DEVELOPMENT OF MULTILITERACY-BASED FOLKLORE INTERACTIVE MEDIA IN BLENDED LEARNING

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Abstract

The research objective is to develop interactive media of folklore based on multiliteracy blended learning. The research method is descriptive qualitative with a mixed qualitative-quantitative strategy of subsequential exploratory design. The development stages of this interactive multimedia application design use the Luther method. Digital applications in the form of action script in programming language that can be added to flash files (frames, movie clips or buttons), interactive multimedia applications in the form of programming languages. The final product results in the form of mobile-based interactive multimedia. Testing based on the system usability scale method shows that interactive multimedia can be accepted in the good category. The results showed that multiliteracy-based folklore interactive multimedia is well received and has high educational value due to its systematic and integrative development approach. The Luther method used ensures that each visual, auditory, and interactivity multimedia element functions synergistically according to the principles of neuroscience. Multiliteracy-based interactive multimedia contributes to blended learning.

Keywords: Blended learning, Folklore, Interactive media, Multiliteracy, Value.

1. Introduction

The development of effective interactive media is crucial, especially in blended learning. Many media are not adaptive and interactive in learning [1-4]. Digital learning media content is less relevant to the cultural context of students. The development of interactive multimedia has not been based on neuroscience principles of how the brain works in accordance with the learning culture of students. This research highlights the importance of creating interesting, adaptive, and innovative interactive media in developing students' multiliteracy skills through interactive multimedia digital-based folklore. Through interactive multimedia, students interpret moral, social, cultural, struggle, and historical values in folklore [5-10]. Interactive multimedia in learning maximizes students' learning potential to be able to keep up with technological developments and always be active in global communication.

Previous relevant research shows that folklore plays an important role in education, especially in teaching ethical, moral, and cultural values [11]. In addition, interactive media has been proven to be effective in increasing student motivation and understanding, as it is able to combine visual, auditory and kinaesthetic elements in one platform [12]. Blended learning as a model that combines online and face-to-face learning, has been recognized for offering flexibility and a more personalized and effective learning experience [13]. Previous relevant research shows in Table 1.

However, there are still limitations in the research linking the development of multiliteracy-based interactive media with the use of folklore in a blended learning context. This suggests the need for further research that focuses on how this media can be designed to not only be visually appealing, but also support the development of students' multiliteracy skills.

The purpose of this research is to develop multiliteracy-based folklore interactive media as teaching materials in the context of blended learning. This interactive media can be used to develop students' ability to understand and interpret various forms of literacy, including visual, auditory and digital literacy, while maintaining the essence of cultural and moral values in folklore.

The novelty of this research is as follows (i) Designing the transformation of folklore text to visual form. (ii) Developing interactive multimedia with Luther's version method and applying neuroscience principles (iii) Integrating the concept of multiliteracy in blended learning through interactive media based on folklore.

2. Literature Review

2.1. Multiliteracy

Multiliteracy is a relevant and important concept in the context of learning and daily life in the modern era. With the increasing complexity and diversity of media and information, the ability to understand and utilize different types of literacy is becoming increasingly critical [14]. Multiliteracy involves the use of multiple modalities and media, including text, images, sound, video and digital technology. Multiliteracy is closely related to how the brain absorbs information through various modalities. Since the human brain has a preference for different forms of information, multiliteracy enables one to more effectively process, understand and remember

information presented in multiple formats. Multiliteracy provides the necessary tools to make sense of a complex and diverse world, while knowledge of information absorption helps in designing effective and holistic learning experiences.

Table 1. Relevant research.

No.	Title	Similarities	Differences	Ref.
1	"Roro jongrang" game as a learning media to introduce folklore	Helping parents/teachers and students in introducing folklore based on android applications	Related research: educational RPG game introducing the folklore of "roro jongrang" developed with the waterfall model. research conducted: learning media for the introduction of Indonesian folklore developed through interactive media developed with Luther's version of the method.	[15]
2	Literacy ability through digital media "playing literacy" in early childhood	Learning media to increase learning motivation in children in digital innovation	Related research: learning media in the form of e-books. research conducted: interactive learning media with storytelling approach.	[16]
3	Development of mobile-based Javanese writing learning media using construct 2	Interactive learning media based on mobile.	Related research: learning media to recognize Javanese script using construct 2 developed with waterfall method. research conducted: learning media to recognize folklore using adobe animate developed with Luther's version of the model.	[17]

Neuroscience focuses on how the brain processes different types of information through different neural pathways. This subject has been well-reported [18-20]. This is visualized in Fig. 1.
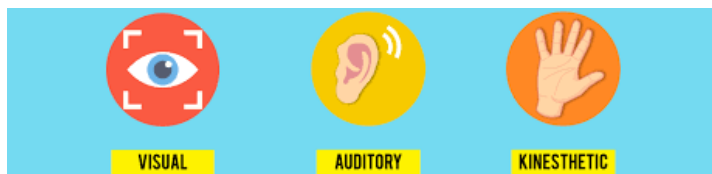

Fig. 1. Communication mode.

