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The Effect of Using *Sapek* Virtual Studio Technology Plugin and It's Impact on the Existence of Traditional *Sapek* Activists

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Abstrack
Sapek VSTi is an innovation to develop traditional musical instruments in digital form that can be used to make musical works. There is no need for the original Sapek musical instrument in the creation process. Only controlled with a Digital Audio Workstation (DAW). This is evidence of a concern because Sapek activists are no longer needed in making musical works. This study describes the efficiency and sound quality of the Sapek VSTi and their impact on the Sapek art activists. The type of research used is descriptive analysis and uses an ethnomusicological approach. Data collection techniques with observation, interviews, and documentation. Data analysis through the stages of reduction, presentation, and conclusion. The results of the study found that the Sapek musical instrument in the form of VSTi (Virtual Studio Technology Instrument) could not replace the original musical instrument in performing arts performances, either solo or as a dance accompaniment. This did not significantly impact Sapek art activists but has benefits for Sapek art activists. Sapek VSTi can help make temporary arrangements before recording using original Sapek musical instruments. Sapek VSTi participates in preserving Sapek musical instruments globally, which impacts ordering services for original Sapek musical instruments, making it easier for audio engineers in recorded music if they do not have the original Sapek musical instrument. For the scope of education, Sapek VSTi can be used as a learning medium to introduce sapek musical instruments to students.

Keywords: Sapek, VSTi, Sapek Activist

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INTRODUCTION

One of the traditional Dayak musical instruments in Kalimantan is the Sapek musical instrument. Sape' is an instrument from the Dayak tribe in East Kalimantan (Kurniasaid & Supriono, 2018). Sapek also means a stringed instrument shaped like a boat or canoe, but with a smaller size. In the past, Sapek music could only be played by men and played individually or individually (Haryanto 2015: 134). Due to the advancement of the times, the shape of the sapek musical instrument has changed with the addition of several mechanical tunings and preamps as loudspeakers that are usually used on guitars. Organologically, the sapek instrument is a type of chordophone instrument in the form of a sapek, including a chordophone instrument shaped like a paddle. "The types of wood that have become a hereditary tradition for making Sape' are *lemle wood, arro wood, meraang wood, and cempedak* or *nyireh wood*, which are commonly found in forest areas in Kalimantan (Hartanto et al., 2021). However, lately, many other types of wood have been used to make sapek, such as jackfruit wood, *sana keeling*, *pule*, etc. The wood material is used because it has been tested for durability, is lighter, does not break easily, and has good acoustic quality. The size of the sapek varies, from the length of 120 cm - 150 cm, the width of the lower end of 20 cm to 28 cm, and the thickness of 10 cm - 15 cm. In the mention, the researchers found differences in terms between one region and another, such as sapek, saviek, Sambe, sambe, and possibly other terms that have never been found.

VST (Virtual Studio Technology) is a software plugin that simulates various types of hardware for audio production, such as compressors, equalizers, and amplifiers (Sani & Ramadhani, 2019). VSTi (Virtual Studio Technology Instrument), better known as a software synthesizer, is a hardware synthesizer development that was quite popular in the 80-90s. Steinberg first announced Plugin Technology (VST) in 1996. Anyone who made digital music before 1996 has used a DAW (Digital Audio Workstation) to control keyboards and samplers via MIDI and then route all of their external hardware through a computer (Tanev & Bozinovski, 2014). Virtual Studio Technology is a tool to integrate sample and audio effects plugins with DAWs. Simple is a way to get all hardware instruments like piano, guitar, and drums into music software like Cubase, FL Studio, or Logic Pro (Getahun et al., 2018). VSTi virtualizes not only modern musical instruments such as drums, piano, and guitar but also traditional musical instruments VSTi. Traditional musical instrument sounds can be recorded, processed into sound samples, and processed in a Virtual Studio (Julia et al., 2019). The main task of this VSTi is as a sound generator / sound bank that is sounded through MIDI language commands.

