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PHONOLOGY OF *KAUR* LANGUAGE IN GENERATIVE THEORY

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Abstract

Kaur language (abbreviated to KL) is one of the varieties of Central Malay, which is spoken by the people living in Kaur Regency, Bengkulu Province. This study focuses on three problems; they are (1) how the segments of sounds in KL were represented and what features distinguished them; (2) how the syllabic structures, phonetic symbols, and the patterns of stress in KL were represented; and (3) how and why the phonological processes in KL took place; and what its phonological rules were like? The general objective of this study was to analyze the phonological system of Kaur language, and the specific objective was to explain the sound segments, syllabic structure, phonotactic system, and phonological processes and rules of KL using the Generative Theory. Descriptive-qualitative approach was used in this study. The data were collected using interview and documentation methods and were analyzed and presented formally and informally.

The results of the study showed that there were 23 phonological processes in Kaur language represented by /a, ə, i, u, p, b, t, d, c, ɟ, k, g, ʔ, m, n, ɲ, ŋ, s, ʕ, h, l, w, j/. These segments were phonetically realized by [a, ɑ, ɘ, ə, i, ɪ, e, ɛ, u, ʊ, o, ɔ, ã, ɑ̃, ə̃, ə̃, ĩ, ɪ̃, ẽ, ɛ̃, ũ, ʊ̃, õ, ɔ̃, p, p$^{>}$, b, b$^{>}$, t, t$^{>}$, d, c, ɟ, k, k$^{>}$, g, g$^{>}$, ʔ, m, n, ɲ, ŋ, s, z, ɣ, ʕ, h, ɦ, l, w, j, ^{w}, ^{j}]. Every segment was described by using 17 distinctive features, which were [syllabic, son., cons., cont., nas., lat., ant., cor., gut., plosives stops, voiced, high, front, back, low, ATR, round.]. In addition, it was found that there were 3 diphthongs, 9 series of vowels, 14 clusters of consonants, 22 series of consonants, and several unique series of vowel-consonants, 36 syllabic structures of bases, 5 basic patterns of syllabic structures of affixes, and 4 structures of mixed affixes.

The phonological processes are described in 49 phonological rules. Of these 49 rules, there are several ordered phonological rules.

Key words: Kaur language, syllable structure, phonological processes

1. Introduction

Kaur Language (abbreviated to KL) is spoken by more or less 40,000 people. It is genetically related to Central Malay (abbreviated to CM) (a combination of Minangkabau language and Malay language). Geographically, it is spoken in Kaur Regency, Bengkulu Province (see Arono, 2004 and Lewis, 2009). The other names for it are Mulak language, Bintuhan language, and Bulak-Bintuhan language. Among the three names, *bahasa Kaur* is better well known by those belonging to the Kaur ethnic group.

Phonologically, in addition to having universality, KL also has uniqueness. Such uniqueness, for example, can be seen from its phonological system and phonological processes. Phonologically, KL has four vowels and nineteen consonants (including semivowels). Having the system of four vowels and the system of fricative laryngeal consonants have made KL unique enough if compared to the other languages, especially those which are genetically related to CM. In addition, KL has a number of phonological processes, several of which are highly unique as exemplified by the process of addition of fricative velar.

A specific study exploring the phonological aspect (including phonetic aspect) of KL using Generative Theory has never been done before. Thus, theoretically, this present study is highly important and interesting. The reason is that phonology/phonetics is the most basic part of linguistics. In other words, one can use phonetic and phonological knowledge as a capital for conducting wider linguistic studies including morphology, syntax, and semantics (Laksman, 2001:139). Apart from that, it is such a phonological aspect which can reveal the specific as well as universal features of a language (Suparwa, 2007:3). Therefore, being the basic aspect and being able to describe a particular side of the speakers of a language, phonological aspect should be given more priority to explore than the other aspects (Palmer, 1996:273; Erom, 2010).

