

CHAPTER 3

PRESENTATION OF THE DATA

3.1. Compositions of Vowels

A Javanese word is usually built by the construction of CVCVC (Uhlenbeck, 1982:30). This is the ideal morpheme structure which has the highest distribution in Javanese words especially in root morphemes. In spite of this this structure, final open syllable is also often found. From the form CVCVC, two preferences on the basis of composing vowels are known. The first vowel as well as the second vowel tends to be fit by /a/, therefore the form /a-/a/ is to be the optimal vocalism. Some vowel combinations are rare to be used, especially in the standard dialect. But they may be used in borrowing words or dialectic style. Those ten rare vowel combinations are /o-/u/; /o-/i/; /o-/ə /; /e-/i/; /e-/u/; /e-/ə /; /u-/o/; /u-/e/; /i-/o/; /i-/e/.

In this research, I combine all the eight vowels to each other. Each vowel has same opportunity to be combined with other vowels including with the vowel itself. In the combinations the intended vowel is the first vowel. But, however, the vowel still has the opportunity to be the second vowel when other vowel is intended as the central or the first vowel. Therefore, each vowel has eight combina-

tions when it stands as the first vowel and other eight combinations when it is as second vowel. But in general, each vowel has fifteen possibilities in the vowel combination.

The combination are arranged as below.

Table 1. The Combinations of Vowels

	i	e	ɛ	u	o	ɔ	ə	ʌ
i	i-i	i-e	i-ɛ	i-u	i-o	i-ɔ	i-ə	i-ʌ
e	e-i	e-e	e-ɛ	e-u	e-o	e-ɔ	e-ə	e-ʌ
ɛ	ɛ-i	ɛ-e	ɛ-ɛ	ɛ-u	ɛ-o	ɛ-ɔ	ɛ-ə	ɛ-ʌ
u	u-i	u-e	u-ɛ	u-u	u-o	u-ɔ	u-ə	u-ʌ
o	o-i	o-e	o-ɛ	o-u	o-o	o-ɔ	o-ə	o-ʌ
ɔ	ɔ-i	ɔ-e	ɔ-ɛ	ɔ-u	ɔ-o	ɔ-ɔ	ɔ-ə	ɔ-ʌ
ə	ə-i	ə-e	ə-ɛ	ə-u	ə-o	ə-ɔ	ə-ə	ə-ʌ
ʌ	ʌ-i	ʌ-e	ʌ-ɛ	ʌ-u	ʌ-o	ʌ-ɔ	ʌ-ə	ʌ-ʌ

Since more feature similarities are much regarded, the combinations are classified based on their similarities especially by the value of frontness as well as backness. But height parameter is also noticed. Therefore, from the Table 1 above I will analyze 64 combinations of eight Javanese vowels. To make the analysis easier, I classified the vowels and the combinations as below :

I. Front- Vowels as Point of View

a. Front- Front Vowels

i-i

i-e

i-ɛ

e-e

e-i

e-ɛ

ɛ-ɛ

ɛ-i

ɛ-e

b. Front-Back Vowels

i-u

i-o

i-ɔ

e-u

e-o

e-ɔ

ɛ-u

ɛ-o

ɛ-ɔ

c. Front-Middle Vowels

i-ə

e-ə

ɛ-ə

i-ʌ

e-ʌ

ɛ-ʌ

From (b), several combinations are noticed to have the same value of height although they have differences on frontness or backness. They are :

i-u (high)

e-o (central)

ɛ-ɔ (low)

II. Back Vowels as point of View**a. Back-Back Vowels**

u-u

o-o

ɔ-ɔ

b. Back-Front Vowels

u-i

o-i

ɔ-i

u-o	o-u	ɔ-u	u-e	o-e	ɔ-e
u-ɔ	o-ɔ	ɔ-o	u-ɛ	o-ɛ	ɔ-ɛ

From b several combinations are marked for their identical value in height of the members when in the same they are in gradual value of frontness or backness

c. Back-Middle Vowels

u-ə	o-ə	ɔ-ə
u-ʌ	o-ʌ	ɔ-ʌ

III: Middle Vowels as Point of View

a. Middle-Middle Vowels

ə-ə	ʌ-ʌ
ə-ʌ	ʌ-ə

b. Middle-Front Vowels

ə-i	ʌ-i
ə-e	ʌ-e
ə-ɛ	ʌ-ɛ

c. Middle-Back Vowels

ə-u	ʌ-u	ə-ɔ	ʌ-ɔ
ə-o	ʌ-o		

Similarities of height can not be considered for the reason that these middle vowels are in relatively different

degree of height from other vowels, here, front and back vowels.

From more than 300 words, the frequency of each vowel combination can be seen as below.

