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The Technique of Playing Sundanese Gamelan Made from a Black Bamboo Resonance

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***Abstract*—Sundanese gamelan is an Indonesia's pentatonic musical instruments. Sundanese gamelan with black bamboo resonance have different shapes and sizes with conventional Sundanese gamelan in general. Therefore, the characteristics of Sundanese gamelan prototype with black bamboo resonance have an effect on different way of beating in producing tone sound. The purpose of this article is to discuss how to beat the Sunda gamelan prototype with black bamboo resonance in West Java. This qualitative research with descriptive method of analysis sourced data through; observation, interview, documentation and literature review. As for understanding techniques of drumming Sunda gamelan with black bamboo resonance, include: (a) Instruments and characteristics of Sunda gamelan prototype; (b) Sundanese gamelan prototype tone; (c) The use and placement of the fingers in the prototype of the Sundanese gamelan; (d) Memorize the orchestra or song according to the barrel of Sundanese gamelan. Validation of research done by triangulation. The research findings are a technique of drumming Sunda gamelan with black bamboo resonance to help understand the art of music with the limitations of conventional Sundanese gamelan media.**

Keywords—play technique; sundanese gamelan prototype; black bamboo resonance

I. INTRODUCTION

The learning process were supported by the components of teaching media that are relevant to novelty and innovation will be able to build the learning culture of students more passionate and effective [1]. So that it can provide creative stimulation in developing all the potential and high learning motivation for students. Mainly in learning the art of traditional music in formal schools in Sundanese gamelan material in West Java, it was felt that it was still constrained by the lack of infrastructure to support learning in conventional Sundanese gamelan practices.

Efforts from art teachers, musicians, related government and so on are commendable. With the presence of several Sundanese / Javanese / Balinese gamelan instruments / instruments made from bamboo which we can and usually appreciate through live performances or other media with the technique of playing by being beaten.

Base on the efforts of the teachers and musicians, researchers feel called to conduct research efforts with the same goal but have high effectiveness values and novelty values in answering the problem of implementing Sundanese gamelan music in formal schools. Especially in formal schools in West Java.

Based on the findings and studies of researchers on several examples of musical instruments or *waditra* that are considered to inspire and imitate innovation-based research in the making and application of media in the form of Sundanese gamelan instruments in West Java formal schools. One of them is an appreciation of the *Kalimba* musical instruments from Africa.

The teaching media that inspires researchers in the manufacture and technique of playing the prototype instrument of Sundanese gamelan instruments is the *Kalimba* musical instrument from Africa with all the advantages and disadvantages that are in it. The superiority of the *Kalimba* music instrument can be revealed that; *Kalimba* music instrument is a conventional African country musical instrument made with wood material, can be played by pressing a button (*toot*) and usually carries songs that are diatonic or tones of sol, mi, sa, si, or patterned on the do notes, re, mi, fa, so, la, si, and do high. This means that the *Kalimba* music instrument can only carry national songs and is of a general nature as long as it is not bound by the pentatonic scale.

The weaknesses that appear from usual Sundanese karawitan songs, both *kawih* songs and media songs, Kalimba instruments have limitations in playing songs with pentatonic tone or *da, mi, na, ti, la* and *da* scales which usually carry songs - Sundanese karawitan songs, both *kawih, tembang*, *pupuh* and *saléndro* or *degung* songs.

With the weaknesses seen in the *Kalimba* music instrument from Africa this inspired researchers and provided a gap in further research efforts related to the making and application of the *Saléndro* gamelan instrument teaching media through modification of shape, size and how to play to help students learn with Sundanese gamelan media. conventional in formal school.

Starting from the case in learning the art of traditional music in West Java, especially in learning media services in mastering the material of *Sundanese* gamelan practice in formal schools with a tendency to experience the limitations of conventional *Sundanese* gamelan instruments, because the price is quite expensive and takes up considerable space to care for it. So the researchers after making previous applied research efforts related to the technique of making *saléndro*

gamelan instruments. It feels incomplete when this applied research is not followed up by discussing "The technique of playing the *saléndro gamelan* instrument with a black bamboo resonator".

This research is expected to be able to answer and be able to help students in improving the quality of Sundanese gamelan learning for schools and cultural arts educators in West Java which are constrained by conventional Sundanese gamelan facilities and infrastructure.