The problems in this study are formulated into three questions; they are (1) how the segments of sounds in KL were represented and what features distinguished them; (2) how the syllabic structures, phonetic symbols, and the patterns of stress in KL were represented; and (3) how and why the phonological processes in KL took place; and what its phonological rules were like? In general, this study aimed at (1) analyzing the phonological system in KL in such a way that the phenomena of sounds in KL, both the phenomena related to one segment, combinations of segments, and the changes taking place in such segments, could be comprehensively described; (2) applying the theory of Generative Phonology to the data taken from KL; (3) developing phonological studies which did not only analyze the phonological processes from the internal factors of linguistics but also from the external factors of linguistics . In particular, this study aimed at (1) describing the representations of the segments of sounds in KL and the segments of sounds in KL based on their distinctive features; (2) describing and analyzing the representations of the syllabic structures, the phonetic systems, and the patterns of stress in KL; and (3) analyzing the phonological processes, the factors leading to such phonological processes; and the phonological rules in KL.

2. Research Method

This study was conducted in seven districts in Kaur Regency, Bengkulu Province from August 2010 to March 2012. The oral data used in this study were obtained from informants

and the written data were obtained from KL documents. The instruments used in this study were the researcher himself, an interview guide and a recorder.

The data were collected through observation method (field linguistics) and library research (documentation). The observation method included three techniques; they were (1) elicitation, (2) recording, and (3) transcribing. The Ladefoged phonetic transcription was used to transcribe the data completed with Ladefoged CD software, Phonetic Symbol Guide, SIL Doulos IPA93 (font), Speech Analyzer Version 3.0.1 (SIL, 2007), and M. Kosmen Keyboard Keyman Program. The documentation method included the documents written in KL.

The collected data were analyzed based on the steps in dynamic phonology, segmental phonology, and suprasegmental phonology. The steps in dynamic phonology are as follows (1) the existing morphemes were determined, (2) the variants found were listed, (3) the rules describing such variants were transcribed, (4) the appropriate rules were combined, (5) the rules were tested, and (6) the rules were orderly compiled when necessary (see Suparwa, 2007: 88). Then, the steps in the segmental phonological analysis including phonological segments were proved and phonetic variants were found. After that, the analysis was continued by assigning the distinctive features to the segments of sounds in KL, redundant rules, the combinations of the sounds of segments in KL, the redundancies were analyzed so that optimal rules were created, the syllabic structures and the phonotactic system in KL were described and explained, and where the patterns of stress in KL were placed was analyzed using Speech Analyzer (version 2.6). Next, the dynamic phonological patterns were analyzed by describing the generally applicable rules. In addition, the minor rules including the obstructions causing any rule not to be applicable were also analyzed. Such analyzes were required by the theory of Generative Phonology applied in this present study and were in accordance with the analysis requiring that the data found should be completely analyzed. The dynamic phonologic patterns also used speech analyzer, which could detect, for example, the process of germination. Later, the results of data analysis were presented in the form of a research report using both formal and informal methods.

3. Material and Discussion

3.1 Representation of the Segments of KL sounds

This study found four segments of KL phonological vowels (/a, ə, i, u/), seventeen KL phonological consonants (/p, b, t, d, c, ɟ, k, g, ʔ, m, n, ɲ, ŋ, s, ʕ, h, l/), and two segments of KL phonological semivowel segments (/w, j/). It found two raising diphthongs (/a͡ɪ/, /a͡ʊ/) and one front diphthong (/u͡ɪ/), nine series of vowels (/a-a/, /a-u/, /a-i/, /u-u/, /u-a/, /u-ə/, /u-i/, /i-a/, /i-u/), fourteen clusters of consonants (/pl/, /bl/, /gl/, /mp/, /mb/, /nt/, /nd/, /ɲc/, /ɲɟ/, /ŋk/, /ŋg/, /st/, /ɲcl/, /ŋgl/), twenty two series of consonants (/m-p, m-b, n-t, n-d, n-s, ɲ-c, ɲ-ɟ, ŋ-k, ŋ-g, ŋ-s, ʕ-b, ʕ-t, ʕ-d, ʕ-c, ʕ-k, ʕ-s, s-ʕ, s-k, s-t, ʔ-m, ʔ-ʕ, ʔ-mp/), and unique patterns of vowel and consonant sequences.

