

CONSTRUCTING CUBASE GUIDEBOOK FOR FIRST YEAR STUDENTS IN MUSIC AT LESHAN NORMAL UNIVERSITY, SICHUAN PROVINCE, CHINA

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Abstract

Cubase, as a powerful digital audio workstation, enables students to engage with the integration of technology and music, a practice increasingly valued in modern Chinese culture for its innovation and adaptability. This research aims to create a guidebook that empowers first-year music students at Leshan Normal University to master Cubase, while also fostering an understanding of how technology intersects with the cultural, spiritual, and artistic expressions inherent in Chinese music traditions. The purposes of this study are: (1) To study Cubase teaching for first year students in music program at Leshan Normal University, Sichuan province. The People's Republic of China; and (2) To construct Cubase guidebook for first year students in music program at Leshan Normal University, Sichuan province. The People's Republic of China. The researchers designed this study as a theoretical study, collecting data and literature, sorting out and creating research tools. Through the evaluation and modification of the Cubase application teaching guide by three experts, the researchers modified it according to the suggestions of the 3 experts, and created and developed the Cubase application exercise to guidebook for first year students in music program at Leshan Normal University. **The results of the research found that** the Cubase program was used to participate in the teaching of Solfeggio and Ear training for first year students in music program in 9 elements; 1) Recording, 2) Audio Editing, 3) MIDI Editing, 4) Virtual Instruments, 5) Chord Track, 6) Audio to MIDI chords, 7) Import/Export, 8)

Collaboration and 9) Video. Researcher constructed Cubase guidebook divided into 3 chapters based on the elements obtained from the research; 1) Introduction 2) Using Cubase software to learn solfeggio and ear training in combination with teaching materials; and 3) Problems encountered during practice and solutions.

Keywords: Constructing Cubase; Guidebook; First-year music students

Introduction

Cubase application developed by Steinberg company (1989) is one of the most powerful music creation software in the world. It has many excellent functions such as composition, music arrangement, recording and mixing. It can help professional composers create music and music teachers teach different courses. Now the Cubase software has launched its 12th generation version, which has more powerful and convenient functions. We can find and download its user manual on the official website. Since we can find the user manual of this software on the official website, why would I create a guide book on how to use Cubase software for sight-singing and ear training teaching? There are 4 reasons why the researcher wanted to create a guide book for freshmen.

The development of the times has sounded the horn of reform to the traditional teaching method of Solfeggio and ear training. Applying digital music to Solfeggio and ear training classes will certainly become a trend in the future. First, it provides a variety of training methods, which can stimulate students' interest in learning and change the traditional piano accompaniment teaching mode. Secondly, it has changed the traditional teaching mode which relies on piano as an auxiliary teaching tool, and can also achieve accurate, flexible and diverse teaching even when there is only three feet of platform. It can be said that the convenience and shortcut it brings to the teaching of sight singing and ear training cannot be achieved by the traditional teaching, or even cannot be imagined. Thirdly, in the modern teaching of solo singing and ear training, teachers can share examples and accompaniments with students directly with the help of multimedia teaching tools. By doing so, students can intuitively feel the music characteristics of the visual singing, better understand

the composer's creative intentions, and ultimately achieve the teaching purpose of improving students' overall music literacy (Chen, 2013).

Through the study of the above articles, we can clearly understand that Cubase software can help students quickly master the sound color and performance skills of different instruments, and can also improve their music creation ability. Also allow them to do after-school exercises anytime and improve the score visual ability, auditory ability; Being more able to tamp down their music theoretical foundation has important implications for improving students' comprehensive music literacy. At present, there is no specific teaching manual on how music software can effectively participate in the course-assisted teaching in Chinese colleges and universities (Bai, 2021).