MIDI stands for Musical Instrument Digital Interface. MIDI can be interpreted as a communication protocol created to connect musical instruments digitally to computers and vice versa to communicate with one another. The most common computer music standard today is MIDI. As long as the standards are met, electronic musical instruments produced by different manufacturers can connect, send and receive digitally encoded music messages with each other (Liu et al., 2018). At this time, many art activists in the field of music are using digital recordings. Recording digitally or using VST also benefits activists and artists alike. The Internet and digital technology have continuously driven music companies to develop new business models.

Following this trend, several new media environments influence the nature and intensity of music distribution (Arbatani et al., 2018).

The ease of doing digital recordings and producing works without requiring expensive costs, especially for beginners, is beneficial in documenting and promoting their creations efficiently. Especially with the development of Internet at home and abroad in recent years, the spread of data is more and more rapid and

extensive. Many Internet companies at home and abroad provide online digital music services, such as Netease Cloud Music, Xiami Music, and LastFM (Zhang, 2021). Design creation in digital music is also made similar to the original musical instrument. Design and content features in digital music demand the convergence of technology, social entertainment, and user-experience learning and are influenced by external spatial and cultural influences. Finally, policy implications and recommendations incorporate industry boundaries, reduce regulation and bureaucracy, and facilitate the market transfer. Technology (Castro et al., 2016). However, it should also be seen that the ease of digital recording can eliminate the existence of traditional musical instruments so that artists or musicians are less needed to record.

Traditional music activists have done many digital recordings using VSTi. Several traditional musical instruments have been converted into VSTi form, one of which is the Sapek musical instrument. Virtual Instrument Technology Instrument sapek or Sapek VSTi is a work of digitizing musical instruments, especially in this discussion, namely the traditional musical instrument sapek made by Agus Hardiman. Based on an interview with Agus Hardiman, he said that in the world of music production, many outsiders had made samples of Indonesian musical instruments, such as the Balinese gamelan. He was forced to buy the sampling because he was in need. This also prompted him to decide to make VSTi Indonesia, including one of the Sapek VSTi.

Sapek VSTi is an innovation in the music industry. Many innovations have sprung up in the cultivation of musical works that arise due to several factors, such as making music requires expensive costs, both in making film music illustrations and popular music recordings (Antonius, 2013). In addition, several musical instruments and players are needed to make a piece of music. Sapek VSTi has been widely used in the recording process; in the recording process, it no longer uses Sapek musical instruments. It only needs to use Sapek VSTi, which DAW controls. Music digitization does not require a lot of human resources in the cultivation process. Time in the MIDI process is also more effective and efficient (Fitriani & Saepudin, 2022). This is evidence of a concern because musicians or sapek players are no longer needed to record, and their musical ensembles are no longer used. Based on the above background, the researcher is interested in conducting a research entitled: "The Use of Virtual Studio Technology Instrument Sapek Plugin and it is Impact on the Existence of Traditional Sapek Activists."

METHODS

The method used in this research is descriptive. The researcher uses a descriptive method to describe the situation in the field following the existing reality. When the research is carried out systematically, factual, and accurately regarding the existing facts and analyzing them. Best in Mutiara (2009:29) explained that the descriptive method is a research method that seeks to describe and interpret objects as they are. This research is used to make an objective picture of various data in writing and orally observed. The form of research used in this study is qualitative. The researcher uses this form of research because it is a data presentation, analysis steps, and conclusions. This research is presented in the form of sentences, descriptions, or the form of statements related to the object of research. The research approach used in this study is ethnomusicological. According to Mantle in Siagian (1992:68)

Ethnomusicology is a branch of science that has the object of investigating the art of music as a physical, psychological, aesthetic, and cultural phenomenon. Ethnomusicology is an umbrella discipline for several other disciplines such as Musicology, Organology, and Anthropology. The primary data sources that the researchers got were from traditional

music audio engineers and sapek players who already have more than ten works and have a minimum of 10,000 followers on social media, so the data sources obtained are more accurate and make it easier for researchers to make observations in the field. The data obtained in this study are data regarding all aspects of the Sapek VSTi and the Sapek musical instruments through the speeches delivered by the relevant informants regarding the review of the impact of the Sapek VSTi in 4 aspects, namely musical aspects, instrument aspects, supporting aspects, and functional aspects. To study the Sapek VSTi, researchers used several techniques and data collection tools. The techniques that the researchers used were Observation Techniques (observing the use of Sapek VSTi), interviews (conducting questions and answers to informants about Sapek VSTi and Sapek musical instruments), and documentation techniques (documenting things related to the object of research in the form of photos, videos and track record of performers of sapek art).

