

Dissemination of Children's Literary Work to Optimize Virtual Language Laboratory at Elementary School Education Department

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Abstract—The rapid development of Science and Technology (IPTEK) in the 21st century has led to changes in curriculum, media, and technology. Good learning media can make abstract concepts to be easily understood. 21st-century learning requires ICT-based learning which requires interactive media. Teachers must ensure that learning can run well and learning objectives can be achieved. Virtual laboratories can be used in learning (VLab). VLab can be utilized in class or for self-learning. Virtual lab-based learning overcomes 21st-century learning difficulties. The virtual laboratory is an interactive medium where students can observe phenomena to fulfill learning objectives. The results of the study show that (1) The Language VLab at <http://pgsd.fip.unesa.ac.id/page/vilab-language> is feasible to use. The user response test to VLab Language shows 84.5% feasibility. The results of VLab Language dissemination have been optimal as can be seen through the enthusiasm of VLab Language visitors; (2) The results of data collection showed that 50% of students, 30% of lecturers, and 20% of professors visited the Language VLab. Students frequently visit the Language VLab. While the title of the fairy tale book that is often read and downloaded by readers is entitled "The Country of Learning".

Keywords: Dissemination, Children's literature, Virtual, Laboratory

1. INTRODUCTION

Technology has changed many aspects of life (Simarmata, 2020). Technological developments are heading in a digital direction where all human activities can be fulfilled by existing technology (Indarta et al., 2022). We were familiar with the Industrial Revolution 4.0, which used digital technology and the internet to completely revolutionize an industry's production. Putriani & Hudaidah (2021) argued that the industrial revolution was a great technological change that affected various disciplines, especially education and society. Society 5.0, initiated by the Japanese state, emerged shortly after this era. This notion allows humans to use modern science-based information like the Internet of Things (IoT) or Artificial Intelligence (AI) to suit their wants to live happily (Chignell, 2022; Savitri, 2019). Society 5.0 can help humans improve their talents and capacities, according to Maghfiroh & Sholeh (2022). With this notion, the Japanese government hopes people can keep up with artificial technology. Countries around the world are working to modernize their order of life to keep up with more advanced artificial technology.

Children's literature is written for children (Nikolajeya 2015; Hafizah, et. al, 2022). Children's literature creates fictitious worlds and memorable experiences (Rustin, 2018; Pratiwi, et. al, 2022). Literary works created by lecturers and students have experienced a very significant increase, especially in language courses. Lectures, teaching the Indonesian language, have produced printed literary works in the form of hard files and soft files, such as poetry ontologies, children's stories, animated videos, and

infographics. These literary works have only been kept by departments or professors which obviously decreases the work's accessibility.

Multimedia plays an important role in the learning process (Adlina, 2022; Kadarwati, et.al, 2022). Using multimedia, students can repeat each learning material until they understand it naturally (Muslem & Abbas, 2017). A virtual laboratory is a tool to improve teacher quality by providing virtual devices, algorithms, and other devices within a certain scope (Manongga, 2022). Likewise, Jaya (2012) defines a virtual laboratory as a platform for experimenting, which includes a domain-dependent simulation program, experimental units, object-operating tools, and reference volumes. Researchers are using guided inquiry models and virtual laboratories to teach science process skills.

This study is a development study at the product dissemination stage of children's literature produced in previous studies. This study aims to disseminate works of children's literature created by lecturers and students, including printed materials and digital works (videos, animation videos, and audio literature). Before uploading printed materials, a digitization process is carried out. After the works have been entered into the Language VLab, lecturers and students can access them. The dissemination of children's literature is conducted by registering literary works and then uploading these items to Language VLab. To evaluate VLab's product upload optimization, users' progress on VLab Language, particularly in accessing children's literature, is routinely checked.

2. METHODS

2.1 Research Design

This study develops the dissemination stage of previous children's literature works. Disseminating children's books optimized Virtual Language Laboratory at elementary school teacher education department, faculty of education, UNESA. The Outcome Based Education (OBE) Curriculum supports problem- and project-based learning. To maximize the Language Virtual Laboratory (VLab) at the elementary school teacher education department, faculty of education, UNESA, children's literature is registered and uploaded to the VLab. VLab users, notably those accessing children's books in VLab Language, are monitored often.

