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PLAYING MUSIC, CREATING THE FUTURE: EXPLORING CARDBOARD MEDIA IN DAYAK MUSICAL INSTRUMENT LEARNING

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Abstract
The limited access to traditional Dayak musical instruments, the Dau', drives innovation in music learning in the digital era. This research explores students' perceptions of using cardboard media as a creative alternative in learning the basics of the instrument. Through a qualitative approach, this study found that students responded positively to the cardboard media. Data were collected through participant observation, documentation, and interviews with the 2023 cohort of Performing Arts Education students at Tanjungpura University. Open-ended questions were used to understand how students perceive the cardboard media used in the learning process. Data analysis used triangulation techniques to understand students' opinions regarding the learning media. The research results show that students have a positive view of using cardboard media in the basic music learning of the Dayak. They assess that this media is not only effective in facilitating the understanding of Dayak music concepts but also stimulates creativity and fine motor skills. These findings indicate that cardboard media can be an innovative and flexible solution in traditional music education, especially in resource-limited environments. The implications of this research open up opportunities for further development, such as the integration of augmented reality technology, to create a more immersive and engaging learning experience for the millennial generation.

Keywords: cardboard media, Dayak music, music instrument

Introduction

In the fast-paced digital era, the preservation of traditional culture has become a unique challenge. However, it is precisely amidst this wave of modernization that the noble values contained in traditional arts, such as Dayak music, become increasingly relevant. This research explores students' perceptions of using cardboard media as an innovative approach in learning the basics of Dayak musical instruments. In addition, traditional music offers a multitude of benefits for humans, such as therapy for those who have difficulty sleeping (Amiri et al., 2019) and alleviating anxiety in pregnant women (Satriami & Sumiati, 2022). These various benefits make traditional music a valuable treasure, a product of the ancestors'

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thoughts in preserving life continuity (Hapidzin et al., 2022). This paradigm certainly becomes a factor in why music is taught (Vitale, 2011). By combining tradition with simple technology, this learning is expected to serve as a bridge between the younger generation and the cultural heritage of their ancestors, while also addressing the demands of 21st-century learning that emphasizes creativity, collaboration, and problem-solving.

More than just entertainment, traditional music, such as that of the Dayak people, serves as a bond of brotherhood and a pattern of interaction (Razak & Ferdinand, 2019). This art form is passed down through generations, preserved to prevent it from being swallowed by time. Behind its melodic tunes lie values and life principles that have been inherited through generations, making it an inseparable essence of culture (Putra et al., 2023). These values are a cultural process that has the potential to adapt and transform in the present era (Ćaleta, 2023). Its existence has become an integral part of community life, where the values contained within it provide a strong argument for studying it. This culture serves as a driving factor for individuals to study the arts, particularly traditional music.

Dayak music, as a cultural heritage of West Kalimantan, has great potential to nurture the national identity of the younger generation (Mansyur, 2016). However, the challenges in teaching traditional music often lie in the limited learning resources and monotonous teaching methods. Often, an educator believes that the teaching being conducted is effective, while it may be perceived differently by the students (Scoot, 2016). Recent research (Permana et al., 2024) highlights the importance of innovative learning media that are relevant to the learning styles of Generation Z. By integrating technology and active learning approaches, it is expected to enhance students' learning motivation and enrich their understanding of the nation's cultural wealth.

In this context, this research explores students' perceptions of the use of cardboard media in learning the basics of Dayak music. This curiosity stems from the problems present in the learning process. The traditional musical instrument I have is only one set, which is insufficient to accommodate 40 students in one class. A considerable amount of time is needed to give them the opportunity to play the traditional musical instruments directly. It is also often found that students lose focus when their classmates have the opportunity to play traditional Dayak musical instruments in front of the class. Therefore, cardboard media was used, designed in such a way that all students could practice the playing patterns together at the same time.

This research focuses on two main aspects, namely creativity and effectiveness. Creativity is believed to be a factor in playing music with confidence (Daly, 2022). Usually, the results of this creativity are formed from the students' enthusiasm for learning and their background (Ladamay & Mustakim, 2023). Meanwhile, the effectiveness of learning can be supported by the use of tools so that the learning material can not only be optimally received by students but also become a lifelong learning experience (Sunardi, 2023). On one hand, cardboard media offers the potential to develop students' creativity through activities such as making musical instruments and musical exploration. On the other hand, this research examines the effectiveness of cardboard media in enhancing students' understanding and skills in learning the basics of Dayak music, as well as preparing them to teach traditional music as part of their graduate profile.

