	'Holdings'
mənN- + R. topok	/mənopopopok/	'Piercing-Piercing'
MaN- + sendang	/manəndan/	'basking in the sun'
MaN- + saput	/manaput/	'wrapping'
MaN- + sunge	/manuŋe/	'head'
pʔaN- + saʔap	/pʔanaʔap/	'commonly used to scoop'
pʔaN- + sule	/pʔa sule/	'Commonly used to block'
pʔaN- + sosoʔd	/pʔasosoʔd/	'commonly used for climbing'
paN- an + sendang	/panəndanjan/	'Ordinary place to relax'
paN- an + sake	/panakean/	'Usual place to ride'
paN- an + sengo	/panəŋjoan/	'Usual place to blow'
mənN- + R. sawel	/mənaʔəl-nawəl/	'alternate'
mənN- + R. sere	/məneŋe-nere/	'looking around'
mənN- + R. sesel	/mənaʔəl-nasal/	'Regret Continues'

The phonemes /N/ in the suffixes maN-, pʔaN-, PaN—an, mənN-N, mənN- +R. change to /n/ if the suffixes add basic forms with the initial phonemes /t/ , /s/, except for the suffix mənN-an in the basic phonemes with the initial phoneme /s/ nasal /N/ in mənN- an changes to /n̄/ which will be described elsewhere.

Especially in the addition of mənN-R. with the basic form of the initial phoneme /t/, /s/, the change not only occurs in the phoneme /N/ suffix, but also occurs in /t/ and /s/ both in the first phallus and in the second phallus. The change from /N/ to /n/ also occurs with the addition of mənN—an in the initial phoneme-based form /r/, but in this process the phoneme /r/ changes to /d/, for example in table 5:

Table 5. This process the phoneme /r/ it changes to /d/

Phonem: /r/ to /d/	Phoneme Change Process	Meaning
mənN—an + rangkaʔ	/məndaŋkaʔan/	'Elevate each other'
mənN—an + romaʔ	/məndomaʔan/	'Talking to each other'
mənN—an + ruʔut	/mənduʔutan/	'Gathering Together'

The change of /N/ to /n/ in the suffixes maN-, pʔaN-, PaN—an, is only found in the Makelaʔi dialect.

(2) The Process of Adding the Phonem /n/

The addition of mənN- with the reduplication of mənN- + R. gives rise to the addition of sounds to the basic form as shown in table 6:

Table 6. Process Adding sound to basic shapes

Addition of phoneme /n/	Phoneme Change Process	Meaning
mənN- + R ame	/məŋame-nəme/	'Crying Constantly'
mənN- + R inde	/məŋinde-njinde/	'Constant fear'
mənN- + R engkol	/məŋeŋko-nəŋkol/	'twisting'
Addition of phoneme /ʔ/	Phoneme Change Process	Meaning
Pəla + -an	pəla /pəlaʔan/	'dry'
Ka—an + linga	/kəliŋaʔan/	'sound'
Pa—an + esa	/paəsaʔan/	'unity'

The confluence of /a/ in the basic form at the final position with /a/ at the beginning of the suffix -an gives rise to /ʔ/. The suffix -an and the suffixes ka-an and pa-an. So the existence of /ʔ/ is due to the meeting of two morphemes /a/ in each morphe that is brought together.

Table 7. Addition of the phoneme /y/

Addition of the phoneme /y/	Phoneme Change Process	Meaning
wali + -an	/waliyan /	'Drop-off place'
kəli + -an	/kəliyan/	'a lot'
ka—an + wali	/kawaliyan/	'causes'
ka—an + wengi	/kawəŋjan/	'Late Night'
pa—an + tuli	/patulian /	'Stopover'

The addition of the /y/ phoneme occurs when the vowel /i/ at the end of the basic form meets the vowel /a/ at the beginning of the suffix -an. The suffix -an is intended as the suffix -an and -an in the confix -an and pa-an. The addition of this phoneme is to facilitate speech.