This guidebook is designed to guide teachers and first-year college students in using Cubase software to assist them in learning solfeggio and ear training courses. There are currently no books or textbooks in China that involve Cubase software in course teaching. Therefore, in view of the key points and difficulties of Cubase software participation in teaching, especially how to guide students to use the software for learning, this study selects the author to professor the two classes of first grade visual singing and ear training courses in university for comparative experiments, and analyzes the cases. In addition, this paper also puts forward some suggestions on the use of music software in Chinese colleges and universities, and explores the positive impact of the use of music software on students.

Research Objectives

1. To study Cubase teaching for first year students in music program at Leshan Normal University, Sichuan province, The People's Republic of China.
2. To construct Cubase guidebook for first year students in music program at Leshan Normal University, Sichuan province, The People's Republic of China.

Literature Reviews

Cubase program is a comprehensive digital audio workstation (DAW) renowned for its advanced music production capabilities. It is widely utilized by musicians, composers, and audio engineers for recording, editing, mixing, and mastering audio projects. The program offers a sophisticated interface that integrates a plethora of tools and features, catering to both novice and professional users. Key features of Cubase program include a multi-track recording system, a versatile audio engine, and a robust MIDI sequencing environment. It supports a vast array of audio and MIDI effects, plugins, and virtual instruments, allowing for extensive creative control over the production process. Additionally, Cubase program provides advanced editing capabilities, such as time-stretching, pitch correction, and sample-accurate editing, which are pivotal for achieving high-quality audio results (Yu, 2011). The program also facilitates collaboration through its compatibility with various file formats and its ability to integrate with other music production software. Cubase's educational value is further enhanced by its inclusion of tutorial videos and documentation, which serve as invaluable resources for students and instructors alike. In the academic sphere, Cubase program is often employed as a teaching tool in music technology and production courses, enabling students to acquire practical skills and theoretical knowledge in the field of music production and sound engineering. Its versatility and feature set make it a preferred choice for educational institutions looking to equip their students with industry-standard software proficiency.

Wang Yumeng (2018), Sight-Singing was originally a singing training course developed by Guido, a French theorist in the Middle Ages, for the church choir. It was translated into French Solfege at the end of the 18th century. In 1795, when the Sight-Singing discipline was established at the Paris Conservatory of music, it was formulated as one of the basic courses. The first Sight-Singing text book, comprehensive basic training of music in the Conservatory of music, was used and published to carry out vocal practice, spectrum reading practice Singing practice and so on.

Sight-Singing and ear training is a compulsory course for music appreciation, learning, singing and hearing ability, it mainly has two parts: Sight-Singing and hearing. The first part is Sight-Singing. Simply put, it is to get a score and sing according to certain requirements. First, we should see whether the clef is a treble clef, a alto clef or a bass clef, as well as key signs and temporary lifting marks, and then divide the phrases. When singing, first of all, pay attention to the position of the tone, while paying attention to the change of rhythm, it is best to be able to sing while playing rhythm in your heart; Secondly, in Sight-Singing, it is required to have a sense of rhythm, melody, music ups and downs and the perfect coordination of singing breathing. Thirdly, pay attention to the pitch of singing. Finally, Sight-Singing is an important test of students' basic quality, and the immediate concert after getting the score causes tension, so we should especially strengthen the practice of this subject. The other part is ear training. It is a kind of training for auditory ability, which has a certain impact on music listening ability and memory. Generally speaking, a group of La characters in piano is usually used as the standard tone for note recognition and analysis (Yin & Zhu, 2016).

There are several ways to practice your ears: model singing, auditory analysis, rhythm training and dictation. This plays a crucial role in the development of auditory ability to recognize the nature and function of pitch, rhythm, timbre, interval and chord. The training of auditory ability is usually combined with other basic related disciplines of music, which are closely related and promote each other (Peng, 2007).

In Sight-Singing teaching, the first thing encountered is the problem of Sight-Singing. Currently, although there are many roll call methods used at home and abroad, they can be summarized into two categories: (1) Fixed sol-fa. (2) Tonic sol-fa. Fixed sol-fa, also called fixed do sol-fa. That is, no matter what key it is, add a line of C below the treble staff - G staff to sing Do. When encountering a diacritical mark, the roll call remains unchanged, but the note is sung higher or lower. For example, F is still sung as Fa (simplified notation is 4), but the sound is a semitone higher than that without a sharp.

