

Using The Sibelius-7 Application in The Harmoni-II Subject at IAKN Tarutung

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Abstract: This study aims to determine the use of the Sibelius-7 application in the Harmoni II subject at Institut Agama Kristen Negeri Tarutung (IAKN). This study uses qualitative research methods with qualitative descriptive types. Data collection techniques used are observation, interviews and documentation. The results showed that the use of the Sibelius-7 application as a learning medium was carried out at every meeting in the Harmoni II subject. The learning process at each meeting is carried out with the preparation stage, providing theory and training. At the preparation stage, the lecturer provides indicators of achievement for each theory given. The theory is given by the lecture method. In the practice stage, students use the Sibelius-7 application as a learning medium. The use of the Sibelius-7 application as a learning medium begins with the stage of opening the quick start feature, the add and remove instrument window appears, selects the bar, selects a key (clef), displays the keypad feature and the Sibelius-7 application worksheet is ready to use.

Keywords: instructions; paper format; use of template

Introduction

The development of information and communication technology is increasingly rapid, triggering effectiveness and efficiency in carrying out all activities, especially teaching and learning activities. Along with the development of technology, educators and students are increasingly easy to access various information, improve communication to support higher quality learning. The progress of education in a nation can be measured by the ability of teachers and students to master Information and Communication Technology. Technology in education is a system that is used to support learning so that the desired results are achieved (Lestari, 2018, p.96). The function of educational technology as a tutor, teaching tool and learning tool. Therefore, the world of education is required to provide updates in every learning process by utilizing technology (Lazar, 2015, p.111). The influence of technology encourages educational actors to provide more innovation in education.

Seeing the development of the learning process at this time, especially in music education, there are various obstacles in delivering music theory, one of which is the use of music technology and the use of technology to access information. The world of education must be able to use ICT-based learning. ICT-based learning (Information Communication Technology) is a learning system where the teaching and learning process is adjusted by utilizing information and communication technology which of subject can be used to make it easier for educators to distribute music theory to students (Admojo, 2022, p.184). The use of technology is no longer a foreign thing for students. Learning that involves the development of technology has become one of the attractions of the learning process for students. Technology is not something that is foreign to the younger generation because all activities carried out by generations have involved technology.

The development of educational technology certainly creates a variety of learning media. Learning media is a communication tool between the message source (a source) and the message recipient (a receiver) (Widiastuti, 2020, p.2). One of the learning media that is growing rapidly at this time is audio-visual learning media. In general, the notion of learning media is a means to convey information to students. The benefits of learning media are: (1) As a means to create an effective learning situation; (2) As a component that is interconnected with other components in

order to create a learning situation as expected; (3) Accelerating the learning process; (4) Improving the quality of the teaching and learning process; (5) Concrete abstract things so as to reduce the occurrence of verbalism (Nurseto, 2011, p.21-22).

The process of learning the art of music using media is one way to improve learning outcomes. Music computer-based learning media is a more appropriate option in terms of implementing learning media. Music computers are a medium that can help teachers solve problems effectively and become students' learning partners for independent study in various conditions (Yan, 2017, p.142). Music computer technology is one of the media and the music learning process through computer technology contributes to strategies in music teaching and learning activities (Widodo, 2016, p.121). Therefore, the presence of music technology is able to value effectiveness for both students and musicians.

In music technology, the development of music computers requires software as software to operate music programs. The development of this technology is marked by the emergence of applications for writing musical works such as the Sibelius-7 application, Musescore, Finale, Magicscore and so on. One of the software that is often used by musicians to write musical notation is the Sibelius-7 application. The Sibelius-7 application is a notary software that is classified in the Musical Notation Software (Magara, 2013, p.3). The Sibelius-7 application software is a strategic medium for musicians or music educators to compose and/or perform several music production activities, including learning media (Oktafian, 2020, p.155). This audio-visual software makes it easy to write notation. Complete features make it easy for users to write a piece of music, especially to make harmony. Besides the completeness of the musical elements, the Sibelius-7 application provides Sound which makes it easier for users to hear audio from the written music. The advantage of the Sibelius-7 application is that when the user writes several notations on the staff, at that time the user can also perform the playback feature to listen to the results of the notation.

Learning the art of music at the higher education level of subject must know about the science of harmony. Harmony in music is the study of the harmony of sounds in music with tones arranged vertically and horizontally (Kaestri, 2015, p.31). The Sibelius-7 application as a notation writing application can be used as a learning medium to maximize learning outcomes in harmony learning. Through the Sibelius-7 application, students can write down the notation while listening to the Sibelius-7 audio. The science of harmony serves to produce musical works, so that in exploring musical works, audio-visual assistance is needed.

One of the universities in North Sumatra that has a Music Education Study Program is Institut Agama Kristen Negeri Tarutung, especially the Ecclesiastical Music Education Study Program at the Faculty of Education. This study program has a Harmoni-II subject whose theory consists of scales, cadences, intervals, and the first reverse chord, the second reverse chord. The learning process carried out in the Harmoni II subject uses learning media, namely the Sibelius-7 application. The use of the Sibelius-7 application as a learning medium compared to other applications, are: (1) The initial appearance of the Sibelius-7 application is not complicated when compared to other music applications such as Muscore, Finale, notation 6 and so on; (2) Besides having a simple appearance, Sibelius-7 also has virtual instruments with real audio quality; (3) The result of the worksheet is made into Midi Format

The Sibelius-7 application is used as a virtual writing tool during learning and is used to write and implement theories in the Harmoni II subject. When using the Sibelius-7 application as a learning medium, there were various obstacles found such as the lack of computer/laptop facilities that support the successful use of the Sibelius-7 application, students' understanding is still minimal in operating the Sibelius-7 application and the lack of student references in operating the Sibelius-7 application. 7 as a learning medium in the Harmoni II subject. The learning process using the Sibelius-7 application is expected to make it easier for students to understand the theories in the Harmoni II subject and produce good learning outcomes for participants in the Harmoni II subject.

Learning is the result of the shopping process. Learning is a process or effort made by each individual to get changes in behavior both in knowledge, skills, attitudes and positive values as an

experience from various theorys that have been studied (Dzamaluddin, 2019, p.6). The learning process that has been carried out produces a learning. Learning is assistance provided by educators so that the process of acquiring knowledge and knowledge, mastery, skills and character as well as the formation of attitudes and beliefs can occur in students (Dzamaluddi, 2019, p.12).

In the learning process, the most important thing is the learning theory. Learning theory is everything that is given to students to achieve the educational goals that have been set (Sabaruddin, 2018, p.2). Learning theorys are substances that will be delivered in the learning process (Aprida, 2017, p.343). Without learning theorys, the teaching and learning process will not succeed. Learning theory (instructional theory) is the knowledge, skills, and attitudes that must be mastered by students in order to meet the competency standards set. Therefore, in the learning process educators must be able to explain learning theorys to students (Suroso, 2020, p.175). Learning theorys need to be chosen properly in order to help students achieve competency standards and basic competencies (Darwis 2017, p.344). Thus, learning theory is the core of learning that cannot be ignored because the theory is the core of learning. The theorys taught in the Harmoni-II subject are Intervals, Chords, 4-Voice Chords, Cadence and Inverted Chords first and second).

The learning process must follow technological developments. One of the impacts of technological developments in the field of education is the development of learning media. The learning process certainly requires media to maximize the learning process. Media is a form and channel used to convey messages and information (Arsyad, 2011, p.3). Learning media are everything both physical and technical in the learning process that can help teachers to simplify and deliver learning theorys to students so as to facilitate the achievement of learning objectives that have been formulated (Talizaro, 2018, p.112). The types of learning media according to (Arsyad, 2011, p.42): (1) Print technology media, is a way to produce or deliver theorys such as books and static visual theorys, especially through mechanical or photographic printing processes; (2) Audio-visual media is a method of delivering theory using mechanical and electronic machines to present audio and visual messages; (3) Computer-based media is a way of producing or delivering theory using-microprocessor-based sources.

The role of learning media serves as a tool in the learning process both inside and outside the classroom. Learning media is prepared to meet the learning needs and ability of students to adapt in the learning process. Learning media is something that can channel messages from sources in a planned way as an effort to create an effective and efficient learning process (Ilmawan, 2020, p.117). Learning media certainly has many benefits, including: (1) Learning media can clarify the presentation of messages and information so that they can facilitate and improve learning processes and outcomes; (2) Learning media can increase and direct children's attention so that it can lead to learning motivation, more direct interaction between students and the environment and the possibility of students to learn independently according to their abilities and interests; (3) learning media can overcome the limitations of the senses, space and time; (4) Learning media can provide students with a common experience about events in their environment and allow direct interaction with community and environmental teachers (Azhar Arsyad, 2011, p.26-27).

