Langgam : International Journal Of Social Science Education, Art and Culture
Volume 1 Issue 3 year of 2022
ISSN: 2828-1214

THE IMPLEMENTATION OF DIGITAL AUDIO WORKSTATION LEARNING IN DIGITAL MUSIC AT ART, DRAMA, DANCE, AND MUSIC STUDY PROGRAM OF UNIVERSITAS NEGERI PADANG

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***Abstract*: This study aimed to determine, describe and analyze the facilities and infrastructure for Digital Music lectures at the Art, Drama, Dance and Music Study Program of UNP, the use of DAW as the primary medium for learning Digital Music at the Art, Drama, Dance and Music Study Program, Universitas Negeri Padang, and the implementation of digital audio workstations in the Digital Music lectures of the Art, Drama, Dance and Music Study Program, Universitas Negeri Padang. This type of research was descriptive qualitative research. The main instrument in this study was the researcher himself and assisted by supporting instruments such as stationery, camera, memory card /flash disk, and mobile phone. This study's data sources were lecturers and students of the Art, Drama, Dance and Music Study Program, Universitas Negeri Padang. The informants of this research are lecturers in Digital Music lectures at the the Art, Drama, Dance and Music Study Program, Universitas Negeri Padang. Data collection techniques were carried out using library research, observation, and interviews. The steps to analyze the data were data collection, data reduction, data presentation, and concluding. The results showed inadequate facilities and infrastructure for digital music lectures. The facilities and infrastructure only use computers and soundcards in digital music lectures.**

Meanwhile, the facilities needed in digital music lectures are computers, soundcards, mixers, microphones, and midi controllers. The Sibelius, Nuendo, and fruity loop software were used in this lecture. However, students still expect the provision of software from the lecturer without trying to download the software. The implementation of the classes for this course went well. It was following the RPS used by the lecturer in charge of digital music courses, so the material provided was well conveyed. However, in implementing a *Digital Audio Workstation*, many students could not operate it properly, whether operating Sibelius, Nuendo, or *fruity loop*. As music academics, students should at least master notation writing and music editing to have skills in work after graduating from college.

***Keywords:* Implementation, Digital *audio w*orkstation, Music, Digital**

I. INTRODUCTION

Technology advances in the field of music are overgrowing. It cannot be denied because the role of technology for humans is vast, including in education. Technology develops rapidly and makes it easier for teachers and students to carry out the learning process [1]. Furthermore, technological developments make it easier for educators to innovate in delivering material to students. This innovation can be applied so that students are more enthusiastic in receiving the material to increase students' interest in learning. Learning media and supporting facilities in material delivery are diverse, especially for music art subjects, ranging from hardware (Computer/Laptop, LCD, Speaker/Amplifier, musical instrument) and Software.

The use of technology also helps in lectures at the Art, Drama, Dance and Music Study Program of UNP. It has become imperative for students to master technology in musical activities, composing music, and managing the sound system. It can be seen in its graduates who have set up music studios to express themselves in creating music. However, few students and alumni can still master technology in making or composing music.

The usage of Digital Audio Workstation software in digital music lectures has a significant

role. Therefore, DAW is a crucial element of Digital Music courses. If there is no the software, the class will not run as it should.

In Digital Music lectures at the the Art, Drama, Dance and Music Study Program, there is the application of software music-making, both music arrangement and music notation. The software first used is Sibelius. Sibelius is a software for making block notation in music. For example, making notation for the chorus. It will be easier for the arranger to create a series of harmonies. In Sibelius, some features can be selected in making music notation. The following Software next is fruit loop and Nuendo. Fruityloop and Nuendo are software usually used by music producers to create a musical composition or record songs, such as the songs we listen to at this time. Fruity loop and Nuendo software make it easier for a musician to express because they have full features needed in making music, be it plugins, channels, editing, or mixing mastering.

In the implementation of lectures, students only follow the learning process given during lecture hours for two credits. However, some students repeat and continue studying outside of class hours. Students who repeat outside class hours are earnest about learning digital audio workstations. Meanwhile, students who only take advantage of lecture hours have not demonstrated their ability to implement the digital audio workstation.