3.2 Segments of KL Sounds in Their Distinctive Feature Description

This study needed seventeen distinctive features such as ([syllabic, son., cons., cont., nas., lat., ant., cor., gut., plosives stops, voiced, high, front, back, low, ATR, around]) for describing the segments of sounds in KL.

Based on the main features, the KL sounds were classified into **(a)** the segment featured by [+sonorant]: vowels (/a, ɘ, i, u/), nasal (/m, n, ɲ, ŋ/), lateral approximant (/l/), labial velar approximant (/w/), and palatal median approximant (/j/); **(b)** the segment featured by [-sonorant]: plosive (/p, b, t, d, c, ɟ, k, g, ʔ/) dan fricative (/s, ʕ, h/); **(c)** the segment featured by [+consonantal]: plosive (/p, b, t, d, c, ɟ, k, g/), nasal (/m, n, ɲ, ŋ/), fricative (/s, ʕ/), and lateral approximant (/l/); **(d)** the segment featured by [-consonantal]: plosive (/ʔ/), fricative (/h/), labial velar approximant (/w/), palatal median approximant (/j/), and vowels; **(e)** the segment featured by [+syllabic]: vowels (/a, ɘ, i, u/); and **(f)** the segment featured by [-syllabic]: plosive (/p, b, t, d, c, ɟ, k, g, ʔ/), nasal (/m, n, ɲ, ŋ/), fricative (/s, ʕ, h/), lateral approximant (/l/), labial velar approximant (/w/), and palatal median approximant (/j/).

Based on the features of the manner of articulation, the sounds in KL could be classified into **(a)** the segment featured by [+continuant] (/s, ʕ, h/); **(b)** the featured by [+nasal] (/m, n, ɲ, ŋ/); and **(c)** the segment featured by [+lateral] (/l/). Then, based on the features of the place of articulation, the sounds in KL could be classified into **(a)** the segment featured by [+anterior] (/p, b, m, w/), **(b)** the segment featured by [-anterior]: alveolar (/t, d, n, l/), palatal (/c, ɟ, ɲ, j/), velar (/k, g, ŋ, w/), faringal (/ʕ/), and glotal (/ʔ, h/); **(c)** the segment featured by [+coronal]: plosive (/t, d, c/), nasal (/ɲ/), and lateral (/l/); and **(d)** the segment featured by [-coronal]: plosive (/p, b, k, g, ʔ/), nasal (/m, n, ŋ/), fricative (/s, ʕ, h/), labial velar approximant (/w/), and palatal median approximant (/j/).

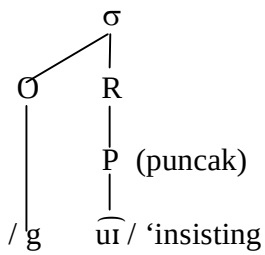
Based on the basic features of vowels, the vowels in KL could be classified into the segment featured by [+high] (/i, u/), the segment featured by [+low] (/a/), the segment featured by [+back] (/u/), the segment featured by [+front] (/i/), and the segment featured by [+round] ([u]). Finally, the sound grouping in KL based on the larynx could also be described using the [gutural] feature. Additionally, the segment of sounds in KL could also be described using the [voiced] feature (especially the consonants), the [ATR] feature (especially the vowels), and letup-hambat .

From redundancy point of view, based on the values of up down and down up features, 162 rules of segment redundancies in KL were found. Such patterns of redundancies were combined in the form of if-then patterns. Such combinations generated 20 optimal patterns (which were not redundant).