In general, the purpose of this applied research article is to discuss "How is the technique of playing Sundanese gamelan instruments with a black bamboo resonator?"

II. Theoretical Approach

It is necessary to do a theoretical analysis in the form of understanding the concept or mindset of research on the technique of playing the *saléndro gamelan* instrument with a black bamboo resonator as the basic material for making *waditra* or Sundanese gamelan instruments sourced from the surrounding environment.

Waditra / gamelan instruments in the Sunda region are generally made of bronze. Gamelan instruments made of bronze have the best quality to date. Because bronze metal is a material made from a mixture of brass, iron and tin. Bronze gamelan instruments have soft sound characteristics that can convey the qualities of grandeur. Besides bronze which has a quality under bronze metal is a gamelan instrument made of brass metal and can be said to be number two. Gamelan instruments made from brass metal have simple characteristics. If we hear from the characteristics of the sound it is not too soft or rough.

Gamelan instruments made of iron metal have a loud (*nyaring*) sound characteristic. Gamelan instruments made of iron metal are generally widely used in formal schools in suburban areas. Because the price is relatively cheaper compared to the bronze gamelan instrument to reach tens to hundreds of million prices. Therefore, Bronze gamelan instruments and Brass metal gamelan instruments are widely used by formal schools in urban areas. Because urban formal schools have good quality tastes and high purchasing power.

Techniques for making *waditra* or musical instruments are not only done with metal materials, such as; iron, bronze, brass, etc. Even musical instruments can also be made from clay, wood, plastic and ceramics, such as *Okarania* musical instruments. Even musical instruments can be made from bamboo, such as; angklung, *calung*, flute, and so on, which in the end happened to change some instruments with different materials from the original.

Related to musical instruments, precisely gamelan made from bamboo with bold Sundanese culture has even become the nation's property rights. One of them is angklung as said by Cundaningsih N et al. as follows [2].

Angklung is a Sundanese traditional musical instrument that very popular both in its own country and abroad. Even this musical instrument has been registered as the Masterpieces of the Oral and Intangible Heritage of Humanity by UNESCO. The uniqueness of angklung aside from how to play it, the type of raw material (bamboo) that is used also has special characteristics. The main raw materials include black bamboo (*Gigantochloa Av*).

Black bamboo or *Bambu Wulung* (*Gigantochloa atroviolaceae*) as the main material in making angklung is not simply chosen when it is not unique as an ingredient capable of producing sound sources of pitch and is quite different from other types of bamboo in its use.

Cundaningsih N et al. in the same source that the area of West Java which is overgrown with black bamboo trees is not necessarily suitable for making angklung [2]. More details in the same source Cundaningsih explained as follows [2].

Black bamboo gardens supply angklung raw materials, including Cibitung Village (Sukabumi, SDR 42%) and Karangwangi Village (Cianjur, SDR 34.30%). The black bamboo garden located in Koreak Village (Kuningan, SDR 23.06%) has quite a lot of black bamboo potential but there is not much demand for black bamboo raw materials especially for angklung, all the bamboo in the village is used as raw material for household furniture. Whereas black bamboo from the Sumedang area is not used as a raw material for angklung because the characteristics of bamboo with large diameter and high water content are not suitable for use as angklung raw materials.

III. Method

The research article focused on the technique of playing the *saléndro gamelan* instrument with a black bamboo resonator as a whole using a qualitative approach with descriptive methods. The research data was obtained through field research with data collection techniques, through activities; direct observation, documentation, literature review and interview with guest speaker Mr. Pipin Priatna (49 years old) as an art teacher at Lembang 2 Junior High School, West Bandung regency [3].

The research procedure is carried out by stages; data collection on research subjects was carried out by daily recording during the study, from July 14th to August 30th, 2018. Data were obtained using collection instruments in the form of guidelines; observation, unstructured interviews, and photo documentation.

Data processing is done by categorizing field data in the form of descriptions of research results, labeling, and photo documentation, which are then analyzed with relevant theoretical sources. Finally, the results of the research data are compiled into a holistic description of the technique of playing the *saléndro* gamelan instrument with a black bamboo resonator.

Data validation related to the results of the research was carried out by triangulation method [4,5].

