JAVANESE WRITING SKILLS IMPROVEMENT
THROUGH COMPUTER MEDIA

By: Nurhidayati
Yogyakarta State University

Address: State University of Yogyakarta, Yogyakarta Karangmalang,
Zip Code 55281, Tel. 0274-548207 Fax.548207
Email: nurhydanur@yahoo.com

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 sandhang as a
regulator of vocals, some special characters (ᵱ, ᵱ, 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 pasangan are as follows:

\[
\begin{array}{c}
\text{Aksara Jawa Nglegena} \\
\hline
\text{ha na ca ra ka da ta sa wa la} \\
\text{pa dha ja ya nya ma ga ba tha nga} \\
\end{array}
\]

\[
\begin{array}{c}
\text{Pasangan} \\
\hline
\text{ha na ca ra ka da ta sa wa la} \\
\text{pa dha ja ya nya ma ga ba tha nga} \\
\end{array}
\]

Adapun penggunaan aksara Jawa nglegena dan pasangan-nya dapat dicermati pada contoh berikut:

\[
\begin{array}{c}
\text{Ana wedhus mangan sukut} \quad \text{'There are goats eat grass'}
\end{array}
\]

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:

<table>
<thead>
<tr>
<th>ꔃ</th>
<th>ꔃ</th>
<th>ꔃ</th>
<th>ꔃ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Na</td>
<td>Ka</td>
<td>Ta</td>
<td>Sa</td>
</tr>
<tr>
<td>Pa</td>
<td>Nya</td>
<td>Ga</td>
<td>Ba</td>
</tr>
</tbody>
</table>

Writing *murda* scripts in Javanese script writing has a few rules, namely:

a. *Murda* script cannot 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:

*Dewi Sinta* ‘Dewi Sinta’
*Kutha Nyayogyakarta* ‘kota Jogjakarta’

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:

<table>
<thead>
<tr>
<th>ꔍ</th>
<th>ꔍ</th>
<th>ꔍ</th>
</tr>
</thead>
<tbody>
<tr>
<td>kha</td>
<td>dza</td>
<td>za</td>
</tr>
<tr>
<td>fa</td>
<td>gha</td>
<td></td>
</tr>
</tbody>
</table>

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

*Rekan* script consists of:

<table>
<thead>
<tr>
<th>ꔝ</th>
<th>ꔝ</th>
<th>ꔝ</th>
</tr>
</thead>
<tbody>
<tr>
<td>khatib</td>
<td>dzikir</td>
<td>fakir</td>
</tr>
<tr>
<td>zakat</td>
<td>ghaib</td>
<td></td>
</tr>
</tbody>
</table>

4. Aksara Swara

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

<table>
<thead>
<tr>
<th>ꔫ</th>
<th>ꔕ</th>
<th>ꔖ</th>
<th>ꔗ</th>
<th>ꔘ</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>i</td>
<td>u</td>
<td>e</td>
<td>o</td>
</tr>
</tbody>
</table>

4. *Svara Script*.
Swaran script in Javanese script writing rule used to write many words absorbed from a foreign language. Swaran 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:

\[ \text{Usman} \quad \text{Oktober} \]

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.

<table>
<thead>
<tr>
<th>Sandhangan</th>
<th>Fungsi</th>
<th>Contoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wulu …….....</td>
<td>Penanda bunyi /i/</td>
<td>[ \text{iki pipi 'ini pipi'} ]</td>
</tr>
<tr>
<td>Suku …….u</td>
<td>Penanda bunyi /u/</td>
<td>[ \text{dudu kuku 'bukan kuku'} ]</td>
</tr>
<tr>
<td>Taling [ ]</td>
<td>Penanda bunyi /e/</td>
<td>[ \text{lele 'ikan lele'} ]</td>
</tr>
<tr>
<td>Taling tarung [ ]</td>
<td>Penanda bunyi /ə/</td>
<td>[ \text{loro 'dua'} ]</td>
</tr>
<tr>
<td>Pepet ……</td>
<td>Penanda bunyi /ə/</td>
<td>[ \text{sega 'nasi'} ]</td>
</tr>
</tbody>
</table>

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.

\[ \text{Usman} \quad \text{Oktober} \quad \text{atik'.} \]

\[ \text{bathik tulis 'batik tulis'.} \]

\[ \text{awak kuru 'badan (yang) kurus'.} \]
Sandangan pepet is not used in \(\text{r} \) and \(\text{l} \) that do not function as pasangan. Writing \(\text{r} \) symbolized by the sign alphabet and \(\text{pa cerek} \ x \) and \(\text{l} \) represented with 2 characters nga lelet.