3.3 The Syllabic Structure in KL

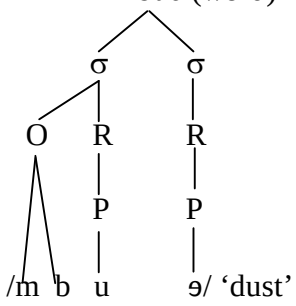
This study found 36 syllabic structures of base morphemes; 5 one- syllabic structure, 16 two-syllabic structures, 11 three- syllabic structures, and 4 four- syllabic structures. Among them, a number of structures had pitches as diphthongs and a number of structures which did not have complex onsets. In addition, this study found five basic patterns of affixes and four combined patterns of inter affixes (prefixes, suffixes, confixes, simulfixes/circumfixes). The examples of syllabic structures in KL are displayed as follows.

(a) Struktur bersuku satu



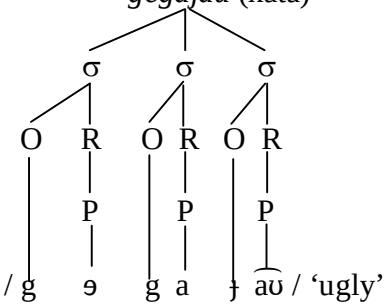
(b) Struktur bersuku dua

mbue (word)



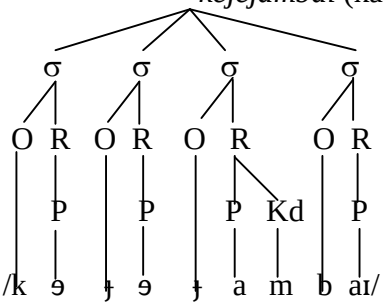
(c) three-syllabic structure

gegajau (kata)



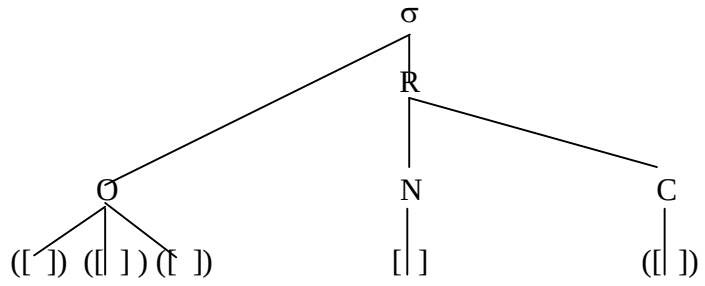
(d) four-sylabbic structure

kejejambai (kata)



‘whiskers’

Based on the syllabic structure above, the study concluded that the basic morpheme in KL (1) could be started with a consonant or vowel, (2) allowed a morpheme to be started with a complex onset (three consonants maximum), (3) allowed the nucleus to be filled up by a diphthong, (4) was filled up by a structure with its variants, (5) was filled up by four syllables maximum. Therefore, the deep structure of a syllable in KL could be presented in a chart as follows.



3.4 The Phonotactic System of KL

The phonotactic system arranged the sounds in KL. There were a number of patterns of how the sounds were arranged in KL; the arrangement of consonants in the form of clusters, the arrangement of consonants in the form of series of consonants, the arrangement of vowels in the form of diphthongs and the arrangement of vowels in the form of series of vowels. The arrangement of consonants in the form of clusters included (1) the nasal and obstacled group

such as /mp, mb, nt, nd, ɲc, ɲɟ, ɲcl, ŋk, ŋg, ŋgl/; (2) the obstacled and lateral: /pl, bl, gl/; (3) obstacled and fricative group: /st/. Quantitatively, 8 consonants were found to be able to occupy the initial position in a cluster, and one consonant was found to be able to occupy the third position in a cluster. In addition, viewed from the phonetic realizations, 8 clusters were found to only have one initial phonetic realization (/mp, mb, nt, nd, ɲc, ɲɟ, ŋk, ŋg/) and 6 clusters were found to have two initial phonetic realizations. It was also found that the nasal and obstacled clusters as well as the fricative and obstacled clusters belonged to homorganic sounds, and that the lateral and obstacled clusters belonged to the non homorganic sounds.