Table 2. The Frequency of Each Combination

Combination	Frequency
I. Front Vowels	
i-i	10
i-e	1
i-ɛ	2
e-e	13
e-i	0
e-ɛ	0
ɛ-ɛ	4
ɛ-i	0
ɛ-e	0
II. Middle Vowels	
ə-ə	10
ə-ʌ	5
ʌ-ʌ	20
ʌ-ə	8
III. Back Vowels	
u-u	15

u-o	0
u-ɔ	4
o-o	38
o-u	0
o-ɔ	0
ɔ-ɔ	18
ɔ-u	1
ɔ-o	0

IV. Front and Back Vowels

i-u	8
i-o	2
i-ɔ	5
e-u	0
e-o	7
e-ɔ	0
ɔ-u	0
ɔ-o	0
ɔ-ɔ	5
u-i	5
u-e	1
u-ɛ	3
o-i	0
o-e	11
o-ɛ	0

ɔ-i	0
ɔ-e	0
ɔ-ɔ	3

V. Front and Middle Vowels

i-ə	2
i-ʌ	5
e-ə	0
e-ʌ	1
ɛ-ə	0
ɛ-ʌ	2

ə-i	6
ə-e	2
ə-ɛ	3
ʌ-i	13
ʌ-e	10
ʌ-ɛ	15

VI. Back and Middle Vowels

u-ə	3
u-ʌ	10
o-ə	0
o-ʌ	2

ɔ - ə	1
ɔ - ʌ	1
ə - u	3
ə - o	9
ə - ɔ	7
ʌ - u	13
ʌ - o	12
ʌ - ɔ	5

There are several phenomena to be considered. They are about two preferences or tendencies in vowel combinations. First preference is about that phoneme /a/ tends to have highest occurrence as first as well as second vowel in Javanese words (Uhlenbeck, 1982:30-34). The phoneme in this thesis is a representation of phoneme /a/ and phoneme /ɔ / in the other vowel systems in which consist of six vowels. It is due to the phenomenon that both phonemes sometimes are overlapping in their orthographic symbol but from phonetic point of view there is a fact that [ɔ] can be the allophone of [ʌ], although several words they show that /ɔ / and /a/ are phonologically distinctive. The result of the research which is arranged to capture phonetical content of the vowel of the combination or in the word will lead to gain the real occurrence of the preference in

Surabaya dialect of Javanese.

The occurrence of each phoneme in observed words is needed to prove the proposed tendency.

Table 3. The Occurrence of Each Phoneme

Vowel	Occurrence Number
/i/	59
/u/	66
/a/	117
/e/	46
/o/	71
/ɛ/	37
/ɔ/	50
/ə/	59

The second tendency is that there are ten vowel combinations which are rare to be found especially in standard Javanese words except borrowing or dialectical ones. They are /o/-/u/; /o/-/i/; /o/-/ə/; /e/-/u/; /e/-/i/; /e/-/ə/; /u/-/o/; /u/-/e/; /i/-/o/ and /i/-/ə/. But since the object of research is a dialect, one of those combination is used or founded in two observed words. The combination which appears is that /i/-/o/, in /ijo/--[i ɔ] and /ɲinum/--[ɲinɔm].

3.2. The Occurrence of Vowel Harmony

The arrangement of vowel combination is designed in such a way to capture the occurrence of vowel harmony found in the target language. Vowel harmony is focused on the agreement of phonetical features of vowels in a certain structure. Therefore, identical vowel combinations are noticed to be the most obvious occurrence of vowel harmony where all features of the vowels are common. The result of the research shows that this particular combination mostly has higher frequency than others. The combination of phonemes with each other and their frequency can be seen below. The table is built based on the content of intended phoneme.

Table 4a

/i/	
Combination	Frequency
/i/-/i/	10
/i/-/e/	1
/i/-/ɛ/	2
/ɛ/-/i/	0
/e/-/i/	0
/i/-/u/	8
/i/-/o/	2
/i/-/ɔ/	5
/i/-/ə/	2

Table 4b

/u/	
Combination	Frequency
/i/-/u/	8
/e/-/u/	0
/ɛ/-/u/	0
/ə/-/u/	3
/a/-/u/	13
/u/-/u/	15
/u/-/o/	0
/u/-/ɔ/	4
/o/-/u/	0

/i/-/ə/	5	/ɔ/-/u/	1
/ə/-/i/	6	/u/-/i/	5
/ə/-/i/	13	/u/-/e/	1
/u/-/i/	5	/u/-/ɛ/	3
/o/-/i/	0	/u/-/ə/	3
/ɔ/-/i/	0	/u/-/ə/	10

Table 4c

/a/	
Combination	Frequency
/u/-/a/	10
/o/-/a/	2
/ɔ/-/a/	1
/ə/-/a/	5
/a/-/a/	20
/a/-/ə/	8
/a/-/i/	13
/a/-/e/	10
/a/-/ɛ/	15
/a/-/u/	13
/a/-/o/	12
/a/-/ɔ/	5
/i/-/a/	5
/e/-/a/	1
/ɛ/-/a/	2

Table 4d

/e/	
Combination	Frequency
/i/-/e/	1
/e/-/i/	0
/ɛ/-/e/	0
/e/-e/	13
/e/-/u/	0
/e/-/o/	7
/e/-/ɔ/	0
/e/-/ɛ/	0
/e/-/ə/	0
/e/-/a/	1
/a/-/e/	10
/ə/-/e/	2
/u/-/e/	1
/o/-/e/	11
/ɔ/-/e/	0