IV. Results and Discussion

To understand the technique of playing *Sundanese* gamelan with a black bamboo resonator, it can be expressed as follows:

(1) Introduction to *Sundanese* gamelan / gamelan instruments with a black bamboo resonator; (2) Understanding the characteristics of the *Sundanese* gamelan instrument with a black bamboo resonator, (3) Understanding the technique of playing a *Sundanese* gamelan instrument with a black bamboo resonator.

The technical stage outline of playing the *saléndro* gamelan instrument with a black bamboo resonator can be mapped in the following chart.

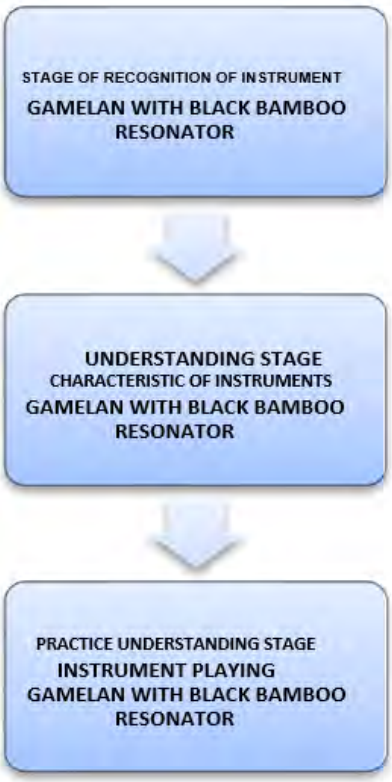

Fig. 1. Stages of playing techniques gamelan instruments made of black bamboo resonators.

A. *Waditra / Instrument*

Gamelan instruments with black bamboo resonators basically have the same tone and barrel function as gamelan instruments. That includes several musical instruments or partnerships, including: *saron 1, saron 2, bonang, rincik, panerus, demung, selentem, kenong / jengklong, kendang* and *goong*

The gamelan instruments mentioned above are adapted to the functions of each instrument in a melodic manner that refers to Sundanese music rules in general.

Basically the *saléndro* gamelan instrument with a black bamboo resonator made by Mr. Pipin Priatna consists of five bamboo gamelan instruments with tunings and instrument functions according to the song we want [3].

Saléndro gamelan with black bamboo resonator according to the informant's statement, Mr. Pipin Priatna through interview (July 14, 2018) explains as follows. Resonator tube from the shortest to the longest: 16 cm, 18 cm, 20 cm, 24 cm, 28 cm for five instruments. (a) Length of accessories (9 cm instrument handle part (b) Resonator tube thickness averaging 5 mm [3].

Saléndro gamelan instrument with black bamboo resonator, not only uses bamboo material but uses plate material as a finger lighter in the form of tone keys.

For information on the tone keys, Mr. Priatna through the interview at the same time explains the following [3].

Bar of tones; (a) The length of the short to the longest keys ranges from 6-8 cm. (b) The number of keys for each instrument ranges from 5-8 blades. (c) Thickness of the pitch of an average 0.5 mm. (d) The average pitch width is 0.5 cm.

This is pictures of five *saléndro gamelan* instruments with black bamboo resonators.

Fig. 2. Instrument of Gamelan *Saléndro* (Sunda) with black bamboo resonator [3].

B. *Characteristics of Waditra / Instrument*

Playing the *Sundanese* gamelan instrument with a black bamboo resonator has differences and similarities compared to pounding *Sundanese* gamelan instruments in general, with materials made of metal; iron, brass or bronze.

The similarity of the playing technique lies in the player / drummer / *wiyaga* all of whom must remain guided by the arch (song frame), the melody of the song, *kenongan* and *gongan* according to the rules of music in general.

The sound character of the Sundanese gamelan instrument is made of black bamboo if the way to play it using the tip of the thumb without nails or just using the flesh part will cause a smooth voice character. On the contrary, in the technique of playing it using nails in the left and right thumbs, it produces a louder or slightly loud sound character.

Students must know and understand the roles and functions of each instrument or partnership. Each instrument or gamelan has a different role by playing Sundanese gamelan instruments. Similarly, in accompanying songs, the learners must memorize

the song framework (*arkuh* song) that will be played so that it is in harmony with the song that will be performed. Playing each instrument will be heard when the way to carry different melodies. But of all the games in general the students must refer to the song framework (*arkuh* song) that has been selected or determined.

