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DESIGNING WEB-BASED LEARNING MEDIA TO SUPPORT NARRATIVE TEXT READING COMPREHENSION

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Abstract

This study is aimed at designing a web-based learning media and finding its appropriateness in supporting the ninth-grade students' narrative text reading comprehension in SMPN 16 Singkawang. The ADD design from ADDIE was employed in this study, with observation, interview, and expert validation as the data collection technique. The results of the observation and interview revealed the need for learning media to address the difficulties in comprehending narrative texts among the students. Expert validations revealed that the designed product was very valid in terms of media and material design, with percentages of 85.3% and 96.3%, respectively. The final product includes multimedia and four reading texts translated and adapted from Singkawang local folktales. In conclusion, the web-based learning media was considered as an appropriate medium to be utilized by the students.

Keywords: Learning Media; Narrative Text; Reading Comprehension

INTRODUCTION

Narrative is one text type included in the English language learning material for the ninth-grade classes of SMPN 16 Singkawang. However, the result of observation discovered that ninth-grade students faced difficulties when they practiced their reading comprehension of the text. Most students found the reading materials provided within their textbook were unable to cater to their motivation in reading. The current learning media used by the students was a textbook entitled *Think Globally Act Locally*. The textbook was based on the 2013 curriculum and separated into two versions: the teacher's textbook and the student's textbook. The lesson on narrative text appears in the tenth chapter of the textbook. Notably, the Indonesian folktale *Sangkuriang* was exclusively featured in the teacher's textbook, whereas the students' textbook only included *The Golden Star-Fruit Tree*. Moreover, the observation also revealed that both folktales lacked illustrations, making it hard for students to visualize the story.

The findings from observation suggested a need to provide appropriate media to support students' narrative text reading comprehension. According to Smaldino et al. (2014), a medium encompasses an intermediary in which information is conveyed and transmitted from a sender to a recipient. In educational situations, media are used as the carrier of information between the teacher and students and are commonly referred to as learning media. Most learning media in recent days utilize technology. In line with this statement, Purwasari and Purnamaningsih, (2022) consider utilizing technology-based media to be very helpful for students due to its ability to elevate students' motivation and increase the intensity of learning. One example of technology-based learning media is websites. A website, which is commonly constructed with a combination of multimedia, can be qualified as a learning media if it possesses functionalities that support educational goals (Figna et al., 2020).

In this study, the researcher considered designing a web-based learning media that includes reading material based on local folktales as a solution to overcome the need for appropriate learning media for students who struggle with narrative text reading comprehension. Web-

based learning media was taken into the researcher's consideration because it offers numerous strengths that can be helpful for students. Supporting this, Radovan and Perdih (2016) argue that the utilization of websites in learning has become a trend in recent education due to its flexibility in adapting the students' pace, place, and style of learning. Similarly, Supratman et al. (2020) also state that learning through websites is more flexible due to its ability to be accessed anywhere. On the other hand, local folktales were taken into consideration due to their ability to elevate student motivation in reading. In line with this, Supriati et al. (2023) have shown that the use of folktales can contribute to the development of positive character traits in students, aligning with the curriculum's goal of fostering good moral values. In addition, the study also shows that the implementation of local folktales as reading material would help students overcome their difficulties in comprehending narrative text because the stories are more enjoyable and familiar to them.

Previous studies have notably addressed the positive results of utilizing web-based learning media in language learning, further affirming its effectiveness as a solution for learners who struggle with learning activities, especially in reading comprehension. For instance, Roslan et al. (2022) have designed a web-based learning media to provide an interactive quiz for English language learning in a rural area of Malaysia. The findings have revealed that the developed website was not only able to motivate but also inspire young students, showcasing its positive impact on enhancing English language acquisition. Similarly, Adanan et al. (2020) have developed a website to help senior high school students who face difficulty in practicing reading comprehension in Riau. The study revealed that the designed web-based learning media has high feasibility in aiding the students. Another relevant study was conducted by Yuliana (2022), which reported that the utilization of internet-based learning media, including websites, can be an alternative to elevate students' creativity in mastering English langauage in the master program of Universitas Tanjungpura, Pontianak.

While previous studies have addressed the design and utilization of web-based learning media in many contexts of language learning, there was a notable paucity of dedicated efforts to design web-based learning media that specifically target the enhancement of narrative text reading comprehension skills among junior high school students. Hence, in the context of this study, the researcher aimed to fill the gaps by designing a web-based learning media to support students' narrative text reading comprehension for the ninth-grade students of SMP Negeri 16 Singkawang.

Through the ADD design from ADDIE, the researcher designed the product of web-based learning media that consisted of narrative text learning materials, narrative text reading materials adapted from Singkawang folktale, and exercise activities to strengthen students' understanding of the materials. In addition, the reading materials and exercises were adapted to be suitable for junior high school levels to ensure the learning activities were neither too hard nor too easy for students.