Table 8. The confluence of the vowels /u/ and /a/ gives rise to the phoneme /w/

Addition of phonemes /w/	Phoneme Change Process	Meaning
saru + -an	/saruawan/	'Facing Place'
wuku + -an	/wukuwan/	'have books'
ka—an + tupu	/katupuwan/	'stabbed'
ka—an + kusu	/kakusuwan/	'can be smashed'
pa—an + kuru	/pakuruwan/	'Place of Respect'
pa—an + saru	/pasaruan/	'Facing Place'

The meeting of the vowel /u/ at the end of the basic form with the vowel /a/ at the beginning of the suffix -an gives rise to the phoneme /w/. The appearance of the phoneme /w/ in the formed word is due to the meeting of the phoneme /u/ at the end of the basic form with /a/ at the beginning of the suffix -an. The addition of /y/ and the addition of the phoneme /w/ are anaptic, which is a sound that adds two vowels between two consonants to facilitate speech.

(3) The Process of Removing the /N/ Phoneme

The addition of mən- by reduplication of mən- + R. mən—an causes the elimination of sounds in the basic form as shown in table 9.

Table 9. Phoneme Removal Process /N/

Phoneme removal /N/	Phoneme Change Process	Meaning
mən- + render	/mərɛndɛ-rɛndɛr/	'scolding continuously'
mən- + mata'	/məmata-mataʔ/	'Raw Continues'
mən- + R langkoi	/mələŋko-ləŋkoi/	'Langgar-langgar'
mən- + R lelo	/mələlo-lələ/	'miss always'
mən—an + nanam	/mənənanam/	'Taste each other'
mən—an + naram	/mənəram/	'Familiar'
mən—an + lua'	/məluaʔan/	'Spit on each other'

The phoneme /N/ in formed words has been decayed. This occurs when the suffixes mən- + R., mən—an are appended to the basic forms that have the initial phonemes /m/, /n/, /r/, and /l/.

Table 10. The phoneme /p/ is melted or omitted

Phoneme omission /p/	Phoneme Change Process	Meaning
maN- + pongkor	/maməŋkor/	'used to look for fish'
maN- + pu'puk	/mamupuk/	'used to fertilize'
p'aN- + pokol	/p'amokol/	'commonly used to cut'
paN—an + pangkur	/pamanʔkur/	'Usual place to hit'
məN- + pumpun	/məmumpun-mumpun/	'Inserting'

The phoneme /p/ in these formed words has been omitted. This phoneme is also the initial phoneme of the basic forms that undergo dissolution or disappearance when the basic forms are suffixed with maN-, pɣaN-, paN—an, and məN- +R. the omission of /p/ in the first and second phalluses.

Table 11. The phoneme /w/ is diluted or omitted

Removal of the /w/ phoneme	Phoneme Change Process	Meaning
maN- + wilit	/mamilit/	'regular sewing'
maN- + wa'kes	/mamaʔkəs/	'usual binding'
p'aN- + wu'as	/p'amuʔas/	'commonly used for washing'
paN—an + wangker	/pamanʔkeran/	'a common place to sell'
paN—an + wera'	/paməraʔan/	'Usual place to play'
məN- + R wilit	/məmili-milit/	'sew on'

Table 12. The phoneme /t/ is diluted or omitted

Removal of the /t/ phoneme	Phoneme Change Process	Meaning
maN- + teles	/manələs/	'Casual Buying'
maN- + tawoi	manawoi	'Ordinary work'
p'aN- + tebel	/p'anəʔbəl/	'commonly used to sharpen'
paN—an + tenge'	/panɛŋɛʔan/	'Where it used to sound'
məN- + R tawoi	/mənawo-nawoi/	'Keep working'

The phoneme /t/ in formed words has been omitted. The phoneme /t/ as the initial phoneme of the basic forms is omitted when the basic forms are suffixed maN-, pɣaN-, paN—an and məN- + R.

