Damarjati Application for Development of Javanese Language Learning in High Schools

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Abstract. The background of this study is the difficulty of Javanese high school language teachers in implementing the 2013 Local Content Java Language Curriculum. The problem discussed is how the application of the Damarjati application in the development of HOTS-based Javanese language learning in high school. The objective to be achieved is to describe the standard operating procedures of the Damarjati application in the development of HOTS-based Javanese language learning in high school. The object of this research is the application of the Damarjati application in the development of HOTS-based Javanese language learning with a population of Javanese language teachers and high school students in Central Java. The phenomenological approach applied in this research is carried out by developing products in the learning process with the Content Management System (CMS) format. Based on in-depth studies it was concluded that: 1) the Damarjati application was opened through damarjati.upgris.ac.id.; choose classes and semesters; choose themes and sub-themes, and provide corrections and comments; and 2) the application of the Damarjati application can develop HOTS-based Javanese language learning in high schools through the nggatekake menu, tetakon, naliti, nyoba, ngatonake, and gladhen. Our gratitude goes to the In the 7th International Conference on DV-X melalui Method Committee, through Ms. Mega Novita for her willingness to give our team the opportunity to join this highly qualified international conference.

1. Introduction

The background of this study is the difficulty of Javanese high school language teachers in implementing the 2013 Local Content Java Language Curriculum. This was identified in the Facilitation of Curriculum Development and Deepening of Local Content Materials in the Javanese Language of Central Java High School, at Siliwangi Hotel, Semarang, 15-18 May 2017. In its implementation, the 2013 Curriculum was aimed at developing XXI century skills, namely learning that integrates literacy skills, skills knowledge, skills and attitudes, and mastery of technology. Learning activities are developed by reducing Lower Order Thinking Skills (LOTS) and add on Higher Order Thinking Skills (HOTS). (Dirbin SMA, 2017: 2-4). This is in accordance with the Strategic
Plan for UPGRIS Research, in the Roadmap for Superior and Identity HR Research. In that field it is planned that 2017-2019 can implement technology in the form of prototype models and produce web-assisted HOTS model products, the Damarjati application is developed. The problem of this research is how the application of Damarjati application in the development of HOTS-based Javanese language learning in high school. The goal to be achieved is to describe the standard operational procedures of the Damarjati application in the development of HOTS-based Javanese language learning in high school.

The XXI Century is a global era and spread to all aspects of human life, including the world of education. Therefore, learning Javanese must lead to it. Means of communication in this global era are dominated by internet networks, one of which is the use of the World Wide Web or often called the web. The web is the largest collection of documents stored on various servers connected to a network (Rianawaty, 2011: 1). Documents used on the web are developed in a format Hypertext Markup Language (HTML). Through this format it is possible to link from one document to another. Learning that utilizes the web as it is commonly referred to as Web Based Learning or E-learning. The use of the web in this study was chosen by the type of web enhanced course, which utilizes the internet to support the improvement of the quality of learning in the classroom (Rianawaty, 2011: 3-4). The time needed in this learning model is 5-10 months divided into 5 stages. Stage 1, 3, and 5 are implemented remotely using the web, while stages 2 and 4 are carried out conventionally by face to face (Idayoce 2014: 1). Permendikbud Nomor 22/2006 contains that learning aims to provide the ability to think logically, analytically, systematically, critically, and creatively, and be able to work together with students. These objectives are in accordance with the main principle Higher Order Thinking Skills (HOTS). Itasari (2012: 1) explain that Higher Order Thinking Skills (HOTS) in the Indonesian language is interpreted as a high-level thinking ability. HOTS is one of the approaches in learning that teaches students to think critically, logically, reflectively, metacognitively, and creatively. Such thinking skills can arise if students are confronted with problems they have not encountered before. Referring to Krulik and Rudnick's opinion, Itasari mentioned that the characteristics of thinking skills consist of memorizing (recall thinking), basic (basic thinking), critical (critical thinking), and creative (creative thinking). Critical thinking according to Romlah (in Itasari, 2012: 2) is a disciplined thinking controlled by consciousness. This creative thinking will produce something complex. Complexity is seen by the activities to unite ideas, create new ideas, and determine their effectiveness.

2. Methods

2.1. Object of research
The object of this research is the application of the Damarjati application in the development of HOTS-based Javanese language learning. The study population was Javanese language teachers and high school students in Central Java who were randomly selected.

2.2. Research stages
This research applies a phenomenological approach. In this case the research activities carried out by developing products in the learning process with the content format Management System (CMS) Damarjati application for high school students. The stages in conducting this research are: 1) goal setting and problem formulation; 2) research design and data collection techniques; 3) conducting research: data collection and analysis; 4) formulation of conclusions; and 5) reporting (Moustakas, 1994 in Creswell, 2013: 105-149), like the following picture.
3. Results and Discussion

Through research it can be stated that the standard operational procedures of the Damarjati application include four steps, namely: finding a web address, finding class and semester information, entering the material menu, entering the submateri menu.