2.2 Participants

The research subject for the dissemination of children's literature to optimize the Language Virtual Laboratory at elementary school teacher education department, faculty of education, UNESA is access to children's literature uploaded to the VLab of the elementary school teacher education department, faculty of education, UNESA.

2.3 Procedures

The research data collection technique is centered on the dissemination stage. The activity steps are as follows: (1) collect children's literature from the Storytelling Skills course product development results that will be uploaded to the Language VLab, (2) upload children's literature to the Language VLab, (3) validate children's literary works uploaded to the Language VLab, and (4) process data on children's literature uploaded to the Language VLab.

2.3 Data Analysis

This study used descriptive data analysis methodologies, both quantitative and qualitative. The distribution of questionnaires was used to assess the quality of the results of the dissemination. Optimization of dissemination results can be obtained through qualitative data obtained from descriptive data of accessing children's literature uploaded to the Language VLab at the elementary school teacher education department, faculty of education, UNESA.

3. RESULTS

3.1 The Quality of Children's Literature Dissemination Through the Language Vlab at elementary school teacher education department, faculty of education, UNESA

In the disseminated VLab Language, the next step is to measure the user's response. A total of 34 people filled out the survey. The following are the results of the PGSD Language VLab users' responses.

Table 1. Results of User Responses to VLab Language

No	Aspects Assessed	Ideal	Score
1	Storybooks in VLab Language are clear and easy to understand	170	144
2	Literary storybooks contained in VLab Complete language	170	148
3	The language used is easy to understand	170	131
4	Menu selection in VLab language is easy to do	170	149
5	The colors in VLab language literature books are appropriate	170	144
6	The screen display in the VLab language is interesting	170	141
7	The pictures in story books in VLab language are clear	170	144
8	The layout of the text and pictures is not confusing	170	149
9	Interesting animations used	170	131
10	Animations in storybooks in VLab Language according to material	170	143
11	Buttons in VLab Language easy to use	170	136
12	Instructions in VLab language easy to understand	170	154
13	I am interested in using this VLab language	170	154
	Overall Score	2210	1868
	Percentage		84.5%

The overall score was 1865 of a total of 2210 points, or 84.5%, according to the student response test data. It can be concluded that the test results of the user's response to the Language VLab are included in the very feasible category.

3.2 Dissemination result of Children's Literary Works to Optimize the Virtual Language Laboratory at elementary school teacher education department, faculty of education, UNESA

The developed VLab Language can be accessed at <http://pgsd.fip.unesa.ac.id/page/vilab-language>. The next step to get a fairy tale book

is to click on the book title and then fill out the *Google form*. When all is done, the book can be read or downloaded.

