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The Using of Cubase and Vegas Software in Virtual Choir Production

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ABSTRACT
Music is one of the sciences related to the concept of sound, either in the form of objects or sounds that arise from human intensity such as singing. Singing can be done independently or in groups, which are commonly called as choir. In today's era, the appreciation of the choir is quite good. One of them is by having festivals and competitions as well as carrying out activities such as concerts or performances. However, since the beginning of 2020, the world has been faced with the COVID-19 pandemic that affects all human activities in the world, one of which is the choir group. Many choir groups were forced to postpone and temporarily suspend all their activities and plans indefinitely due to conditions that did not allow them to practice face to face. This has also prompted choir practitioners and researchers to look for ways to keep choirs running during the pandemic. One way that is considered to achieve this goal is by conducting a virtual choir. The virtual choir production process involves several DAW (Digital Audio Workstation) software. In this case, the researcher was used the best practice method, namely sharing the experience of researchers in using Cubase software to edit the audio for higher quality and Vegas software to edit the videos so that the display is more attractive to see. Cubase and Vegas software is one of the options for producing virtual choirs so that the choir group or community can still exist and can carry out activities without meeting face to face.

Keywords: *Choir, Virtual Choir, Software, Cubase, Vegas.*

1. INTRODUCTION

Music is the wisdom of the scientific disciplines in society. Music patterns and types are characterized by the emergence of various cultural activities that refer to movements and sound concepts in the form of objects or sounds that arise from human intensity such as singing. Singing can be done independently or in groups, which are commonly called as choir.

According to Backer [1], a good choir is a choir that can sound harmonious and there is no one voice character that stands out. Sitompul [2] said that a choir can be said to be a group of people who sing together and consist of two or more types of voices and are led by a conductor. In the choir there are sound classifications, including soprano, alto, tenor, bass (SATB).

In today's era, the appreciation of the choir is quite good. However, since the beginning of 2020, the world has been faced with a COVID-19 pandemic that affects all human activities in the world, one of which is the choir group. The choir as one of the communities in society cannot be separated from the effects of the COVID-19 pandemic. Many choir groups were forced to postpone and temporarily suspend all their activities and plans indefinitely due to conditions that did not allow them to practice face to face. This has also prompted choir practitioners and researchers to find ways to keep the choir running during the pandemic. One way that is considered to achieve this goal is by conducting a virtual choir.

In the implementation of the virtual choir, the singers do not need to gather and meet face to face in one place. They can carry out the preparation to implementation process online through applications that allow for voice and video calls such as Zoom, Google Meet, and Microsoft Teams and others. In online practice, the choir members do not sing together, but each member will take turns doing the exercises individually with their coach. This is done so that each person's voice can be heard clearly because video

calling applications cannot support many people talking simultaneously at the same time.

After the material has been studied, singers can record and upload videos of themselves singing from their various locations. Individual videos are then combined and synced into a single show to create a virtual chorus. In addition, the appearance of the video is also edited so that the visuals are attractive and not monotonous so that the audience will not be bored when watching it.

In the process of editing video and audio, a DAW (Digital Audio Workstation) software is needed to support these activities. Bartlett [3] state DAW (Digital Audio Workstation) is music recording software that connects a computer with an audio interface or sound card. DAW (Digital Audio Workstation) is designed to replace the analog recording studio that uses tape, into digital form. Leider [4] also explains, Digital Audio Workstation (DAW) is a PC or Macintosh equipped with a sound card and software for editing and processing digital audio. There are various DAW software, including Cubase, Nuendo, Fruity Loops, Sibelius, Pro Tools, Vegas and many more media that are used to create or edit audio from singers.

Software is one of the important components in developing written form, as well as making it easier for composers to develop copyrighted music. Melwin [5] said that software is a device that functions as a regulator of computer work activities and all instructions that lead to a computer system. Roger [6] also said that what is meant by software or software is a program command in a computer, which when executed by the user will provide the function and performance as expected by the user. This statement illustrates that this software or software functions to give computer commands, so that the computer can function optimally, in accordance with the wishes of the user who gave the order. In this virtual choir process, researchers chose Cubase Pro 10 software to process the audio, and Vegas Pro 17 software to process the video.

2. METHODS

Based on the background of the problems that arise in research on the effectiveness of Cubase and Vegas software in virtual choir production, the researchers used the best practice method.

Apandi [7], said that best practice is the way of telling success stories or the best experiences of creativity and innovation of Educators and Education Personnel in overcoming the problems faced in improving the quality of education services in educational units so that they can achieve the expected result.

In this study, the emphasis is on the personal experience of researchers and resource persons who have competence in the use of Cubase and Vegas so that the data obtained will be more valid. The sample used for this research is the Student Choir of the Tarbiyah Faculty of Islamic National University Of Sultan Maulana Hasanuddin Banten with a song entitled "Mengheningkan Cipta" by Truno Prawit.

In this study, researchers also want to share experiences in making virtual choirs, as well as tell the problems that occur and how to overcome these problems, such as sending voice and video samples, as well as editing audio that is not pleasant to hear and video transitions to make it look more attractive.

Participants/subjects in the research are the parties selected based on the consideration of research needs. In this study, participants can also be referred to as resource persons, or informants. Bungin [8] states that what is meant by informants are "...subjects who understand the information on the object of research as actors and other people who understand research". Informants act as research subjects who are representative, have quality and accuracy in accordance with the characteristics of the research problem and the research method used. The subject of this research is the student choir of the Tarbiyah Faculty of UIN SMH Banten.