Tonic sol-fa (also known as movable sol-fa), also called movable Do sol-fa. Unlike the fixed sol-fa, which sings the lower line of the treble spectrum as do regardless of the key on the spectrum, the tonic sol-fa moves the singing name with the change of the key. For example, in G major, G is sung as Do, and in D major, D is sung as Do. The tonic sol-fa can be divided into two types. One is when the pitch changes, and the roll call changes; the other is when the pitch changes, and the roll call does not change. The pitch changing and roll call changing reading method was pioneered by British female vocal teacher Sarah Ann Glover in 1812, and was further improved by British pastor John Curwen in 1841 and adopted by many countries. Its seven basic tones are sung: do re mi fa so la ti. When raising a semitone, change the vowel of each sound to i. When lowering a semitone, change the vowel of each sound to e. Let's take the key of C major as an example:

The pitch changing and roll call does not changing reading method is basically the same as the pitch changing and roll call changing reading method, which is different from the same when rising, the name changes the same. For example: la, la, la all sing la (of course, to sing the voice to sing the half, drop the bass), this is the change the name reading method.

Solfeggio was originally a singing training course developed by Guido, a French theorist in the Middle Ages, for the church choir. It was translated into French Solfege at the end of the 18th century. In 1795, when the solfeggio discipline was established at the Paris Conservatory of music, it was formulated as one of the basic courses. The first Solfeggio textbook, comprehensive basic training of music in the Conservatory of music, was used and published to carry out vocal practice, spectrum reading practice Singing practice and so on.

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Research Methodology

This study adopts a qualitative research methodology. The researcher identified relevant experts, made appointments, and used a developed interview form to interview experts and analyze them to describe the methods.

1. Research Tools: Through the study of teaching literature and related theses, select and evaluate knowledge related to Solfeggio and ear training, and invite an expert group to evaluate the effectiveness of the Cubase manual book and Solfeggio and Ear training exercises.

Cubase program teaching method: Content 5 chapters such as Chapter 1: About Cubase program, Chapter 2: Cubase program Assisted in Sight-Singing and Ear Training Learning, Chapter 3: Let's Practice Together, Chapter 4 Performance, Chapter 5: Evaluation

The item-objective congruence (IOC) form: The item-objective congruence (IOC) Processes 1) Determine whether the work to be evaluated (example) conforms to the point of view to be explained, 2) Four experts are invited to give marks and put forward suggestions for modification, 3) Score to the item-objective congruence (IOC) evaluation.

2. Research process: Researcher design and program are divided into 6 steps:

Research Cubase literature, teaching methods for Solfeggio and ear training, the current situation and problems of Solfeggio and Ear training education in China, and the method of creating Cubase program for teaching Solfeggio and Ear training courses.

Summarize the teaching methods of Solfeggio and ear training from the above materials, and propose solutions based on the current situation of Solfeggio and Ear training in China.

Develop a method suitable for first-year college students to use Cubase program for Solfeggio and Ear training courses.

Please have experts evaluate the teaching methods of the Cubase program, interview experts, and evaluate the project objective consistency (IOC). After the first round of IOC evaluation results, Base on expert advice, modify the Cubase program teaching method, and conduct the second round of IOC evaluation scoring after the modification.

Improve the teaching method of the Cubase program for Solfeggio and Ear training courses to help teachers and students improve the quality of Sight-Singing and ear training courses.

Construct Cubase guidebook.