This research is expected to make an important contribution to the field of Dayak music education by uncovering students' perspectives and exploring the potential of cardboard media as a creative and effective learning tool. The findings of this research can serve as a reference for educators and practitioners of Dayak music in designing more innovative and engaging learning methods for the younger generation. In addition, the results of this research can be further developed for the creation of a more effective electric Dau' instrument for learning, taking into account organology, the production of basic materials, and the preservation of sound and cultural representation.

Method

This research adopts a descriptive qualitative approach to observe and describe the behavior patterns or actions of an object (Christy & Rachman, 2023). This research will examine how cardboard media as a learning aid for traditional Dayak music can help improve confidence and collaboration. The data obtained were analyzed using triangulation techniques to ensure the validity of the findings. This research uses a qualitative approach with a case study design. The subjects of the research are 40 students enrolled in the course Fundamentals of Dayak Musical Instruments. This course studies Dayak musical instruments, including the types of instruments, playing positions, playing techniques, and the drumming patterns of each instrument. The limitation of musical instruments available in the study program necessitates the need for other innovations in learning so that students can be well facilitated. The concrete step taken is to create media resembling the blades of the Dau. It is hoped that through this media, students can acquire skills in playing the rhythmic patterns of Dayak music, particularly the Dau instrument.

Data were collected through participatory observation during the learning process, interviews through the distribution of questionnaires, and document analysis related to students' learning outcomes. The data analysis adopts the Miles and Huberman model in the form of data collection, data reduction, data display, and conclusion (Miles & Huberman, 1994). Meanwhile, the validity of the data uses triangulation techniques from observation, interviews, and documentation.

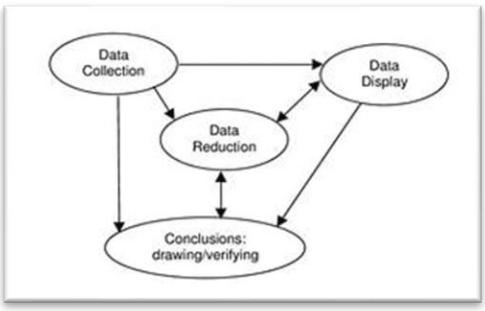


Figure 1. Qualitative data analysis

Students actively learn traditional Dayak music in every class meeting. They must bring imitation musical instruments made of cardboard, consisting of drumsticks and the Dau musical instrument. Students are trained to imitate the musical patterns demonstrated by the lecturer using these simple media. This interactive learning process not only helps students understand the basic motor

skills of Dayak music but also builds confidence and cooperation. To assess the learning experience, a questionnaire was sent, divided into ten statements in Table 1 below.

Table 1. List of statements in the questionnaire distribution

No	Statement
1	Full Name
2	I am interested in creating cardboard media for Dau' learning
3	Through cardboard media, I can become more fluent in playing Dau'
4	Cardboard media enables me to practice fine motor skills and think creatively and innovatively
5	Cardboard media can motivate me to learn Dau' so that I become more independent
6	I can collaborate with friends in making cardboard media
7	The use of cardboard media helps me understand the techniques of playing Dau'
8	My learning outcomes improve when using cardboard media due to the limited musical instruments on campus
9	Cardboard media can be used continuously even after classes are over and is environmentally friendly
10	Dau' learning with cardboard media can also be recommended in school education if I have the opportunity to become a music art teacher

Findings and Discussion

A learning media using cardboard was implemented for 40 second-semester students of the Performing Arts Education Study Program, FKIP, Tanjungpura University, who are enrolled in the basic course of Dayak musical instruments. The participants were randomly divided into 10 groups, each consisting of four members. Each group selected a leader responsible for coordinating the practice process of their respective group. Each individual in the group takes turns playing one Dayak musical instrument until all instruments are mastered.