METHOD

In conducting this research and development study, the researcher employed the ADDIE instructional design model by Branch (2009). The consideration of using the ADDIE model for this study was due to its ability to provide an adaptable framework for designing an instructional product. The adaptability of the ADDIE model has been shown in previous studies conducted by other researchers. For instance, according to Heaster-Ekholm (2020), the ADDIE model easily accommodates adaptations. In line with this statement, Ghani and Daud (2018) state that the ADDIE model does not have a strict linear progression across its steps. Furthermore, the ADDIE design allows instructional designers to navigate the instructional design process with adaptability and creativity, which means the design is flexible and versatile. However, this study

only conducted the Analyze, Design, and Develop (ADD) phases due to the time constraints that prevented the completion of implementation and evaluation phases.

In the analysis phase, an analysis of field notes from the observation was conducted to identify students' current performance and needs. After that, an interview with the ninth-grade English language teacher of SMPN 16 Singkawang was conducted to confirm and further investigate the findings from the observation. The interview utilized an interview guideline, which is arranged following a table of specifications. The following is the table of specifications of the interview guidelines.

Table 1. Specification for the interview guideline

Topic	Purpose	Total of Items	Number of Item Placement
Students' performance	To identify the students' current and desired performance	1	1-2
Probable causes of performance gap	To identify the primary cause of the gaps between students' and desired performance.	2	3-4
Required resources	To identify suitable resource for the students	1	5

The designing phase was focused on designing the drafts of material and media of the web-based learning media. As the first step, suitable learning and reading materials were gathered and filtered. Then, the collected materials were proceeded with further details on how they would be organized and presented in the web-based learning media. The result of the material draft includes the outline of activities, multimedia drafts, and assessment quizzes prototype. After that, a flowchart and blueprint of the website were constructed to ease the flow of ideas compilation.

In the development phase, the draft of instructional materials and media was finalized into a completed product. To finalize the draft of the material, the chosen materials were adapted into a suitable material adaptation based on the students' needs. In addition, the multimedia drafts were also completed by finalizing the illustrations and generating the audio recording. After the materials were completed, the website blueprint was constructed into an actual web-based learning media that is compatible with both desktop and mobile devices.

Once the web-based learning media was finished, experts were invited to validate the web-based learning media. The expert validation instruments were divided into two. The first expert validation instrument focused on website design and was adapted from Cook and Dupras's (2004) criteria for an effectively designed website. The second expert validation instrument focused on the material design and was adapted from criteria by McGrath (2016). Moreover, the measurement of the product's validity level in the expert validation instruments utilized the Likert scale: 1, 2, 3, and 4, which respectively represent the statements of strongly agree, disagree, agree, and strongly agree.

The data from expert validation instruments was generalized into validation score by using a formula adapted from Akbar (2013), as follows:

$$V = \frac{total\ score\ from\ the\ validator}{maximum\ score} \text{ x } 100\%$$

Note:
V = Validation score percentage

Once the validation scores were collected, the scores were interpreted based on the table of validity level conversion. The result of the interpretation from the table was used to consider the next action toward the development process. The development process was considered finished when the result of the validity level from the expert validations was interpreted as "quite valid" or "very valid."

Table 2. Conversion of product validity level

Range of Percentage (%)	Validity Level	Declaration
85,01 – 100	Very Valid	Appropriate, no revision required
70,01 – 85,00	Quite Valid	Feasible, require minor revision
50,01 – 70,00	Less Valid	Less feasible, require major revision
01,00 – 50,00	Not Valid	Very improper, require major revision

RESULTS AND DISCUSSION

Results

This research carried out the analysis, design, and development phases from the ADD model to design a web-based learning media to support narrative text reading comprehension for the ninth grade of SMPN 16 Singkawang. In the analysis phase, the information related to challenges faced by students in practicing their reading comprehension of narrative text was collected. The result of the observation found that the students have low motivation in practicing their reading comprehension skills as a result of limited vocabulary and failure to identify context clues. However, it was also noted that the problem was not only aroused due to students' lack of mastery in English language skills but also due to the lack of appropriate learning media.

The discoveries from observation were confirmed by the teacher during the interview. The teacher confirmed that the majority of students found comprehending narrative text reading material hard because of low vocabulary mastery and motivation. The students got bored easily because the reading materials were not aided with any multimedia. In addition, it was also confirmed that the reading materials in the textbook were not able to ignite the students' motivation because they were not familiar with the story and preferred to have materials that were relatable to them. Moreover, it was also confirmed by the teacher that the learners have a high interest in learning with the integration of technology. Whenever the students were asked to bring their mobile phones to access material through the internet, they were excited. They also acted more actively in learning when the teacher used digital tools such as a screen projector to present the materials.