The data in this study were obtained from observations in the form of observation sheets, interviews, documentation and literature studies that were used to support the research process so that the final results could be categorized and analyzed based on existing theoretical studies. The data obtained are expected to provide various kinds of information that can be used as conclusions.

3. DISCUSSION

3.1. Making Audio Guide

Figure 1 Cubase view.

According to Prier [9], the conductor is someone whose job is to appear and act as a direct leader in the presentation of an orchestra or choir. One of the tasks is to give signs to the singers, whether it's a sign to start a song, dynamics, tempo, and stop time.

However, singing a virtual choir is not possible when using a conductor, because it is related to the stability of the connection and also the supporting devices of each singer, so there is often a delay in receiving images and sounds.

Therefore, to create a virtual choir, the researchers first made an audio guide that had been arranged and recorded using Cubase software (see figure 1). After that, the audio is sent to each singer's voice area via email, WhatsApp and others.

An audio guide is needed so that when the voice actors record their respective voices, the results will be the same as the other voice actors in terms of tone, phrases, and pronunciation of song sentences as well as the tempo of singing.

3.2. Audio and Video Collection

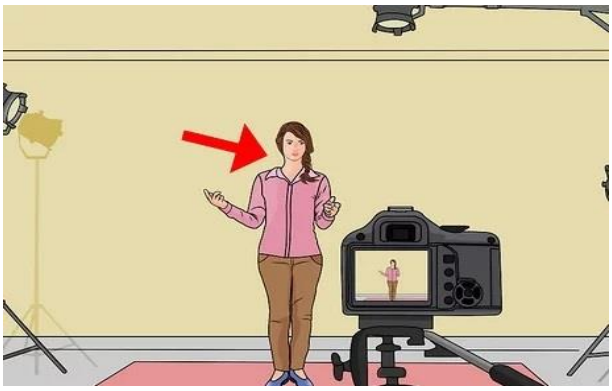

Figure 2 Video capture.

Singing together in a choir is a little different from singing solo or unison. Singing in the form of a choir cannot be separated from the essence of the choir itself, namely: "harmony between several types of voices". The explanation above explains that God created different colors of human voices, but in singing activities in a choir, one aspect that is required is the homogeneity of all choir members.

Many choir members individually have good singing skills and good voice quality, but if they appear in choir, for example in festivals, the scores they get are not as good as those obtained individually. Not infrequently this happens because of the lack of homogeneity in the choir. Chorus or homogeneity can be achieved only by practicing together, the same singing technique, the willingness of each member to be formed, persistence, and time.

After the researchers got the audio and video recordings from the voice actors, the researchers first converted the video into wav or mpeg3 audio so that the audio could be input into the Cubase software and could be edited and synchronized with other voice actors (see figure 2).

In editing the audio, the researcher first checked the results of the sound and synchronized it with other sounds. Then the researcher checked the results of the voice and the notation sung by the voice actors using the pitch wrap menu in Cubase. The goal is that the sound results can be harmonious with other sounds.

Cubase is a software product for writing and creating compositions based on Cinematic digital media. With various additional features in the form of Vst and Preset Sound, it makes it easier for composers to create new ideas and concepts in writing their ideas and creativity.

Arrangement is the adjustment of a musical composition with the voice number of a singer or other instrument based on an existing composition so that the essence of the music does not change. Cubase has existed in three main incarnations—began with Cubase, which featured MIDI only, and which was available on the Atari ST, Macintosh and Windows. After a short period with audio integration, the next version, Cubase VST, features fully integrated audio recording and mixing along with effects.

After all the sound results are in sync and harmonious, the researcher gives several effects to the sound, such as a noise gate to minimize room noise so that it sounds clear. A compressor is also needed to increase and decrease the sound level automatically so that it sounds more pleasant to the ear and does not cause hearing damage if there is an excessive frequency. The next effect is the equalizer. Equalizer serves to adjust the audio balance and the character of the vocal sound to suit the region of the sound. Then the use of reverb also serves to create or simulate a spatial dimension, as if all singers sound like they are in one room together, in fact they are singing individually in a certain room.

After giving effects, all sound results are balanced using the mixer in the Cubase application, then mastered to increase the overall sound volume to make it sound more balanced. After that it is exported into WAV format.

When the audio is finished being edited and exported into WAV form, the video results that have been obtained by researchers and audio in WAV format are input into the Vegas application, and synchronized with the edited audio to be in harmony. After synchronization, one by one the videos are cropped according to the frame the researcher wants and rendered into mp4 format for viewing.

4. CONCLUSIONS AND SUGGESTIONS

The COVID-19 pandemic is not an obstacle to work. With this virtual choir, choir groups can continue to exist in their work, be known and can be watched by

everyone online. In today's era, there are lots of software that can support our work, both in music and video making. Cubase and Vegas software is one of the options for producing virtual choirs so that the choir group or community can still exist and can carry out activities without meeting face to face.

Suggestions from researchers for making good quality virtual choirs especially in making sound recordings, it is better to use supporting devices, such as condenser mics, sound cards, and soundproof places so that the sound results can be maximized. Likewise, with audio and video editors, it is a must to learn and try the various features found in Cubase and Vegas software. And the laptop or PC used should use specifications that support the application so that the work process can be faster and more efficient.

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