The factor of achieving learning outcomes is largely determined by the learning media. Therefore, the application of learning media must pay attention to practical values in the process of implementing the learning media. The practical values in the media are: (1) The media lays real foundations for thinking and reduces verbalism; (2) the media can increase interest and attention in learning; (3) the media is able to increase the interest and attention of students to learn; (4) Learning methods are more varied and not merely verbal communication (Wahid, 2018, p.3).

Learning media is an intermediary to convey information to students. Learning media can be either physical or technical. The application of learning media is expected to be able to improve student learning outcomes and increase student motivation to learn and the media is expected to stimulate students' thoughts, feelings, interests and attention to learning topics. Learning media has several types, namely print media, audio-visual media and computer media. Music computer-based learning media is one way that can improve music theory learning outcomes. Music computer-based media certainly requires software to operate music computer-based learning media. Such

software such as musescore, finale, Sibelius. Music computer-based learning media using Sibelius-7 software is one way to improve student learning outcomes.

The world of music today is experiencing very rapid development, especially in the field of technology. The development of music technology makes it easy for musicians, especially in the field of production. The influence of computer technology in music provides a development in the form, system, and processing function (Widodo, 2015, p.3). Technological developments in the field of music production cannot be separated from the role of applications that support music performers to work, one of which is the notater software sibelius-7. Sibelius-7 software is a software in the field of music writing which is devoted to writing notation in the form of musical notes (Magara, 2013, p.5). This software is used by music writers, arrangers, composers, and song publishers. Usually used in composing or editing classical, jazz, pop, band, and vocal music. Sibelius can edit scores and play the resulting songs before they are printed. In addition, musical notes can also be written without typing but by playing the piano or guitar contained in the program. The types of music that can be heard through the compositions of Sibelius-7 are stringed instruments, woodwind instruments, brass, percussion, guitar, piano, vocals, and others. Operating systems that can use this program are Microsoft Windows, Mac OS X, and RISC OS.

Some of the advantages of the Sibelius-7 Application are that it provides audio when writing notations, the ease of writing notations is supported by the simplicity of the initial display. This is presented so that users can write the notation properly and correctly. The Sibelius-7 application program has many features to support work as a musician, arranger, composer, and music teacher (Wibowo, 2018, p.192). The Sibelius-7 application can be used as a music theory learning media because this application provides several special features to meet learning needs. The features that can be used in the Sibelius-7 application that can be used as learning media include: (1) Worksheet Creator, this feature provides thousands of types of worksheets (worksheets), practice questions, posters, reminder cards (Flashcards) and theorys learning as a reference for learning music theory at all levels; (2) New Score Worksheet, this feature serves to create your own worksheet (Wibowo, 2018, p.168). To make your own worksheet, you must master the layout of the Sibelius-7 application. Sibelius-7 can be used as a learning media that is presented to improve students' music theory learning outcomes because this media provides convenience for notation writing and the introduction of various musical elements. Clarity in writing and supported by display and audio is assumed to be able to improve students' music theory learning outcomes.

Learning music must know the theory of music, especially the science of harmony in music. Harmony is a harmony of sound (Kaestri, 2015, p.161). Learning the science of harmony has theories such as scales, intervals, chords, cadence. The first reverse chord and the second reverse chord. The scale, formed a row of notes that have a certain distance, the row of notes is named the scale. Scales basically have two types of scales, namely Major scales and Minor scales. Each of these scales has a different tuning (distance). Major scales have distances: 1, 1, $\frac{1}{2}$, 1, 1, 1, $\frac{1}{2}$ and minor scales have distances: 1, $\frac{1}{2}$, 1, 1, $\frac{1}{2}$, 1, 1. Interval is one of the theories that must be mastered in Harmony. Interval in music is the distance between two notes (Banoe, 2003, p.48). A chord is a collection of three or more notes that are played simultaneously and sound harmonious (Widiastuti, 2019, p.45). Chords have distance values and can be defined according to the properties of the arrangement of the major and minor scales. Cadence is a pattern of harmony or movement of a series of chords that appears at the end of the final phrase / sentence of the song / the end of the song that functions as a comma or period in a language sentence (Widiastuti, 2019, p.101).

This research is a qualitative research with descriptive qualitative type. Data collection techniques using observation, interviews and documentation. The data analysis technique was carried out after the research data had been collected. Data analysis is an activity of organizing, compiling, grouping, coding and classifying to obtain findings based on the problem to be answered. According to (Gunawan, 2017, p.209).

Full papers should be up to 5000 words in length excluding abstract and references.

The Learning Process and Using the Sibelius-7 Application in the Harmoni II subject at Institut Agama Kristen Negeri Tarutung

Harmoni II Learning Sibelius-7 application is used as a learning medium. The Sibelius-7 application is used as a writing instrument for the Harmoni II subject and is used as a learning medium in the process of doing assignments for students, as well as a medium for lecturers to check the results of assignments given by students. by using the Sibelius-7 Software, the theory and the results of the assignment can be seen and heard through the play feature on Sibelius.

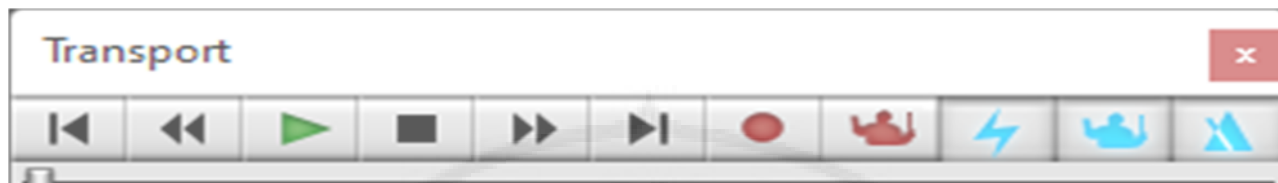


Figure 1 Transport feature for playback.

Theory about Harmoni II are given directly or face-to-face between lecturers and students, then the next meeting the task is carried out using the Sibelius-7 application. The following is a description of the use of the Sibelius-7 application at every meeting of the Harmoni II subject with a research time of 2 (two) months.

At the first meeting, Harmoni II learning was carried out face-to-face with Interval theory. The number of students who attended the initial meeting of data collection was 12 people. The first theory in the interval is the calculation of the interval distance. The learning process carried out is to write down the interval distance. Students are expected to be able to understand the concept of interval distance before trying exercises in the Sibelius-7 application. The theory is delivered using the lecture method, then students are required to start the practice of determining the interval distance in the Sibelius-7 application. The learning process is carried out in three stages, namely, Preparation, Providing theory and training using the Sibelius-7 application.

The preparation for learning begins with a prayer led by the participants of the Harmoni II subject. After the opening prayer, the subject lecturer gave directions about the theory to be delivered. At the preparation stage, the lecturer in the Harmoni II subject also gives an indicator of success.



Figure 2 Harmoni-II Subject Preparation

Implementation is carried out after the supervisor provides an indicator of the success of the theory, then the theory is given using the lecture method and the Sibelius-

7 application as a learning medium. The use of the Sibelius-7 application is used as a learning medium to help students work on the practice questions given. Here are the steps to create a work page on the Sibelius-7 application.