From the result of the analysis, the study proceeded to the design and development phases. In the design and development phases, intended web-based learning media was produced based on the analysis results and relevant theories of learning media design from experts. The final product of web-based learning media consists of a home page, about page, user guide page, story page, and exercise page. The flowchart of the website can be seen in Figure 1.

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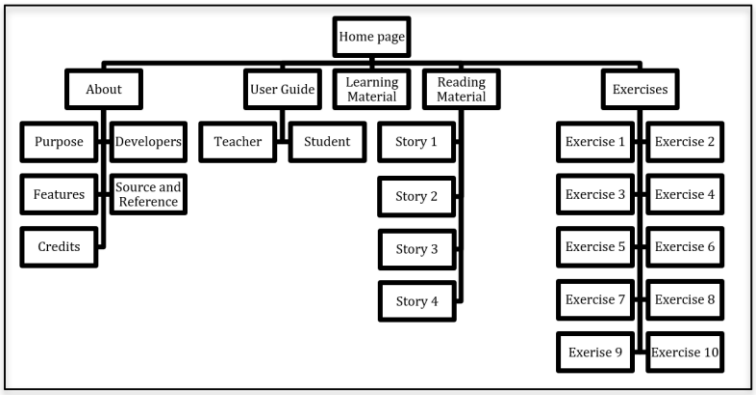

Figure 1. Website Flowchart

The designed product includes four local folktales from Singkawang as reading materials, which were adapted and translated into English to suit the students' English language level. The folktales were aided with illustrations to ease the students in visualizing the story and motivate them to read. Moreover, some vocabularies within the text were highlighted to help the students in finding the meaning within the translation. Each reading material was included with exercises to facilitate students in practicing their reading comprehension. There were ten exercises in total. In addition, each quiz consists of ten questions to strengthen students' narrative text reading comprehension. The scope of the questions is majorly related to the information from the stories, which includes the story plot and vocabulary. Each quiz within the exercise page is provided with a score to help students measure their progress. There were also user guides for both teachers and students. The user guides were designed to ease the users in familiarizing with the website.

The product is accessible through the link https://neonarra.netlify.app on any device with an internet connection. Once accessing the website, the user would arrive on the landing page, which can be seen in Figure 2. The page consisted of six slides, each slide occupying the full-screen window size with responsive design ensures that the website's content and elements are displayed properly for user experience across various devices. These slides within the home page serve different functions, ranging from introducing the website, providing further information about the website, previewing the user guides, and previewing for reading and exercise activity.

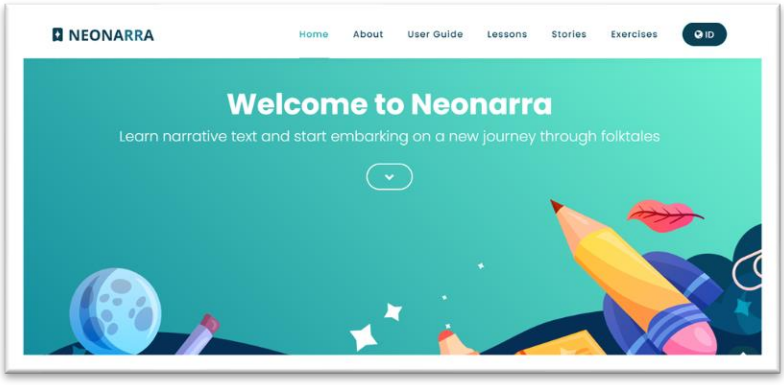

Figure 2. Website's Landing Page

The web-based learning media is aided with multimedia such as illustrations and audio, which helps elevate students' motivation in reading and comprehending the narrative text materials. In addition, the website caters to diverse students' needs by providing translations, thus serving as an invaluable resource for students seeking to strengthen their skills in reading comprehension of narrative texts. This inclusive approach ensures that learners with varying

language competencies can benefit from the platform, fostering a more supportive learning environment.

The expert validation, which was conducted once the product was completed, was divided into two main focuses. The focus was mainly on validating the appropriateness of the website and material design. The scores from the two experts whose expertise is in website development can be seen in Table 4. The table shows that the score percentage is 85.3%, which can be interpreted as "very valid." This result indicates that the designed media was able to fulfill the criteria of an effective website design proposed by Cook and Dupras (2004).