Digital Audio Workstation (DAW) replaces the function of analog audio/music recording equipment into the computer-based digital recording (Charles, 2008). As a result, using DAW in producing music works will be more effective and efficient. The recording process can be done quickly; editing, sequencing, mixing, and transferring audio recording projects between sound engineers is more practical and accessible. The cost of producing and distributing music can be more affordable.

In the initial observations of researchers in the field and interviews with lecturers in digital music courses, there are three Software digital audio workstations (DAW)used in Digital Music lectures: 1. Nuendo 2. Sibelius 3. Fruity Loop. The Software is used to make music, and the result is shaped form (midi).

Lecture support facilities and infrastructure are computers and lecture rooms. In lectures, students are still expected to bring their laptops. A laptop or computer is essential in Digital Music lectures. Meanwhile, the number of computers for lectures is not proportional to the number of students taking lectures on Digital Music. However, personal laptops brought by students may not necessarily be used in the lecture. It is because digital audio workstations require sufficient RAM and memory to run the program. In digital music lectures, the minimum facilities and infrastructure that must be present are computers, music software, microphones, soundcards, mixers, earphones, and other supporting tools. Digital music lectures in the music study program are mandatory subjects that students of the music study program must take.

The subject lecturers have carried out the implementation of digital music lectures well. It can be seen from the results of interviews with digital music lecturers who said that studies were carried out from the beginning to the end by teaching software knowledge, writing notation, to

mixing and mastering. In digital music RPS, the achievement of the lectures is that students can master writing notation music and editing music. However, many students have not been able to implement and master the digital audio workstation.

After interviews with lecturers in digital music courses, the researcher continued to interview several final year students who had gone through Digital Music lectures and students who took digital music courses. Researchers see the role of students. The result of their observation was that they have not mastered the use of digital audio workstations in making music compositions, so they still expect seniors and peers who master DAW to compose music if there is a task regarding music composition. This problem was seen when the researcher asked one of the students to make a standard musical composition (*talempong pacik*). As a result, the student concerned cannot do it. Then, when the researcher asked the student for music editing, the student was also unable to implement it. To achieve the material following the RPS applied in the Art, Drama, Dance, and Music Study Program, a basic understanding of digital music technology, especially Digital Audio Workstation (DAW), is needed. By knowing the initial function of the tools in the Digital Audio Workstation, students will be helped to use the Digital Audio Workstation.

II. METHOD

The type of this research was descriptive qualitative research. Qualitative research methods are often referred to as naturalistic research methods because the analysis is carried out in natural conditions (natural settings)[2]. The main instrument in this study was the researcher himself and assisted by supporting devices such as stationery, camera, memory card /flash disk, and mobile phone. This study's data sources were lecturers and students of the UNP Sendratasik Study Program. The informants of this research are lecturers in Digital Music lectures at the Art, Drama, Dance and Music Study Program. Data collection techniques were carried out using library research, observation, and interviews. Data analysis steps included data collection, reduction, presentation, and conclusion drawing.

III. RESULTS AND DISCUSSION

Results

1. **Digital Music Learning Facilities and Infrastructure at at the Art, Drama, Dance and Music Study Program, Universitas Negeri Padang.**

Digital music is a compulsory subject that must be taken by music concentration students in semester five. This lecture uses facilities and infrastructure, namely: one computer room, LCD as a presentation medium. It was also stated by a lecturer in Digital Music, namely Mr. Hengky Armez Hidayat, M.Sn. In his interview (Tuesday, October 5, 2021), he revealed seven units of computers in the Digital Music lecture room, one unit of LCD, one unit of the sound card, and eight units of tables and chairs. However, the study program will seek to procure the facilities and infrastructure needed in digital music learning to maximize learning. Mr. Firnando Sabetra, M.Pd also stated this. In the interviewe on October 12,

2021, he conveyed that the facilities and infrastructure to support lectures, especially at at the Art, Drama, Dance and Music Study Program UNP, the music concentration already consisted of 7 computers, one LCD, eight tables, and chairs, and a sound card. However, to maximize lectures, especially in digital music lectures, they seek facilities and infrastructure, especially in digital technology.

