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DESIGN OF ANIMATED LEARNING MEDIA KACAPI KAWIH TUTORIAL VIDEO FOR BEGINNERS

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ABSTRAK

Abstrak: Penelitian ini berfokus pada permasalahan kurangnya akses pembelajaran kacapi yang menjelaskan hal-hal dasar dalam bermain kacapi kawih seperti *sintreuk* dan *toél*. Penelitian ini bertujuan untuk mengembangkan media pembelajaran berbasis animasi video tutorial untuk pemula dalam memainkan kacapi kawih. Media ini diharapkan dapat meningkatkan kemandirian belajar, minat dalam melestarikan alat musik daerah, serta mengintegrasikan seni musik tradisional dengan teknologi untuk menjawab kebutuhan generasi saat ini. Penelitian ini menggunakan model pengembangan Borg & Gall yang dimodifikasi, dengan pendekatan Multimedia Development Life Cycle (MDLC). Data dikumpulkan melalui wawancara, observasi, dan lembar penilaian. Penelitian dilakukan dalam enam tahap: pengumpulan informasi, perancangan, pengembangan bentuk awal produk, pembuatan, pengujian, dan distribusi. Media pembelajaran yang dikembangkan berupa video tutorial berbasis animasi, memvisualisasikan teknik dasar *sintreuk* dan *toél* dengan jelas. Uji coba pada mahasiswa menunjukkan bahwa secara umum materi yang disajikan memiliki kualitas dalam kategori baik. Hasil evaluasi terhadap media pembelajaran menunjukkan nilai pada Desain visual: 70.84, Animasi: 70.84, Pemilihan warna, font, dan tata letak: 79.17, Visualisasi alat musik atau objek lain: 75.00, Materi ajar: 87.50, Penyajian materi: 83.33, Instruksi pada media: 75.00, Fitur pengulangan: 79.17, Akses video tutorial: 83.33, Ukuran file video tutorial: 79.17, Fleksibilitas video tutorial: 87.50, dengan rata-rata keseluruhan mendapat nilai 79.17. Secara keseluruhan, media pembelajaran ini memiliki kualitas yang baik, namun masih terdapat saran perbaikan seperti penambahan notasi pada body kacapi yang disesuaikan dengan perubahan warna pada senar dan partitur yang bisa diunduh.

Abstract: This research focuses on the problem of the lack of access to kacapi learning that explains the basic things in playing kacapi kawih such as *sintreuk* and *toél*. This research aims to develop learning media based on video tutorial animation for beginners in playing kacapi kawih. This media is expected to increase learning independence, interest in preserving regional musical instruments, and integrate traditional music with technology to answer the needs of today's generation. This research uses a modified Borg & Gall development model, with a Multimedia Development Life Cycle (MDLC) approach. Data is collected through interviews, observations, and assessment sheets. The research was conducted in six stages: Information Collecting, Design, Develop Preliminary Form of Product, Assembly, Testing, Distribution. The learning media developed is an animation-based video tutorial, visualizing the basic techniques of *sintreuk* and *toél* clearly. Student trials showed that in general the material presented had good quality. The results of evaluation the learning media show the value of visual design: 70.84, Animation: 70.84, Color, font, and layout selection: 79.17, Visualization of musical instruments or other: 75.00, Teaching materials: 87.50, Presentation of material: 83.33, Instructions on the media: 75.00, Feature Repetition: 79.17, Access to video tutorials: 83.33, Video tutorial file: 79.17, Flexibility of video tutorials: 87.50, with an overall average score of 79.17. Overall, this learning media has good quality, but still there are suggestions for improvement such as the addition of notation on the body of the kacapi that is adjusted to the color changes in the strings and scores downloadable.