Morphophonemic Rule

Alteration, Addition, and Omission of phonemes that occur due to the meeting or contact of two morphemes, both in the construction of formed words and in the construction of phrases as described in the previous section, show an orderly change of sound. Based on this order, morphophonemic rules in Tontemboan (BT) can be formulated as follows:

1) Morphemes affix maN-

- a. maN- → mam- When added to the basic forms with the initial phonemes

/p/ and /w/ This change process is accompanied by the loss of the phonemes /p/ and /w/.

maN- + pongkor ⇒ /mamɔŋkor /

maN- + waʔkəs ⇒ /mamaʔkəs /

- b. **maN- → man-** when added to basic forms with initial phonemes /t/ and /s/. This process of change is accompanied by the loss of the phonemes /t/ and /s/.

maN- + talun ⇒ /manalun/

maN- + sendang ⇒ /manəndaŋ/

- c. **maN- → maŋ-** when added to basic forms with initial basic phonemes /k/, /i/, /ɛ/, /ə/, /a/, /u/, /o/. This change process is accompanied by the loss of /k/, while /i/, /ɛ/, /ə/, /a/, /u/, /o/ remain.

maN- + kawok ⇒ /maŋawok/

maN- + emaʔ ⇒ /maŋɛmaʔ/

maN- + elep ⇒ /maŋələp/

maN- + angkai ⇒ /maŋaŋkai/

maN- + uma ⇒ /maŋuma/

maN- + oko ⇒ /maŋoko/

2) Morpheme affixes pʔaN-

- a. **pʔaN- → pʔam-** when added to basic forms with initial phonemes /p/ and /w/. This change process was accompanied by the loss of /p/ and /w/.

pʔaN- + pokol ⇒ /pʔamokol/

pʔaN- + wangker ⇒ /pʔamaŋkər/

- b. **pʔaN- → pʔan-** when added to basic forms with initial phonemes /t/ and /s/. This change process is accompanied by the loss of /t/, and /s/.

pʔaN- + tebel ⇒ /pʔanaʔbəl/

pʔaN- + suʔup ⇒ /pʔanuʔup/

- c. **pʔaN- → pʔaŋ-** when added to basic forms with initial phonemes /k/, /i/, /ɛ/, /ə/, /a/, /u/, /o/. This change process was accompanied by the loss of /k/. while /i/, /ɛ/, /ə/, /a/, /u/, and /o/ fixed.

pʔaN- + kua ⇒ /pʔaŋua/

pʔaN- + indo ⇒ /pʔanindo/

pʔaN- + ema ⇒ /pʔaŋɛma/

pʔaN- + elus ⇒ /pʔaŋələs/

pʔaN- + angkai ⇒ /pʔaŋaŋkai/

pʔaN- + useʔb ⇒ /pʔaŋusəʔb/

pʔaN- + oko ⇒ /pʔaŋoko/

3) Afix morphemes paN—an

- a. **paN—an → pam—an** when added to basic forms with the initial phoneme /p/, /w/. This change process is accompanied by the loss of /p/, and /w/.

paN—an + pumpun ⇒ /pamumpunan/

paN—an + welaʔd ⇒ /paməlaʔdan/

- b. **PaN—an → pan—an** when added to basic forms with the initial phoneme /t/, /s/. This change process was accompanied by the loss of /t/ and /s/.

PaN—an + tawoi ⇒ /panawoian/

PaN—an + sendang ⇒ /panəndaŋan/

- c. **PaN—an → paŋ—an** when added to basic forms with the initial phoneme /k/, and the vowels /i/, /ɛ/, /ə/, /a/, /u/, /o/. This change process is accompanied by the loss of /k/, while The vowels /i/, /ɛ/, /ə/, /a/, /u/, and /o/ remain.