1. Selecting a Blank Score in the Quick Start Feature;

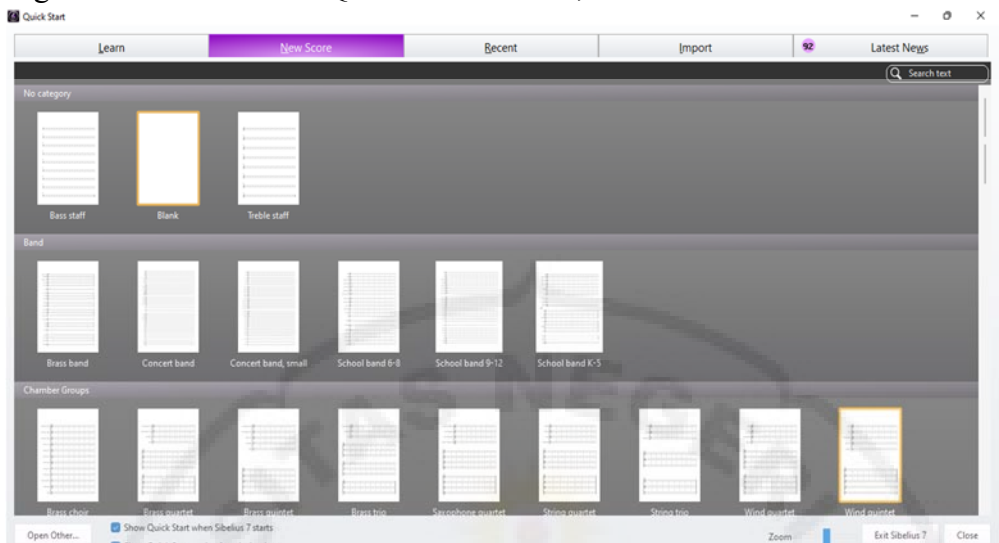


Figure 3 Quick Start Feature To Choose Score

2. Adding Instruments to the Worksheet;

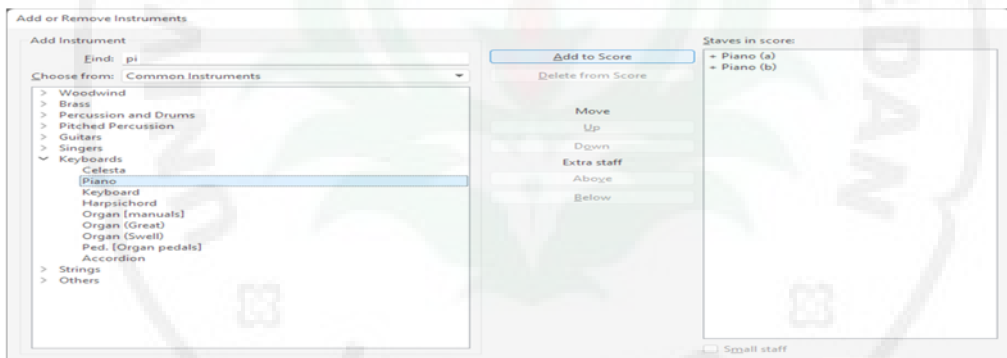


Figure 4 Features Add or Remove Instruments

3. Selecting the Time Signature

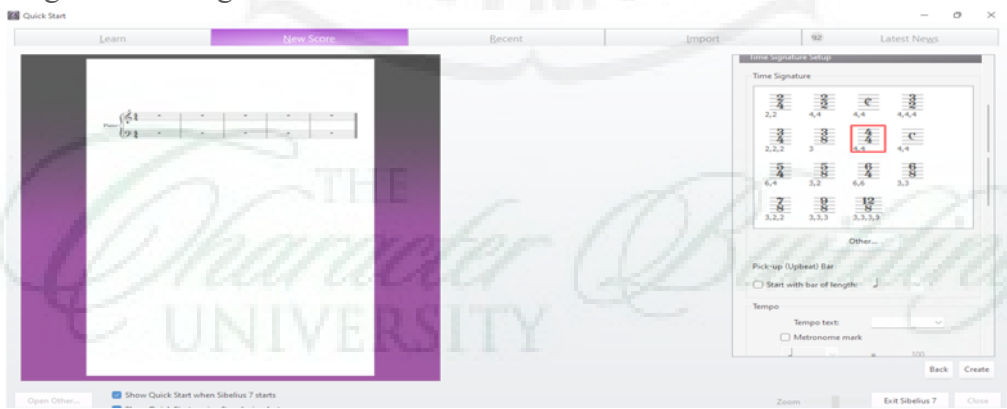


Figure 5 Features of Selecting the Time Signature

4. Selecting Key Signature and Information Set Up;

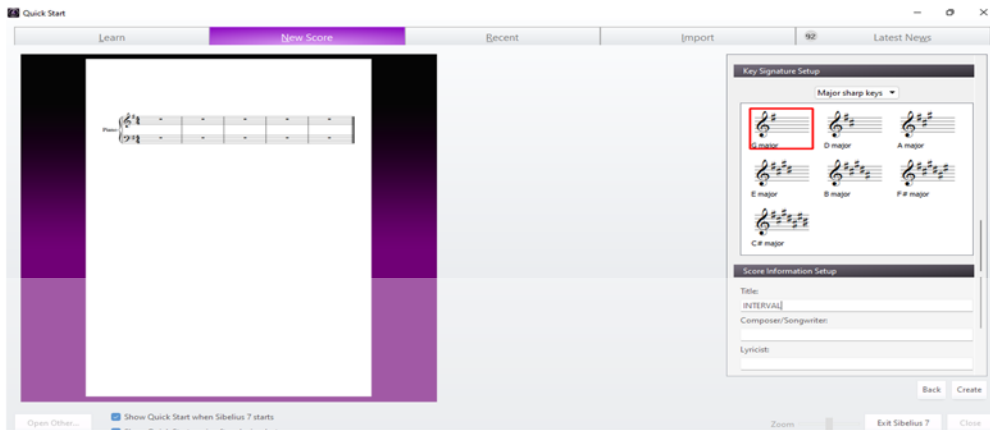


Figure 6 Key Signature and Information Set Up

4. Worksheets Ready to Use

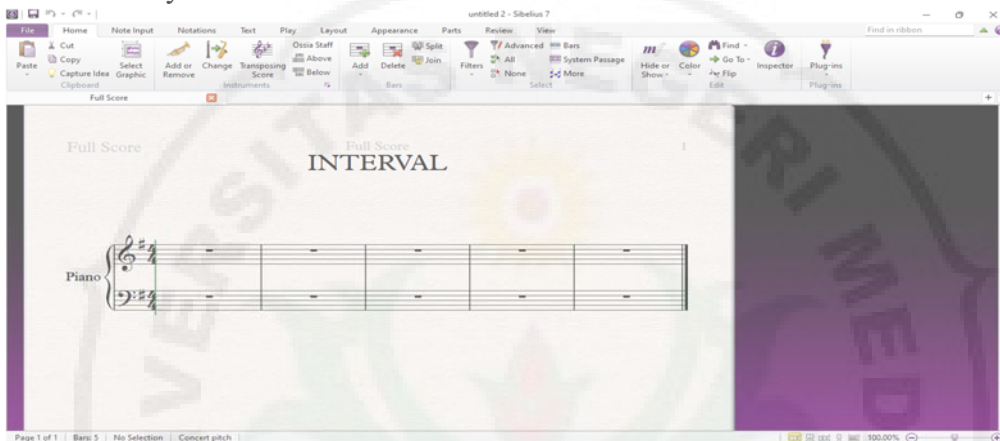


Figure 7 Sibelius-7 Application Worksheet

After creating a worksheet, the next step is to write notations on the worksheets that are already available. The following are the steps for making notations on the Sibelius-7 application worksheet.

1. Bring up the keypad feature by typing ctrl+alt+K simultaneously;

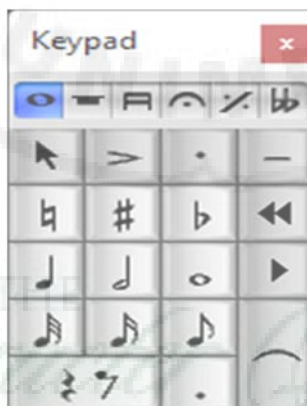


Figure 8 Keypad Features on the Sibelius-7 Application

2. Write Notation From Keypad To Staves

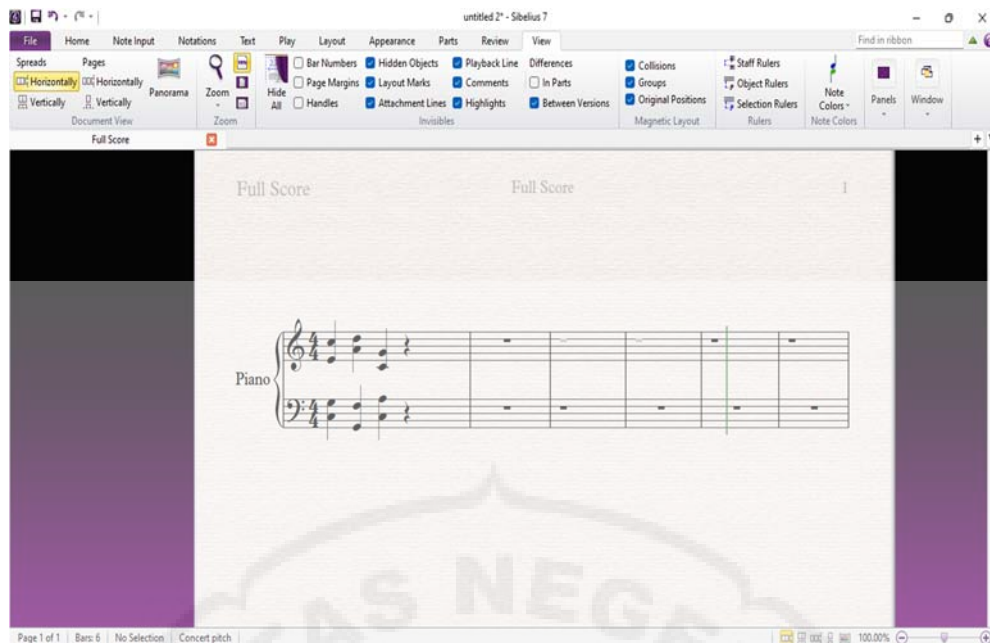


Figure 9 Staves on the Sibelius-7 Application

The following is an example of an exercise for HarmoniII subject participants with Interval theory. In this exercise, subject participants are required to be able to write down the interval distance on the Sibelius-7 application and determine the interval distance on a chord.