A. BACKGROUND

Learning traditional art is an effort to preserve local culture, one of which is traditional music in West Java called kawih usually accompanied by kacapi kawih or commonly called kacapi siter. There are basically 4 techniques in playing kacapi wanda anyar, namely: *disintreuk-toél*, *dijeungkalan*, *diranggeum*, and *dijambrét* (Drazatna et al., 2022). The material taught for beginners is taken from several Etude Mang Koko, the empirical experience of researcher, and based on interviews with academics to create effective learning media, as stated by Drazatna (2022) in learning this requires a longtime allocation in learning because it is seen from the level of difficulty in learning. This is in line with what is explained by Baharuddin (2014) Video tutorial media can replace educators when students want to repeat the material. From the explanation above, an animated video tutorial kacapi learning media for beginners containing *sintreuk* and *toél* material was made to make it easier to learn kacapi kawih independently anywhere and anytime. In addition to facilitating the learning of kacapi for beginners, media this is an effort to preserve local culture so that it remains sustainable in the eratechnological.

Currently, the use of new technologies to support the student learning process has become common and often encountered. This phenomenon reflects that the times have given birth to individuals with different and increasingly complex needs (Komalasari et al., 2021). Some previous research found in the discussion and development of multimedia by (Restu, 2020) examines the development of learning video tutorials as online media for SMA and SMK. (Hasanah, 2022) examines video tutorials for keyboard learning for beginners. (Nurul Azmi et al., 2021) examines the kacapi etude made by Arts teacher the Cultural himself 'with an adaptation of Mang Kokos kacapi etude simplified. From the previous research, no one has made learning media that discusses how to play the kacapi structured to be learned independently. In this study, the focus of researchers is to discuss the creation of kacapi learning media with animated visual design containing basic material for beginners which is compiled based on user needs.

Technological developments have resulted in significant transformations in the learning paradigm, encouraging the utilization of innovative and interactive learning media to improve the effectiveness of the learning process in facing the various challenges of the modern era (Utomo, 2023). Technological advances have influenced the style and pattern of education in the modern era. Digital developments provide opportunities for educators to be infinitely creative in the realm of education, by adjusting learning strategies according to needs (Fahrul Rozi, 2024). Along with the rapid advancement of information technology, media such as Android-based smart phones can be utilized optimally (Alisyafiq et al., 2021).

Learning media is one of the main factors that play a role in the teaching and learning process. In learning, educators utilize learning media as a means to convey material effectively, so as to increase students' understanding (Wulandari et al., 2023). Learning media is a learning resource that can support teachers in expanding student knowledge. With various types of learning media used by teachers, it can be an effective means of conveying knowledge to students (Mustofa, 2023). Along with the development of technology, media learning today is no longer limited to a format certain or amount, and can be easily utilized in the teaching and learning process (Lee & Herman, 2023). The use of video tutorials in online learning can facilitate students to more easily understand the material presented. This is due to the ability of students to repeat the video tutorials that contain material explanations, making it easier for them to note the important points conveyed by the teacher (Alisyafiq et al., 2021). Video animation is the result of a series of moving images that form objects with the addition of certain effects, resulting in a realistic and attractive appearance (Asih et al., 2023). Video is one of the media that is familiar and widely used. Its role is not only limited as a means of entertainment, but also serves as a learning medium (Pratiwi & Kasriman, 2022).

Easy access to understanding how to play kacapi kawih for beginners is one way to facilitate independent learning and can be learned anywhere. Learning that tends to be centered on educators (teacher-centered) can result in minimal involvement of students in the process of forming concepts in their thinking (Baharuddin, 2014). One the of main advantages of utilizing interactive learning media lies in its ability to present information in various visual and multimedia forms (Utomo, 2023). The creation

of this learning media uses animation to provide more detailed information with motion, shape, and color on how to play a good lute. Through the use of moving images, animation can illustrate concepts that are difficult to explain verbally or statically (Melati et al., 2023). Media becomes the delivery of the message to be conveyed in a material (Asih et al., 2023). Ease of media access is one of the important things in learning so that users can use it anywhere easily.

The purpose of this research is to develop learning media kacapi kawih for beginners which is expected to increase independence and interest in preserving regional musical instruments and integrating traditional music with technology to create learning media that suits the current generation. In addition, access to learning kacapi kawih for beginners is one of the things that can make it easier to learn kacapi kawih without having to meet face to face with the teacher.