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

<table>
<thead>
<tr>
<th>Sandhangan</th>
<th>Fungsi</th>
<th>Contoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pangkon (\text{ʃ} )</td>
<td>Panyig(\text{g} ) atau menjadikan bunyi konsonan/mati</td>
<td>(\text{q} \text{q} ) (\text{q} \text{q} ) = salak ‘buah salak’</td>
</tr>
<tr>
<td>Wignyan (\text{ʒ} )</td>
<td>Penanda sig(\text{g} ) /(h/ )</td>
<td>(\text{m} \text{m} ) (\text{g} \text{g} ) = gajah ‘gajah’</td>
</tr>
<tr>
<td>Layar (\text{ʃ} )</td>
<td>Penanda sig(\text{g} ) /(h/ )</td>
<td>(\text{m} \text{m} ) (\text{m} \text{m} ) = kabar ‘kabar, berita’</td>
</tr>
<tr>
<td>C(\text{c} )cak</td>
<td>Penanda sig(\text{g} ) /ng/</td>
<td>(\text{m} \text{m} ) (\text{n} ) = lanang ‘laki-laki’</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Sandhangan</th>
<th>Fungsi</th>
<th>Contoh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cakra (\text{ʃ} )</td>
<td>Penanda panjingan /(\text{ra} / )</td>
<td>(\text{q} \text{q} ) = krasa ‘terasa’</td>
</tr>
<tr>
<td>Cakra k(\text{è} )r(\text{è} )</td>
<td>Penanda panjingan /(\text{ré} / )</td>
<td>(\text{p} \text{p} ) (\text{p} \text{p} ) = pr(\text{è} )lu ‘perlu, penting’</td>
</tr>
<tr>
<td>Pengkal (\text{ʃ} )</td>
<td>Penanda panjingan /(\text{ya} / )</td>
<td>(\text{m} \text{m} ) (\text{m} \text{m} ) (\text{q} \text{q} \text{q} ) = kopyah ‘peci’</td>
</tr>
</tbody>
</table>

6. Javanese Number

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

\[ 1 = \text{Ⅰ} \quad 2 = \text{Ⅱ} \quad 3 = \text{Ⅲ} \quad 4 = \text{Ⅳ} \quad 5 = \text{Ⅴ} \quad 6 = \text{Ⅵ} \quad 7 = \text{Ⅶ} \quad 8 = \text{Ⅷ} \quad 9 = \text{Ⅸ} \quad 0 = \text{Ⅹ} \]

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.
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.

\[
\begin{align*}
\text{Adhiku tuku klapa 'Adikku membeli kelapa'}. \\
\end{align*}
\]

b. Pada Lingsa

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.

\[
\begin{align*}
\text{Bapak, ibu, lan adhiku ora ana 'Bapak, Ibu, dan adikku tidak ada'.} \\
\end{align*}
\]

c. Pada Lungsi

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.

\[
\begin{align*}
\text{Bapak mundhut salak 'Bapak membeli salak'.} \\
\text{Dewi tuku buku 'Dewi membeli buku'.} \\
\end{align*}
\]
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 *pemertian*, and mark a direct passage. As example of the use of *pangkat* can be observed as follows.

\[
\text{Kula lair: 1 Mei 1976 ‘Saya lahir: 1 Mei 1976.}
\]

\[
\text{Gunung iku dasanamane: ardi, arga, giri ‘Gunung itu sinonimnya: ardi, arga, giri’}
\]

\[
\text{Ibu dhawuh: ‘Le, Bapak aturana dhahar’. ‘Ibu memerintah: ‘Nak, Bapak diminta makan’}
\]

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), Ermanwan 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

<table>
<thead>
<tr>
<th>Tabel 4 Penulisan dan Pengetikan Aksara Jawa</th>
<th>Penulisan Aksara Jawa</th>
<th>Pengetikan</th>
<th>Bac aannya</th>
</tr>
</thead>
<tbody>
<tr>
<td>ꎖ khuyên</td>
<td>ansd</td>
<td>ana 'sada 'ada</td>
<td>lidi'</td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>tukubuku</td>
<td>tuku 'membeli buku'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>aikipipi</td>
<td>iki pipi 'ini pipi'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>Gels\</td>
<td>gelas 'gelas'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>ггi</td>
<td>legi 'manis'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>ks/</td>
<td>kesar 'kasar'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>kels;5;</td>
<td>kelas 5 'kelas 5'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>[mj]</td>
<td>meja 'meja'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>fWibas</td>
<td>dwi bahasa 'dwi bahasa'</td>
<td></td>
</tr>
<tr>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>ꎖ ꎖ ꎖ ꎖ ꎖ ꎖ</td>
<td>Siti lagi sianu 'Siti sedang belajar'</td>
<td></td>
</tr>
</tbody>
</table>

Note: Javanese script correspondence with Latin letters on the keyboard can be downloaded on the rules of Javanese script writing through [http://hanacaraka.fateback.com](http://hanacaraka.fateback.com)

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.

<table>
<thead>
<tr>
<th>Kesalahan Penulisan</th>
<th>Perbaikan</th>
<th>Bac aannya</th>
</tr>
</thead>
<tbody>
<tr>
<td>mbathik</td>
<td>mbatik</td>
<td>mbathik</td>
</tr>
<tr>
<td>lemah</td>
<td>tanah</td>
<td>lemah</td>
</tr>
<tr>
<td>rega</td>
<td>harga</td>
<td>rega</td>
</tr>
<tr>
<td>krasa</td>
<td>terasa</td>
<td>krasa</td>
</tr>
<tr>
<td>bagya</td>
<td>bahagia</td>
<td>bagya</td>
</tr>
<tr>
<td>pitik</td>
<td>ayam</td>
<td>pitik</td>
</tr>
</tbody>
</table>

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.

References:


