# JAVANESE WRITING SKILLS IMPROVEMENT THROUGH COMPUTER MEDIA

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#### A. Abstract

Writing is one of the main linguistic competence as well as the competence of listening, reading, and speaking in Javanese language learning. Writing competence in learning the Javanese language is realized in the form of writing skills using Javanese script. The ability to write in Javanese script was a difficulty. Many students are still not able to write using Javanese script. One alternative that can be used to treat the condition is increasing the ability to write in Javanese script through computer media.

Writing in Javanese script using computer media can be done through the following stages: (1) open the official web site: http://hanacaraka.fateback.com, (2) download the Javanese script type font (*Hanacaraka*), (3) download Javanese script writing instruction, (4) Install the font on the control panel, fonts, files and install the New Font or copy font type and paste it in Fonts folder, (5) read the instructions carefully, (6) how to use the normal way and change the font type become *hanacaraka*. Utilization of computer media in learning to write Javanese script attempted attract and motivate students to learn so as to achieve predetermined learning objectives.

Keywords: Javanese script, computer media, improving writing skills

#### B. Introduction

Writing is one of the main linguistic competence as well as the competence of listening, reading, and speaking in Javanese language learning. Writing competence in learning the Javanese language is realized in the form of writing skills using Javanese script. Writing competence using Javanese script is rarely done recently. The golden era of writing various papers using Javanese script occurred in Surakarta kingdom. It can be known by the number of manuscripts that Javanese script born in the golden era of Surakarta. These conditions were far different from now, the current generation have rarely been

able to write using Javanese script. These conditions threaten the existence of Javanese script as a result of Javanese culture. One of the government's efforts to maintain the existence of Javanese language learning includes local content required in kindergarten through high school. The implementation of Javanese language learning as a compulsory local content, one of which teaches writing skills using Javanese script.

Learning writing skills using Javanese script at this time found several problems,

namely:

- 1. The ability of students to write in Javanese script is still low
- 2. Implementation of learning to write in Javanese script is less varied or monotonous
- 3. Lack of utilization of various media

One solution that can be used to solve various learning problems, namely perform special study in improving Javanese writing skills through computer media.

# C. The meaning of Writing

Writing according to Standard Indonesian Dictionary (2001: 1219) is to make the letters or numbers with a pen. It was also confirmed in http://www.usniarie.com that writing is a skill to make letters, numbers, codes, punctuation, or other symbols. According to Tarigan (1996: 64) writes is graph depicting the emblem depicts a language that is understood by someone so that others can read the symbols graph if they understand the language and graphic images. Definition of writing as a skill revealed by Nurjamal (http://definisi.pengertian.blogspot.com) that writing is the ability to express ideas in the mind to the other party with written media. The purpose of writing, among others, to invite, inform, persuade, or entertain the reader.

Some of these definitions can be summarized that writing is a skill to pour idea of mind to others through the medium of writing or graphic symbol. Writing skills can be emerged through writing Javanese script.

## D. Characteristics of Javanese Script

# 1. Nglegena Script and Pasangan

Javanese script is also called *dentawyanjana*. Javanese script consist of twenty basic script, twenty *pasangan* which serves as a consonant *sigeg*, eight characters *murda* and their *pasangan*, five vowel letters, five *rekan* letters and their *pasangan*. Javanese script is also equipped by several *sandhangan* as a

regulator of vocals, some special characters ( $r \square$ ,  $l \square$ , panjing, pengkal, chakra), some punctuation, and some signs of regulatory writing (pada).

Javanese script in basic form called *nglegena* script, namely Javanese script that has not received *sandhangan*. If we observed Javanese Script, one character represents one syllable. This is what makes Javanese script is silabik. Javanese script writing done in connection between the characters that one to the next character without any sort of one word with another word. Javanese script writing is done scriptio continuo.

Javanese script is not only in the form *nglegena*, it is also equipped with *pasangan* which shows that Javanese script is consonantal. The *pasangan* has a function as a liaison or a closed syllable ends with a consonant with the next syllable. This was also confirmed in http://id.wikipedia.org/wiki/Hanacaraka that Javanese script writing procedures are not familiar with space, so the use of the *pasangan* to clarify the clusters. The description of Javanese script *nglegena* and

their		pa	asangan	!	a	re		as		follows:
		Aksara Jawa Nglegena								
M	ıы	M	11	nai	เก	ា	ធា	111	m	
ha	na	ca	ra	ka	da	ta	sa	wa	1a	
M	NJ1	<b>L</b> K	m	am	េ	m	lM	٦į	เา	
pa	dha	ja	ya	nya	ma	ga	ba	tha	nga	
	Pasangan									
្ឃា	đ	øħ	11	m.	۷	uL	A	С	m_	
ha	na	ca	ra	ka	da	ta	sa	wa	la	
பி	w	Gı	M	ď	С	m	ଜ	۵	រោ	
pa	dha	ja	ya	nya	ma	ga	ba	tha	nga	
dicen	Adapun penggunaan aksara Jawa <i>nglegena</i> dan <i>pasangan-</i> nya dapa dicermati pada contoh berikut: MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM					a dapat				