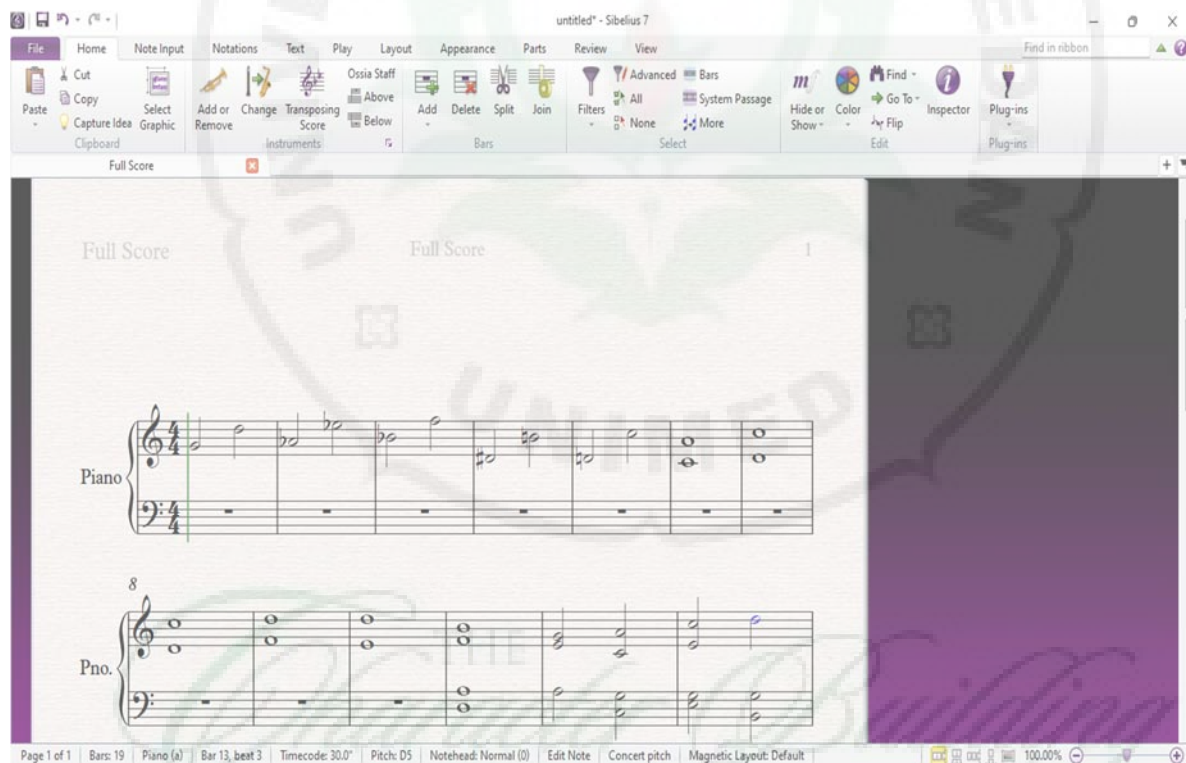


Figure 10 Harmony-II Subject Participant Exercise Sheet.

After providing the theory and exercises, as a form of implication of the theory, the subject participants did exercises using the learning media, namely the Sibelius-7 application. Giving practice from interval theory is the closing part of the HarmoniII lecture with Interval theory.

One of the theories that uses Sibelius-7 as a learning medium is the Kadens theory. Indicators of success for the participants of the Harmoni II subject on cadence theory are compiling perfect cadence, compiling imperfect cadence, compiling deviant cadence and compiling Plagal cadence.

The preparation for learning begins with a prayer led by the participants of the Harmoni II subject. After the opening prayer, the subject lecturer gave directions about the theory to be delivered. At the preparation stage, the lecturer in the Harmoni II subject also gave an indicator of the success of the Kadens learning theory. The implementation of the cadence theory learning was delivered using the lecture method and the Sibelius-7 application as a learning medium. Learning using the Sibelius-7 application learning media is very useful, especially in learning Harmoni II

with Kadens theory. On the worksheets in the Sibelius-7 application, students are required to determine the cadence of the notation that has been determined then through the Transport feature, students can listen directly to the notation and chord movements in the notation.

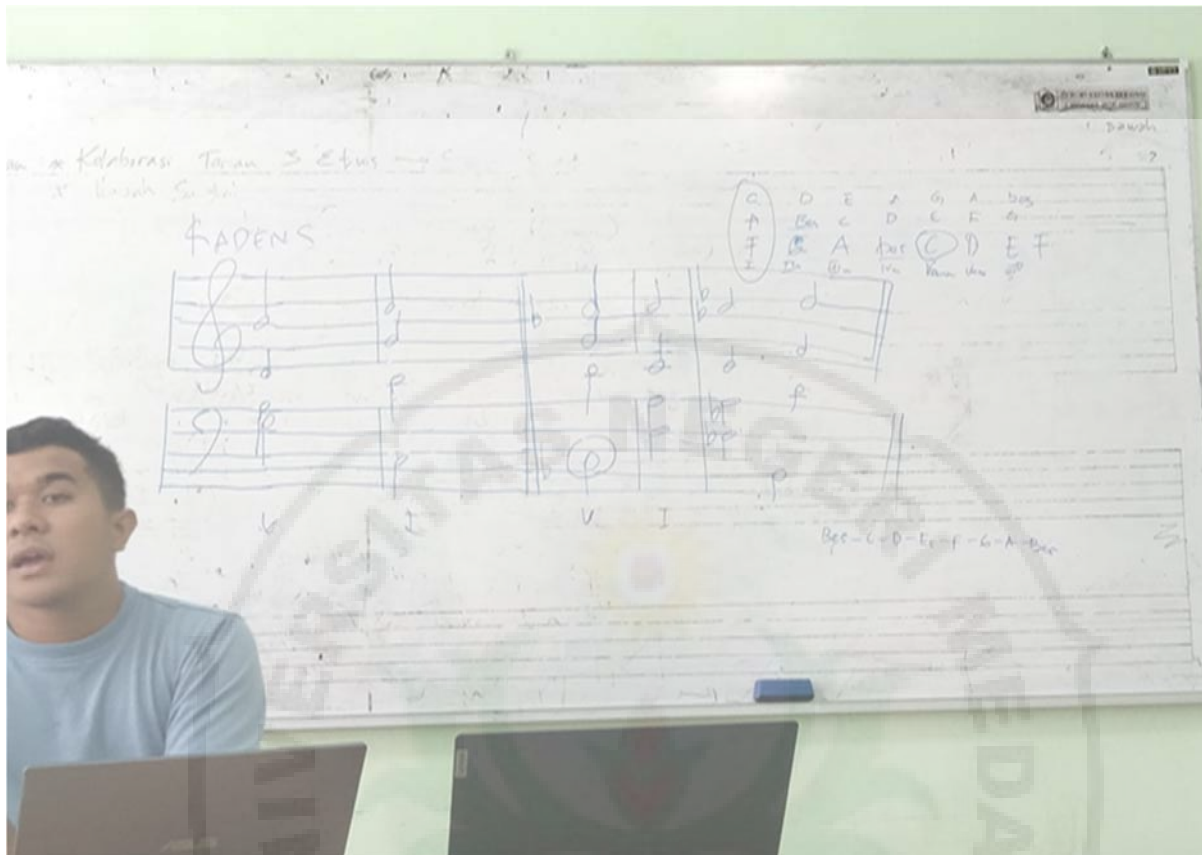


Figure 11 Submission of Kadens theory

Learning using the Sibelius-7 media is very useful, especially in learning Harmoni II with cadence theory. On student worksheets, students are required to determine the cadence of a predetermined notation then through the Transport feature and students can listen directly to the notation and chord movements in the notation.