Learning the basics of Dayak musical instruments in this class is not just about theory, but also direct experience with Dayak culture through the performance of the Jubata music rhythm. The word "*Jubata*" itself has a profound meaning, namely the Creator or God (Olendo et al., 2022). Therefore, this drumming pattern is not only played for entertainment but also constitutes an important part of the religious rituals of the Dayak community. The ritual serves as a medium for the Dayak community to convey their requests or expressions of gratitude to God Almighty (Callista et al., 2022; Sagala, 2024).

The pattern of the Jubata rhythm in the Dayak Kanayatn community is played with the instruments dau, tuma', and agukng. Dau itself has two types, namely dau we'nya and dau nak'nya. The learning of the Jubata drumming pattern in class begins with a demonstration of the drumming pattern by the lecturer on each instrument. Previously, students were required to have wooden sticks to strike the dau' that would be played. After the demonstration of the rhythmic pattern of the *dau'* on the *Jubata* motif, students were asked to imitate the sound produced by that rhythmic pattern of the dau'. The imitation began with a sound exploration process combined with sound sensitivity until they were able to sing it verbally (Hemming & Kvarnhall, 2015). Then, the students sat in a circle and imitated the rhythmic pattern by striking cardboard, as if playing the *dau'*. This exercise was repeated until they achieved the *dau nak'nya* rhythmic pattern. When the students were

deemed capable of playing the pattern, the class was divided into two groups. The first group played *dau we'nya* rhythmic pattern, while the other group played *dau nak'nya* rhythmic pattern. After both groups were able to play their rhythmic patterns well, they were combined and played the Jubata music rhythm together. One of the groups took turns playing the actual Dau' musical instrument until each of them had the experience of playing the Dau' directly.

At the end of the lecture, the students were then asked to fill out a questionnaire via Google Form regarding their perspectives on the cardboard media used during the lecture. From the 40 students in the class, 38 responses were received regarding the distribution of the questionnaire related to the students' perspectives. The results of the questionnaire distribution are as follows.

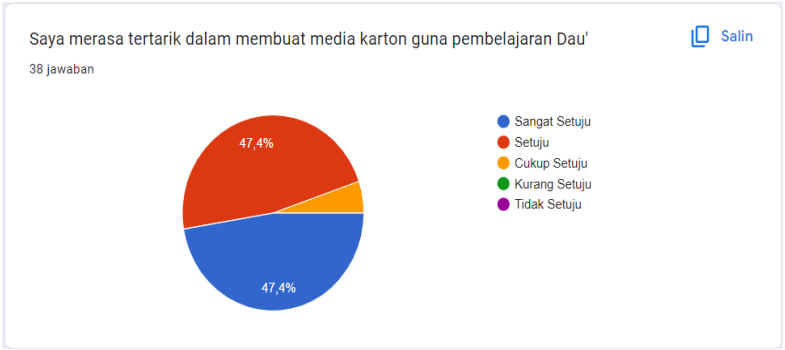


Figure 2. Result of statement 2

Based on the image above, the percentage result of 47.4% indicates that students are interested in making cardboard media to practice the rhythm patterns of the Dau' instrument. This is also evident when they enthusiastically brought the necessary equipment after being instructed to bring the tools used, such as rice cardboard, wooden sticks, rulers, anchors, scissors, and glue.

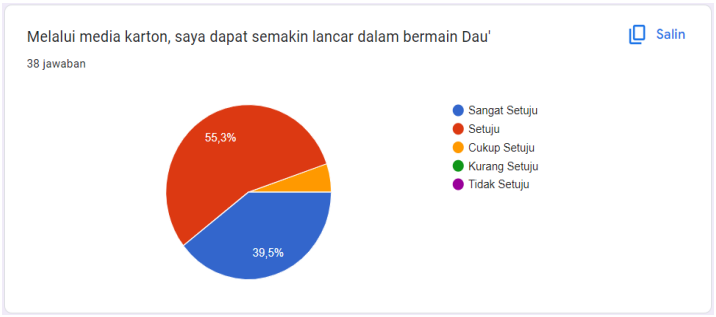


Figure 3. Result of statement 3

The cardboard media used by students in each lecture indirectly requires and trains them to follow the rhythm patterns of the Dau' game. Practicing with the cardboard reduces the distraction of those who are less focused if the opportunity is given to their friends to play the Dau' directly. Imitation becomes one of the aspects that influence the creation of character education (Hidayat et al., 2022). The repetitions that occur make them memorize the rhythm patterns and melody positions when playing the Dau'. As a result, habituation is created until the students are able to play the Dau' independently.