The data collection tools used in this study were the researchers who functioned as planners, implementers, data collectors, data analyzers, and data interpreters. Furthermore, researchers also extended observations and triangulated data on data obtained in the field. This is done so that the data obtained from the source is genuinely valid and there is no misunderstanding between the researcher and the resource person. From the results of the extension of observations and triangulation of the data, researchers can analyze and conclude from the results obtained.

RESULTS AND DISCUSSION

In this discussion, we answer the problems related to the use of the Sapek VST instrument and the impact of the Sapek VST on the existence of Sapek activists. An effort so that this problem can be answered or explained more completely and broadly. So, regarding the thoughts on answers and problems related to the use of the Sapek VST instrument and the impact of the Sapek VST on the existence of Sapek activists, it is appropriate to present it to the general public, answered in this discussion.

Figure 1. Sapek VSTi

The Use of Sapek VSTi

The use of the Sapek VST found by researchers in the music production process carried out by a sound engineer and the VST maker, namely Agus Hardiman, covers the differences between the Sapek VST and the original musical instrument in the production process focused on efficiency and sound quality.

The efficiency of Using Sapek VSTi

The efficiency of using Sapek VSTi in music production maximizes the results of a job with few resources in the form of funds, effort, or time. Judging from this understanding, the fewer resources or funds used in a business or music production process, the more efficient it will be. Virtual Instrument Technology or Sapek VSTi is a work of digitizing musical instruments, especially in this discussion, namely the sapek traditional musical instrument made by Agus Hardiman. Based on an interview with Agus Hardiman, he said that in the world of music production, many outsiders had made samples of Indonesian musical instruments, such as the Balinese gamelan. He was forced to buy the sampling because he was in need. This also prompted him to make VSTi Indonesia, including Sapek VSTi, which can be used for free by people in various countries. The new

discovery factor is the result of a new idea which is the sequence of the creation of individuals in society which is standardized on certain goals and desires (Apriadi & Wadiyo, 2018).

Figure 2. Trials of Sapek VSTi

The results found by the researchers based on the results of interviews and observations with sound engineers who have used Sapek VSTi in the context of efficiency, namely: 1) Leaving much space in the recording studio Sapek VSTi is undoubtedly an innovation in digitizing musical instruments in the form of applications that can only be accessed and used through a computer that makes it easier for audio engineers to produce a piece of music because there is no need for a particular room to store original sapek musical instruments, of course, this makes the space more spacious in the studio. 2) Saving production costs The price of sapek musical instruments sold in the market when viewed from online shops such as *Tokopedia* and *Shopee* ranges from Rp. 1,500,000, while the price sold by the Sapek musical instrument craftsmen also ranges from Rp. 1,800,000, of course, if using VSTi, it does not need to pay anything. During the take/recording process, if using the services of a sapek player, of course, incur a fee to pay for his services. 3) Saving Production Time Creating music independently is also known as independent music recording production (home recording). The development of independent music recording production is much more advanced with the development of recording technology and information technology. These technological developments influenced the independent production of recorded music. Technology advancements have affected the music recording industry's production, distribution, and consumption processes. This makes it easier and benefits musicians who are on an independent path. The pre-financing of record productions is still a domain of the record labels, nevertheless, new ways of financing such as crowdfunding allow artists to act independently from labels and other intermediaries (Tschmuck, 2016). The process of recording and distributing the results of their musical works is cheaper by utilizing existing social media. The arrangement process is usually done independently. Of course, the sound engineer can only play a midi controller that can play various instruments such as drums, bass guitar, and traditional musical instruments. In the process of entering ethnic elements such as sapek musical instruments, of course, the services of a sapek player must listen to the song material made by the arranger to the sapek player as a whole and usually takes 2 to 3 days for the listening process only. When taking/recording in the studio, it is sure that there will be strumming errors in the game, which makes this take/record process to be repeated until it is as perfect as possible according to the tempo and beat of the demo song. In contrast to this VSTi technology does not require a real sapek player because only by drawing a midi in a DAW (Digital Audio Workstation) can you get detailed and perfect music sound and can be easily edited and updated. This, of course, dramatically reduces the production time, which initially took weeks to be completed in just one day.