Table 4e

<i>/o/</i>	
Combination	Frequency
<i>/i/-/o/</i>	2
<i>/e/-/o/</i>	7
<i>/ɛ/-/o/</i>	0
<i>/u/-/o/</i>	0
<i>/o/-/o/</i>	38
<i>/ɔ/-/o/</i>	0
<i>/ə/-/o/</i>	9
<i>/a/-/o/</i>	12
<i>/o/-/i/</i>	0
<i>/o/-/e/</i>	11
<i>/o/-/ɛ/</i>	0
<i>/o/-/u/</i>	0
<i>/o/-/ɔ/</i>	0
<i>/o/-/ə/</i>	0
<i>/o/-/a/</i>	2

Table 4f

<i>/ɛ/</i>	
Combination	Frequency
<i>/i/-/ɛ/</i>	2
<i>/e/-/ɛ/</i>	0
<i>/ɛ/-/ɛ/</i>	4
<i>/u/-/ɛ/</i>	3
<i>/o/-/ɛ/</i>	0
<i>/ɔ/-/ɛ/</i>	3
<i>/ə/-/ɛ/</i>	3
<i>/a/-/ɛ/</i>	15
<i>/ɛ/-/i/</i>	0
<i>/ɛ/-/e/</i>	0
<i>/ɛ/-/u/</i>	0
<i>/ɛ/-/o/</i>	0
<i>/ɛ/-/ɔ/</i>	5
<i>/ɛ/-/ə/</i>	0
<i>/ɛ/-/a/</i>	2

Table 4g

<i>/ɔ/</i>	
Combination	Frequency
<i>/ɔ/-/i/</i>	0
<i>/ɔ/-/e/</i>	0
<i>/ɔ/-/ɛ/</i>	3

Table 4h

<i>/ə/</i>	
Combination	Frequency
<i>/ə/-/i/</i>	6
<i>/ə/-/e/</i>	2
<i>/ə/-/ɛ/</i>	3

/ɔ/-/u/	1	/ə/-/u/	3
/ɔ/-/o/	0	/ə/-/o/	9
/ɔ/-/ɔ/	18	/ə/-/ɔ/	7
/ɔ/-/ə/	1	/ə/-/ə/	10
/ɔ/-/a/	1	/ə/-/a/	5
/i/-/ɔ/	5	/i/-/ə/	2
/e/-/ɔ/	0	/e/-/ə/	0
/ɛ/-/ɔ/	5	/ɛ/-/ə/	0
/u/-/ɔ/	4	/u/-/ə/	3
/o/-/ɔ/	0	/o/-/ə/	0
/ə/-/ɔ/	7	/ɔ/-/ə/	1
/a/-/ɔ/	5	/a/-/ə/	8

If identical vowel combinations consist of vowels which share all phonetical features, there are also prominent combinations which only share at least one phonetical feature, that is the height or the relative high position of the tongue. The feature of vowel height is accounted for the tendency that combination of vowels in the same height, although different frontness, has higher occurrence than other combinations with different both height and frontness. We can see Table 3. The table shows that combinations /i/-/u/, /e/-/o/, /ɛ/-/ɔ/, /u/-/i/, /o/-/e/, /ɔ/-/ɛ/ have relatively higher frequency than other kinds of combination. Beside the commonness of height value, those vowels

in one combination have the same value of tense. It will be clearer with these comparisons.

$\begin{array}{c} /i/ \\ \left[\begin{array}{l} + \text{ high} \\ - \text{ low} \\ - \text{ back} \\ + \text{ tense} \end{array} \right] \end{array}$	$\begin{array}{c} /u/ \\ \left[\begin{array}{l} + \text{ high} \\ - \text{ low} \\ + \text{ back} \\ + \text{ tense} \end{array} \right] \end{array}$
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The comparison of phonetic features between /i/ and /u/

$\begin{array}{c} /e/ \\ \left[\begin{array}{l} - \text{ high} \\ - \text{ low} \\ - \text{ back} \\ + \text{ tense} \end{array} \right] \end{array}$	$\begin{array}{c} /o/ \\ \left[\begin{array}{l} - \text{ high} \\ - \text{ low} \\ + \text{ back} \\ + \text{ tense} \end{array} \right] \end{array}$
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The comparison of phonetic features between /e/ and /o/

$\begin{array}{c} /ɛ/ \\ \left[\begin{array}{l} - \text{ high} \\ + \text{ low} \\ - \text{ back} \\ - \text{ tense} \end{array} \right] \end{array}$	$\begin{array}{c} /ɔ/ \\ \left[\begin{array}{l} - \text{ high} \\ + \text{ low} \\ + \text{ back} \\ - \text{ tense} \end{array} \right] \end{array}$
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The comparison of phonetic features between /ɛ/ and /ɔ/

CHAPTER 4

ANALYSIS OF DATA