Ana wedhus mangan suket 'There are goats eat grass'

The use of *pasangan* ma in the example serves to form consonant / s / in *wedhus*; and *pasangan* sa to form consonant / n / in *mangan*.

# 2. Murda Script

Murda Javanese Script is script used to write capital letters. Murda script is usually used to write the proper name, title names, geographic names, and name of the institution. Murda script consists of 8 characters, namely:

$$\mathbb{M} = \mathbb{N}a$$
  $\mathbb{M} = \mathbb{K}a$   $\mathbb{M} = \mathbb{T}a$   $\mathbb{H} = \mathbb{S}a$   $\mathbb{M} = \mathbb{P}a$   $\mathbb{K} = \mathbb{B}a$ 

Writing *murda* scripts in Javanese script writing has a few rules, namely: a. *Murda* script can not be used as *sigeg* (closing consonant syllables.) b. If *murda* script found to be *sigeg*, the script is written in basic form. c. If in one word or one sentence found more than one script *murda*, *murda* then simply write as one script only (Hesti Mulyani, 2009: 6). As an example of using *murda* script is as follows:

# 3. Rekan Script

Rekan script is a script that made to write words or terms in foreign languages, especially Arabic. The use of rekan script shows the assimilation of foreign culture into the Javanese culture. The rekan script in Javanese scripts writing

consist

of:

$$\hat{\mathbb{N}} = kha$$
  $\hat{\mathbb{N}} = dza$   $\hat{\mathbb{N}} = fa$   $\hat{\mathbb{K}} = za$   $\hat{\mathbb{M}} = gha$ 

Berikut ini contoh penggunaan aksara *rekan* dalam kata-kata yang diambil dari kosakata bahasa Arab.

# 4. Aksara Swara

Aksara *swara* sepadan dengan aksara vokal Jawa. Aksara *swara* terdiri atas 5 aksara, yaitu:

4. Swara Script.

Swara script in Javanese script writing rule used to write many words absorbed from a foreign language. Swara script in Javanese script writing has some rules, namely: swara script can not be used as pasangan script, and if the swara script meet sigegan or consonant at the end of the previous syllable, then it must be sillabled by sigegan pangkon. Here is an example of using swara script:

# 5. Sandhangan

Sandhangan is a device in Javanese script used for the marker sounds in Javanese script writing. This Sandhangan sounds inherent in a single syllable or syllabus. The type of sandhangan in Javanese script writing can be divided into three groups, namely:

a. Vocal Sandangan (sandhangan Swara), consist of wulu, suku, taling, taling tarung, and pepet. The function and its use can be observed in the following table.

Tabel 1 Sandangan Bunyi Vokal

Tabel I Sandangan Bunyi Vokal					
Sandhangan	Fungsi	Contoh			
Wulu	Penanda bunyi /i/	ทักทีทีที่ = iki pipi 'ini pipi'			
Suku <sub>U</sub>	Penanda bunyi /u/	มมมมม = dudu kuku			
		'bukan kuku'			
Taling	Penanda bunyi /e/	MMMM = lele 'ikan lele'			
Taling tarung 12	Penanda bunyi /o/	MM2M112 = loro 'dua'			
Pêpêt	Penanda bunyi /ê/	MM = sega 'nasi'			

Sandangan suku if attached to the pasangan ka, la, and ta then this pasangan must be converted into a basic script form and completed with sandangan suku. The possible use is as follows.

Sandangan pepet is not used in  $r \square$  and  $l \square$  that do not function as pasangan. Writing  $r \square$  symbolized by the sign alphabet and pa cerek x and  $l \square$  represented with 2 characters nga lelet.

b. Sandangan Consonants Ending Syllable (Sandhangan Panyig $\Box g$  Wanda), includes: pangkon, wignyan, layar, and  $c\Box cak$ . The function and its use can be observed in the following table.