B. RESEARCH METHOD

This research was conducted based on the modified results of the Borg & Gall (research model Supriyono, 2022), the Multimedia Development Life Cycle (MDLC) (Hasanah, 2022). Data collection was carried out through interviews, observations, and assessment sheets. The interviews were conducted to gather information about the material that should be included in the learning media for kacapi kawih for beginners. The observation carried out for the creation of a learning media for a kacapi tutorial video animation for beginners aims to determine the needs of prospective users, such as their level of understanding of the basics of kacapi playing, as well as visual and audio preferences that support the understanding of the material. In addition, this observation also helps in designing media that is easy for users to understand. The assessment sheet is used as an evaluation tool in assessing the quality of the media that has been developed.

This research was conducted through six structured stages. The first is information gathering and research, where data is extracted related to learning needs, existing problems, and target users. process This includes interviews and documentation to understand the basic techniques of kacapi kawih and how animated video media can support learning. Interviews were conducted with art experts in academia to validate the needs in making media, while interviews with media experts were conducted to test the media that had been made stage. The next is design, which aims to create learning media specifications. At this stage, program architecture, animation style layout, as well as the need for supporting materials such as sheet music, images, and are designed in detail. The results of this stage become the main guide for further development. Once the design is complete, the next stage is to develop a preliminary form of product. In this stage, materials are prepared to form the initial product that will later be tested and further developed. Furthermore, at the assembly stage, all multimedia that elements have been designed are combined to form a complete product. This includes creating animations, integrating text and sound, and combining other elements based on the design that has been compiled stage. The testing is conducted after the assembly stage is complete. This testing is known as alpha testing, where the program is tested in an internal by the environment developer to ensure the product functions according to plan. If errors or short comings are found, improvements are made before proceeding to the next stage. The final is distribution, where the finished product is stored in a suitable storage medium, online platform, such as an software, or physical media, so that it can be accessed by users, especially beginners who want to learn kacapi kawih.

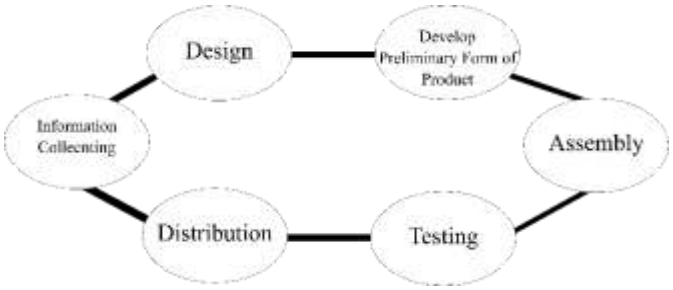

Figure 1. Modification of Borg & Gall and MDLC research models

C. RESULT DAN DISCUSSION

The results of the learning media design research using a modified development model the models of Borg & Gall and MDLC research are as follows.

1. Information Collecting

Information collecting is done to identify the needs, constraints and problems that occur in the field. Based on the observation, it was found that some students who were learning kacapi for the

first time experienced obstacles in learning due to the lack of adequate media to be able to do independent learning. Even one of the alumni stated that if there was learning media that could support independent learning, the material presented would be easier to learn.

Interviews with academic art experts emphasized the importance of a step-by-step approach in teaching the sintreuk and toél techniques. Therefore, the video tutorial starts with simple exercises such as plucking the strings with one hand until the user can practice sintreuk and toél simultaneously in basic playing patterns until the intro of the catrik song. Based on the recommendations of art experts in the academic field, the etude used should adapt Mang Koko Etude with adjustments according to user needs.

2. Design

Media begins with designing program specifications that include visual structure, animation elements, layout, and audio integration. This design stage aims to formulate product specifications in a systematic and structured manner (Hasanah, 2022). Each visual element, such as illustrations of the kacapi musical instrument, finger positions, and playing steps, is made to make it easier for users to visually understand the basic techniques.