At the closing stage, the lecturer provides conclusions from the cadence theory and expects students to be able to implement cadence. The lecturer at the closing stage also gives practice questions that will be done outside of lecture hours. The exercises are done with the Sibelius-7 application learning media and will be collected in PDF and Midi formats.

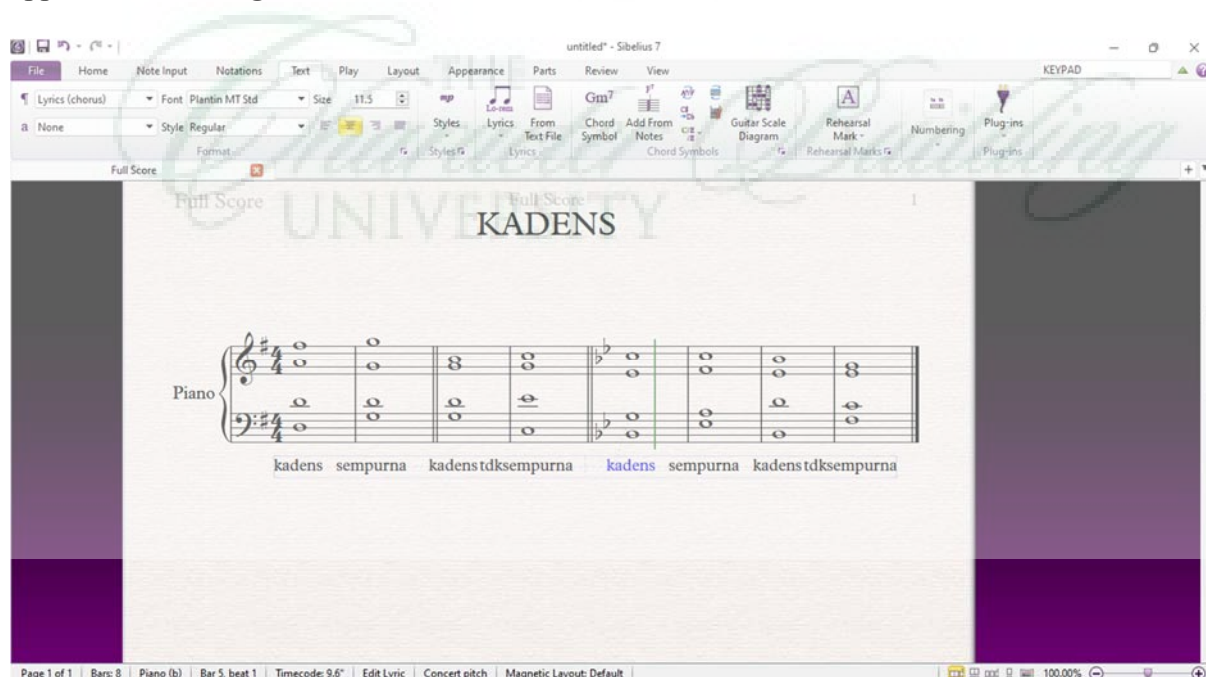


Figure 12 Student Worksheet.

The use of the Sibelius-7 application is also used in theory reversal (Inversion). At this meeting, the theory about inversion is the first reverse chord. The indicator of the success of subject participants in the first reverse chord theory is that students are expected to be able to compose a series of chords using the first reverse chord. The theory was delivered using the lecture method and the Sibelius-7 application as a learning medium. At this meeting, the lecture was carried out in three stages, namely, preparation, implementation and closing. In the preparation stage, the opening begins with a prayer led by the participants of the Harmoni II subject. After the opening prayer, the subject lecturer gave directions about the theory to be delivered. At the preparation stage, the lecturer in the Harmoni II subject also gave an indicator of the success of the first reverse chord theory. At the implementation stage, the lecturer provides learning theorys using the lecture method. The theory discussed is the first reverse chord. In this theory, students must understand about interval theory and chord composition. It aims to maximize understanding of the theory of the first reverse chord.

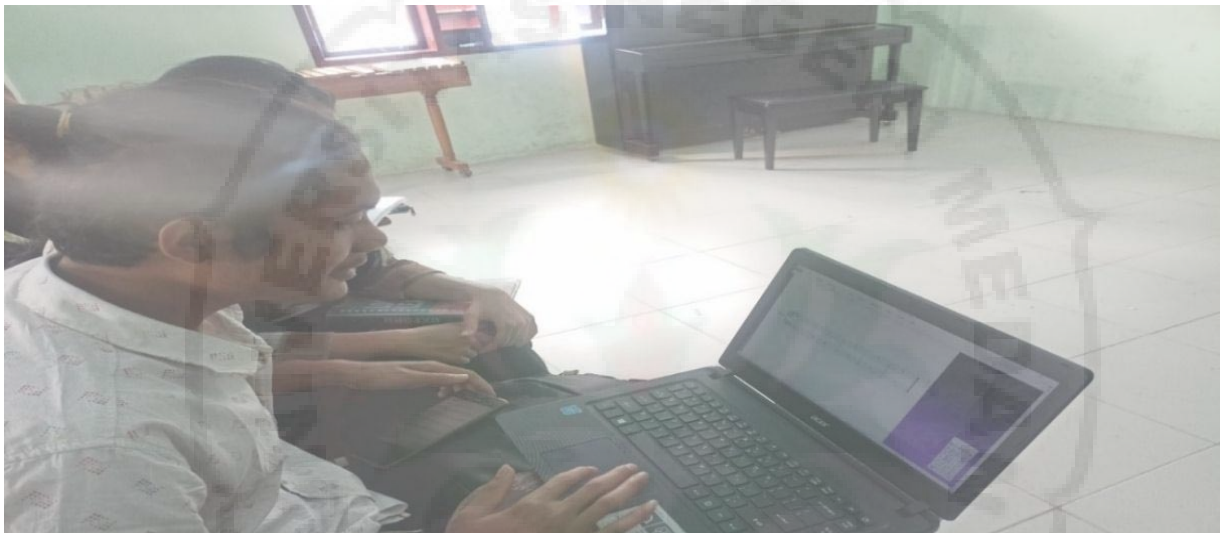


Figure 13 Use of Sibelius-7 Application on Inversion theory

After the lecturer provides theory on the first reverse chord, subject participants are required to work on the problems in the printed book and then write them down into the Sibelius-7 application. The purpose of using the Sibelius-7 application as a learning medium for the first inverse chord theory is that students can listen directly to the difference between pure chords and the first reverse chord through audio from the Sibelius-7 application. After giving the theory and exercises, the lecturer gives conclusions and expects students to be able to implement the first reverse chord. At the closing stage, students are directed to work on daily practice questions that will be done outside of lecture hours. The exercises are carried out using the Sibelius-7 application learning media which will be collected in pdf format.