Results

To Study Cubase Teaching for First Year Students in Music Program at Leshan Normal University, Sichuan Province, the People's Republic of China

Cubase teaching for first - year students in the music program at Leshan Normal University: The study on Cubase teaching in the solfeggio and ear - training courses for first - year students at Leshan Normal University led to the following conclusions. Cubase software offers a wide range of functions that are effectively applied in teaching. Its recording function enables students to record their performances for self - evaluation and improvement. Audio editing helps in pitch and rhythm correction, as well as in creating teaching resources. MIDI

editing is useful for various ear - training exercises, such as rhythm and chord practice. Virtual instruments provide diverse timbres for students to recognize and use in accompaniment. Chord Track and Audio to MIDI functions assist students in understanding chord structures and musical elements. Import/Export, Collaboration, and Video functions enhance the teaching process by providing more resources, enabling remote teaching, and integrating audio - visual elements.

Summarize the teaching and application of Cubase software in sight singing and ear training courses:

Cubase 13 As a comprehensive and powerful digital audio workstation, it provides a series of guidance and assistance for trial singing and ear training courses, covering various levels from basic skill training to advanced music analysis.

1) Basic music skills training: Cubase program's audio editing and MIDI editing functions help students practice and improve pitch, rhythm, timbre, and musical expression.

2) Harmony and Melody Analysis: The Chord Track function enhances students' understanding of chord progression and melody structure.

3) Technical proficiency improvement: Through the Audio to MIDI conversion function, students can learn how to convert audio signals into editable MIDI data, enhancing their music production skills.

4) Creative expression and personalized learning: The virtual instrument function stimulates students' creative thinking and provides personalized learning paths.

5) Collaborative learning: The collaborative function of Cubase program supports teamwork and promotes communication and learning among students.

6) Audio visual integrated teaching: The integrated video function provides an audio-visual integrated learning experience for ear training and singing trials, enhancing the perception and understanding of music.

7) Sharing of teaching resources and remote teaching: The import/export function facilitates the sharing of teaching resources and the implementation of remote teaching.

8) Real time feedback and interactive learning: Cubase 13's real-time processing capability allows teachers to provide immediate feedback, promoting interaction between teachers and students.

9) Interdisciplinary integration: Combining multiple disciplines such as music theory, vocal studies, and music production, Cubase program provides a comprehensive music learning experience.

10) Recording and Display of Teaching Achievements: By recording and editing students' singing videos, teachers can record students' learning achievements and present them.

These features of the Cubase program not only enhance the interactivity and practicality of trial singing and ear training teaching, but also provide students with a platform to explore the music world in depth, making teaching more vivid, efficient, and personalized.

To Construct Cubase Guidebook for First Year Students in Music Program at Leshan Normal University, Sichuan Province, The People's Republic of China

Constructing Cubase guidebook for first - year students in the music program at Leshan Normal University, the guidebook summarizes the teaching and application of Cubase in solfeggio and ear - training courses, covering aspects like basic music skills training, harmony and melody analysis, and creative expression. It is divided into three parts: an introduction to Cubase software and the purpose of learning solfeggio and ear - training, using Cubase software to learn in combination with teaching materials, and expected to include problems encountered during practice and solutions. Experts have evaluated the guidebook as meeting teaching requirements, being practical and feasible.

Construct Cubase guidebook for First Year Students in Music Program:

The aim of this study is to produce a Cubase guidebook that will be used to carry out teaching activities, design lesson plans, and evaluate teaching effectiveness based on input from key informants according to the research process. Based on the analysis of key informant interview data, the researchers designed the content of the guidebook, which is divided into three parts,

Chapter 1 Introduction: 1) What is the Cubase software? 2) Functions of Cubase software. 3) The purpose of learning solfeggio and ear training.

Chapter 2 Using Cubase software to learn solfeggio and ear training in combination with teaching materials:

1) Practice of length perception of sounds and intensity perception of sounds.

- Beat sensing exercises.
- Rhythm Awareness exercise.

2) Practice of high and low sound perception and timbre perception.

- Interval perception exercises.
- Scale perception exercises.
- Chord perception exercises.

3) Perceptual Practice of Melody Tonality.

- Perception exercises for different melodic modes.
- Perceptual practice of melody pitch in the same mode.

4) Perception exercises for melody tonal changes

- Mode alternating exercises.
- Transposition exercises.