3.1. Damarjati application address

The first step to enter the Damarjati web address can be found by address damarjati.upgris.ac.id. This address will open the main page that loads: the front page (figure 2.1); menu list (figure 2.2); class and semester (figure 2.3); material and submissions (figure 2.4); and the comments page (figure 2.5) like the picture below.

![Figure 2.1](image1)
![Figure 2.2](image2)
![Figure 2.3](image3)
![Figure 2.4](image4)
![Figure 2.5](image5)

Figure 2. The main page of Damarjati

3.2. Class and semester

This page contains class and semester information. Through this page, users can choose class X semester 1, class X semester 2, class XI semester 1, class XI semester 2, class XII semester 1, and class XII semester 2. In addition to selecting classes and semesters, this page can be viewed core competency (KI) and basic competencies (KD) which is developed in each class and semester chosen.

![Figure 3](image6)

Figure 3. The class and semester page

3.3. Material and submissions

On this page the material to be discussed has been determined, for example, Serat Wedhatama Pupuh Pangkur. Then you can choose the submersion to be studied more specifically through the menu: ayo nggatekake ‘observing’, ayo tetakon ‘questioning’, ayo naliti ‘associating’, ayo nyoba ‘experimenting’, ayo ngatonake ’networking/communicating’, and gladhen ‘exercises’.

![Figure 4.1](image7)

Figure 4.1. The observing page
Figure 4.1 shows the display of the submission *ayo nggatekake*. In this submission, a video is presented in the 'verse' of the Pangkur song, which is equipped with notation and moving poetry. This is intended to guide the observer in observing the songs and poems of the Pangkur song.

![Figure 4.2. The questioning page](image)

The next sub-topic is *ayo tetakon* ‘questioning’. This page shows a page like Figure 4.2. In this submission the user can ask all the words contained in Pangkur song. If a word is written in the "kata susah" column and then clicks the “cari” column, then an answer will automatically appear: lime clay root word, its morphological process, and the meaning or meaning of a word.

![Figure 4.3. The associating page](image)

On this *ayo naliti* ‘associating’ submission, users observe several verses of Pangkur song. In each verse of the Pangkur song the first line number is written down to the seventh line; each line will be written with a syllable fragment which is *guru wilangan*; then the last syllable vowel of each line will be displayed differently from other letters. This was to mark the *guru lagu*. By observing several verses of a song, a characteristic of a Macapat song will be found.

![Figure 4.4. The experimenting page](image)

Based on the characteristics that have been deduced from the above association process, students are instructed to compose songs of Pangkur using their own language. If students experience difficulties, the teacher can guide by choosing certain themes. After students succeed in composing songs, in this case Pangkur song, the students' work is uploaded into the upload column provided (Figure 4.4). The upload can be seen and commented on by anyone who opens the Damarjati application.
The next step, the song that has been composed by the students was sung by themselves and video. After that, the video is uploaded using the URL format facility and uploaded to YouTube, as shown in Figure 4.5. Similar to the previous step, the video can be seen and commented on by everyone who opens the Damarjati application. Students who compose songs and upload videos can read comments, both related to the writing and the video. Based on the various comments of readers, viewers, and listeners of the song earlier, students can make improvements.

These steps (1-5) can also be applied to Sinom, Pocung, Gambuh, Kinanthi, Dhandhanggula, and other songs.

The exercises page, like Figure 4.6 contains questions to test students' understanding of the material being studied. Student identity is recorded accurately. Thus, the teacher can conduct a comprehensive evaluation. Understanding ability is assessed based on answers to questions; writing ability and critical attitude can be assessed based on the songs created by students; and communication skills or expressions can be assessed through video recordings of students communicating their work.

3.4. The comments page

As noted above, the comments page (Figure 5) is provided for all users to comment on student uploads. All written and video student work; both the song material, discourse fiction, discourse nonfiction, customs, and Javanese script, commented on by application users through this page.

4. Conclusion

Based on the above research it can be concluded that the standard operational procedures of the Damarjati application include: 1) opening the address through damarjati.upgris.ac.id.; 2) choose classes and semesters; 3) choose a theme and sub-theme with the menu ayo nggatekake ‘observing’, ayo tetakon ‘questioning’, ayo naliti ‘associating’, ayo nyoba ‘experimenting’, ayo ngatonake ‘networking/communicating’, and gladhen ‘exercises’; and 4) users make corrections and comments. Through the application of the Damarjati application, it can achieve research objectives in developing HOTS-based Javanese language learning in high schools, which can be achieved through the Damarjati menu facility: nggatekake, tetakon, naliti, nyoba, ngatonake, and gladhen.
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