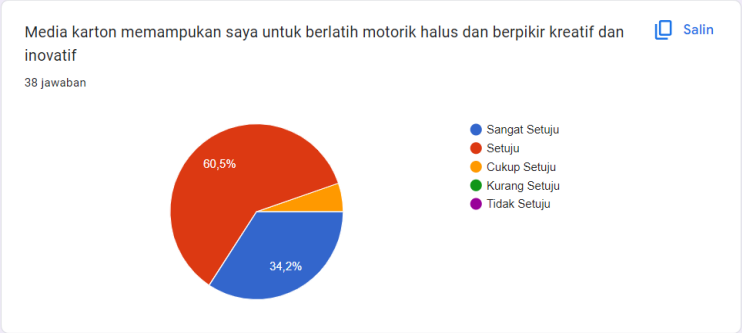


Figure 4. Result of statement 4

Based on the image above, most students feel that the cardboard media also trains them in their fine motor skills. The movement when striking each Dau' bar must be estimated so that they do not make mistakes when playing. This activity aims for them to achieve perfect positional accuracy and precision, so that sound production can be maximized (Patteson, 2016). These skills are related to the fine motor dimension where the brain coordinates with hand movements simultaneously (Sarbadhikary, 2023). The different patterns of the right hand and left-hand drumming require students to focus when playing the Dau'. Additionally, creating cardboard media allows students to be creative in representing the Dau'. This can be evidenced by the following image.



Figure 5. The result of students creativity in making cardboard media

The image displays a cardboard medium created by a student, where the *Dau'* is made in a three-dimensional shape. Not just a circular cardboard sheet, but more like a cylindrical shape, albeit not too tall. Here is where the students' creativity process takes shape, stemming from their experience in observing the Dau' instrument organologically. How the shape of the *dau'* is represented by students using cardboard with volume, not just flat sheets. Similarly, the shape of the stick used to strike the *Dau'* is also represented.

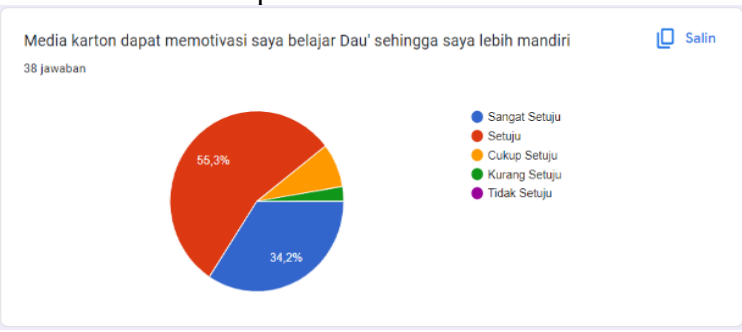


Figure 6. Result of statement 5

Playing the Dau' rhythm pattern on cardboard media proves that students are increasingly motivated to be able to play that musical instrument. It is explained by (Febriyani & Sukmayadi, 2023) that after the COVID-19 pandemic, the independence contained in the independent curriculum will be continuous, including in the learning of cultural arts. Motivation that arises from within the students will foster independence so that they do not rely solely on the *Dau'* musical instruments available on campus. Although this music is an ensemble played together, students can practice independently outside of class hours because this medium is easy to carry anywhere.



Figure 7. Result of statement 6

Students certainly do not immediately find rice husk cardboard. They discuss finding out where to buy rice husk cardboard in the city of Pontianak. In addition, they also coordinated in preparing the materials for making the media. Some collected money from one of their friends to buy materials such as cardboard and glue. This collaboration is also demonstrated through the results of the questionnaire distribution as shown in the image above, where the creation of this cardboard media produced collaborative value among the students.