PaN—an + kesot ⇒ /paŋəsotan/

PaN—an + indo ⇒ /paŋindoan/

PaN—an + emaʔ ⇒ /paŋɛmaʔan/

PaN—an + elus ⇒ /paŋələsan/

PaN—an + aŋe ⇒ /paŋaŋean/

PaN—an + useʔb ⇒ /paŋusəʔban/

PaN—an + oko ⇒ /paŋokoan/

4) Afiks mən—an morphemes

- a. **mən—an → məm—an** when added to basic forms with the initial phoneme /p/,

/w/. In the process of this change is not accompanied by the loss of /p/, while /w/ changes to /b/.

mən—an + pute ⇒ /məmputean/

mən—an + waʔkes ⇒ /məmbaʔkəsən/

- b. **mən—an → mən—an** when added to basic forms with the initial phoneme /t/. This change process is not accompanied by the loss of /t/.

mən—an + tulang ⇒ /məntuluŋan/

- c. **mən—an → mən—an** when added to the basic form with the initial phoneme /s/. This change process is not accompanied by the loss of /s/.

mən—an + sere ⇒ /mənserean/

- d. $m\text{əN}-\text{an} \rightarrow m\text{əŋ}-\text{an}$ when added to the basic form with the initial phoneme /k/, and the vowels /i/, /ε/, /ə/, /a/, /u/, and /o/. In the process of this change, it is not accompanied by the loss of phonemes.

$m\text{əN}-\text{an} + \text{kesot} \Rightarrow /m\text{əŋkəsot}\text{an}/$
 $m\text{əN}-\text{an} + \text{indo} \Rightarrow /m\text{əŋindo}\text{an}/$
 $m\text{əN}-\text{an} + \text{ema}' \Rightarrow /m\text{əŋema}'\text{an}/$
 $m\text{əN}-\text{an} + \text{elur} \Rightarrow /m\text{əŋelur}\text{an}/$
 $m\text{əN}-\text{an} + \text{angkai} \Rightarrow /m\text{əŋangkai}\text{an}/$
 $m\text{əN}-\text{an} + \text{upu}' \Rightarrow /m\text{əŋupu}'\text{an}/$
 $m\text{əN}-\text{an} + \text{oko} \Rightarrow /m\text{əŋoko}\text{an}/$

5) Morpheme Afiks $m\text{əN}-$ + R.

- a. $m\text{əN}- + R. \rightarrow m\text{əm}- + R.$ when added to the basic form with the initial phoneme /p/, /w/. This process of change was accompanied by the loss of the phonemes /p/ and /w/.

$m\text{əN}- + R. + \text{pokol} \Rightarrow /m\text{əmokol-mokol}/$
 $m\text{əN}- + R. + \text{wera}' \Rightarrow /m\text{əmərə-mərə}'/$

- b. $m\text{əN}- + R. \rightarrow m\text{ən}- + R.$ when added to the basic form with the initial phoneme /t/, /s/. This change process is accompanied by the loss of /t/, /s/.

$m\text{əN}- + R. + \text{tawoi} \Rightarrow /m\text{ənawo-nawoi}/$
 $m\text{əN}- + R. + \text{sowat} \Rightarrow /m\text{ənowa-nowat}/$

- c. $m\text{əN}- + R. \rightarrow m\text{əŋ}- + R.$ when added to basic forms with the initial phonemes /k/ and the vowels /i/, /ε/, /ə/, /a/, /u/, /o/. This process of change is accompanied by the loss of /k/, while /i/, /ε/, /ə/, /a/, /u/, and /o/ remain.

$m\text{əN}- + R. + \text{kesot} \Rightarrow /m\text{əŋəsot-ŋəsot}/$
 $m\text{əN}- + R. + \text{indo} \Rightarrow /m\text{əŋindo-ŋindo}/$
 $m\text{əN}- + R. + \text{ema}' \Rightarrow /m\text{əŋema-ŋema}'/$
 $m\text{əN}- + R. + \text{enda}' \Rightarrow /m\text{əŋənda-}'\text{ŋənda}'/$
 $m\text{əN}- + R. + \text{ame}' \Rightarrow /m\text{əŋame-ŋame}'/$
 $m\text{əN}- + R. + \text{upu} \Rightarrow /m\text{əŋupu-ŋupu}/$
 $m\text{əN}- + R. + \text{onge} \Rightarrow /m\text{əŋoŋe-ŋoŋe}/$

6) Particles aN, iN, əN

- a. $a\text{N}, i\text{N}, \text{əN} \rightarrow a\text{m}, i\text{m}, \text{əm}$ when preceding the initial phonetic words /p/, /w/. This change process is not accompanied by the loss of /p/, while /w/ changes to /b/.

