

## UTILIZATION OF WEB AS AKSARA JAWA LEARNING MEDIA FOR ELEMENTARY SCHOOL STUDENTS

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### ABSTRACT

*This learning media application is designed to be able to help elementary school students in learning Aksara Jawa. This application is made web-based, so it can be used by all people. The purpose of making this application is to assist with the learning of Aksara Jawa with the subject matter of the aksara carakan with pasangan, aksara wilangan, aksara swara, tuladha page, and question page. It is expected that the presence of this learning media can help increase the students' interest in learning local content subjects, namely Regional Languages (Javanese). In addition to increasing interest, can contribute to the preservation of regional culture.*

**Keywords:** aksara jawa, learning media, web

### 1. Introduction

Aksara Jawa is one of the priceless cultural relics. The form of the aksara and the art of making it also become a heritage that deserves to be preserved [1]. This aksara is a clear proof of the existence of the past before the existence of the Indonesian nation. This Aksara Jawa preservation effort is being pursued by the government. One of the efforts is to include it in the education curriculum. So that the Indonesian people will not lose their cultural values. For some students, aksara Jawa is a quite complicated lesson, because there are forms of aksara, memorization, pronunciation, and preparation of letters that are quite difficult. So to increase students' interest in learning aksara Jawa, methods such as multimedia-based learning media are very helpful in the learning process.

The development of multimedia technology can change the way a person learns in general to become a more interactive learning method and provide better results. Interactive understanding is related to two-way communication or more than communication components. Components of

communication in interactive multimedia (computer-based) are relationships between humans (as users / users of products) and computers (software / applications) in certain file formats [2]. So with the role of a computer-based learning system equipped with learning facilities with sound and images it is expected that it will be easier to attract students' interest in learning and obtain a more enjoyable learning process and eliminate the boring impression.

The importance of developing aksara Jawa learning media, namely aksara Jawa is a cultural heritage, there needs to be preservation efforts, government efforts to incorporate Javanese script into the education curriculum, in education the role of media can help learning, computers as effective and efficient learning media, so development interactive Javanese learning media.

## **2. Research Methods**

### **A. System Analysis**

System analysis is a problem-solving technique that outlines component parts by studying how well these component parts work and interact to achieve their goals [3]. System analysis is carried out for the purpose of studying a system or its parts to identify its purpose. Analysis of the needs of this application will be done in a way;

- 1) Observation, namely by approaching the school and students about the Javanese script learning response, then interviewing and responding to the application suggestions that will be made.
- 2) Literacy of information by studying and reading various references from articles, journals, papers that support research.

### **B. System Design**

From the results of the analysis, a system design is made. The system design built includes a system flowchart, data flow diagram, layout design.

1) Flowchart system

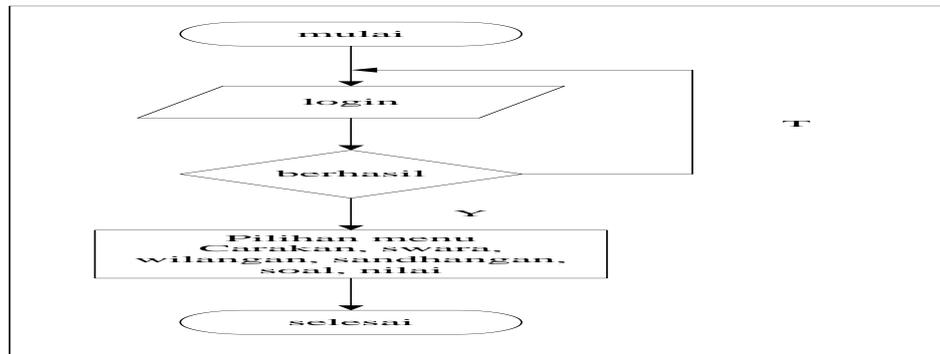


Figure 1 Flowchart system

In Figure 1, the User login enters the username and password, if successful the user will enter the main page of the Java script learning media, otherwise the user will be re-directed to log in again, after successfully entering the main page the user can choose the menu, Aksara Jawa, sandhangan, wilangan, example, history of Aksara Jawa, then menu questions and values. Then the user can begin to learn to recognize, memorize, read and work on questions about Javanese script, after working on the problem, the user can immediately see the results of the questions that have just been done.