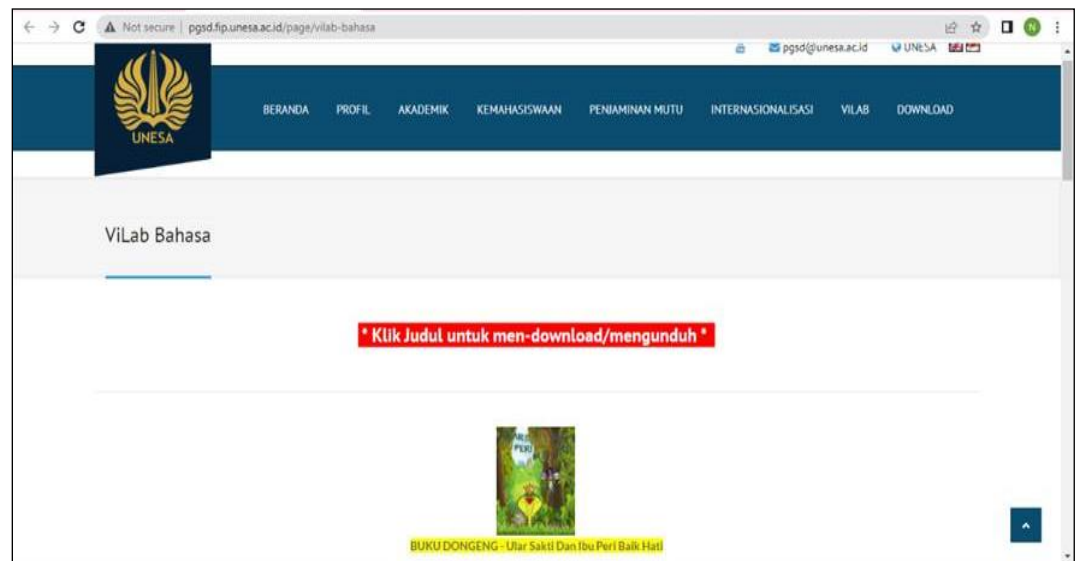


Figure 1. Display of the Virtual Language Laboratory

There are six works of children's literature in the Language VLab. The six works are made in the form of a fairy tale book that can be accessed at the Language VLab. The following describes several works of children's literary works uploaded to the Language VLab.

a. Fairy tale book with the title "The Magical Snake and the Kind Fairy Godmother"



Picture 2. The Fairy Tale book with the Title "The Magical Snake and the Kind Fairy Godmother"

The first book is a fairy tale book entitled "The Magical Snake and the Kind Fairy Godmother" and consists of 11 pages. The contents of the story of the book is about a

powerful snake named Raja Saga who is good friends with the fairy godmother Phea. Raja Saga wants to be a good leader. Therefore the fairy godmother Phea always protects King Saga to be careful in his actions.

b. A Fairy Tale Book entitles “Cici is Wise Ant”



Figure 3. A Fairy Tale Book entitles “cici is Wise Ant”

“Cici is the wise ant” contains the story of friendship between three animals consisting of ants, bees, and flies. In the story, it is presented that it is not permissible to fight over food between friends. The attitude of sharing food with ants is exemplary by readers.

c. Fairy Tale Book entitles “Azura’s Trinkets”



Figure 4. Fairytale Book entitles “Azura’s Trinkets”

The third book is a fairy tale book “Azura’s Trinkets” consisting of 14 pages. The contents story of the book are Azura’s arrogant character so she has many enemies. While eating chocolate, Cici fell and was found by her friend. At first, Azura’s friend didn’t want to give her the ring because of Azura’s arrogant attitude. A few days later, Azura’s friend gives her the ring. They communicate with each other. Azura apologized for her attitude so far.

d. Fairy tale book entitles “I Promise I Will Live a Healthy Life“



Figure 5. Fairytale Book entitles “I Promise I Will Live Healthy”

The fourth book is a fairy tale book “I Promise I will Live Healthy” consisting of 23 pages. The contents of the story of the book are the importance of always maintaining health. Frog’s character acts as a dirty character in the story. Frog is sick because of an unhealthy lifestyle.

e. Fairy tale book entitles”Land of Learning”

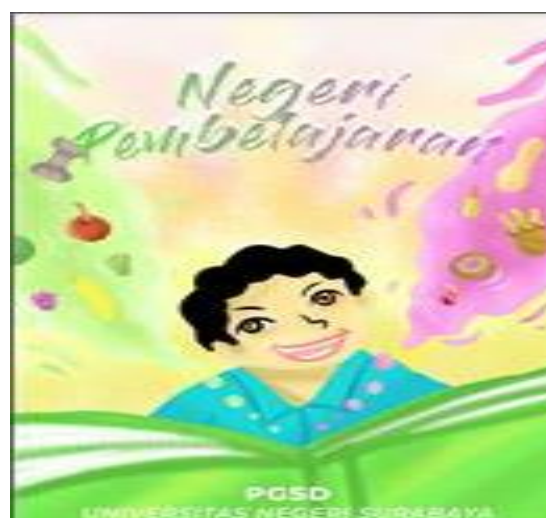


Figure 6. Fairytale book entitles “Land of Learning”