$a\text{N} + \text{po}'\text{ot} \Rightarrow /a\text{mpo}'\text{ot}/$

$a\text{N} + \text{wale} \Rightarrow /a\text{mbal}\epsilon'/$
 $i\text{N} + \text{po}'\text{ot} \Rightarrow /i\text{mpo}'\text{ot}/$
 $i\text{N} + \text{wale} \Rightarrow /i\text{mbal}\epsilon'/$
 $\text{əN} + \text{po}'\text{ot} \Rightarrow /ə\text{mpo}'\text{ot}/$
 $\text{əN} + \text{wale} \Rightarrow /ə\text{mbal}\epsilon'/$

When preceding the phonetic words with the initial /i/, /ε/, /a/, /o/ which indicate direction.

$a\text{N} + \text{ico} \Rightarrow /a\text{mico}/$
 $a\text{N} + \text{eko} \Rightarrow /a\text{meko}/$
 $a\text{N} + \text{ange} \Rightarrow /a\text{maŋ}\epsilon'/$
 $a\text{N} + \text{onge} \Rightarrow /a\text{moŋ}\epsilon'/$
 $i\text{N} + \text{ico} \Rightarrow /i\text{mico}/$
 $i\text{N} + \text{eko} \Rightarrow /i\text{meko}/$
 $i\text{N} + \text{ange} \Rightarrow /i\text{maŋ}\epsilon'/$
 $i\text{N} + \text{onge} \Rightarrow /i\text{moŋ}\epsilon'/$
 $\text{əN} + \text{ico} \Rightarrow /ə\text{mico}/$
 $\text{əN} + \text{eko} \Rightarrow /ə\text{meko}/$
 $\text{əN} + \text{ange} \Rightarrow /ə\text{maŋ}\epsilon'/$
 $\text{əN} + \text{onge} \Rightarrow /ə\text{moŋ}\epsilon'/$

- b. $a\text{N}, i\text{N}, \text{əN} \rightarrow a\text{n}, i\text{n}, \text{ən}$ when preceding words with the initial phonemes /t/, /r/, and vowels /i/, /ə/, /ε/, /ə/, /a/, /u/, /o/, which do not indicate direction. This change process is not accompanied by the loss of /t/ while /r/ changes to /d/.

$a\text{N} + \text{talun} \Rightarrow /a\text{ntalun}/$
 $a\text{N} + \text{ru}'\text{u} \Rightarrow /a\text{ndu}'\text{u}/$
 $i\text{N} + \text{talun} \Rightarrow /i\text{ntalun}'/$
 $i\text{N} + \text{ra}'\text{dan} \Rightarrow /i\text{nda}'\text{dan}/$
 $\text{əN} + \text{talun} \Rightarrow /ə\text{ntalun}/$
 $\text{əN} + \text{ra}'\text{dan} \Rightarrow /ə\text{nda}'\text{dan}/$
 $a\text{N} + \text{ipen} \Rightarrow /a\text{nipən}/$
 $a\text{N} + \text{ewe}' \Rightarrow /a\text{n}\epsilon\text{w}\epsilon'/$
 $a\text{N} + \text{enda}' \Rightarrow /a\text{n}\epsilon\text{nda}'/$
 $a\text{N} + \text{uma} \Rightarrow /a\text{numa}/$
 $a\text{N} + \text{oak} \Rightarrow /a\text{noak}/$
 $i\text{N} + \text{ipen} \Rightarrow /i\text{nipən}/$
 $i\text{N} + \text{ewe}' \Rightarrow /i\text{n}\epsilon\text{w}\epsilon'/$
 $i\text{N} + \text{erut} \Rightarrow /i\text{n}\epsilon\text{rut}/$
 $i\text{N} + \text{ate} \Rightarrow /i\text{nat}\epsilon'/$
 $i\text{N} + \text{uma} \Rightarrow /i\text{numa}/$
 $i\text{N} + \text{oak} \Rightarrow /i\text{noak}/$
 $\text{əN} + \text{ipen} \Rightarrow /ə\text{nipən}/$
 $\text{əN} + \text{ewe}' \Rightarrow /ə\text{n}\epsilon\text{w}\epsilon'/$
 $\text{əN} + \text{erut} \Rightarrow /ə\text{n}\epsilon\text{rut}/$
 $\text{əN} + \text{ate} \Rightarrow /ə\text{nat}\epsilon'/$
 $\text{əN} + \text{uma} \Rightarrow /ə\text{numa}/$
 $\text{əN} + \text{oak} \Rightarrow /ə\text{noak}/$