5) The perceptual exercise of the melodic structure

- Musical structure exercises in Western major and minor keys.
- Chinese folk tune structure practice.

6) Perception exercises of traditional Chinese folk tunes

- Pentatonic mode and seven-toned mode practice based on the pentatonic mode.
- Heptatonic scale exercises based on non-pentatonic scales.

7) Perceptual Exercises for Polyphonic Thinking

- Harmonic main tune music practice
- Polyphonic Music Practice Based on Imitation
- Contrastive polyphonic music exercises

Chapter 3 Problems encountered during practice and solutions

Discussions

The research on Cubase teaching in the solfeggio and ear-training courses for first-year students at Leshan Normal University highlights the significant role that modern music technology can play in enhancing music education. The findings demonstrate that Cubase, a powerful and versatile music production software, has proven to be a valuable tool in facilitating a deeper understanding of music theory and ear training for beginner music students. The software's multifaceted features not only support traditional learning methods but also provide new ways for students to interact with and engage in music.

The study points to several key advantages of incorporating Cubase into music education. Firstly, the recording function allows students to record their performances, giving them an opportunity to engage in self-reflection and self-evaluation. This ability to listen back to their work enables students to identify areas of improvement, which is an essential aspect of developing both technical and musical skills. The research suggests that this feature fosters independent learning, as students can assess their progress and make adjustments without always needing instructor input (Chen, 2007).

Additionally, Cubase's audio and MIDI editing functions are instrumental in refining students' musical abilities. The software's ability to correct pitch and rhythm offers students a hands-on approach to understanding these critical aspects of music, providing real-time feedback on their performances. By applying these tools in practical exercises, students can gain a better understanding of rhythm, pitch accuracy, and overall musicality, which directly benefits their ear-training development. Furthermore, the MIDI editing feature supports various exercises aimed at rhythm and chord practice, allowing students to experiment with different musical patterns and harmonies.

The use of virtual instruments in Cubase further enhances the educational experience by providing students with a variety of timbres to explore. This feature is particularly beneficial for ear-training, as it allows students to practice recognizing different instrumental sounds and understand how various instruments work together in an ensemble or composition. The ability to manipulate and experiment with different timbres also encourages creativity and exploration, essential components of music education.

Moreover, the Chord Track and Audio to MIDI functions are valuable for students studying musical structures and chord progressions. These functions support students in their comprehension of the theoretical aspects of music, such as harmonic analysis and chord relationships. Understanding these concepts is crucial in ear training, as they provide students with the tools to identify chords, tonal centers, and harmonic movement, both aurally and visually.

The research also highlights the importance of Import/Export, Collaboration, and Video functions, which offer students more resources and facilitate remote learning. These features expand the scope of teaching, enabling teachers and students to collaborate efficiently and access diverse teaching materials. The integration of video elements makes the learning process more dynamic, allowing instructors to present a variety of audiovisual content that aids in the retention of theoretical concepts.

The creation of a Cubase guidebook for first-year students marks an important step in formalizing the use of this technology in music education. The guidebook's structure is designed to assist students in mastering both the software and the fundamental concepts of solfeggio and ear training (Peng, 2007). By dividing the content into three comprehensive chapters, the guidebook provides a systematic approach to learning, from understanding the basics of Cubase software to applying it in various ear-training exercises. Each section targets specific aspects of musical perception, including pitch, rhythm, melody, tonality, and harmony, ensuring that students are able to practice and refine their listening skills in a structured and progressive manner.

The integration of Chinese folk tunes and polyphonic thinking exercises further reflects the guidebook's adaptability to different musical traditions and learning styles. By including exercises that cover both Western and Chinese musical structures, the guidebook offers a comprehensive approach to ear training that is inclusive of diverse musical cultures. This is particularly relevant for students in China, where there is a rich history of folk music and traditional practices that should be incorporated into their music education.