The fifth book entitles “Land of Learning” consists of 10 pages. The contents of story of the book are to tell the character Boni who won the running competition. Boni won the competition because of his persistence during practice.

f. Fairy tale book entitles “Grandfather Bori’s Ship, the Wise Bear“



Figure 7. The fairytale book entitles “Grandfather Bori’s Ship, the Wise Bear”

The sixth book is a fairy tale book “Grandpa Bori’s Ship the Good Bear” consisting of 12 pages. The story of the book states that anything difficult will be easier and faster to complete if we work together. Furthermore, when there are other people in need, those of us who see them and can help must be willing to move and have the awareness to aid as a form of compassion for others.

3.3. Results of Dissemination of Children’s Literary Works in Virtual Laboratories

Children’s Literary Works in the Language VLab have been visited by several readers. The following are the results of the dissemination of Children’s Literary Works in the Language VLab.

- a. Most visitors are students from Surabaya State University. The following is a graph of VLab Language visitors.

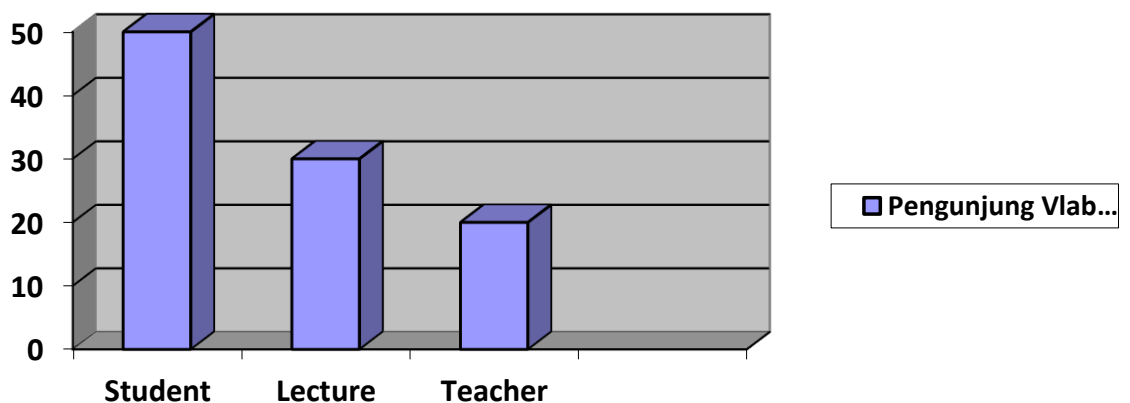


Figure 8. VLab Language Visitors

The graph shows that 50% of students visit the Language VLab, 30% of lecturers, and 20% of teachers. Thus, visitors who often visit the Language VLab are students. Students who often visit come from Surabaya State University.

- b. The title of the fairy tale book that is frequently read and downloaded by readers is “The Land of Learning”. The following is a diagram of fairy tale books that are often read and downloaded by VLab Language visitors.