Multiliteracy in education can be improved by understanding how the brain works in understanding information. The way the human brain works in understanding information is categorized into three parts, namely the ability to absorb information visually, audio, and kinaesthetic. The results of the study show the percentage of the brain's ability to work in the Fig. 2.
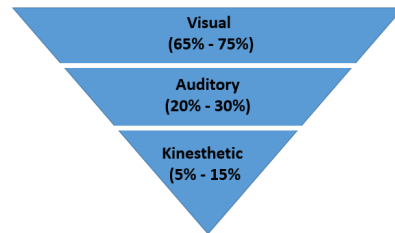
Fig. 2. Percentage of brain's ability to absorb information.

Based on the chart above, the human brain tends to be more effective in absorbing information that is presented visually, such as pictures, graphs, videos, and diagrams. This is because visualization helps in understanding and remembering information more effectively. Information delivered through sound, such as speech, music, or audio recordings, is absorbed well by the brain, although it is usually less effective than visual information. However, the combination of audio with visuals can significantly improve comprehension [21]. The coordination of the eyes and ears with the brain relates to meaning, comprehension, synthesis, analysis, structure, pattern and rhythm in the Fig. 3.
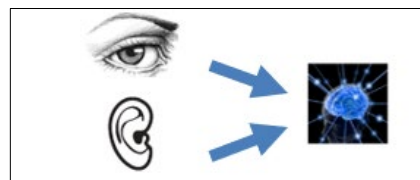

Fig. 3. Coordination of eyes, ears and brain.

Information absorbed through physical activity, such as hands-on practice, simulation, or the use of hands, tends to be more effective for learning that requires practical skills or long-term recall. Although the percentage is lower, kinaesthetic experiences often result in deep and long-lasting learning.

2.2. Interactive multimedia

Multimedia is a tool that uses various communication channels to convey messages. [22]. Interactive multimedia is a combination of several media in the multimedia domain in the form of words or concepts in text, colours in pictures, the amount of motion in movies, or rhythm in musical works [23]. In modern times, multimedia products are widely developed in various fields, such as in education, games, sports, movies, medical, military, business, advertising or promotion, and so on [24]. Multimedia in the scope of education is developed so that the teaching and learning process becomes interesting for both students and teachers [25].

Multimedia as a medium can create an adaptive, dynamic, interactive, and fun learning process. Multimedia as a medium combines text, graphics, animation, audio, visual, and video [26]. Interactive multimedia is integrated multimedia elements such as text, audio, animation, graphics, video, images, in the structure of a digital media environment that allows users to interact [27]. Implementation of interactive multimedia in the classroom shown in Fig. 4.

Fig. 4. Implementation of interactive multimedia in the classroom.

2.3. Transformation of folktales

Folktales mirror human life, customs, and rituals. As a result, they form intricate bonds with culture. It comprises behaviours acquired through learning or societal norms. These include customs, traditions, and institutions of people along with their products and ways of production, thereby making folktales an inextricable part of culture. Folktales form part of expressive culture, which includes drama, art, dance, music, and so on. In contrast, a practical culture involves economy, politics, and social structure. Expressive culture is best reflected in how participants' emotions are expressed and manipulated.

Folklore transformation is the process of converting verbal text into visual forms, such as drama, movies, songs, or paintings, even into digital interactive multimedia. Multimedia products in this case are used to convey messages using various communication channels so that the message is more strongly received by the audience. The design of transforming educational story values into interactive multimedia is shown in the Fig. 5 [28, 29].

The final product of this process directly contributes to efforts to disseminate ancestral cultural heritage that can be emulated by the younger generation in life. One of the impacts of this transformation is a change or shift in the style, theme, or structure of the work. Characters, plot, setting, and even theme can change from their original form into another form. This interactive folklore multimedia will be a digital teaching material in blended learning.
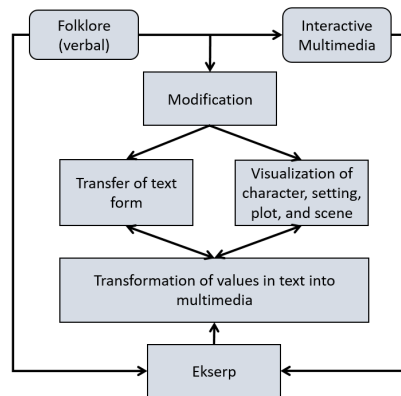

Fig. 5. Text transformation modification and expression scheme.