Facilities and infrastructure are essential elements for achieving learning quality. In learning Digital Music, a computer is needed as a medium to implement conducive learning. A DAW without a computer is just a meaningless application. Lecturers also remind students to procure media in laptops for lectures. So, each student must bring a laptop and have software used instructional digital music. It is so that students can repeat the material taught at home.

Based on an interview with Mr. Firnando Sabetra, M.Pd (October 13, 2021), the lecturer told students to download the software used in lectures on sites that provide the Software for free to save costs for students. The availability of free software is a good solution in courses so that students don't have to spend money to buy Software used in digital music learning. Students who take digital music lectures get the Software used for Digital Music lectures directly from the lecturer. It follows what was explained in the interview with Faras Hanafi as a Music Concentration Study Program student who took the music course. He stated that the lecturers gave the soft copy of the software used, and students were told to install it on their laptops. Tutorial on how to install it was shown earlier.

2. Digital Music Learning in the Ballet Study Program, Padang State University.

The planning carried out by the Digital Music lecturer at the at the Art, Drama, Dance and Music Study Program UNP must be following the syllabus or RPS.

Digital Music Learning in the at the Art, Drama, Dance and Music Study Program teaches two DAW points: Sibelius and Nuendo/fruity loop.

In Sibelius material, the lecturer gave Sibelius installation method and taught how to use it, starting from writing rhythm notation, melody, chord, and making compositions. Writing rhythm notation begins by providing knowledge about the functions of the *tools* in Sibelius, followed by how to make various kinds of rhythmic forms. After explaining the use, students made rhythm patterns and assessed the simple compositions. After the rhythm material, students were asked to compose a song using a well-composed melody and make a melody using the songs chosen by the students. After the melody material, the following material was the use or making of chords. After completing the three materials, the lecturer could see and evaluated the student's work. In the Nuendo/material fruity loop, the lecturer provided how to install Nuendo/fruity loop and taught how to use it, starting from making or arranging simple music, studying music editing, mixing and mastering, and explaining the operational performance of the Software. The implementation of Digital Music learning started from meeting one to meeting seven. Meeting eight was the mid-semester exam. The learning process was continued from meeting nine to meeting fifteen. In the meeting sixteenth, the student ability test was

carried out in a final semester exam. In an interview with Mr. Hengky Armez Hidayat, M.Sn (interview, Tuesday, October 26, 2021), it was known that the lectures were carried out according to the objectives and learning outcomes, namely writing rhythms, harmonizing melodies, mixing, mastering, and exporting from midi files to other software.

3. Implementing Digital Audio Workstations in Digital Music Learning at the Art, Drama, Dance, and Music Study Program, Universitas Negeri Padang

The performance of digital audio workstations in the lectures of the Digital Music at the Art, Drama, Dance and Music Study Program has been carried out quite seriously by the lecturers, both in terms of the availability of facilities, software, and materials being taught. With this, students have been equipped with many skills.

Students faced many obstacles in implementing Digital Music lectures, starting from facilities and operating the Digital Audio Workstation.

Based on interviews with Faras Hanafi, who attended Digital Music lectures, it was found that students followed the instructions given by the lecturer in learning. However, they were constrained by the existing facilities, so many students could not compose or write on Sibelius or Nuendo and fruity loops**.** Therefore, facilities and infrastructure are essential in implementing digital music lectures. In other cases, students also complained about sofytware introducing to the existing.

The software used in lectures is a media that must be included in Digital Music. The class will not run according to the learning objectives without the software. However, students did not understand the software used. Some students also did not know how to operate the *Software* used for the Digital Music lectures. As it was known from the interview with Faras Hanafi, they were not very familiar with the software used, and some of them still did not know how to use it. It maight be due to only two credits lectures or because it was difficult to understand its use.