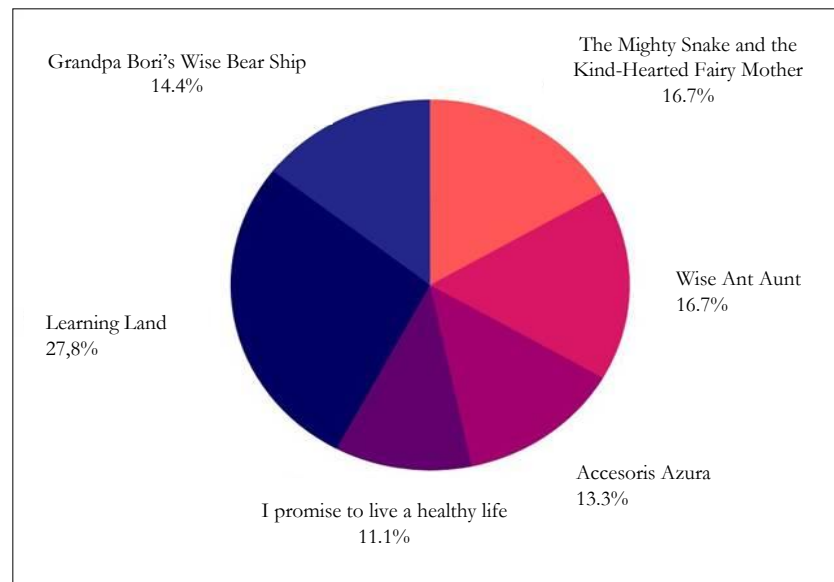


Figure 9. Diagram of Frequently Read Book Titles in VLab Language

Based on the figure, the fairy tale book “The Magical Snake and the Kind Fairy Godmother” is read by 16.7% of visitors. 16.7% read “Cici is wise Ant, 13.3% of visitors read “Azura’s Accessories. A fairy tale book ”I Promise I Will Live a Healthy Life” was read by 11.1% of visitors. 27.8% read a fairy tale book ”land of Learning” and 14.4% read ”Grandfather Bori’s Ship, the Wise Bear”. As a result, The most popular book read is “Learning Country” as much as 27.8%.

4. DISCUSSION

The following books were produced as a result of the development: 1) The Magical Snake and the Kind Fairy Godmother; 2) Cici, the Wise Ant; 3) Azura’s accessories; 4) I Promise I Will Live Healthy life; 5) Land of Learning; and 6) Grandfather Bori’s ship the Wise Bear. The development of the VLab is in line with development research conducted by Roosyati (2022) regarding interactive Phet-assisted virtual laboratories for science learning. The results showed that the media was proven to be able to visualize science concepts well which were initially difficult to understand because of the abstract so that it would further enhance students’ understanding of the concepts/material being taught. This is consistent with the findings of Song et al. (2022), who revealed that Web-based VLab can assist students to achieve more meaningful learning. The use of specially constructed simulators has proven to be quite effective in meeting learning objectives (Hochstrasser, et al, 20022).

The virtual laboratory is a type of interactive multimedia product that includes text, hypertext, sound, pictures, animation, video, and graphics in a variety of formats (Dede, 2022). The study found that 50% of students, 30% of lecturers, and 20% of

teachers visited VLab Language. Thus, most visitors to the Language VLab are students. VLab can be utilized for instructional reasons in class or individual learning, according to Prihatiningtyas, Praswoto, and Jatmiko (2013). According to Kurniawan, Rifa'I, and Fajar (2020), virtual laboratory-based learning is capable of responding to learning obstacles. According to Sony and Katkar (2014), a virtual laboratory is an interactive experience in which students can observe and manipulate system objects, data, or events to meet learning objectives.

With a percentage of 84.5%, the test results of the user's response to the Language VLab are categorized as a feasible category. Thus, VLab Language can be described as a learning medium that motivates students to learn. This is consistent with Raini's (2020) mentioned that good learning media as those that can motivate students, give meaningful learning experiences, and allow for analysis and individual performance. The advantages of VLab, according to Emigh and Herring (in Jaya, 2012), range from static websites containing video and text to dynamic pages that may be used for collaborative production. This virtual laboratory can also be accessed remotely, allowing for distance learning.

5. CONCLUSION

The study concludes that the quality of the Language VLab developed at <http://pgsd.fip.unesa.ac.id/page/vilab-language> is very feasible. This can be seen through the user response test to VLab Language is included in the very feasible category with a percentage of 84.5%. VLab Language dissemination had excellent results. This is evident in the enthusiasm of VLab Language visitors. Data collection showed that 50% of students, 30% of lecturers, and 20% of teachers visited VLab Language. As a result, most visitors to the Language VLab are students. "The Land of Learning" is the title of a fairy tale book that readers frequently read and download.

VLab Language can be used for a variety of groups, including elementary, junior high, and high school students, as well as students, teachers, and lecturers. The use of VLab Language can be adapted to the learning objectives and text readability. It is suggested that further research of language VLab should be evaluated continuously because the development of science and technology changes rapidly. Future researchers are expected to be able to develop more complete material, for example in e-books for education courses in elementary schools which are equipped with article links, YouTube, and others.

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