Tabel 2 Sandangan Konsonan Penutup Suku Kata

Sandhangan	Fungsi	Contoh		
Pangkon J	Panyigeg atau menjadikan bunyi konsonan/mati	AMMMM = salak 'buah salak'		
Wignyan2	Penanda <i>sig</i> êg /h/	MILK 2= gajah 'gajah'		
Layar	Penanda <i>sig</i> êg /r/	โฟไไปใ= kabar 'kabar, berita'		
Cêcak	Penanda <i>sig</i> ê <i>g</i> /ng/	Mhi = lanang 'laki-laki'		

**c.** Sandangan gugus consonant (Sandhangan wyanjana), include: cakra, Keret, and pengkal. The function and its use can be observed in the following table.

Tabel 3 Sandangan Gugus Konsonan

Sandhangan	Fungsi	Contoh		
cakra	Penanda <i>panjingan /</i> ra/	M = krasa 'terasa'		
Cakra kêrêt	Penanda <i>panjingan /</i> rê/	IJM= prêlu 'perlu, penting'		
Pengkal	Penanda <i>panjingan</i> /ya/	Mil 2013 = kopyah 'peci'		

## 6. Javanese Number

Javanese number used to write numbers or number symbol. Javanese number consist of:

$$1 = 111$$
  $2 = 12$   $3 = 12$   $4 = 6$   $5 = 6$   $6 = 4$   $7 = 111$   $8 = 12$   $9 = 101$   $0 = 0$ 

Javanese number write as the Dutch number, for example: 1945 to 1945

The rule of writing Javanese number in sentences are marked with *pada pangkat*. Use of the *pada pangkat* according to Padmosoekotjo (1992: 44) is intended to provide separators between numbers and Javanese script. As an example of writing numbers in a sentence are as follows.

# 

Setahun wonten 12 wulan 'setahun ada 12 bulan'

# ្រាយមើរសាលាចាល់មួយ នៅក្នុង នេះ ដែល ក្រុង ក្រុ

Taun Masehi sapunika 2010 'Tahun Masehi sekarang 2010'.

## 7. Punctuation Mark

Punctuation in Javanese script writing is a set of punctuation marks used in writing sentences. Punctuation includes: *Adeg-Adeg, pada lingsa, pada lungsi, and pada pangkat*.

# a. Adeg-adeg

Adeg-Adeg also called pada ada-ada. According Sudaryanto (1992: 263) Adeg-Adeg is a punctuation mark used in the prose at the beginning of the sentence, the beginning of alenia, the beginning of the story, or initial letter. As an example of using Adeg-Adeg at beginning of the sentence is as follows.

្យាហាហាសាស្រា្រា្រាហ្ម Adhiku tuku klapa 'Adikku membeli kelapa'.

# b. Pada Lingsa 4

Pada lingsa according to Sudaryanto (1992: 264) is a punctuation in Javanese script writing rule as a substitute for a comma. Pada lingsa pangkon sign can be replaced by pangkon if the final sentence before the lingsa or coma is ended by consonant or sigeg. As an example of using the lingsa as follows.

# $\| \text{cm}_{\mathcal{M}} \|_{\mathcal{M}} = \| \text{cm}_{\mathcal{M}} \|_{\mathcal{M}} + \| \text{cm}_{\mathcal{M}} \|$

Bapak, ibu, lan adhiku ora ana 'Bapak, Ibu, dan adikku tidak ada'

## c. Pada Lungsi 44

Pada lungsi is the punctuation in Javanese script writing rule equivalent with a dot. Pada lungsi can be replaced with a pangkon and pada lingsa if the end of the sentence end with the word ending in consonant or sigeg. The use of pada lungsi can be seen in the following example.

| IIIIIIIII AIIII Bapak mundhut salak 'Bapak membeli salak '.
| IIIIIII III III A Dewi tuku buku 'Dewi membeli buku'.

# d. Pada Pangkat

Pada Pangkat according to Hesti Mulyani (2009: 22) are used to flank the Javanese script number, mark a complete statement that accompanied pemerian, and mark a direct passage. As example of the use of pangkat can be observed as follows.

Kula lair: 1 Mei 1976 'Saya lahir: 1Mei 1976.

Gunung iku dasanamane: ardi, arga, giri 'Gunung itu sinonimnya: ardi, arga, giri'.

Ibu dhawuh: "Le, Bapak aturana dhahar".

'Ibu memerintah: "Nak, Bapak diminta makan".

# E. Writing Javanese Script using Computer Media

Some attempts to integrate the Javanese script into an electronic system based on http://id.wikipedia.org/wiki/Hanacaraka have been done since 1983 by several researchers, led by van der Molen Wiliem from Leiden University. The integration is needed in order the Javanese script codes are recognized throughout the world.