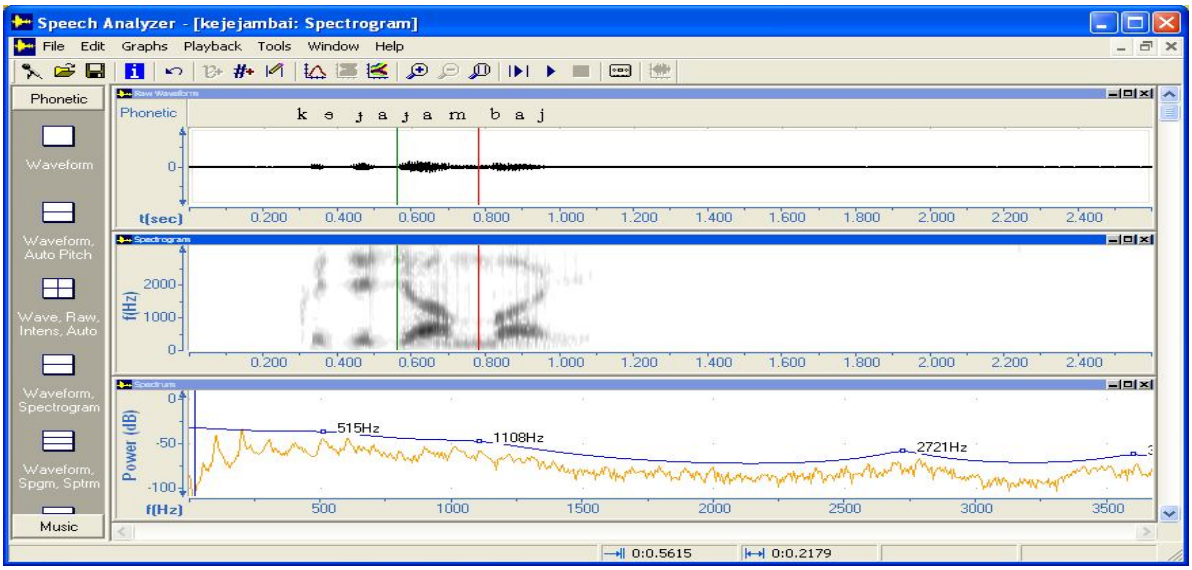
It was found in KL that 22 series of consonants were grouped into (1) the series of nasal bilabial and obstacled group which included (/m-p, m-b/); (2) the series of nasal alveolar and obstacled/fricative group which included (n-t, n-d, n-s); (3) the series of nasal palatal and obstacled group which included (/ɲ-c, ɲ-ɟ/); (4) the series of nasal velar and obstacled/fricative alveolar group which included (/ŋ-k, ŋ-g, ŋ-s/); (5) the series of fricative laryngeal and obstacled/fricative/nasal group which included (/ʕ-b, ʕ-t, ʕ-d, ʕ-c, ʕ-k, ʕ-s, ʕ-m/); (6) the series of fricative alveolar and obstacled/fricative group which included (/s-ʃ, s-k, s-t/); and (7) the series of obstacled glottal and fricative (/ʔ-ʕ/).

This study also found three sequences of vowels in the form of the series of diphthongs (/a͡ɪ/, /a͡ʊ/, /u͡ɪ/) and nine series of vowels (/a-a, a-u, a-i, u-u, u-a, u-ɘ, u-i, i-a, i-u/). Additionally, the study also found unique sequences of vowel-consonant as the VC-patterning syllable in the initial position which always appeared as a combination of vowel and consonant.

The phonotactic rule was described to require “if-then” condition rules series of original segments. Three patterns which required “if-then” condition rules series of consonants in the form of clusters, five rules which required “if-then” condition rules series of sequences of consonants, two rules which required “if-then” condition rule in the form of diphthongs, and four rules which required “if-then” condition rules in the form of series of vowels.

3.5 Patterns of Stress in KL

Stress is a suprasegmental element which refers to the relative degree of the positions of syllables in an utterance manifested by how hard the acoustic signal amplitude is, the length of the stressed syllables, and the raising intonation, and by the increased activities and movements of the articulators. Such a stress occupies a specific position in a base. As far as KL was concerned, the primary stress on a one-syllable basic morpheme was on the vowel of the syllable, the primary stress on a two-syllable basic morpheme was on the final syllable, the primary stress on a three- syllable basic morpheme was on the penultimate syllable, and that on a four-syllable basic morpheme was on the penultimate syllable as well. The following figure exemplifies the positions of such a stress.