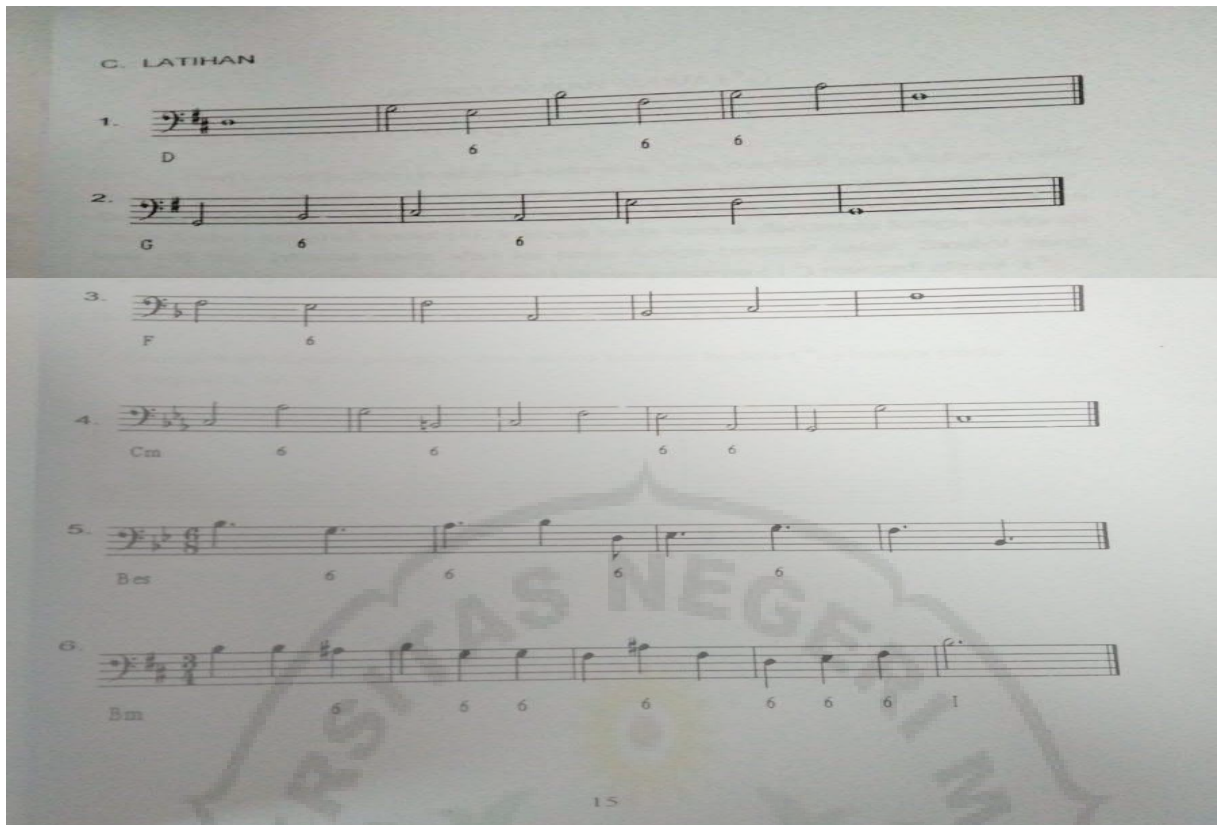


Figure 14 First Reverse Chord Practice Questions

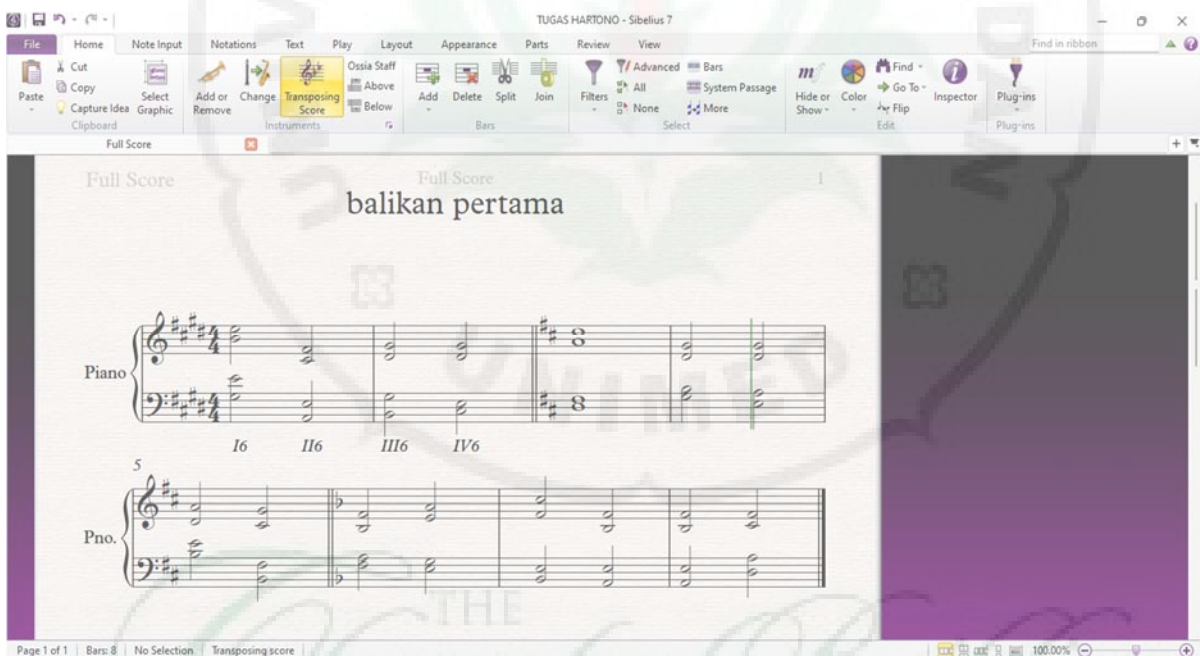


Figure 15 Student Worksheet

The next meeting of the Harmoni-II subject is still discussing chord reversal (inversion) in this case the theory is the second chord reversal. Lectures are carried out in 3 (three) stages, namely preparation, implementation and closing.

In the preparation stage, the opening is with a prayer led by the participants of the Harmoni II subject. At the preparation stage, the lecturer provides an indicator of the success of the Harmoni-II subject participants in the second inverse chord theory, which is to compose a series of chords using the second inverse chord. At the implementation stage, the theory was delivered using the lecture method and the Sibelius-7 application as a learning medium. The theory given is how to compose the second reverse chord. To understand this theory, students must understand intervals and chord arrangement. At the implementation stage, after giving the theory, the lecturer directs students to work on practice questions using the Sibelius-7 application.



Figure 16 Submission of Second Reverse Chord Theory

To measure the level of understanding of the Harmoni II subject, the lecturer always provides exercises using learning media, namely the Sibelius-7 application. It aims to hone the understanding of the participants of the Harmoni II subject on the theory that has been presented. The second inverse chord practice questions are done with the Sibelius 7 application learning media and collected in pdf format.