- c. $a\text{N}, i\text{N}, \text{əN} \rightarrow a\text{n}, i\text{n}, \text{ən}$ when preceding a word with an initial phoneme /s/. This change process is not accompanied by the loss of /s/.

aN + salu ⇒ /a^hsalu/
 iN + insolo ⇒ /i^hnsolo/
 əN + susu ⇒ /ə^hnsusu/

- d. [aN, iN, əN → aŋ, iŋ, əŋ] when preceding a word with the initial phoneme /k/. This change process is not accompanied by the loss of /k/.
 aN + kesot ⇒ /aŋkəsot/
 iN + kama ⇒ /iŋkama/
 əN + kundu ⇒ /əŋkundu/

7) The meeting of two vowels

- a. [a + a ⇒ ʔ] The addition of the glottal /ʔ/ occurs when the two vowels /a/ in two morphemes intersect.
 liŋa + an ⇒ /liŋaʔan/
 esa + pa—an ⇒ /paəsəʔan/
 lupa + ka—an ⇒ /kalupaʔan/
- b. [i + a ⇒ y] The addition of /y/ occurs when /i/ in one morphem intersects with /a/ in another morpheme.
 awi + an ⇒ /awiyān/
 wengi + ka—an ⇒ /kawəŋjān/
 tuli + pa—an ⇒ /patuliyan/
- c. [u + a ⇒ w] The addition of /y/ occurs when /i/ in one morphem intersects with /a/ in another morpheme.
 kuru + an ⇒ /kuruwan/
 suru + ka—an ⇒ /kasuruwan/
 susu + pa—an ⇒ /pasusuwan/

CONCLUSION

The process of morphophonemic change in the Tontemboan language of the makalaʔi dialect after being described turns out to consist of three types, namely: 1) The process of changing the phoneme, found in the phoneme /N/ in the suffixes m N-, pʔaN-, paN—an, m N—an, m N-+R, and in the particles aN, iN, N change to /m/, /n/, /ŋ/, /ñ/. The process of changing /N/ to /m/, /n/, /ñ/, /ŋ/ depends on the condition of the initial phoneme of the basic form or root word entered by the suffix. In addition, the process of changing the phoneme can also be seen in the change of /w/ to /b/, /r/, /r/ to /d/ as the initial phoneme of the basic form or word,

after getting certain suffixes and the above particles. 2) Phoneme Addition Process occurs when two vocal phonemes intersect or meet. The phoneme /a/ meets the phoneme /a/ will give rise to /ʔ/, the phoneme /i/ meets the phoneme /a/ will give rise to the phoneme /y/, and the phoneme /u/ meets the phoneme /a/ will give rise to the phoneme /w/. The addition of phonemes is also found in the addition of m N- + R. with a basic form with an initial vowel phoneme. 3) The process of phoneme removal is seen in the loss of the phoneme /N/ in the suffixes m N- + R. m N—an when adding the basic forms of the initial phonemes /l/, /m/ and /n/. The loss of /p/, /w/, /t/ as the initial phoneme of the basic form when receiving the suffix maN-, pʔaN-, paN—an, m N- + R. is also included in the process of phoneme removal. The types of morphophonemic processes that exist in the Tontemboan language are assimilation, loss of consonant phonemes, loss of vowel phonemes, palatalization and nasalization, while dissimilation and cluster reduction were not found.