Figure 8. Results of statement 7

Dau' in traditional Dayak music consists of two types, namely *Dau We'nya* and *Dau Nak'nya*. Both have different playing patterns, but they complement each other. In the implementation of the lecture, students sitting at the back certainly cannot see clearly how the game pattern being demonstrated at the front of the class. Some of them might not clearly understand the game, so those who are less knowledgeable will look at their closest friends and imitate the *Dau'* game pattern using cardboard. In addition to fostering independence, cardboard media can also

help with the techniques of the *Dau'* game, including the hitting technique using a wooden stick.



Figure 9. Result of statement 8

The Dau' instrument is part of a set of traditional Dayak musical instruments. The raw materials used to make the *Dau'* make this musical instrument quite valuable in terms of material. Unlike conventional musical instruments such as guitars or keyboards, the *Dau'* musical instrument has a very small chance of being owned personally. Independence as a manifestation of that learning motivation makes students more skilled and improves their learning outcomes. This is also evident from the assessment results of the group task in playing *Jubata* music.



Figure 10. Result of statement 9

After sessions are over, cardboard materials used in the foundational study of Dayak musical instruments are not thrown away. This material can be used again in subsequent classes, including practice sessions for percussion instruments or even in the seventh-semester Dayak music course. include the beautiful wooden sticks. This outcome demonstrates how well-regarded this instructional resource is for teaching traditional music, particularly *Dau'*. These are the wooden sticks that were utilized; any kind of wood that is comparable in size and shape to the original stick can be used.



Figure 11. Result of statement 10

The image above shows that this cardboard media inspires students to reapply it in school learning. Of course, it can be adjusted to the needs and availability of cardboard, especially in certain areas where they will be teaching later. Rice straw cardboard is just one example of a material that is considered suitable due to its relatively thick and strong structure. Rice straw cardboard can also be replaced with used cardboard or similar materials that are easily found nearby and environmentally friendly.

The learning of Dayak music using cardboard has motivated students to study, allowing them to gain experience in learning their own culture. This learning can also serve as a platform for studying the cultures of other communities, especially for those who have different cultural backgrounds (Váradi, 2022). Through the learning of traditional Dayak music, students have the opportunity to embrace differences and become accustomed to diverse musical traditions. Learning Dayak music with cardboard media also serves as an ideal platform for them to become independent, confident, and hone various social and emotional skills. Performing in front of classmates allows students to overcome fear and stress, as well as learn to face both success and the possibility of failure.

The benefits explained above can serve as supporting factors for developing this learning media. The development carried out by involving digital technology can be utilized, such as the use of augmented reality. This can serve as a digital-based learning medium to help students represent something (Firdaus et al., 2022), including representing the Dau' instrument. Research conducted by (Guclu et al., 2021) shows that the application can assist music learning by visualizing musical instruments in a realistic manner. Meanwhile, research by (Permadi & Budiwati, 2016) shows that cardboard media can be experimented with using digital audio in learning the gamelan musical instrument. This means that it is not impossible for the Dau' musical instrument, which is a traditional Dayak musical instrument, to be represented in the application, allowing students to have an effective audio-visual learning medium. It also serves as preparation for them when they become educators or cultural arts teachers in schools.

Unlimited creativity can be realized through the exploration of various media, including cardboard. By transforming cardboard into unique musical instruments, individuals can build strong confidence in self-expression. The process of making instruments from simple materials not only stimulates creativity but also encourages a deeper understanding of the basic principles of music. More than just producing sound, creating instruments from cardboard is a journey of self-exploration that can inspire the creation of original musical compositions. As

researched by (Fukamizu et al., 2009), playing music with confidence can strengthen social connections. In this context, cardboard can serve as a unifier, both among instrument makers and between musicians and listeners. In line with the thinking of (Kaschub, 2024), by utilizing the potential of cardboard as a musical medium, we contribute to the preservation of traditions and culture, while also paving the way for the emergence of innovative young composers.

Conclusion

This research shows that cardboard media can be an effective tool for learning the basics of Dayak music. The use of cardboard media can help students better understand the concepts of Dayak music, improve their fine motor skills, and make them more creative, cooperative, and collaborative with their peers. The results of this study can be followed up as material to evaluate the learning of traditional Dayak music using cardboard media. These reference results can also be used as a basis for reconstructing the curriculum so that the lectures can be more structured and the learning outcomes can be achieved.

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