Despite the clear benefits of Cubase software in music teaching, the research identifies certain challenges that students may encounter during practice. These challenges may include technical difficulties, lack of familiarity

with the software, or difficulties in understanding certain complex musical concepts. However, the study also provides potential solutions to these issues, emphasizing the importance of continuous support and guidance from instructors. The research suggests that through consistent practice, proper guidance, and troubleshooting, students can effectively overcome these challenges and fully benefit from the software's features (Sun, 2017).

New Knowledges

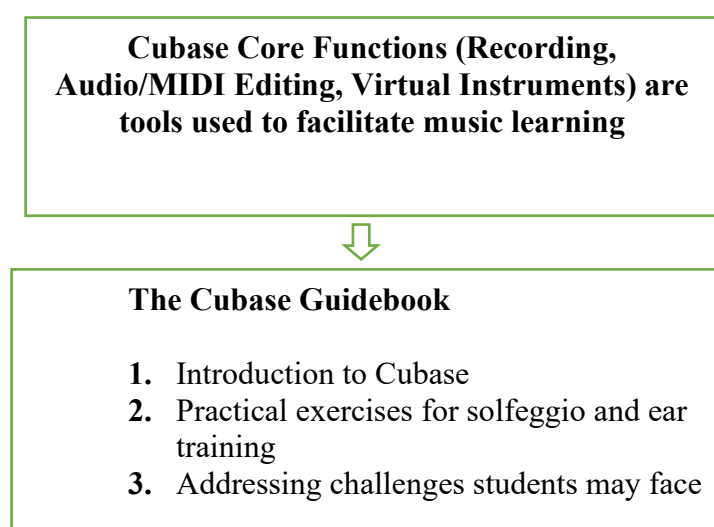


Figure 1: New Knowledges Diagram of Cubase guidebook for first year students in music at Leshan Normal University.

Conclusions

The use of Cubase in the music program at Leshan Normal University offers a dynamic and modern approach to teaching solfeggio and ear training. The software's broad range of functions not only supports students in developing technical and musical skills but also enhances their overall understanding of music theory. The creation of a guidebook tailored to first-year music students further strengthens the integration of this technology into the curriculum, providing a valuable resource that can guide students through their musical journey. Through ongoing practice and guidance, students can overcome

challenges and fully harness the potential of Cubase software to enhance their music education experience.

Suggestions and Recommendations

1. Creating a Guidebook for Using the Cubase Program for Teaching Music Theory to Music Students in Various Years:

The first part of this research focuses on the development of a comprehensive guidebook designed to integrate the Cubase program into music theory instruction for students at various stages of their academic journey. Cubase, with its advanced features for music composition, arrangement, and editing, can serve as an interactive tool to enhance the understanding of music theory concepts.

The guidebook would provide step-by-step instructions on how to use Cubase for theoretical applications such as harmonization, chord progression analysis, counterpoint exercises, and orchestration. It would be designed to cater to the different needs of music students at various academic levels, with an emphasis on gradually increasing complexity and functionality, ensuring accessibility for first-year students while providing advanced techniques for upper-year students.

2. Comparison of Before-After Scores of Students Who Used the Cubase Guidebook in Solfeggio and Ear Training Courses:

The second part of the research aims to evaluate the effectiveness of the Cubase guidebook by comparing the before-and-after scores of students who use the guidebook in their Solfeggio and Ear Training courses. Solfeggio, which involves sight-singing and pitch recognition, and Ear Training, which focuses on recognizing intervals, chords, rhythms, and melodies by ear, are essential components of a comprehensive music education.

The use of Cubase allows for real-time auditory feedback, manipulation of musical elements, and visualization of music theory concepts, which could potentially enhance students' skills in these areas. By assessing students'

progress before and after using the Cubase guidebook, this research will determine whether the integration of technology into traditional music education improves students' abilities in pitch accuracy, rhythm recognition, harmonic analysis, and overall ear training skills.

This comparison will also provide insight into how technology can enhance the learning experience, particularly for subjects that require a high degree of auditory perception and theoretical understanding, and could serve as a model for other institutions looking to incorporate similar tools in their music education programs.

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