2.4. Interactive multimedia folktales as blended learning teaching materials

Blended learning is learning that does not emphasize face-to-face meetings in direct learning but instead uses technological devices to build the learning process [30]. Exploration of folklore in Indonesia can be done for the benefit of teaching materials. Furthermore, the results of the transformation of folklore text in the form of digital interactive multimedia can be a medium in blended learning. Generation Z prefers to learn through interactive multimedia digitization [31]. Several software can be used to build multimedia, is as follows:

(i)   Action script 3.0, is a programming language that can be added to flash files (frames, movie clips or buttons) so that the animation developed is more interactive. ActionScript is case-sensitive in writing like the C, C++ and Java programming languages [32].

(ii) Android is a Linux-based mobile device operating [33]. Android is written in the Java programming language and runs in the Dalvik Virtual Machine, the Virtual Machine is the core component that runs the android system and framework [34].

(iii) Adobe animate, is a flash from Adobe Systems that has a function for creating animation and multimedia content. Adobe Animate software has the feature of creating graphic objects and animations directly without using other software support [35].

(iv) Adobe illustrator, is software developed by Adobe System for the development of vector-based graphic design [35]. Vector is a collection of points, lines and colours so that it becomes a graphic object [36].

There are three current multimedia software development methods [37]. The three methods are the Sherwood-Rout method, Luther-Sutopo, and the Vaughan method. The Sherwood-Root method has detailed stages because there are reviews at almost every stage from the client, but the categories at each stage can confuse developers so that the software processing time becomes longer. While the Vaughan method emphasizes the role of each team member who is competent in their field so that it can facilitate developers, this method is not suitable because there are too many stages including the formation of a production team, financial planning, and evaluation at each stage so that it will take a long time. Unlike the Luther-Sutopo method, this method is easy to understand because the stages are clear, structured and logically sequenced so that the multimedia design time. The Luther-Sutopo method show in Fig. 6.
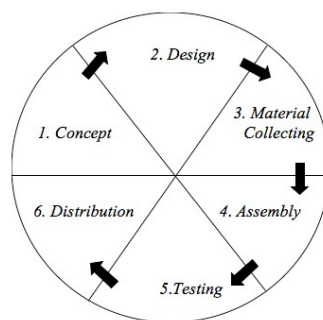

Fig. 6. Luther-Sutopo method.

The Luther method has been widely used for multimedia-based software engineering [37]. The explanation of each stage in the method is as follows:

(i) *Concept*: conceptualization is the stage of defining goals, identifying users, product types, rule bases, measures and targets. The output is a narrative document with the aim of revealing the project objectives to be achieved.

(ii) *Design*: The stage of creating multimedia program specifications. Storyboard is the output at this stage.

(iii) *Material Collecting*: the stage of collecting elements or materials according to the needs of the multimedia product being worked on such as text, images (photos / images), animations, videos, audio.

(iv) *Assembly*: the stage of incorporating all materials into the project based on the design stage, such as storyboards and navigation structures.

(v) *Testing*: The Alpha test is the stage of testing products that have gone through the Assembly stage to see the possibility of errors. The Alpha test is carried out by the developer, after which a Beta test is carried out involving end users to get feedback and the possibility of finding functions that are not yet appropriate.

(vi) *Distribution*: the stage of packaging the product in a storage medium for distribution to end users.

3. Method

The stages, steps, and strategies of this research have qualitative and quantitative levels of analysis. Research procedures have a combination/mix of qualitative procedures and quantitative procedures. The exploratory design that the researcher used in this research shown in Fig. 7.
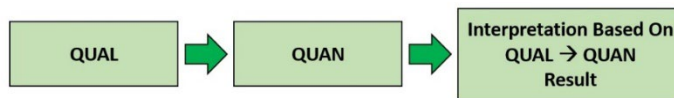

Fig. 7. Exploratory research design.

Consequential exploration design is the research design used in this study. The research begins with the exploration of phenomena in the form of qualitative data. In the second stage, quantitative data was compiled using the System Usability Scale. The research implementation procedure or research steps following this research method include the things illustrated in Fig. 8. Then, data was analysed, collected, and calculated using SPSS, as reported elsewhere [38, 39]. The exploratory design that the researcher used in this research shown in Fig. 8.
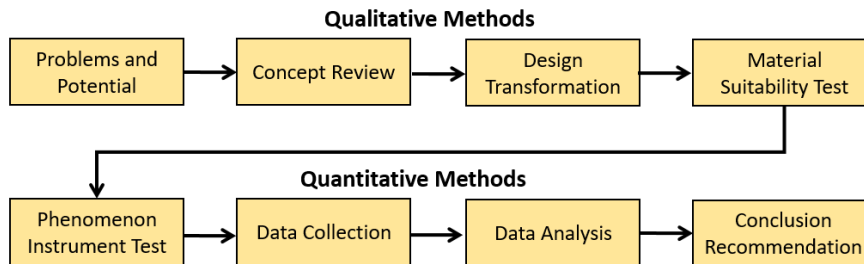

Fig. 8. Mixed methods: sequential exploratory design.