The making this learning media is adjusted to the kacapi learning material for beginners to be able to play the intro planning of a catrik. This learning media will assist teachers in providing material that can be a provision for students to better understand the material being taught.

In the design stage, it is first determined what is needed in the learning media. In this case there are several designs needed:

a. Partiture

Partiture is a written representation of piece of music. Its main function is to document musical notation that includes tones and various other musical elements (Yusuf, 2021). The score in Figure 2 below is arranged based on Mang Koko's etude which is adapted to the user's needs and then created using Microsoft Word with Damina font to help students understand the material in a more structured way.

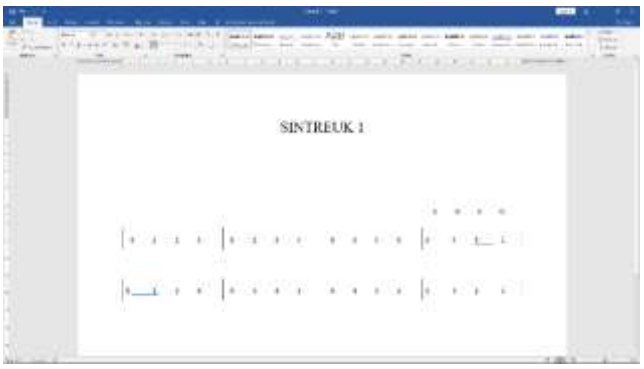

Figure 2. Score Creation.

b. Vector

Vector is an image material with quality that is maintained without distorting or decreasing resolution when scaled up (Nasution et al., 2023). The reason for using vectors is because they have characteristics that can be reduced or enlarged without losing quality and are often used to create illustrations. Illustrations made in this media are kacapi, right hand, and left hand.The vectors in Figure 3 and Figure 4 below are images of a lute and hands and fingers made using software such as Adobe Illustrator.

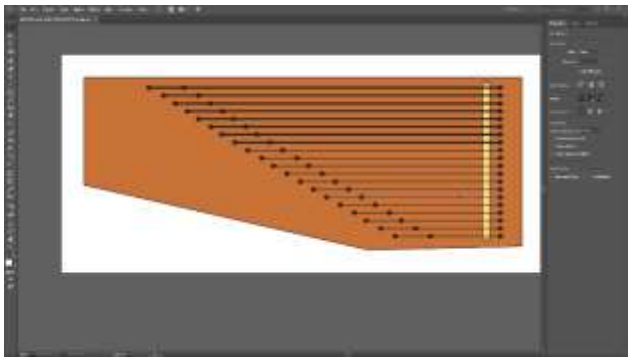

Figure 3. Vector creation of kacapi

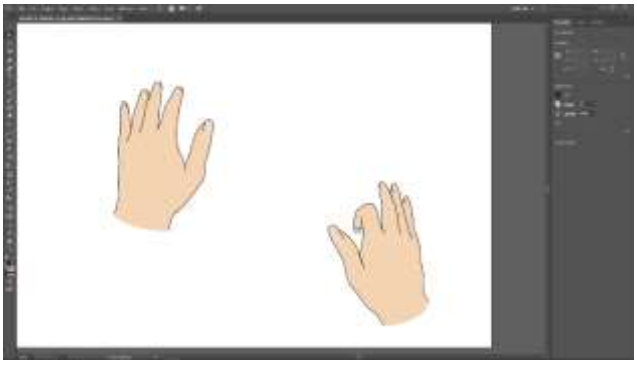

Figure 4. Hand vector creation.

3. Develop Preliminary Form of Product

After vector creation, the next step is to export the required vectors such as separating the index and thumb of the right hand, the index and middle fingers of the left hand, and the strings with the body of the kacapi as shown in Figure 5 and Figure 6.