2) Data Flow Chart

Data Flow Diagram in this system there are three levels.

a. Level 0 data system flow chart of Learning Media

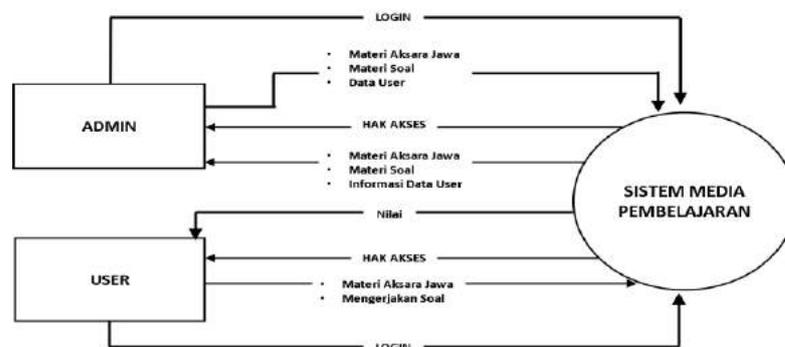


Figure 2 Level 0 Data Flow Diagram

In Figure 2 explains the DFD level 0, Admin includes material in Aksara Jawa, question material, and user data. From the side of the user see the aksara Jawa material and work on the question. Both the Admin and the user have their own access rights.

b. Level 1 data flow diagram of Learning Media

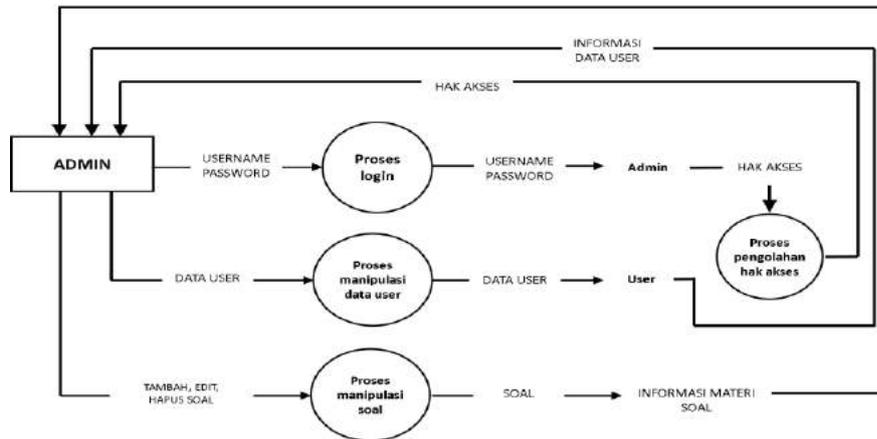


Figure 3 Level 1 Data Flow Diagram

In Figure 3, it explains about DFD level 1. Admin enters user password data then login process. From the admin login process get a user name and password that can be used to access the application. Admin also enters user data and then manipulates user data.

c. Level 2 data flow diagram of Learning Media

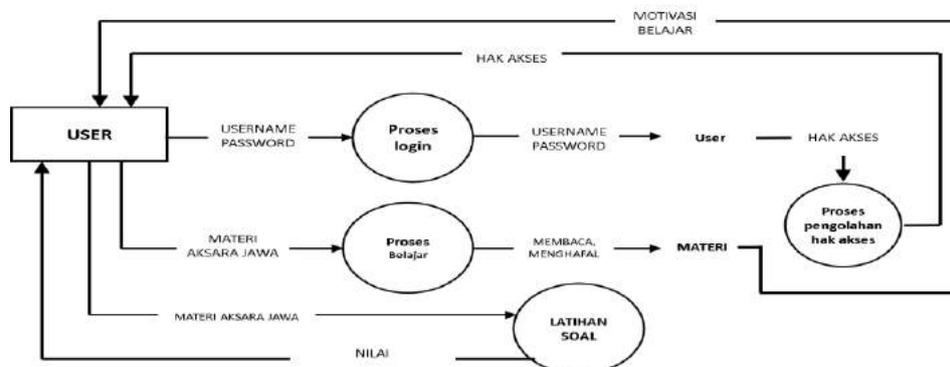


Figure 4 Level 2 Data Flow Diagram

In Figure 4 describes DFD level 2. Users enter a user password and then process logins, the user can process the application access. In addition, users also get access to aksara Jawa, which is reading and memorizing material, the purpose of learning motivation. From the learning process, users can do question exercises. After the question is done, the result will appear as a value.

d. Level 3 data flow diagram Learning Media

In Figure 5, it explains about DFD level 3. Admin can enter questions, add sola, delete questions, and ask questions. All access is in the question table.