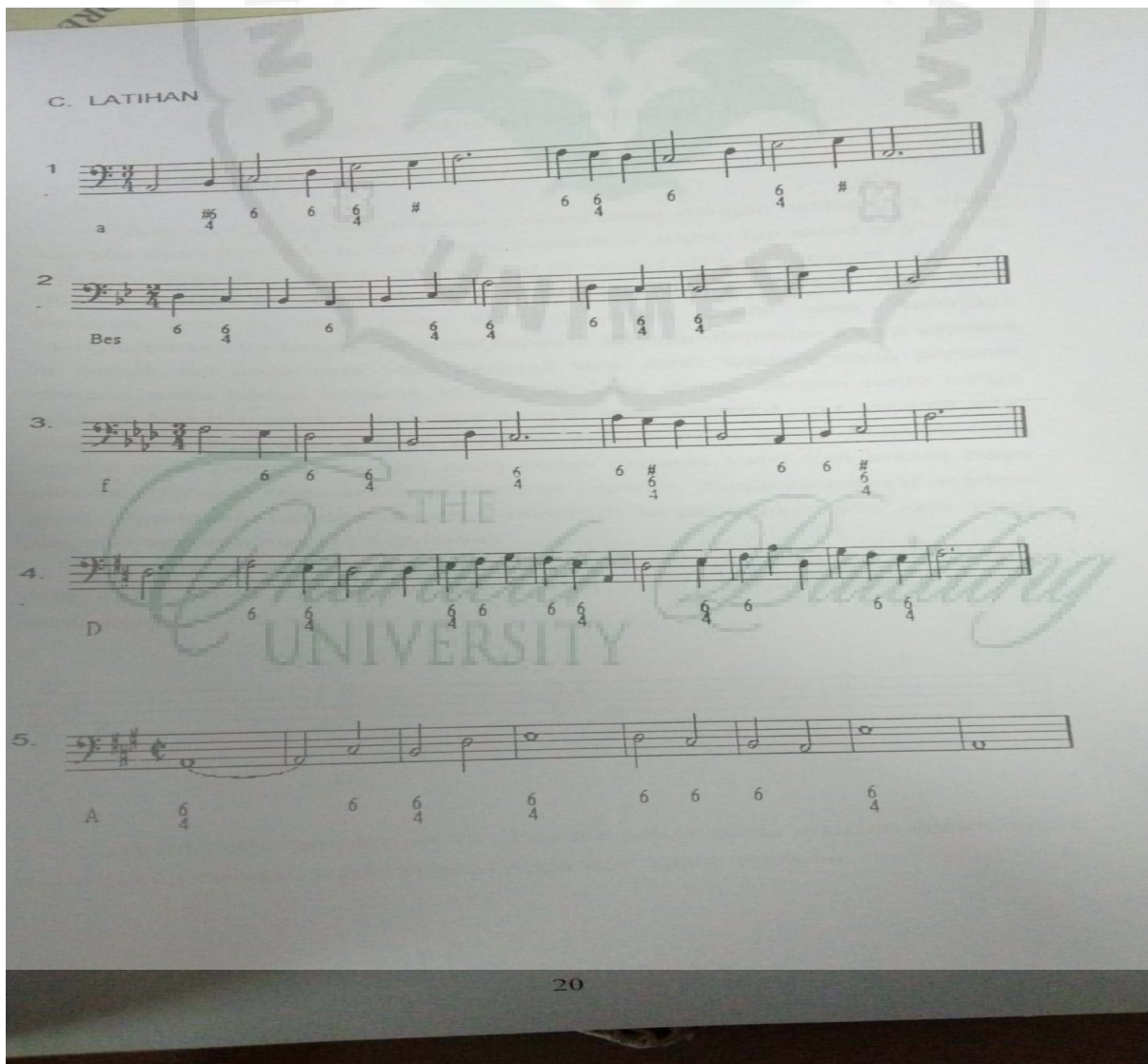


Figure 17 Second Reverse Chord Practice Questions

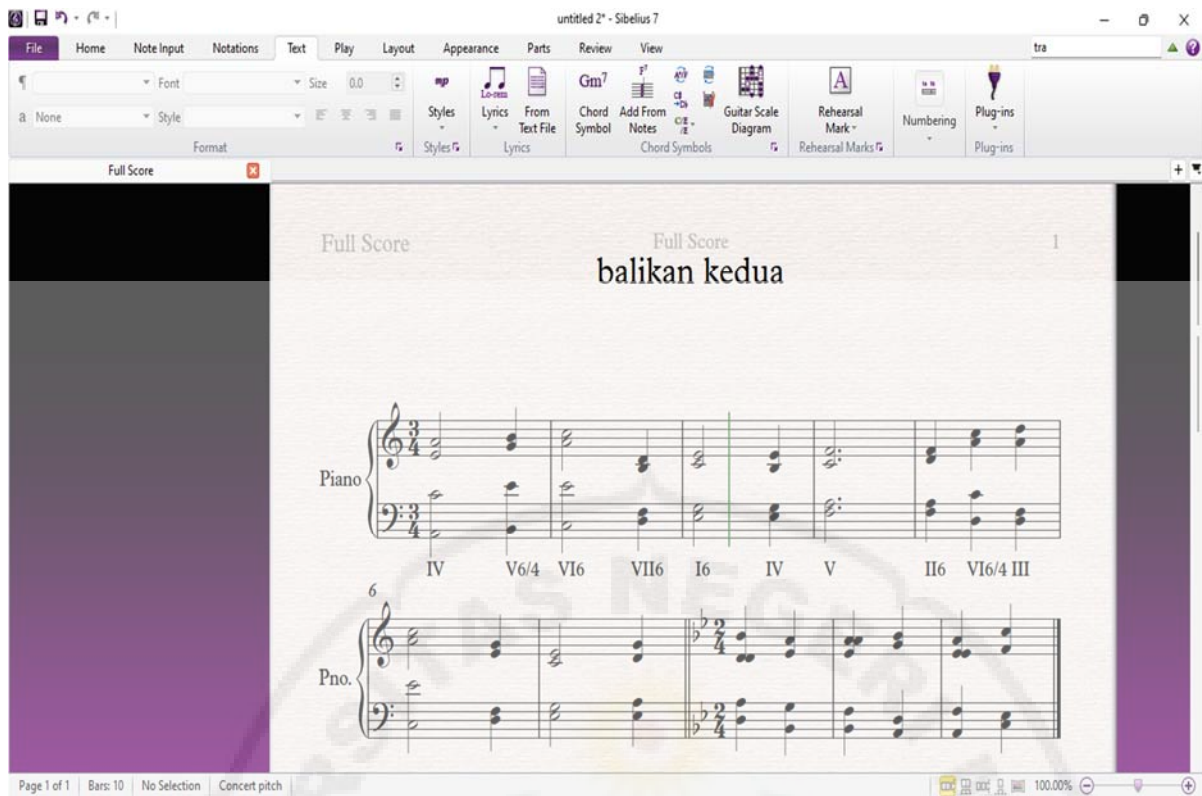


Figure 18 Student Worksheet

In the next learning, the lecturer provides theory as well as teaching how to do the tasks that will be given after the theory is finished. Not only providing theory, the supporting lecturer also gives assignments at each meeting which aims to determine the ability of subject participants after receiving theory on *Harmoni II*. The assignment collection technique used by the lecturers is, students send assignments in two formats, the first sends an audio-visual worksheet, the second uses a pdf format the results of the assignments carried out by students. The collection of tasks in the form of audio is done by exporting the scores into midi format.