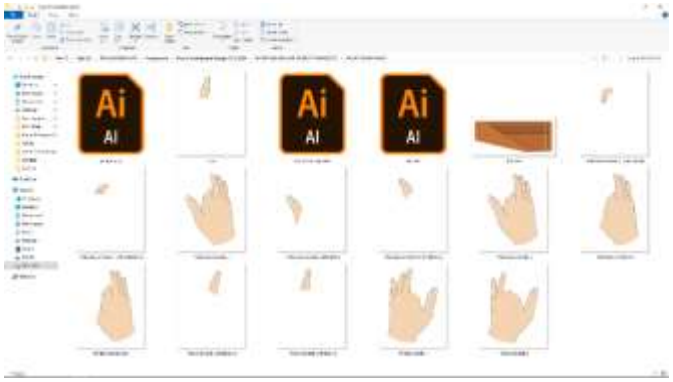

Figure 7. Export vector of hand and finger.

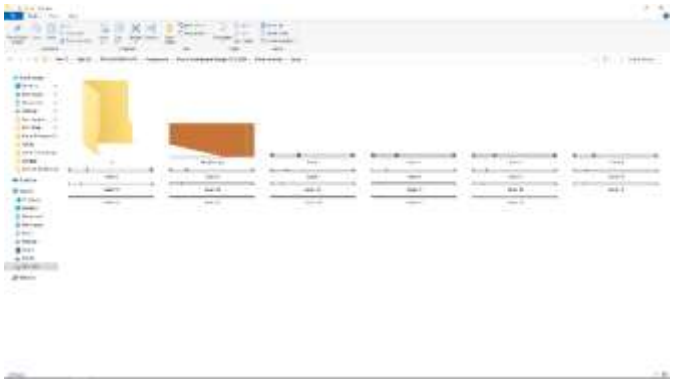

Figure 8. Export vector of body kacapi dan strings.

In addition to visuals, there is an audio creation in Figure 7 made using Cubase DAW and VSTi Kacapi made by M. Luthfi Alfaris. Virtual Studio Technology Instrument (VSTi) is one type of VST that is able to imitate the sound of analog instruments, such as piano, guitar, drums, bass, and various other musical instruments. The existence of VSTi is very useful in reducing recording production costs, because the sound of acoustic instruments can be generated virtually in a Digital Audio Workstation (DAW) (Maulana, 2024).

Figure 5. Creation of the kacapi audio using VST.

4. Assembly

In Figure 8 this is the creation section where there are several stages, including importing sheet music, importing vectors, importing audio, and setting vector positions.

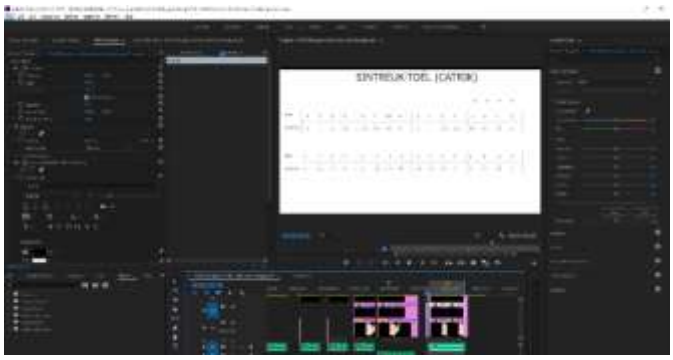

Figure 6. Import sheet music into Adobe Premiere Pro.

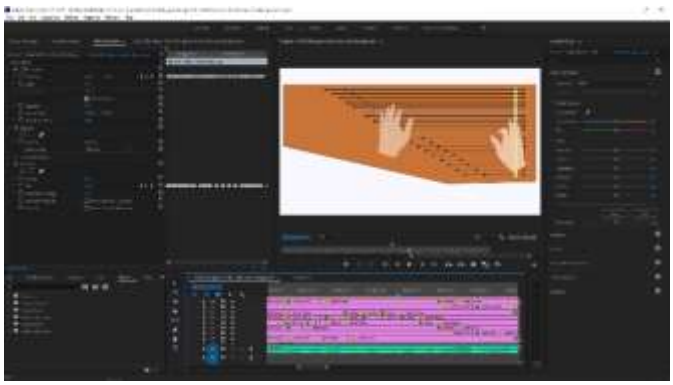

Figure 9. Process of making vector into animation.