The figure which displays the positions of syllabic stress [ɟam] in a base *kejejambai* /kəɟəamba͡ɪ/ 'whiskers'

The figure above shows that the syllabic duration /ɟam/ was 218 milliseconds; while the durations of the other syllables (the figure displaying them are not presented) were 151 milliseconds for the syllable /kə/, 125 milliseconds for the syllable /ba͡ɪ/. Then, it could be concluded that, from the duration point of view, the syllable [ɟam] was much higher than the other syllables.

Apart from the duration point of view, the identities of the syllables in the base *kejejambai* can be presented as follows. *First*, the frequency of F1 of the syllable /kə/ was 213 Hz, the frequency of F1 of the syllable /ɟə/ was 213 Hz, the frequency of F1 of the syllable /ba͡ɪ / was 245 Hz, and the frequency of F1 the syllable /ɟam/ was 181 Hz. This shows that F1 of the stressed syllable was much higher than F1 of the unstressed syllable. *Second*, the frequency of F2 of the syllable /kə/ was 1957 Hz, the frequency of F2 of the syllable /ɟə/ was 1962 Hz, and the frequency of F2 of the syllable /ba͡ɪ/ was 1574 Hz, and the frequency of F2 of the syllable /ɟam/ was 1108 Hz.

This study also found shifts in the patterns of stress triggered by the increasing number of syllables as a result of affixation process.

3.6 The Phonological Processes Resulting From the Internal Factor of Linguistics

This study found seven phonological processes in the level of base morphemes; they are (1) vowel slackening, (2) nasalization of vowels, semi vowels, and fricative glottal, (3) addition of glides, (5) addition of vowels, (6) deletion of vowel /ə/, and plosives-stops of obstruent ; eleven phonological processes in the morphophonemic level; they are (1) assimilation of prefix {*ng*-}, (2) assimilation followed by deletion of obstruent and (without) deletion of vowels, (3) addition of vowel /ə/ to prefix {*ng*-}, (4) addition of glides [ʷ] and [ʲ], (5) addition of fricative velar [ɣ], (6) addition of obstacled glottal /ʔ/, (7) deletion of /ə/ to prefix {*se*-}, (8) deletion of syllable /hə/, (9) syllabic deletion, consonant deletion, and vowel

neutralization, (10) consonant germination, and (11) vowel tightening and slackening; (9) nine phonological processes in the syntactical level; they are (1) addition of glides [^{w}] and [^{j}], (2) addition of fricative velar [ɣ], (3) vowel deletion in the initial part of a word, (4) nasal deletion, (5) /hɔ/ deletion, (6) /h/ deletion followed by /a/ deletion, deletion of consonant /n/, (8) lowering of vowel /i/ into /ɔ/, and (9) consonant germination. The phonological processes resulting from the internal factor of linguistics described above were described in the form of 35 phonological rules from which another 35 rules were derived. Some examples of phonological processes and rules resulting from the internal factor of linguistics are presented as follows.

	Phonological Processes				
/ŋ/+Base (UF)	**1** Assimi-lation	**2** Deletion	**3** Nasaliza-tion	**SF**	**Gloss**
/ŋ + pupu/	/**m**pupu/	/m **ø**upu/	/mũpu/	[mũpu]	‘picking up a falling’
/ŋ + tuɟah/	/**n**tuɟah/	/n **ø**uɟah/	/nũɟah/	[nũɟɑh]	‘killing’

The data above show a number of sequencing processes linking UF with SF. Such processes could be formulated as follows.