4. Results and Discussion

4.1. Overview of research results

The challenge of teaching materials that are suitable for blended learning is the focus of the research. The readiness of interactive multimedia in modern learning information technology to explore the 4Cs [40].

Qualitative data in the form of empirical data obtained through observation to determine the initial conditions of the need for digital teaching materials. This research uses a sequential exploratory design. Subsequential exploratory design procedure. This design begins 2 (with an exploration of phenomena in the form of qualitative data. In the second stage, quantitative data is compiled to test the level of application usability. Furthermore, the results of research data are developed qualitatively.

The transformation of folklore text into digital interactive multimedia was successfully developed. The transformation process is carried out from story verbal to illustrated stories (visual) by modifying and excerpting the story text, then applying the Luther method [37]. The concept of storytelling (audiovisual) using text-to-speech technology is applied in learning media based on the Android system.

Data analysis was conducted using statistical tests (quantitative analysis) and qualitative analysis. The results of this analysis were then compared and connected. Testing the validity of model development was conducted by matching and mixing data. The following is a description of the discussion of the research results. The following is a description of the discussion of the research results.

Based on the System Usability Scale method used to process data from 40 respondents, the average SUS value was 76.84. This means that the application created is classified as Acceptable with a Value of "C" in the Good category. Based on this, the application of interactive multimedia-based folklore learning media can be used as digital teaching materials.

4.2. Discussion

Based on the object of research to be developed, the interactive multimedia developed using Adobe Animate was developed with the Luther version of the model. The Luther-Sutopo method is suitable for application development because the application development time is efficient, structured, and logically sequenced The stages in the Luther-Sutopo multimedia development method consist of 6 stages, namely concept, design, material collecting, assembly, testing and distribution.

Concept in the development of interactive multimedia-based folklore learning media, hereinafter referred to as applications, including software and hardware requirements analysis, conceptual analysis, concept description and transformation of folklore text into interactive multimedia. Analysis of system requirements in application development is divided into 2 parts, namely hardware and software analysis. Hardware requirements analysis has specifications that can be seen in Table 2.

The selection of the above hardware was based on a balance between the specific needs of interactive multimedia development and cost efficiency. Laptops with these basic specifications are adequate for less complex development tasks, while the use of input devices such as mice and tablet pens help to increase precision and productivity in graphic design and animation work. These tools

provide enough flexibility and capability to create interactive multimedia. Meanwhile, an analysis of computer software requirements can be seen in Table 3.

Table 2. Computer hardware specifications.

Hardware	Specification
Laptop	Processor intel® Core™ i3-3217U CPU @ 1.80GHz RAM 4.00GB 64-bit operating system, x64-based processor
Keyboard	On board
Mouse	Standard
Pen Tablet	Standard

Table 3. Computer software specifications.

Software	Description
Operating system	Windows 10 Pro
Image processing tools	Adobe illustrator CS6
Text-to-speech tools	Google
Assembly tools	Adobe animate 2021

The selection of this software was based on the ability to handle various aspects of interactive multimedia development. Windows 10 Pro ensures a stable and compatible working environment, while Adobe Illustrator CS6 and Adobe Animate 2021 provide powerful tools for creating and combining multimedia elements. Google Text-to-Speech adds an important audio dimension to the application, enabling a more immersive user experience. This selection demonstrates the focus on the balance between functionality, compatibility and quality in interactive content development.

Furthermore, conceptual analysis of application development is divided into 2 conditions, namely the initial condition before the use of the system and the expected condition of system development. Teaching materials for folklore were initially provided by Indonesian language teachers or lecturers by distributing folklore material for students to read. Learners read folktales, appreciate, perceive, identify and analyse the elements of story building (intrinsic and extrinsic). Furthermore, the teacher evaluates to measure students' understanding. Learning conditions like this result in the learning process not creating an active and creative atmosphere.

The teacher invites learners to install the Sekala App, after the application is installed on the android device, learners can access and enter the application. The application displays a splash screen and displays a landing page for learners to choose from, including continuing to the homepage or choosing a guide, it is expected that learners choose the guide first to find out how to use the application.

The application guide contains how learners can use the teaching material application; what menus are in it and the features of the application. Learners can select the home tab menu to continue using the application; the home menu contains buttons including folklore, evaluation, guidelines, about and exit. There is a main menu tab located above the application display, namely the story, home and evaluation tabs.

The story tab contains two folktales used in the application. Learners can read the story in the application by pressing the "Read More" button so that the system will switch to display the contents of the selected story. Learners can continue the scene

or return by pressing the next or back button. The content section of this story in addition to displaying story illustration animations, also plays audio narration. The content section of this story not only features animated illustrations but also includes synchronized audio narration for a more immersive storytelling experience.