C. Playing Technique

The technical phase of playing the *Saléndro* gamelan instrument can be said to be a syntax and steps in the provision of overall teaching material to the learner. The learner will indirectly understand what should be known and be done through steps in the practice of playing the *saléndro* gamelan instrument with a black bamboo resonator that will be taken.

Playing the *waditra* / Sundanese gamelan instrument with a black bamboo resonator has its own peculiarities, which is located in the event of playing it using the thumb of the left hand and right hand. The use of thumb, a learner can have two ways to play it, as follows:

- Using the tip of the nail, on both the right and left fingers that will produce a strong sound to make it sound loud.
- Using both right and left fingertips, do not use the tip of the nail, but use the flesh part of the left and right fingers that will produce a soft sound color.

The technical stages of playing Sundanese *Gamelan* instruments with black bamboo resonators are as follows:

- The gesture of the body, the body posture of a person who will play a gamelan instrument can be done with a sitting position or done in a standing position,
- Instruments or gamelan instruments made from black bamboo are held or placed in the lap of our body parts. Both the left and right palms of the ends of the segment are exactly at the end of the steel plate as a lighter to produce tones on each instrument or musical instrument.
- The position of the left and right thumbs above the segment leads to the tip of the steel plate as a lighter to produce tone for each musical instrument or instrument.
- The left and right fingers are moved by picking at the end of the steel plate as a tone-producing lighter.
- The tone picked or played is adjusted according to the instrument played by each learner or *wiyaga*. Likewise in accompanying songs according to Sundanese gamelan instruments in general,

The difference lies in the wasp technique just by picking with an example on the song framework or the song "*Gendu* Song" in the following figure 3.

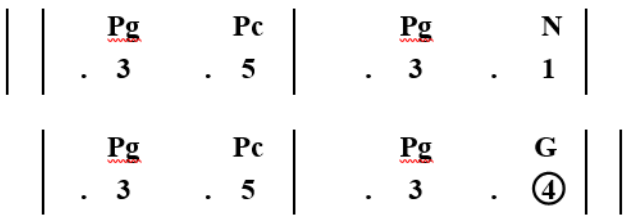

Fig. 3. Song rramework *"Gendu"*.

The learners in playing the *Sundanese* gamelan instrument with the black bamboo resonator still follow the song framework or *arkuh* song above according to the *karawitan* rules including the melody of the song adapted to the function of each instrument.

Following these are picture of the position of the finger in the technique of playing the *saléndro gamelan* instrument with a black bamboo resonator.

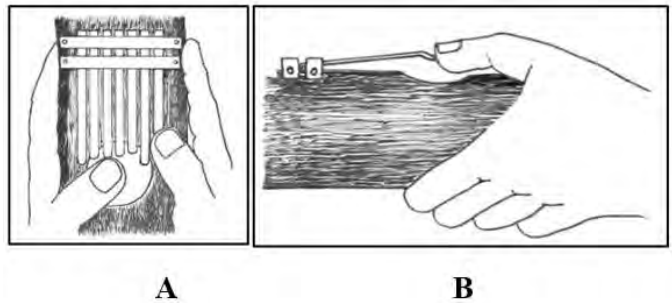

Fig. 4. Finger position of the hand playing technique gamelan *Saléndro* instrument made of black bamboo resonators (A) Front Direction, (B) Side Direction (sketch by: Farid Abdullah, 2018).

V. Conclusion

The technique of playing *Sundanese* gamelan instruments made from black bamboo resonator, the prototype of the *Saléndro gamelan* instrument made by Mr. Pipin Priatna is a technique of playing Sundanese gamelan instruments / instruments by being plucked using the fingers and thumbs of the inside (part of the meat) with a steel plate that functions as the halves of pentatonic tones [3].

Respect for the attitude that has been exemplified by Mr. Pipin Priatna and several artists who have attempted to develop Sundanese gamelan instruments with black bamboo resonators with a variety of playing techniques provide their own innovations in developing gamelan instruments that can be used for the performance and learning of students in the eyes of traditional music playing gamelan [3].

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