Rule of nasal assimilation taking place in the morphemic boundary in KL (Obligatory)

Event 1

$$\begin{bmatrix} +\text{cons.} \\ +\text{nas.} \\ +\text{bel.} \end{bmatrix} \longrightarrow \begin{bmatrix} \alpha\text{ant.} \\ \beta\text{kor} \end{bmatrix} \Big/ \underline{\quad} + \begin{bmatrix} \alpha\text{ant.} \\ \beta\text{kor.} \end{bmatrix}$$

Rule of obstruent deletion taking place in the morphemic boundary (Obligatory)

Event 2

$$\begin{bmatrix} \text{C} \\ -\text{voiced} \\ -\text{voiced} \end{bmatrix} \longrightarrow \text{ø} \Big/ \begin{bmatrix} +\text{con.} \\ +\text{nas} \end{bmatrix} \underline{\quad} \; [+\text{sil.}]$$

Rule of vowel nasalization (Optional)

Event 3

$$[+\text{sil}] \longrightarrow [+\text{nas.}] \Big/ [+\text{nas}] \; + \; \underline{\quad}$$

3.7 The Phonological Processes in KL Resulting from the External Factors of Linguistics

This study found five phonological processes resulting from the external factors of linguistics. They are (1) /ŋ/ deletion followed by a change in /ə/; (2) /h/ deletion in the initial part of the base; (3) a change from vowel /i/ into [e]; (4) a change from vowel /u/ into [o]; and (5) a change from fricative laryngeal /ç/ into /r/. The phonological processes (1) and (2) were triggered by geographical factors and the phonological processes (3) and (4) were triggered by social factors. The five phonological processes were formulated into six phonological roles. The examples of the phonological processes and rules triggered by the external factors are described as follows.

One of the unique phenomena in KL was the deletion of /ɲ/ followed the change of /ə/ into /e/ in the third person pronoun *nye* /ɲə/ 'dia' (he/she). The deletion of /ŋ/ followed by the change of /ə/ took place in the final position of an utterance; it did not take place in the other positions. It was found that the vowel [e] was not included in the phonological segment of KL, as it only appeared as the phonetic realization within the linguistic and non linguistic environments which could be predicted.

Linguistically, the phonological realization of [e] appeared in the final position of an utterance (as stated above) and non linguistically, the phonetic realization of [e] only took place in Bintuhan City as the capital of Kaur Regency, meaning that the variety of [e] could be regarded as a variety whose appearance was triggered by geographical factors.

The form of *nye* in KL could function as the singular third person pronoun as well as a clitic. The *nye* which underwent a phonological process was the one functioning as a clitic; the one which functioned as the singular third pronoun did not undergo any phonological process with /ɲ/ deletion followed by the change of /ə/. The use of the variety of *nye* as a clitic can be seen in the following data.

(a) /təkuʔlah təduhan aku ini, **besaʔɲə** mbaʔ kalaɪ͡an/
[təkʊʔlɑh təduhɑn akuñi, **besɑʔə** mbɑʔ kalaɪ͡ˈɑn]
tebaklah teka-teki aku ini, besarnya sebesar lengan
'Guess this puzzle; is it as big as the arm?"

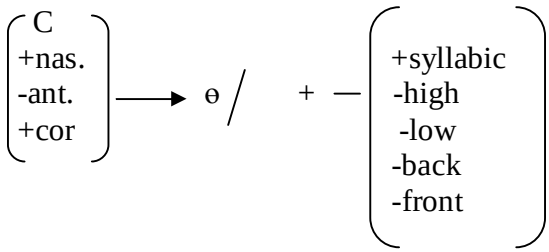
Deletion /ɲ/

(b) /təkuʔlah təduhan aku ini, **besaʔɲə** mbaʔ kalaɪ͡an/
[təkʊʔlɑh təduhɑn akuñi, **besɑʔe** mbɑʔ kalaɪ͡ˈɑn]
tebaklah teka-teki aku ini, besarnya sebesar lengan
'Guess this puzzle; is it as big as the arm?"