The evaluation menu tab of the developed application can be selected by students after students read the folklore provided. The evaluation menu contains questions to measure learners' understanding in reading and understanding the contents of the folklore presented. Learners can press the "Finish" button after filling in the evaluation questions, the system will display the value, or score obtained.

Learners can exit the application after using the application by switching to the home menu and select exit the application or exit directly by pressing the home button on their respective android devices. The table below contains information about a folklore-based digital teaching material application designed as an interactive learning media. The menu about the application contains information about the application that has been developed in Table 4.

The following is an explanation of each element in the Table 4:

(i)   Title: Digital Teaching Materials for Folktales. The title indicates that this application is a teaching material focused on folklore, presented in digital format.

(ii)   Audiens: Teachers and students. The application is intended for two main user groups: teachers (teachers) who use the application as teaching material, and learners (students) who use it as learning material.

(iii)   Duration: Unlimited. This application has no time limit on use, which means it can be accessed and used at any time according to the needs of the teaching and learning process.

(iv)   Text: Image format .png. The text in this application is presented in the form of PNG-format images, which allows presenting the text with special fonts and designs.

(v)   Image: Imagae dan ikon (.ai, .png, dan .jpg). The application uses a variety of image formats and icons (AI, PNG, JPG) to enrich the visual appearance, which serves as a support in the delivery of folklore.

(vi)   Audio: Audio format .mp3 dan .wav. The app includes audio elements that can be narration, background sounds, or sound effects, in MP3 and WAV formats, to add an audio dimension to the learning experience.

(vii)   Animation: Object character animation (.fla). The app also comes with animations, which allow characters or objects in folklore to move, making learning more dynamic and engaging. The FLA Format is a file format used in Adobe Flash to create animations.

(viii)   Interaktifity: Buttons and object. The app offers interactive elements, such as buttons and clickable objects, so users can interact directly with the content, increasing engagement and understanding of the material.

(ix)   Theme: Learning Media. The main theme of this application is as a learning medium, emphasizing its function as a tool for teaching and learning.

(x)   Application description: This application is an interactive multimedia-based learning media that teaches folklore. It is designed to be used by teachers as teaching material and by students as learning material, especially in the context of reading interpreting folklore.

Table 4. Concept description.

Concept	Description
Title	Digital teaching materials for folktales
Audiens	Teachers and Students
Duration	Unlimited
Text	Image format *.png
Image	Image and *icon* (*.ai, *.png and *.jpg)
Audio	Audio format *.mp3 dan *.wav
Animation	Object character animation (*.fla)
Interaktifity	Buttons and objects
Theme	Learning media
Application description	This application is a folklore learning media based on interactive multimedia. Teachers and students can use it as teaching materials, especially in interpreting folklore..

Examples of modification design of linguistic level transfer from prose to multimedia form can be seen in theories and linguistic level transfer of folk tales. This interactive multimedia learning tool is specifically crafted to immerse students in the rich cultural and moral lessons of folklore, providing a dynamic resource for teachers to facilitate engaging instruction and a comprehensive platform for students to deepen their understanding and interpretation of traditional narratives within an educational context.

Storyline:

In a Sunda Kingdom there lived an arrogant and miserly King who was angry at the thought of a woman who always came to his dreams, it is said that in the dream his throne would be destroyed by a woman who had an ash-coloured left leg. Transfer of the linguistic level to the word balloon can be seen in Fig. 9. Fearing his dream would come true, the king ordered the governor to have the rebels kill everyone including women in the southern region of sunda, if necessary scorched earth Southern Region in exchange for land belonging to the rebels.

(i) In a kingdom of Sunda there lived a king who was arrogant and miserly and angry at the thought of an ash-legged woman who always came into his dreams, it is said that the woman would destroy his throne from the kingdom.

(ii) Fearing that his dream would come true, The King ordered the Patih to tell the rebels to kill all the people including women in the Southern Region of Sunda, namely the village of Cikawung Adin and scorched earth his territory in exchange for the land belonging to the rebels.
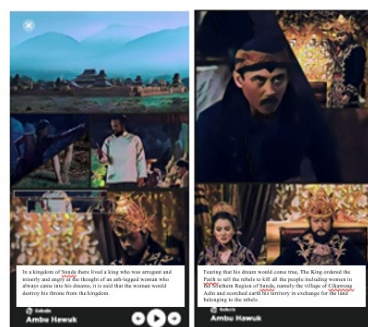

Fig. 9. Use-case diagram of the application created.