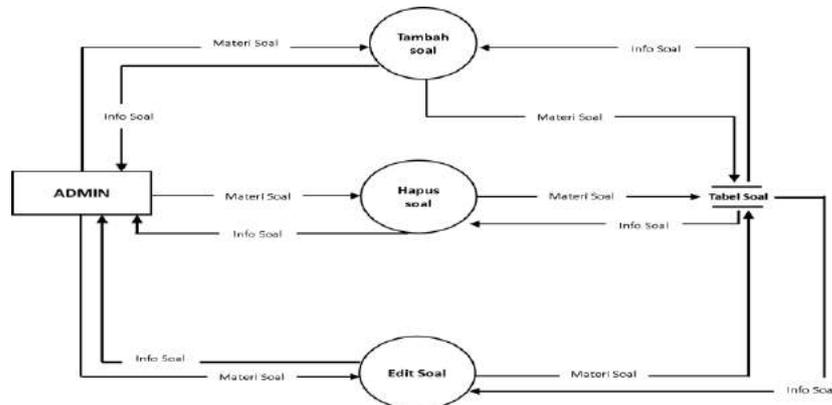


Figure 5 Data flow Diagram

### 3. Results and Discussion

This web-based Aksara Jawa learning media has several views. Then it is necessary to do testing and analysis to see the results that have been achieved making this application.

a. Login page

This page is security or Admin security or User can access by entering User and Password.



Figure 6 Login page

Input	Process	Output
User_ID Password	a. The operator selects user_ID and types the password b. Log in	Access to the application

b. Question page

This page is used to delete, add or edit questions.

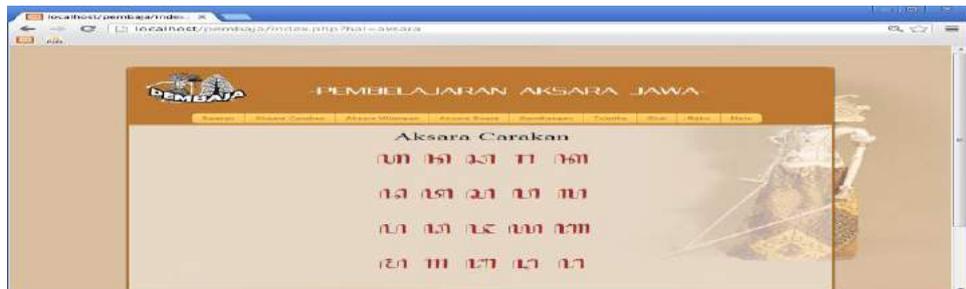


Figure 7 Question page (admin)

Input	Process	Output
Material or questions of Aksara Jawa	a. The operator selects the Add button b. Delete button to delete the question c. Change button for material manipulation	Question of Aksara Jawa

c. Aksara Carakan page

On this page about aksara Carakan, the user can also listen to the sound of the script chosen by clicking on one of the aksara, besides if the user places the cursor on one of the aksara carakan, then the aksara description will appear.





f. Sandhangan page

On this page it contains articles on sandhangan aksara Jawa, the user can also listen to the sound of sandhangan by clicking on one of the sandhangan, in addition if the user places the cursor on one of the drawings, a description and use of the sandhangan will appear in aksara Jawa.



Figure 11 Sandhangan page

g. Tuladha page

On this page show examples of aksara Jawa writing, accompanied by pictures and sounds about figures of clowns and figures of Ramayana, by clicking on one of the images the sound and text will appear.



Figure 12 Tuladha page

h. Question page

On this question page it contains questions about aksara Jawa.



Figure 13 Question page

i. Value page

On this value page displays the value, name and date of working on the question.



Figure 4.12 Value page

#### 4. Conclusions And Recommendations

In this study, we presented a case study on Javanese script learning media. From the results of the research through questionnaires on 10 respondents, it can be concluded that: 67% of Javanese script learning media can increase the interest of students in learning Javanese, while the remaining 33% does not affect the interest of students.

This learning media is one of the alternative ways of learning systems for children that are better, more effective and more interesting, namely by displaying interesting images that will facilitate children's

understanding in learning Javanese script. Learning media can be an interesting supporter of training and also as a means to foster the interest of the younger generation to use and sustain Javanese culture.

It is expected that in the next study more practice questions will be raised which will attract students' interest in learning.

## **5. References**

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