The time available in this Digital Musicis is only two credits (50 minutes x 2). According to another student, that time was not enough for Digital Music lectures. Of course, this interfered with the operation of the software.

The operation of digital audio workstations in lectures was still not complete. From observations in the field, when the researcher asked questions, only one out of nine students who attended the class could use the Sibelius software. The results of interviews with the Digital Music lecture for the students in the Tuesday session at 15.00 WIB. First, they said there were 21 of the students, and now nine were present. Of these nine people, only Faras could operate Sibelius. Another reason was the busyness of students in other courses. In addition, they also said that they did not have a laptop to study it and repeat the lessons at home. It explained that the absence of a computer makes it difficult for students to learn or repeat the tasks that had been given because they could not process outside lecture sessions.

In Digital Music lectures, there were two meetings when students take semester exams or midterm exams. Of the several Art, Drama, Music, and Dance study program students who haa attended Digital Music lectures, many of them

were unable or do not understand the operation of Digital Audio Workstations with Sibelius, Nuendo, or Fruity Loops. Students said they used senior services for final exams or midterm exams to make music composition assignments given by lecturers who teach digital music course. The student said that for those who were not good at or don't understand Digital Music lectures, the asked seniors to make music compositions to collect assignments and got grades from the lecturers in charge of the course Digital Music.

It was detrimental to students both in terms of material and the quality of students' understanding of the operation of Digital Music.

Discussion

1. **Digital Music Learning Facilities and Infrastructure at the Art, Drama, Dance, and Music Study Program, Universitas Negeri Padang**

According to the *National Education Association* (NEA), media are objects that can be manipulated, heard, seen, read, and discussed with other instruments used in these activities [3]. In Digital Music, media is the infrastructure used for learning, where the facilities that must exist in lectures are computers, software, soundcards, microphones, and other electronic musical instruments.

Facilities and infrastructure are equipment and facilities directly used in the teaching and learning process, such as buildings, classrooms, chairs, tables, and teaching media. In addition, the educational facilities and infrastructure are facilities that indirectly support the teaching process, such as yards, school gardens, gardens, and roads leading to schools [4].

In learning Digital Music at the Art, Drama, Dance, and Music Study Program, Universitas Negeri Padang, the main facilities and critical infrastructure are computers. The computer is a medium so that the software used in Digital Music lectures can be installed. Because the software used can only be operated using the computer itself. From the specific objectives of the study, it was also explained that there were adequate facilities and infrastructure in Digital Music lectures, including one computer room consisting of seven computers, one LCD, one unit sound card, eight tables, and chairs. However, for 21 students in one meeting session, only seven computers were available. Thus, students who did not have computers operate computers one by two, even one in three. The lecturer also said that he would try to complete the computer so that students who did not have computers would use one computer per person. The facilities and infrastructure for digital music lectures were not adequate because these facilities and infrastructure only used computers and soundcards in digital music lectures. Meanwhile, what was needed in digital music lectures was a computer, soundcard, mixer, microphone, and midi controller.

The software used in Digital Music lectures was obtained from the lecturer that had previously been downloaded from a website that could be accessed for free. The lecturers' Software consisted of several types: Sibelius, Nuendo, and fruity loop. Students would find it easy to access it with technological advances even though the lecturer did not provide the downloaded file. However, most students expected the Software

supplied by lecturers without downloading it.

It can be concluded that the facilities and infrastructure for Digital Music lectures were not adequate because they only have seven computers which are not proportional to the number of students. As for the software used, lecturers got it from a website that could be accessed for free. The software used was Sibelius, Nuendo, and Fruity Loops. However, students still expected the provision of software from the lecturer without trying to download the software.

2. Implementing Digital Music Learning at the Art, Drama, Dance, and Music Study Program, Universitas Negeri Padang

Learning innovations carried out with the development of digital information technology utilize information technology facilities that are overgrowing in the era of the industrial revolution 4.0 to improve the quality of learning[5]. For example, one of the uses of information technology in education is learning Digital Music. Digital Music Learning introduces the software, using applications, editing, rotating, mixing, and mastering.