Sound Quality Produced by VST Sapek

MIDI can process several sounds into one software, including the types of instruments that can be produced and provided by digital music devices, or combine several or all instruments into one application so that sound efficiency can be produced

properly. Managed monitoring and clarity of sound quality can be obtained in the creation and editing. The results found by the researchers are based on interviews and observations with three sound engineers who have used Sapek VSTi in audio quality. 1). Sound Design, Sound design on the VST Sapek instrument relies more on the knobs that have been provided, namely attack, sustain, release and reverb. The sound was further enriched by an electro-mechanical spring reverb device (Werner & Abel, 2016). Even so, the Sapek VSTi can already add effects with presets outside the Sapek VSTi itself so that it can be adjusted to the sound character desired by the sound engineer. The sound character of the Sapek VSTi is also produced from the recording process of the original Sape music instrument, which has been digitized so that it slightly changes the actual Sapek sound quality. The half-tones or chromatics feel robotic because the tones are made through digitization, and the actual chromatic tones do not exist in the original sapek, so the resulting sound is not good. 2). Finger Character, The fingering character in the original sapek game is very diverse. However, in VSTi, there are still many fingering techniques that cannot be played through this VSTi, so in the mixing process, it does not feel that this is the character of a sapek musical instrument. 3). Mixing Mastering The mixing process is carried out by routing the production process using Daw Studio One, then proceeding with the balancing process on the mixer on the Daw. Mixing is the activity of reducing numerous audio tracks to a stereo mix, manipulating volume, panning and several other parameters of each track (Gelineck, et al. 2013). After the balancing process is complete, audio effects such as equalizer, compressor, delay, and reverb are given. When mixing audio, engineers have difficulty entering audio effects such as equalizer, compressor, delay, and reverb because even though they are mixed in such a way, they still produce a robotic sound that is not like the original musical instrument. The last process is mastering. The essential and perhaps the most important purpose of the mastering process throughout its existence has been to ensure that the musical product translates into various reproduction systems and that the product is distributed in formats compatible with various media and technologies (Ojanen, 2015). Mastering helps add effects to the overall music. However, it will not change the color of the sound on any of the instruments, so even mastering the character of Sapek VSTi still seems robotic. VSTi performed on VST Izotope Ozone by setting equalizer at 20Hz and 15Khz, dynamics, and maximizer as needed.

Impact on Sapek Art Activists

The researcher divides this description into four aspects: the musical aspect, the instrument aspect, the supporting aspect, and the functional aspect. In the second formulation of the problem, the impact of VST on Sapek art activists is obtained through interviews with Sapek players and artisans or makers of Sapek traditional musical instruments.

Musical Aspect

Talking about the musical aspect, Sapek is one of the traditional Dayak musical instruments with hemitonic and anhemitonic scales or is a musical instrument with only five notes. In VSTi, the tone range is not limited to just 5 tones. However, it has 17 scales, meaning that the notes on the VSTi exceed the scales on the original musical instrument, so more scales are made not through recordings but digitalization conversion and changing the sound color. Playing the original Sapek musical instrument that cannot be applied to the Sapek VSTi creates limitations when making the work, so this Sapek VSTi can only be used for temporary recordings.