In Figure 9, the vector is made to move in sync with the audio using Adobe Premiere Pro CC 2018 software with Basic 3D Tilt and Position tools. Meanwhile, Lumetri color is used to change the color of the strings when touched. Based on the opinions of experts, Adobe Premiere Pro is a video editing application used to produce media in the form of audiovisual or video (Zaini & Nugraha, 2020).

5. Testing

This stage is carried out after completing the Assembly stage by seeing whether there are errors or not from the export results which become video tutorials in the form of animated videos as shown in Figure 10.

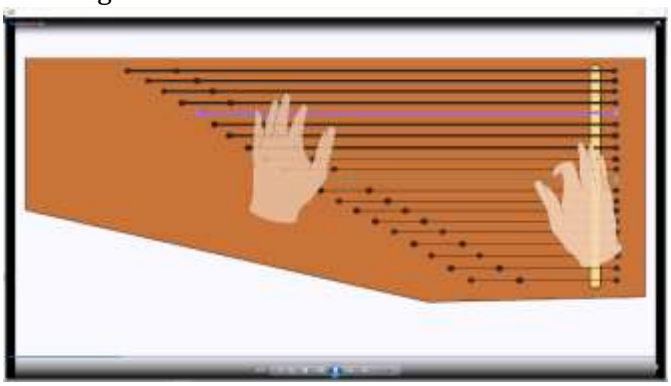

Figure 10. Run the exported video using Windows Media Player.

The pilot phase of this video tutorial was conducted at a university in Bandung, West Java with the indicators assessment in Table 1. The trial sample in this study were 6 students who participated in the Karawitan talent interest unit activities. This rating scale uses a Likert scale. This is scale often used as a measuring tool in assessment because it allows giving value to an aspect (Nempung et al., 2015).

Table 1. Student assessment of the video tutorial on kacapi kawih animation for beginners.

INDICATOR	E	G	F	P	VP
The visual design is attractive, consistent, and appropriate for the target user.	1	3	2		
Animations are clear and easy to understand.	1	3	2		
The selection of colors, fonts, and layouts support user comfort while learning.	1	5			
Visualizations of musical instruments or other objects are relevant and accurate to the teaching material.		6			
The presentation of the material is organized systematically.	3	3			
The media provides instructions that allow users to learn independently.	2	4			
There is a feature of re-explanation or repetition of animation for better understanding.		6			
Video tutorials are easily accessible.	1	5			
The file size is not too large.	2	4			
Can be used on various devices (computer, tablet, or smartphone).	1	5			
The presentation of the material is organized systematically.	3	3			

Description: E = 100 (Excellent) B = 75 (Good) C = 50 (Fair) K = 25 (Poor) SK = 0 (Very Poor).

Based on the data from the trial results, it shows that the assessment of visual design that is attractive, consistent, and in accordance with the target user is 16.67% rated excellent, 50% rated good, and 33.33% rated fair. The assessment of animation aspects that are clear and easy to understand is 16.67% rated excellent, 50% rated good, 33.33% rated fair. For the assessment of the selection of colors, fonts, and layouts, 16.67% rated excellent, and 83.33% rated good. Assessment of the visualization of musical instruments or other relevant objects by 100% rated good. Assessment of teaching materials by 50% rated excellent, and 50% rated good. Assessment of the presentation of material by 33.33% rated excellent, and 66.67% rated good. Assessment of instructions on the media by 100% rated good. Assessment of the repetition feature by 16.67% rated excellent, and 83.33% rated good. Assessment of access to video tutorials by 33.33% rated excellent, and 66.67% rated good. The assessment of the video tutorial file size was 16.67% rated excellent, and 83.33% rated good. And the assessment of the flexibility of video tutorials that can be used on various hardware was 50% rated excellent, and 50% rated good. If based on the score, then Visual design: 70.84, Animation: 70.84, Color, font, and layout selection: 79.17, Visualization of musical instruments or other objects: 75.00, Teaching materials: 87.50,

Presentation of material: 83.33, Instructions on the media: 75.00, Repetition feature: 79.17, Access to video tutorials: 83.33, Video tutorial file size: 79.17, Flexibility of tutorial videos: 87.50, with an overall average of 79.17 indicating that in general, the quality of the material presented is in the good category. In addition to assessing based on the above aspects, several inputs were found from participants, including: the video is easier to understand if it is separated into one etude for one video, the need for additional notation on the body of the kacapi on the left and right and the color change is in sync with the change in string color, and it would be nice if a link to download the score is included.