The implementation of Digital Music learning has the same time as other subjects, namely 16 meetings and a duration of two credits per meeting. At each session, the lecturer taught complete materials. It started from introducing computer technology, arranging and writing notation on a computer, installing the software used, making rhythmic notation, and making melodic notation with various introductory notes or different keys. Then, it was followed by writing chords on Sibelius, understanding and writing dynamic signs, expressions, and transposition processes. Finally, the lecture material was continued by making songs as a whole and combining material from the beginning of making rhythm to term, using Software Nuendo/fruity loop, mixing processes mastering, and editing.

In the implementation of Digital Music lectures, students were given all the knowledge. It was intended that students gain skills in increasingly advanced technology, which would be helpful in a music academy. As music academics, students will have the option of opening a music studio if they do not use their diploma in the future. The implementation of digital music lectures followed the RPS used by lecturers who taught digital music course. It effected the material provided is conveyed well.

3. Implementation of Digital Audio Workstation in Digital Music learning at the Art, Drama, Dance, and Music Study Program, Universitas Negeri Padang

An implementation is a general process of administrative action that can be investigated at a particular program level[6].

The implementation is an action taken either by individuals/officials, government, or private groups to achieve the goals outlined in the policy[7].

The definition of implementation explicitly includes actions by private and public individuals/groups that directly lead to achieving a continuous set of goals in pre-determined policy decisions[8]. Implementation relates to various activities directed at program realization[6]

Implementation means providing a means to implement a policy and can have an impact/effect

on something[9].

Based on the various opinions above, it can be seen that the notion of implementation is a process related to policies and programs that will be implemented by institutions, especially those related to higher education institutions such as ballet. The implementation also includes facilities and infrastructure to support the programs that will be run, such as the implementation of Digital Music or the application of digital audio workstations in digital music lectures.

From the observation of the implementation of Digital Audio Workstations, there were still many students who had not been able to operate Digital Audio Workstations, whether it was operating Sibelius, Nuendo, or Fruity Loops. However, as music academics, students should at least be able to master writing notation and editing music to have skills in work.

The taught software operation was only capable dominated by several students. Only one person could master Sibelius of the nine students, so they still used seniors' services to make their final assignments.

The final assignment given by the lecturer was in the form of a composition that students must create. Unfortunately, due to their inability to drive or operate the *Software*, students had to pay for services to collect assignments given by lecturers, be it mid-semester exam assignments or semester exams.

Students' absence of facilities and infrastructure makes a significant drawback in implementing lectures. It impacted the opportunity for students to repeat the learning that the lecturer had given during classes. So they could not process it optimally.

It can be concluded from the implementation of Digital Music lectures that there must be a process outside of class hours to understand the use of the software studied. Furthermore, due to the lack of facilities from the campus and the students themselves, the achievements for lectures so that students can use Digital Audio Workstations will not be maximized.

IV. CONCLUSION

Digital music lectures are supported by the facilities and infrastructure provided by the campus, namely seven computers, one LCD unit, one soundcard unit, eight decks, and chairs to carry out the learning process. Lecturers will also try to add facilities and infrastructure used for digital music learning to the Art, Drama, Dance, and Music Study Program. Meanwhile, to fulfill the completeness of facilities and infrastructure, students were encouraged to bring their laptops so that lectures can be carried out optimally.

The implementation of Digital Music learning has the same time as other subjects, namely 16 meetings and a duration of 2 credits for each session. At each meeting, the lecturer taught material ranging from introduction to computer technology, arranging and writing notation on a computer, installing the software used, making rhythmic notation, making melodic notation with various introductory notes or different keys, writing chords on Sibelius, understanding, and writing sign, dynamics, expression, and transposition processes. For example, the following material presented was how to compose a song as a whole and combine material from the

beginning of making rhythm to expression using Nuendo/fruity loop Software, namely the process of mixing, mastering, and editing.

In implementing the Digital Audio Workstation, many students did not understand and could not operate the software used in the Digital Music lecture. In addition, it resulted in students still asking seniors for help to complete the final task of music composition using the software being taught.

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