Instrument Aspect

Organologically, the sapek instrument is a type of chordophone instrument. sapek is a type of chordophone instrument that is shaped

like a paddle. The ingredients for making sapek are *aro* or *adau wood* (*Cephalomappa*), *Marong wood*, and *Pelantan wood* which are commonly found in forest areas in Kalimantan. Based on the interviews with the makers of the sapek musical instrument, the type of wood used determines the character of the different sounds. For example, aro wood with dense fibers produces a more terrible or high sound, suitable for sapek playing with high scales. In this Sapek VSTi, the character of the sapek is more middle and less shrill, so it is not suitable for music production. The existence of this VSTi, according to the Sapek maker, is very beneficial for him because since the existence of this Sapek VSTi musical instrument is better known by sound engineers who have tried this Sapek VSTi but are not satisfied with the character of the sound, so there are several orders from them to make the original Sapek musical instrument with more treble or high character.

Supporting Aspect

Sapek, in the past, was played by a man, so it was rare to find female sapek players at that time. Some people think that women who play sapek will be cursed by the gods so that their breasts will lengthen or they will become men. However, at this time, many women play sapek. In this case, the culture will never be patented and will continue to develop according to the current situation, including the development of this Sapek VSTi. However, based on the results of interviews with sapek players, they accept the existence of this Sapek VST if it is only for the sake of music production, in the sense that it is not used for a live performance. Sapek player does not recommend Sapek VSTi for live performances. There has never been a music performance using this Sapek VSTi. In this case, the Sapek VSTi has no impact on gig offers or job invitations to fill a music show.

Function Aspect

This sapek musical instrument is played in various activities or traditional Dayak ceremonies, such as 1) Treating sick people, especially people who have abuh (unseen creatures). 2) Dance accompaniment when *ngayau*, accompanied by *daak karaang kayo* music. 3) Entertainment on gadgets and wedding events. 4) For the offering ceremony. 5) For the accompaniment of talima (ancient poems), and 6). Traditional ceremonies. *Traditional ceremonies* are inheritances from their ancestors and become traditions (Elu et al. 2018). Seeing the sacred function of sapek, even one of the informants (manda) said that on the head of the sapek, there is a supernatural spirit that is not visible; this spirit is what makes sapek players play sweetly, he said. Wayang (puphet), keris, batik, dance and music have religious traits and emit unseen power, because of that the arts in Indonesia are surrounded by rituals and complicated rules (Harriska & Florentinus, 2018). Of course, this Sapek VSTi cannot function as a substitute for original musical instruments, especially for traditional purposes, meaning that Sapek VSTi does not affect the existence of the original Sapek. Traditional arts that have experienced development will tend to always return to certain forms and gives the impression that it is always repeated, but it is full of values (pratama, et al. 2020)

CONCLUSION

Based on the results of the research that has been completed, it can be concluded that the sapek musical instrument in the form of a VSTi (Virtual Studio Technology Instrument) cannot replace the original musical instrument in performing arts performances, either solo or as a dance accompaniment, this does not have a negative impact. This is significant for the Sapek art activists but has benefits for Sapek art activists, including Sapek VSTi can help make temporary arrangements before recording using original Sapek musical instruments. Sapek VSTi participates in preserving Sapek musical instruments globally, which has an impact on ordering services for

Sapek musical instruments the original, making it easier for audio engineers to record music if they do not have an original sapek musical instrument. For the scope of education, Sapek VSTi can be used as a learning medium to introduce sapek musical instruments to students.

REFERENCES

Apriadi, S., & Wadiyo, W. (2018). The Musical Creativity of Senggol Tromol Semarang in The Context of Social Change. *Catharsis*, *7*(1), 62-69.

Arbatani, T. R., Asadi, H., & Omidi, A. (2018). Media innovations in digital music distribution: the case of Beeptunes. com. In Competitiveness in emerging markets (93-108). Springer, Cham.

Castro Soeiro, F., Santos, M., & Alves, J. (2016). Network-Based Innovation- The Case For Mobile Gaming And Digital Music. European Business Review, 28(2), 155–175.