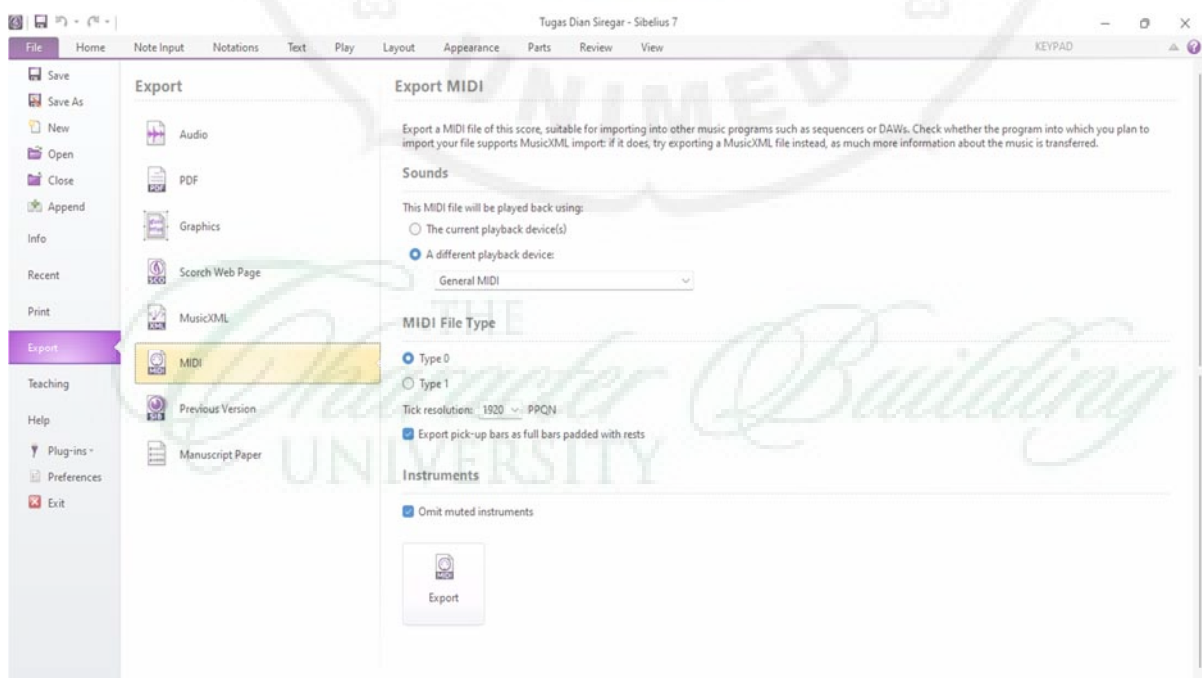


Figure 19 Export to MIDI

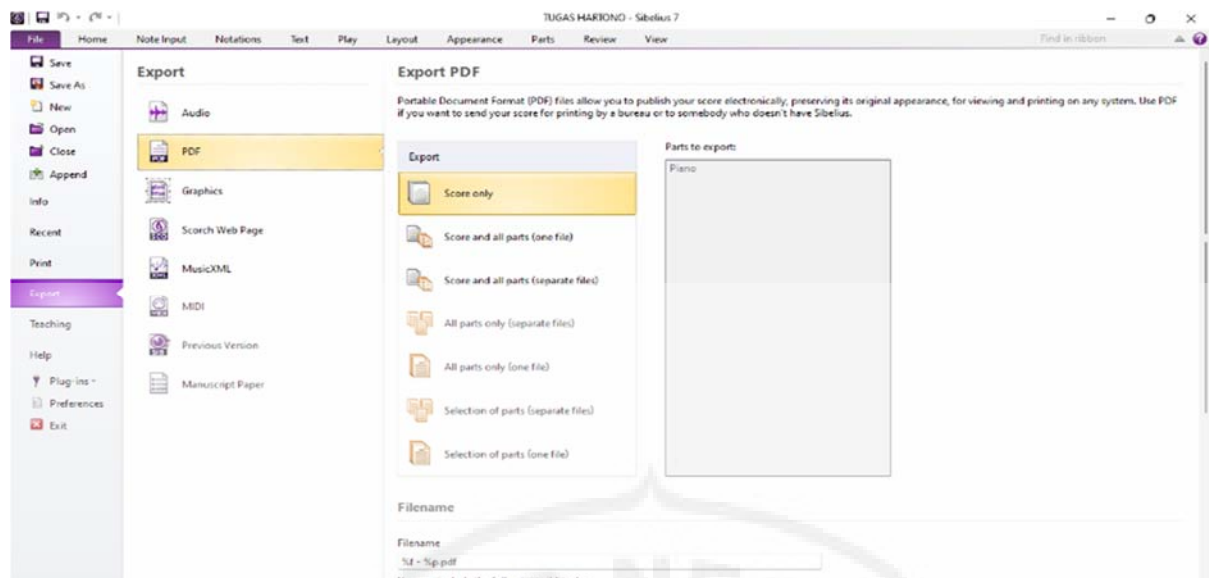


Figure 20 Export to PDF

The use of the Sibelius-7 application as a Harmoni II learning medium is very important because it is supported by the features of the Sibelius7 application in compiling melodic harmonization so that what is exemplified by the supporting lecturer is easy to understand and the results of the tasks carried out by students can be heard. The lecturer who teaches Harmoni II is of the opinion that the world of education must be in line with existing technological developments. Likewise with the development of education in the world of music. Music learning must involve music technology itself. That is the reason the use of the Sibelius-7 application is used to assist the learning process in the Harmoni II subject and the use of the application is quite effective and forms students in understanding the theory presented. In addition to the use of learning media, lecturers in the Harmoni II subject have designed the best possible syllabus to adapt to using the Sibelius-7 application.

In addition, it has maximized and utilized the use of the Sibelius-7 application as a learning medium. The use of the Sibelius-7 application as a learning medium in the Harmoni II subject is very influential on the participants' understanding of the Harmoni II theory. Besides being used as a learning medium, the Sibelius-7 application is also used as a medium for working on practice questions, UTS and UAS questions. The Sibelius-7 application as a learning media makes it easier for all learning activities in the Harmoni II subject for students and lecturers. All lecture activities are helped effectively through the use of the Sibelius-7 application as a learning medium. This is supported by the advantages of the Sibelius-7 application feature at the time of task collection that it is not only produced in a print out format but can also be produced in an audio format with good quality. It's just that the limitations of the sounds on each instrument on the Sibelius-7 make the audio produced less than optimal if the results of the Sibelius-7 project are exported in Audio format. Some students use additional tools in the form of VSTI (Virtual Studio Technology instruments) to maximize the audio format of Sibelius-7.

In the process of using the Sibelius-7 application as a learning medium, there were several obstacles encountered including, some students found it difficult to operate the Sibelius-7 application because it was the first time using it. It is also affected by specific laptops that do not yet support Install Sibelius-7 applications. However, this can be overcome by creating a group for participants of the Harmoni II subject to discuss the Harmoni theory and discussions to operate the Sibelius-7 application.

Conclusion

The process of using the Sibelius-7 application as a learning medium for Harmoni-II at Institut Agama Kristen Negeri Tarutung. The use of the Sibelius-7 application as a harmony learning medium is used as a virtual writing tool to work on practice questions at each meeting. The learning process always begins with preparation, providing theory and doing exercises. At the training stage, subject participants are directed to open a worksheet on the Sibelius-7 application

which is done by: 1) Selecting a Blank score on the quick start feature; 2) Adding instruments to the worksheet; 3) Selecting the Time Signature; 4) Select Key Signature and Information Set Up. 5) Bring up the Keypad feature. Harmoni-II learning theorys that have been studied, Scales, Intervals, Cadence, Chords, First Reverse Chords, and Second Reverse Chords. All theory discussed uses the Sibelius-7 application as a learning medium. Assignments are collected or sent via G-mail to lecturers in Pdf and Midi formats. including sending assignments via gmail to lecturers in Pdf format and Midi format. The obstacle in the process of using the Sibelius-7 application as a learning medium is that some students find it difficult to operate the Sibelius-7 application. The lack of supporting facilities to maximize learning media is also an obstacle in the process of using the Sibelius-7 application even not all students have a laptop to install the Sibelius-7 application.

References

- Aprida, dkk. 201. Belajar dan Pembelajaran. *Jurnal kajian-kajian ilmu keislaman*, Vol.3, Hal 343.
- Arsyad, Azhar. 2011. *Media Pembelajaran*. Jakarta: Rajawali Pers)
- Atmojo, dkk. 2022. Pembelajaran Seni Budaya dengan Menggunakan Media Virtual Reality (VR) Pada Tingkat Satuan SMA Berbasis Local Wisdom Sumatera Utara. Gondang: *Jurnal Seni dan Budaya*, Vol 6. Hal. 184.
- Bonoe, Pono, 2003, Pengantar Pengetahuan Harmoni (Yogyakarta: Kanisius).
- Darwis, dkk. 2017. Belajar dan Pembelajaran. *Jurnal kajian-kajian ilmu keislaman*, Vol.3, Hal. 344.
- Dzamaluddi, Ahdar, dkk, 2019. *Belajar dan Pembelajaran*. Parepare: CV. Kaaffah Learning Center.
- Gunawan, Imam. 2017. *Metode Penelitian Kualitatif Teori dan Praktik*. Jakarta: Bumi Aksara.
- Ilmawan, 2020. Pembelajaran Augmented Reality Sebagai Media Pembelajaran. *Jurnal Pendidikan Komunikasi dan Kejuruan*, Vol.13, No.117.
- Kaestri, V. Y. 2015. Perpaduan Nada-nada dalam Pesrpektif Harmoni dan Aplikasinya terhadap Mahasiswa Promusika. *Jurnal Pengkajian, Penyajian dan Penciptaan Musik*, 3(2), Hal. 31.
- Lazar, Stonic. 2015. The Importance Of Educational Technolohy In Teaching. *Jurnal of Serbia*, Vol 3, Hal. 111.
- Lestari, Sudarsi.2018. Peran Teknologi Pendidikan di Era Globalisasi. *Jurnal Edureligia*, Vol.2, Hal 96.
- Magara, Ardi, 2013, Efektifitas Penggunaan Media Sibelius-7 Terhadap Tingkat Pemahaman Notasi Musik dan Akord di SMP Negeri 1 Mungkid (Skripsi: Institut Seni Indonesia).
- Nurseto, Tejo. 2011. Membuat Media Pembelajaran yang Menarik. *Jurnal Ekonomi dan Pendidikan*, Vol.8, Hal. 21-22.
- Oktafian, dkk. 2020. *An Innovation of Music Art Learning Media in the Covid-19 Pandemic to Develop Student Character*. Semarang, Hal. 155.
- Sabaruddin. 2018. Materi Pembelajaran dan Kurikulum 2013. *Jurnal An-Nur*, Vol.4, Hal. 2.
- Suroso, dkk, 2020, The Repertoiren Of Traditional Malay Ensemble as a source of violon practice learning Theory. *Birle Journal*, Vol. 3. Hal. 175.
- Talizaro, 2018, Peranan Media Pembelajaran dalam Meningkatkan Minat Belajar Mahasiswa. *Jurnal Komunikasi Pendidikan*, Vol.2 No.2. Hal. 112.
- Wibowo, Ari. 2018. *Mahir Sibelius*. Yogyakarta: Budi Utama.
- Wahid, Abdul. 2018. Pentingnya Media Pembelajaran dalam Meningkatkan Prestasi Belajar. *Jurnal Research Depository*, Vol.5. Hal.58.
- Widodo, Suparno Eko. 2015. *Manajemen Pengembangan Sumber Daya Manusia*. Yogyakarta: Pustaka Pelajar.
- Widiastuti, dkk. 2019. *Buku Bahan Ajar Harmoni Dasar*. Medan: CV. Kencana Emas Sejahtera.
- Widiastuti, dkk. 2020. The Development of Textbook Learning Media Based on Local Wisdom of North Sumatera. *Birle Journal*, Vol 3, Hal. 2.