6. Distribution

Figure 11 shows the distribution stage which aims to ensure that Kacapi Kawih learning media can be accessed easily, especially for beginners who want to learn Sundanese traditional music. This learning video is uploaded to the YouTube platform with 1080p resolution so that the material looks clear and easy to understand. This platform was chosen due to its ease of access for users on various devices, such as mobile phones, tablets and computers. By utilizing the YouTube platform, students can easily access subject matter relevant to the topic provided by the teacher, whenever and wherever needed (Widiantari & Dewi, 2023).

Figure 11. Playing videos on the YouTube platform.

https://youtu.be/0DN8wQRATzY

D. FINDING

The findings of this research show that the learning media based on video animation tutorial for kacapi kawih makes it easy for beginners to learn basic techniques such as *sintreuk* and *toél*. This is in accordance with the results of interviews with art experts who emphasized the importance of these basic techniques as a foundation in playing kacapi. The use of animation to illustrate hand positions, playing patterns, and sound muffling movements provides a clearer visual representation than conventional methods that only rely on text, audio or static illustrations.

Historically, several previous studies have highlighted the effectiveness of video media in learning. Baharuddin (2014) mentioned that video tutorial media can replace educators to repeat the material independently, while Melati et al. (2023) showed that animation increases learning motivation by presenting more interesting material. This research extends the concept by combining dynamic animations and audio guides that allow users to understand the technique of playing the kacapi more deeply.

The results of the student trial showed that the visual design and animation in this media are quite attractive and consistent with the needs of beginners. However, there was feedback regarding the addition of notation on the body of the kacapi to facilitate string identification, as well as the need for a feature to download sheet music to support offline learning. This assessment is in line with Utomo's research (2023) which highlights the importance of affordability and flexibility of learning media to be accessible on various platforms.

The advantage of this media lies in its interactivity, where users can repeat certain parts of the video to understand the steps in detail. This feature is relevant to Hasanah's (2022) research on keyboard video tutorials, which emphasizes that the accessibility of videos allows students to learn independently at their own pace. The emphasis on learning independence makes this media an effective tool for the preservation of traditional arts, especially in the midst of the changing educational paradigm towards digitalization.

Through this analysis, it can be concluded that this animated video tutorial-based learning media not only helps users understand the basic techniques of kacapi kawih, but also answers the needs of the younger generation for modern and interactive learning media. This innovation is expected to be a

model for developing other traditional art learning media, so that the sustainability of local culture can be maintained in the technological era.

E. CONCLUSION AND SUGGESTION

Based on the results of the trial, the assessment of various aspects of visual design, animation, color selection, fonts, and layout, as well as visualization of musical instruments, teaching materials, presentation of materials, instructions on the media, repetition features, video access video file size, and flexibility of video tutorials showed results positivewith an overall average of 79.17 which indicates that in general, the quality of the material presented is in the good category. The teaching material and flexibility of the video tutorials received the highest ratings, each with a score of 87.50, aspects while the visual design and animation received the lowest ratings, each with a score of 70.84. This shows that participants were satisfied with the content provided and its ease of access on various devices. However, there are some constructive feedback from participants that need to be considered, such as the need to separate the videos into one etude one video to improve understanding, the addition of notation on the body of the kacapi that is adjusted to the changing color of the strings, and the inclusion of a link to download the sheet music.

This feedback can be the basis for further improvement and development, so that the material presented can be more effective and in accordance with user needs. It is recommended for beginners to use this video tutorial learning media and provide input to make this learning media more developed.

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