Design stage that contains software design activities for multimedia products such as the transformation of folklore prose into images, making modification concepts, use-case diagrams as shown in the Fig. 10, sequence diagram, navigation structure, storyboard. Composite navigation is used in creating this application which directs the user's search for information based on the menus available in the application. Users can access the application system that has been developed after being installed on the android system, then users can read folklore texts including viewing animations and listening to the voice of folklore narration on the system. The user can also work on the evaluation including seeing the results of the evaluation after reading the folklore, in addition the user can access the guide and about the application that has been developed. The user can engage with the evaluation by completing it and viewing the results after reading the folklore, while also having access to a comprehensive guide and detailed information about the developed application.
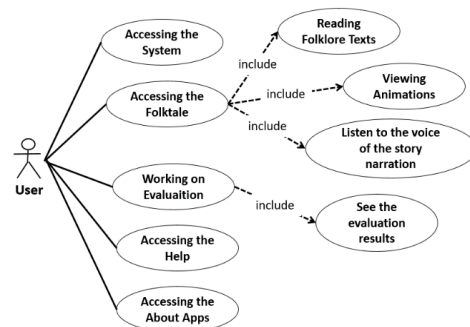

Fig. 10. Use-case diagram of the application created.

At the stage of collecting materials, materials are collected and made for multimedia products of folklore learning. All assets in various forms of communication mode channels that have visual relevance to the story from various sources are utilized in this stage. The creation of materials mostly uses Adobe Illustrator software. The collection of materials is the collection of all materials needed in the development of applications including the collection of reference scans illustration can be seen in Fig. 11.
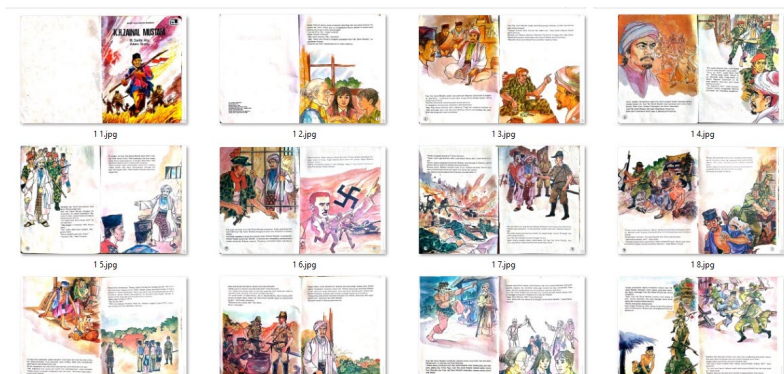

Fig. 11. Illustration reference scan.

The needs of the finished multimedia elements are then combined at the assembly stage. At the assembly stage, all materials/assets as multimedia elements that have been collected are combined according to the existing storyboard. Adobe Animate software is used to combine these multimedia elements. Text-to-Speech technology is used to create audio assets.

Merging multimedia elements is a stage of application development in accordance with the design and storyboards that have been made previously, the multimedia element merging software used is Adobe Animate 2021, the appearance of the software can be seen in Fig. 12.
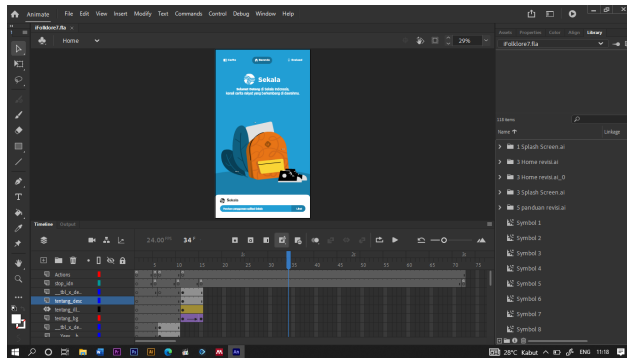

Fig. 12. Adobe animate interface.

Application development is made with a resolution of 720x1280 pixels, multimedia elements that have been collected developed to be able to become an application. The incorporation of multimedia elements is done after the storyboard and application design are designed. A Storyboard is a visual map that describes the storyline, interactions, and visual elements in an application. Once the storyboard is ready, developers begin to incorporate these elements into multimedia development software, in this case using Adobe Animate 2021. The final result of this stage can be seen in Fig. 12. below.
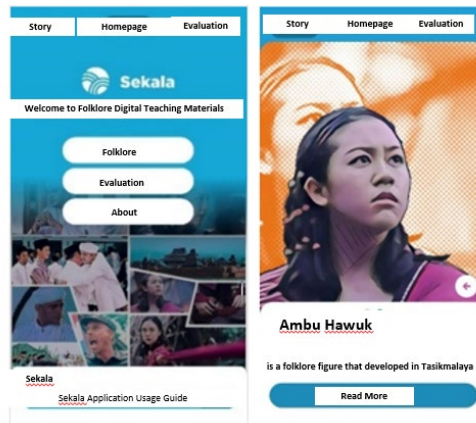

Fig. 13. Main menu and story menu view.