Elu, A. R. A., Utomo, U., & Sunarto, S. (2019). The Function of Timorese Gong Music in The Tfua Ton Ritual Ceremony in Napan Kefamenanu Village. Catharsis, 8(2), 158-164.

Fitriani, T. S., & Saepudin, A. (2022). Midi Sebagai Inovasi dan Alternatif Musik Iringan Tari di Masa Pandemi. Melayu Arts and Performance Journal, 5(1), 85-96.

Gelineck, S., Büchert, M., & Andersen, J. (2013). Towards a more flexible and creative music mixing interface. In *CHI'13 Extended Abstracts on Human Factors in Computing Systems* (pp. 733-738).

Getahun, E., Behailu, A., & Tekeba M.(2018) Design And Implementation Of Virtual Studio Technology Instrument Plug-In For Kirar. Zede Journal, Vol (36) 41-53.

Harriska, H., & Florentinus, T. S. (2018). Senggayung Music in Gerai Village, Ketapang Regency: The Study of The Form and Cultural Identity. *Catharsis*, *7*(1), 34-42.

Hartanto, C. K., Darmawan, D. R., Manalu, C. R., & Lenny, A. (2021). Alat Musik Tradisional Di Masa Modern: Sape' Dayak Kayaan Dalam Kajian Nilai Budaya. Gondang. Vol (5) 182-192.

Haryanto. (2015) *Musik Suku Dayak.* Yogyakarta: Badan Penerbit ISI Yogyakarta.

Julia, J., Supriyadi, T., & Iswara, P. D. (2019). The Development Of Angklung Composition Teaching Materials Using Music Notation Software With Virtual Studio Technology Integration. Journal Of Physics: Conference Series, 1157, 042005.

Kurniasaid, G., & Supriyono, H. (2018). Aplikasi Pengenalan dan Simulasi Alat Musik Sape' Berbasis Android. Jurnal TIKomSIN, Vol (6) 42-47.

Liu, Q., Ba, S., Wu, L., Huang, J., & Li, H. (2018). Virtual Dulcimer Auxiliary Teaching System Based on Musical Instrument Digital Interface. 2018 International Symposium on Educational Technology (ISET).

Moleong, Lexy J. (2000). *Metode Penelitian Kualitatif*. Bandung: Remaja Rosdakarya.

Ojanen, M. (2015). Mastering Kurenniemi's Rules (2012): the role of the audio engineer in the mastering process. *Journal on the Art of Record Production*. Pratama, R. G., Hartono, H., & Triyanto, T. (2020). The Inheritance of Balo-Balo Art at the Cahaya Rembulan Musik Studio in Tegal City. *Catharsis*, *9*(3), 172-187.

Sani, M.B.Z. & Ramadhani, A.M. (2019). Pengembangan Alat Musik Panting Melalui Bentuk VSTi. Pelataran Seni, Vol (4) 49-57.

Siagian, R. (1992). *Etnomusikologi Definisi dan Perkembangannya*. Surakarta: Yayasan Masyarakat Musikologi Indonesia.

Silalahi, A. J. A. (2013). Keberadaan Software Musik Komputer Dalam Pembelajaran

Pembuatan Karya Musik Di Prodi Seni Musik Fakultas Bahasa Dan Seni Universitas Negeri Medan (Doctoral dissertation, UNIMED).

Tanev, G., & Bozinovski, A. (2014). Virtual Studio Technology inside Music Production. Advances in Intelligent Systems and Computing, 231–241.

Tschmuck, P. (2016). From record selling to cultural entrepreneurship: The music economy in the digital paradigm shift. In *Business innovation and disruption in the music industry* (pp. 13-32). Edward Elgar Publishing.

Werner, K., & Abel, J. (2016). Modal Processor Effects Inspired by Hammond Tonewheel Organs. Applied Sciences, 6(7), 185. Zhang, F. (2021). Research on Music Classification Technology Based on Deep Learning. *Security and Communication Networks*, *2021*.