The morphophonemic rules of the Tontemboan language show complexity but have order and systematic. Through this research, it will add to the value of linguistic knowledge in the field of morphophonemics of the Tontemboan language, so that it can be developed and preserved so that it is not eroded or even extinct in the era of globalization.

REFERENCES:

- Alwasilah, A. C. (1993). *Beberapa mazhab dan dikotomi teori linguistik*. Angkasa.
- Alwi, H., Dardjowidjojo, S., Lapoliwa, H., & Moeliono, A. M. (2024). *Tata bahasa baku bahasa Indonesia*. Balai Pustaka.

- Arifin, Z., & Junaiyah. (2007). *Morfologi: Bentuk, makna, dan fungsi*. PT Grasindo.
- Ali, M. (2011). *Memahami riset perilaku dan sosial*. Pustaka Cendekia Utama.
- Baryadi, P. (2022). *Morfologi dalam ilmu bahasa*. Sanata Dharma University Press.
- Chaer, A. (2009). *Fonologi bahasa Indonesia*. Rineka Cipta.
- Chaer, A. (2014). *Linguistik umum* (Rev. ed.). Rineka Cipta.
- Crystal, D. (2008). *A dictionary of linguistics and phonetics* (6th ed.). Blackwell Publishing.
- Danie, J. A. (1986). *Geografi dialek bahasa Tontemboan*. FPBS IKIP Manado.
- Darsana, I. N. (2016). *Proses morfofonemik bahasa Bali: Kajian generatif* (Undergraduate thesis). Universitas Udayana.
- Mahsun, M. S. (2010). *Metode penelitian bahasa*. PT RajaGrafindo Persada.
- Mahsun, M. S. (2012). *Metode penelitian bahasa: Tahapan strategi, metode, dan tekniknya*. PT RajaGrafindo Persada.
- Meruntu, H. H. (1989–1991). *Perbedaan dialek Makela'i dan Matana'i dalam bahasa Tontemboan di Minahasa* (Research report). FPBS IKIP Manado.
- Nazir, M. (2003). *Metode penelitian* (3rd ed.). Ghalia Indonesia.
- Nida, E. A. (2021). *Morphology: The descriptive analysis of words*. University of Michigan Press.
- Ramlan, M. (2009). *Morfologi: Suatu tinjauan deskriptif*. CV Karyono.
- Rattu, A. B. G., Rogi-Warouw, F., Meruntu, H., & Lowing-Kaeng, I. (1993). *Morfologi dan sintaksis bahasa Tontemboan*. Departemen Pendidikan dan Kebudayaan.
- Robot, K. Y. (2019). Tekanan dalam bahasa Tontemboan: Pendekatan fonetik eksperimental. *Kajian Linguistik*, 4(3).
- Schane, S. A. (1992). *Fonologi generatif* (K. Gunawan, Trans.). PT Gelora Angkasa Pratama.
- Schwarz, J. A. T. (1907). *Tontemboansche teksten*. E. J. Brill.
- Schwarz, J. A. T. (1908). *Hoofdstukken uit de spraakkunst van het Tontemboansch*. Martinus Nijhoff.
- Sumadi, S. (2010). *Metodologi penelitian*. PT RajaGrafindo Persada.
- Tambuwun, E. M. (1986a). *Tatabahasa Tontemboan* (Vol. 1). Yayasan Budaya Tontemboan.
- Tenda, K. (2015). *Analisis kontrastif sufiks bahasa Inggris dan bahasa Tontemboan* (Undergraduate thesis). Universitas Sam Ratulangi.
- Ticoalu, H., Nayoan, T. L., Lumenan, A. B., Djumna, R., & Nomomiti. (1984). *Struktur bahasa Tontemboan*. Departemen Pendidikan dan Kebudayaan.
- Warokka, D. (2004). *Kamus bahasa daerah Manado–Minahasa: Indonesia–Manado–Tontemboan–Tolour–Tonsea–Tombulu*. Alfa Indah.

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