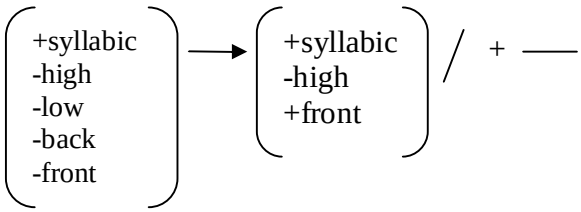
Change of /ə/

Data (a) shows that a deletion took place in the clitic *nye*, making the vowel directly combined with the base it followed. After such a combination took place, vowel /ə/ changed into vowel [e] as shown by data (b). However, it was not applicable in the other way round; the change of vowel /ə/ was followed by the /ɲ/ deletion. Therefore, the /ɲ/ deletion followed by the change of /ə/ could be formulated as follows.

The deletion of consonant /ɲ/ in the *–nye* functioning as a clitic



The change of vowel /ə/ in the *–nye* functioning as a clitic



3.8 Phonological Processes in KL with Minor Rules

This study found six phonological processes in KL with minor rules; they are (1) addition of /l/ to the morphemic boundary; (2) deletion of /ə/ taking place in the word boundary; (3) deletion of /ma/; (4) deletion of consonant /t/ in *tulik* /tuliʔ/ 'sleeping'; (5) deletion of /ŋ/ followed by deletion of /a/ in the word *kangau*; (6) and deletion of /sə/ in the conjunction *sedangkan* /sədaŋkan/ 'sedangkan' (while). The six phonological processes were formulated into seven phonological rules.

4. Results

This study found 23 phonological segments and a number of phonetic segments. The phonological segments were different from the phonetic ones as among the 23 phonological segments, some underwent specific phonological processes. In addition, this study also found 2 raising diphthongs, nine series of vowels, fourteen clusters, twenty two series of consonants, and a number of unique sequences of vowels and consonants.

This study needed seventeen distinctive features to describe the segments of sounds in KL. They were all grouped into five parts. Then, from redundancy point of view, based on the comparison of the values of up down and down up features, 162 rules were found in KL. They were all combined to form 20 optimal rules.

This study found 36 structures of basic morphemes in KL; a number of which had pitches in the forms of complex diphthongs and onsets. Five basic patterns of affix syllables and six combined patterns of combinations of intra affixes were also found.

Related to the phonotactic system, this study found that in KL there were series of consonants and vowels in the form of clusters, and sequences of consonants, diphthongs and vowels. The phonotactic system in KL was described as "if-then" condition rules requirement of series of base segments. Three rules of "if-then" condition rules requirement of series of

consonants in the form of clusters, five rules of “if-then” condition rules requirement of series of consonants, two rules of “if-then” condition rules requirement of series of diphthongs, and four rules of requirement of “if-then” condition rules of series of vowels were found in this study.

As well, this study also found differences in the position of primary stress in the bases resulting from differences in the number of syllables building the bases in KL. Additionally, this study also found shifts in the patterns of stress triggered by the increasing number of syllables as a result of the process of affixation. Besides, this study also found thirty eight phonological processes in KL which were described as forty eight phonological processes, some of which were found to be sequenced rules.

5. Conclusion

Based on what was discussed above, it could be concluded that KL had four segments of phonological vowels, 19 segments of phonological consonants (including the semi vowels), 3 diphthongs, 9 series of vowels, 14 clusters of consonants, 22 series of consonants, unique patterns of vowel and consonant sequences, 17 distinctive features, 162 rules of redundancy segments, 20 rules of non redundancy segments (optimal), 36 syllabic structures of base morphemes, 5 basic patterns of affix syllables, 4 patterns of syllables of mixed affixes, a number of patterns of sound sequences, the position of primary stress on the basic morphemes which were made up of one syllable, two syllables, three syllables, and four syllables, and the shifts in the positions of stress resulting from the addition of affixes.

This study found 7 phonological processes in the base level, 11 phonological processes in morphophonemic level, nine phonological processes in syntactical level, 5 phonological processes caused by the internal linguistic factors, 6 phonological processes with minor rules. Such phonological processes were formulated into 49 phonological rules, out of which several were in the form of sequenced rules.

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