Figure 13 contains the appearance of the application menu that appears after the splash screen in the form of an animation is run. In the example picture above is a screenshot for folklore. The play button is used when the user wants text narration in Audio format. The appearance of the menu and the functions described in Fig. 13 are an integral part of the user experience in this application. By providing the option to read the text or listen to the audio narration, the application offers flexibility in the way users enjoy folklore. Forward and backward navigation buttons provide full control over the storyline, while text and audio narration ensure that the story is accessible to a wide variety of users, whether they prefer to read or listen.

Alpha and beta approaches are used in application testing. This approach is used to find out the functionality of the application created and to see the possibility of errors in the application. The results show that all applications show functions according to the design of the application created.

The distribution stage is carried out by distributing the application in the form of a *.apk file of 66.7 MB to users via the internet at the address https://bit.ly/SekalaApp01. Android OS 4.0, 1.5. GHz Quad-Core Processor, 2 GB RAM, 5.0 Inch Screen Size are the main prerequisites that must be owned by the device to be used. Here is the product distribution packaging in Fig. 14.

Fig. 14. Product distribution packaging.

The resulting application is then packed into a container made specifically for the purposes of distribution to schools that are the target of research. The resulting multimedia products are equipped with printed documents regarding the implementation of learning plans, student worksheets, learning modules, model guides, application usage instructions, and CDs containing application APKs and document materials in digital form.

Testing is carried out on applications that have been developed. The testing process uses Alpha and Beta Testing methods, alpha testing. Testing is carried out through the design of questionnaires for testing evaluation of application development folklore - based learning media interactive multimedia. Testing uses

the system usability scale (SUS) to determine user responses to applications that have been developed. The number of respondents who filled out the questionnaire was 40 people. The statement of user opinion in the questionnaire on the application that has been developed can be seen in the following Table 5.

Testing employs the system usability scale (SUS) to rigorously assess user feedback and gauge the overall effectiveness and user-friendliness of the developed application, ensuring it meets the needs and expectations of its intended audience.

Table 5. System usability scale.

No.	Statement
1	I think I will use this app often
2	I find it difficult to use this app
3	I think this app is easy to use
4	I need help of others or technician to use this app
5	I feel the features on this app are going well
6	I feel like there is a lot of inconsistency on this app
7	I feel others will quickly understand in using this app
8	I find this app confusing
9	I sure can use this app
10	I need some time to get used to before using this app

Each statement on the SUS evaluation has a value to be calculated. The respondent determines his opinion on the statement given, the opinion can be chosen by the respondent by choosing one of the five options available, can be seen in Table 6.

Table 6. Value system usability scale.

Variables	Description	Point
SS	Strongly agree	5
S	Agree	4
N	Neutral	3
KS	Less agree	2
STS	Strongly disagree	1

The calculation of the SUS value in the questionnaire has several rules, including (i) odd-numbered statements, the value minus 1, (ii) even-numbered statements, the value obtained from the value of 5 minus the value that has been obtained by the user and (iii) the overall value of the SUS obtained then multiplied by 2.5.

The overall value of the evaluation of the respondent's opinion on the application is stated to be acceptable or not acceptable with the provisions of the assessment results which can be seen in Fig. 15.

The overall score with grade F between 0-59 is not acceptable, grade D between 60-69 is acceptable, grade C between 70-79 is acceptable in the good category, grade B between 80-89 is acceptable in the excellent category, and grade A between 90-100 is acceptable in the Best Imaginable category. Testing using the System Usability Scale method resulted in an average score of 76.84 SUS. Applications-based learning media folklore interactive multimedia is considered acceptable (Acceptable) with the category of Good (Good) based on the SUS score.
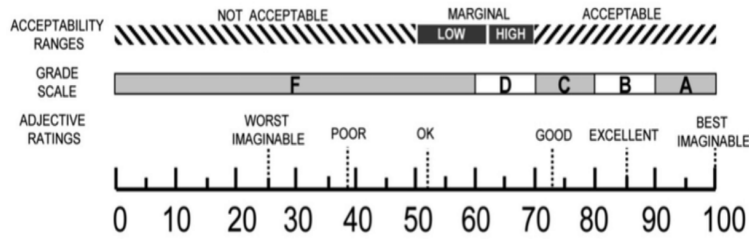
Fig. 15. Grade system usability scale.