The next efforts conducted by Jeroen Hellingman in 1993 submitted a proposal to register the Javanese script to Unicode. The development of "font" Javanese script electronically has been done by several persons, namely: Yanis Cahyono (2001), Ermawan Pratomo (2001), Jason Glavy (2002), Teguh Budi Sayoga (2004), and Kusuma Bayu Purwanto (2006). Java Script has now been released in Unicode version 5.2.

The success of learning to write in Javanese script at the present is still low. This is evident by the lack of ability of students to write in Javanese script. One of the efforts to increase the ability to write in Javanese script can be done by using computer media.

Write in Javanese script through a computer media can be done in the following stages: (1) open the official web site: http://hanacaraka.fateback.com, (2) download the Javanese script font type, (3) download Javanese script writing guide, (4) Install the font on the control panel, fonts, files and install the New

Font or copy font type and paste it in Fonts folder, (5) read the instructions carefully, (6) how to use the normal way and change the font type to be *Hanacaraka*.

This paper uses truetype model Javanese script fonts developed by Budi Sayoga. As examples of its application are as follows

Tabel 4 Penulisan dan Pengetikan Aksara Jawa

i abel 4 Penulisan dan Pengenkan Aksara Jawa				
Penulisan Aksara Jawa	Pengetikan	Bac aannya		
เทเลฉาเล	ansd	<i>ana sada</i> 'ada lidi'		
ធ្យាសាយាមា	tukubuku	<i>tuku buku</i> 'membeli buku'		
เพิ่มตำเน้น	aikipipi	iki pipi ʻini pipi'		
ալունվ	Gels\	gelas 'gelas'		
ngm <sup>*</sup>	2gi	legi 'manis'		
าคาณ์	ks/	kasar 'kasar'		
<b>អ្</b> រពេហិរៈ ៤:	kels;5;	kelas 5 "kelas 5"		
Menre	[mj	meja 'meja'		
เอ๋เทเทฌ	fWibas	<i>dwi bahasa</i> 'dwi bahasa'		
្រាញឈ្មោញម្នាក់ទេស្រាញ	?sitilgisinau.	Siti lagi sinau 'Siti sedang belajar'		

Note: Javanese script correspondence with Latin letters on the keyboard can be downloaded on the rules of Javanese script writing through <a href="http://hanacaraka.fateback.com">http://hanacaraka.fateback.com</a>

The advantages of using Javanese script in truetype fonts, namely:

- a. Typing is done in Latin letters keyboard design, so it does not take a long time to memorize the Javanese script.
- b. Easy to use in a variety of word processor, especially MS Office
- c. Truetype font is easy to use with all software that supports truetype fonts.
- d. Print is similar to existing results on the screen.

Javanese script writing through the medium of the computer needs to consider the guidance in writing good Javanese script. It is necessary for the writing produced to meet the spelling in the writing of Javanese script. As an example Javanese script writing through the medium of the computer that is not appropriate as follows.

Tabel 5 Kesalahan dalam Penulisan Aksara Jawa dengan Media Komputer

Kesalahan Penulisan	Perbaikan	Bac aannya
e ເມານູ້າຍາປ	ណស៊ីវេរូម៉ារ៉	mbathik 'membatik'
ារ័ាខាន	ngang	lemah 'tanah'
hm	Q1111	rega 'harga'
เพียง	<del>M</del> an	krasa 'terasa'
L'II III	mm	bagya 'bahagia'
ហុឈុមហិវិ	ហុយមោរៈជាៈ	pitik 3 'ayam 3'

# F. Efforts to Increase Javanese script Writing Ability through Computer Media

Scarino, Vale, and Clark (in Suwarno, 2002: 28) detailed the principles of language learning, namely: a) learning will be optimal if learning according to the needs of students, b) learning will be optimal if the students are given the opportunity to be active, so they have lots of experience; c) learning will be optimal if the students are given effective feedback, and d) learning will be optimal if the students are given the opportunity to manage their own learning.

These principles emphasize the fulfillment of student needs, and experience exploration for learning can be optimal.

Some of these principles should be adopted in an effort to increase learning Javanese script writing to succeed. The description of the learning in improving Javanese writing skills through a computer media are as follows.

- 1. The selection of materials according to the needs of students and in tune with the times.
- 2. Application of various learning strategies to provide emphasis on experiential learning, among others: inquiri learning strategies, cooperative learning

- strategies, problem-based learning strategies, contextual learning strategies, and so forth.
- 3. Application of various learning methods, including: problem solving methods, team games tournament method, the method of numbered heads together, and so forth.
- 4. The use of various computer media and provide students opportunities to practice, among others: crossword puzzles, power point, games, and others.
- 5. Give feedback at each stage of the achievements of students from the simple to the complex level.

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