Table 3. Expert Validation for Website Design

Aspect	Statement	Score	
		Expert 1	Expert 2
Page Organization	The placement of each element within the page is sorted based on its importance.	3	4
	The page organization follows the logical grouping using visual cues	3	3
	Only utilizing one theme for all headings and navigation labels	3	4
	There is a consistent format from page to page	4	3
Wise Use of Space	Each page is properly divided into grid of defined areas	3	4
	Every element is properly aligned with horizontal and vertical grid	3	3
	The page spaces are effectively designed	3	3
	The pages barely contain distractions	3	3
Text Conciseness	Each page has clear headings	4	4
	The sentences are written effectively	3	4
	Each topic is appropriately summarized before presenting details	4	3
	The sentences are written in a proper length	3	3
Navigation	The position and appearance of the site name and logo is consistent on every page	4	4
	The navigation works properly on each page	3	4
Hyperlinks	Every hyperlink is clearly identified	3	4
	The hyperlink is labeled properly and unambiguous	3	4
	The hyperlink format on all pages is consistent	3	4
Total score		55	61
Percentage		85.3%	

Next, other two experts in the field of English language teaching were also invited to validate the appropriateness of the material design within the learning media. The result can be seen in Table 5, which shows the result from the expert validation shows that the material design of the learning media is considered "very valid" as well, with a score percentage of 96.3%. The score indicates that the material within the web-based learning media was successful in following the guidelines of material design proposed by McGrath (2016).

Table 4. Expert Validation for Material Design

Aspect	Statement	Score	
		Expert 1	**Expert 2**
Content	The content support and related to the curriculum in the targeted school	4	4
	Level of difficulty is appropriate for the targeted students	3	4
	The learning media support academic purpose which is comprehending narrative text	4	4
	The material within the learning media do not show any bias	4	4
	The narrative text reading materials in the website is appropriate	4	4
Instructional Design	Instructional goals and learner objectives are clearly stated	3	3
	The learning media promotes student engagement	4	4
	The learning media encourages students to work independently	3	4
	The resource of materials is appropriate in accordance with its intended purpose	4	4
	The materials are organized precisely	4	4
	Adequate pre-reading and follow-up activity	3	4
	The exercises are adequate	4	4
	Concepts are clearly introduced and developed	4	4
Technical Design	Visual design is interesting	4	4
	Illustrations/ visuals are appropriate	4	4
	Layout is logical and in a good format	4	4
	Topic summarized before presenting details	4	4
Total score		64	67
Percentage		96.3%	

As the results, both experts validations showed that the designed product is appropriate to be used in accordance with its primary purpose, which is to support the narrative text reading comprehension among the ninth-grade students of SMP Negeri 16 Singkawang in the academic year 2023/2024. Hence, the web-based learning media in this study did not require revision, and the development process was declared finished.

Discussion

In accordance with the results, this study highlighted the importance of implementing a guided process in designing a learning media to overcome students' reading comprehension difficulties. This alignment is evidenced by the emphasis on tailored content to cater to the diverse students' needs and learning style, resonating with the theory proposed by Tomlinson and Masuhara (2017). The design process itself was effectively executed using the ADD instructional design framework, adapted from the ADDIE model (Branch, 2009).

Furthermore, the final product emerges as a promising solution to address students' challenges in comprehending narrative text reading materials. The success is attributed to the fulfillment of adapted criteria derived from effective website design principles by Cook and Dupras (2004)

and material design guidelines by McGrath (2016). This validation reinforces the appropriateness and efficacy of the developed web-based learning media, positioning it as a valuable resource to enhance students' comprehension of narrative texts.

Based on the result of expert validation, the final product of web-based learning media has fulfilled the criteria for appropriate learning media. Supporting this validation, the web-based learning media consists of multimedia such as illustrations and audio, which is helpful in elevating students' motivation in reading and comprehending the narrative text materials. In addition, the website caters to diverse students' needs by providing translations, thus serving as an invaluable resource for students seeking to enhance their vocabulary proficiency and strengthen their skills in reading comprehension of narrative texts. This inclusive approach ensures that learners with varying language competencies can benefit from the platform, fostering a more supportive learning environment.

The website's utility extends beyond traditional classroom settings, offering flexibility in its application. In the context of structured classroom activities, English language teachers can seamlessly integrate the media to aid their students. Furthermore, the website is designed to accommodate independent exploration by students outside the formal classroom activities at their own pace. Such independence reinforces the student's understanding of narrative texts and encourages a self-directed approach to learning, nurturing a sense of responsibility and curiosity. In essence, the website's adaptability, comprehensive support for varying language abilities, and seamless integration into both classroom and independent learning contexts make it a versatile tool that caters to the diverse needs of students and educators alike.

CONCLUSION

Referring to the findings and discussion, this research has provided valuable insights into the design and appropriateness validity of web-based learning media, particularly in addressing the challenges faced by ninth-grade students in comprehending narrative text reading materials. The researcher also emphasized the importance of employing and following the principles to produce an appropriate learning media that aligns with students' needs. The systematic application of the ADD instructional design framework ensures the web-based learning media's adherence to best practices, leading to an appropriate solution for improving students' comprehension. The final product, validated by experts, fulfills the criteria of effective website design and material guidelines. Hence, the media is considered appropriate to be used to support students in practicing their comprehension of narrative texts.

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