The aesthetic experience of the reader will be acquired through interpretation in the receptive process of reading. Furthermore, methodologically the aesthetic reception of looking at a studied literary text elicits a reader's reaction. In his description, prescription aesthetics into three main sections, namely (i) the general concept of prescription aesthetics, (ii) the practical application of prescription aesthetics, and (iii) guidelines for prescription aesthetics in the literary studies trade. Aesthetic acceptance is mapped into three main parts, namely (i) the general concept of aesthetic acceptance; (ii) the practical application of aesthetic acceptance; and (iii) the position of aesthetic acceptance in the tradition of literary studies. The stages of analysis are characterization (scenes and dialogues), storyline (storyline), and animation visualization. The stages of interpreting the educational values of folklore in the form of digital animation through a multiliteration process as in Fig. 16.
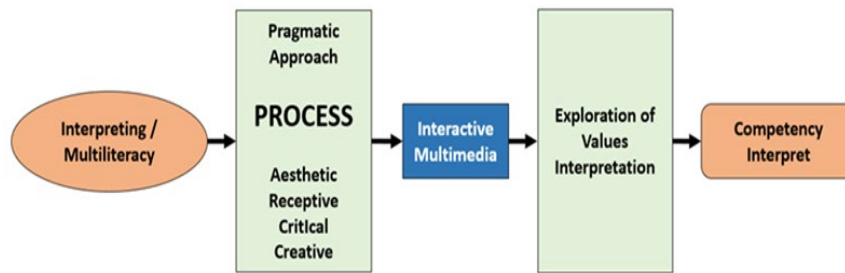

Fig. 16. Scheme for interpreting educational values.

The results of the interpretation showed that folklore that has been transformed into digital animation has educational values that are appropriate to the context of the student's life situation. The percentage of educational values in folklore that have been transformed into interactive multimedia is 36% of the value of struggle, 15% of historical value, 14% of cultural value, 25% of social value, and 10% of moral value. The educational value contained in folklore is a contextual educational value with daily life, so it is suitable to be instilled in students through reading learning activities. In general, the folklore contains educational values in the form of struggle, history, culture, social, and moral values.

The instrument used to measure the ability of students to interpret the multiliteration educational value as multiple choice questions totalling 20 questions with the duration of the answer time is 60 seconds per question. Instruments used to measure the ability of multiliterated students in interpreting educational values

are arranged in the form of multiple choice questions. The questions presented above are sample questions designed to assess how well students can understand and interpret the cultural and moral values contained in folklore the instrument consists of 20 multiple-choice questions with a time of 60 seconds, providing sufficient time pressure to test the speed of thinking and quick understanding of students. With limited time per question, this instrument also tests students ' ability to think quickly and precisely in understanding and interpreting the meaning of various texts and stories. An example of measuring the interpretation of cultural and moral values in Fig. 17.
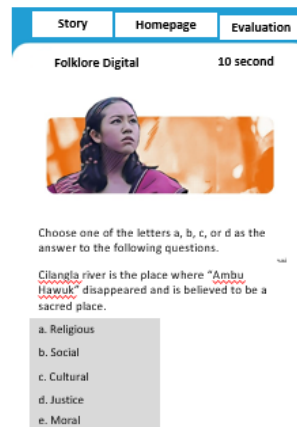

Fig. 17. Question instrument.

These questions are focused on assessing students ' ability to interpret various types of literacy, including cultural, moral, and critical literacy. Multiliteration includes the ability to understand and apply information from various forms of text and media. One of the main focuses of this instrument is to measure how students can interpret the values related to culture and morals contained in the text. This includes understanding the meaning that is implied, the cultural context, as well as the moral message that is intended to be conveyed through folklore.

Based on the acquisition of the average value obtained by students is 94.29 indicates the ability of students classified as very good and appropriate assumption that interactive multimedia can improve the multiliteration of students in interpreting educational values. Based on the average score of 94.29 achieved by students, it can be concluded that the ability of students in interpreting educational values is very good. This indicates that students have a strong understanding of the material presented, as well as a high ability to analyse and apply cultural and moral values contained in the text or learning materials. The average score of 94.29 indicates that the majority of students are able to answer the questions correctly and quickly, which reflects deep understanding and good interpretation skills. This score is above the threshold generally used to assess the "excellent" category, which is set above 85 or 90. These results also support the assumption that the use of interactive multimedia in learning can improve student multiliteration. Interactive Multimedia allows students to interact with learning materials in greater depth, helping them assimilate information in various ways (visual, auditory, kinaesthetic) that suit their learning style.

Interactive multimedia often provides content in multiple formats, such as text, images, audio, and video, allowing students to understand concepts from multiple angles. This can help students who have different learning styles to better understand and remember information. With features such as audio narration, animation, and interactivity, cultural and moral values contained in stories or learning materials can be conveyed more effectively and interestingly. Students not only read the text, but also experience and interact with the content, which reinforces their understanding of those values. These results support the assumption that the integration of technology in the learning process can produce better results in terms of understanding and interpretation of educational values.

5. Conclusions

The conclusion of this study is that the development of Interactive Media based on folklore in the context of multiliteration and* blended learning * has succeeded in achieving the desired goals. Through qualitative descriptive method with mixed approach, application development using Luther method produces digital products based on * Action Script * that can be used on mobile devices. Testing with the system usability Scale method showed that this medium was well received, meeting the category "Good." The results of this study confirm that an integrative and systematic approach can support more effective learning in accordance with the principles of neuroscience.

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