

***The Innovation of Music and Computer Courses Designed to Improve the Skills of
Thai Music Students in Silpakorn University***

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Abstract

The *Music and Computer* course, 431 210 is designed to improve the skills of Thai music students, both majors and minors, at the Faculty of Arts, Silpakorn University. Computer functions in the course as a musical tool incorporated with music software for notating, recording, as well as creating other musical works related to the program of study that has been used since 2002 and revised in 2010 as appropriate for technological advances in Thai society.

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I. Introduction

1) Background and significances of the research (teaching methodology/ teaching materials)

The *Music and Computer* course, 431 210 is designed to improve the skills of Thai music students, both majors and minors, at the Faculty of Arts, Silpakorn University. Computer functions in the course as a musical tool incorporated with music software for notating, recording, as well as creating other musical works related to the program of study that has been used since 2002 and revised in 2010 as appropriate for technological advances in Thai society.

Even though students enrolling in this course have passed western music notation transcription from the course 431 204, that course content only requires students to notate the music by hand; hence, students still need experience in using notation software. As a consequence, 431 210 is designed to incorporate the application *Sibelius 7* in order to enhance student capability to apply this computer skill in preserving Thai Music through western notation. Along with the software operation, students are assigned to do a biographical project of one Thai music master and notate his or her music by using *Sibelius 7*. The assignment will be presented with Microsoft PowerPoint. Students could also utilize this assignment as a project presented in the course 431 217 *Project in Thai Music* in the second semester of their fourth year of study, or modify it for further use in their professional career after graduation. Nevertheless, the benefits of the course after the graduation, especially towards social and public, cannot be emphasized enough.

As such, an innovative project has been designed by one instructor who is experienced in computer music applications. He also works as a part time instructor in teaching two courses: TVB 2203, *Music and Sonic Design for Radio and TV Media* and CAM 2505, *Sound and Music Production* for Communication Arts (Broadcasting) department, Faculty of Management Science, Suan Sunandha Rajabhat University since 2013 to present. This subject aims to teach students computer applications for sound design and production in communication arts business encompassing both theory of music and broadcasting. As a consequence, he has developed an innovative application to support teaching and learning using *Music and Computer* course (MUS 431/210) as a means of teaching. The course content involves the application GarageBand, a software of Apple products in *i-Life* operated under OSX and IOS system. Considered a user friendly application beneficial to people with a non-music background, the program can help create music and compositions through instrument designation, together with playing in an autoplay function. Once the chord is selected to start the application, the system will conduct an ongoing rhythm and tempo providing the background for further input.

Moreover the application is also capable of combining sounds through mixed-sound function of 8 tracks, giving users an opportunity to mix various musical instruments with the option of exporting files to share in social networks including YouTube, SoundCloud, etc., or saving in iCloud to rework in GarageBand on a Mac system. Although GarageBand is one of the most popular applications containing large amounts of audio files of both western and regional music, it does not contain any file of Thai music. Hence, people worldwide have not had the opportunity to experience

Thai music from GarageBand. Realizing this disadvantage, *Music and Computer* provides students study project to develop a simple Thai music composition of 3 minutes under the condition that it has to reveal Thai musical identity. The Instructor of the course will teach students how to operate the application as well as guide them through the composition process before recording and uploading to online media for public users. With this course assignment, Thai music can be integrated with modern technology, along with Thai music preservation and publication.

Students' projects will enhance their methodology in notating Thai music with modern notation in the *Sibilius* application. In addition to the project, students have to conduct a research project on the life and work of one Thai music master with a music score attached and presented through PowerPoint, as well as a teaching presentation on a case-based study. Students will conduct a group project on Thai music composition for the GarageBand application. All of the course assignments will be published on the Thai Music department website. The course outcome can reinforce a new student-centered learning assessment, which provides students freedom in their thinking process under the instructor's guidance.

Through *Music and Computer*, the modernistic evaluation system will assess the project, considered a new integration in teaching and learning, in which Thai musical knowledge has merged with computer applications. As such, it could maintain Thai musical heritage in a creative way congruous with this present-day society.

2) Principle of the project

The goal of the project is to educate both Thai music major and minor students how to integrate Thai music knowledge with technology of the GarageBand application so that they can create and present their works to the public by uploading to online media channels.

3) Objectives of the project

- 3.1 To enlarge the learning outcome of the course 431/210 *Music and Computer*, Music and Dramatic Arts, Faculty of Arts, Silpakorn University
- 3.2 To enlarge the learning outcome through Project-based innovative teaching for individual and group project creativity
- 3.3 To develop educational intergrating system with work-based system relying on student center accountability through project assessment and evaluation
- 3.4 To develop the 5-learning outcomes as mentioned in the curriculum standardization
- 3.5 To promote the university notability in innovative teaching

II. Project Description

1) Project factors

The main factor is to create an innovative program in a GarageBand Application. Students will be assigned to compose a simplified Thai music piece, approximately 3 –minutes length. The instructor will guide student in operating the application as well as providing advice on matters of composition. Students will then upload the files to

online media channels. General application users can derive benefit from students' works, as such this innovative program can serve the society in its full capacity.

2) Procedures in utilizing teaching resources

2.1 Introduction process

Instructor introduces course objectives to students, along with explaining the assessment system in evaluating both the individual and group projects. Meanwhile, he teaches *Sibelius version 7* to enhance students' skill in notating Thai Music with western notation system. After students have managed the competency in using *Sibelius*, the Microsoft PowerPoint program is introduced for creating a project presentation. Students will be assigned an individual project on the study of one Thai Music master's biography and notate a work of the selected Thai music master by using *Sibelius 7*, as well as a brief description of his music literature. The project aims to teach students' the ability to integrate the knowledge of notating music in western notation with the ability to conduct the research in Thai music master's biography. Hence, student's individual project will be announced through the department website.

2.2 Project creation process

GarageBand application is introduced to students. The project is assigned on a group basis. Each group has to compose 3 pieces of 3-minute-long Thai music. Melodies are required to reveal Thai musical identity following to the instructor's advice. After the compositions are made, students have to present their works by performing with 3 different types of ensemble:

Pii-pat Ensemble (soft mallet) which consists of Ranat-ek, Ranat-tum, Kong-wong-yai, Klui, Saw-u, Ching, and Klong-kaek.

Thai Mixed-Strings Ensemble with Kim, consists of Saw-duang, Saw-u, Jakae, Klui, Ching, Tone-Ramana, and Kim.

Thai Mixed-Strings Ensemble with Saw-sam-sai, consists of Saw-duang, Saw-u, Jakae, Klui, Ching, Tone-Ramana, and Saw-sam-sai.

The performance will be recorded and then, exported as sound files to work in GarageBand. Each instrument is placed through the 8-tracks of mixed sound channel according to the number of the instruments in each ensemble.

3) Conceptual Framework in Developing Teaching Innovation

By clarifying the project framework, students can realize the potential of integrating modern technology with the national treasure of Thai music. Thus, the application of Thai musical heritage on the Garage Band application is indeed a new innovative project that can widen the gateway of Thai music for the first time to reach a modern hemisphere of international publication. In processing this project, a strong cooperation from students together with the expertise of experienced sound engineers are significant components to turn Thai music recording into a valuable utilized package. This would definitely establish learning-teaching innovation guideline for a further development of Thai music education.

III. Utilizing the Project

1) Methods in utilizing the teaching package

Instructor assigns students to publish their project via online networks and social medias such as Facebook, YouTube, Sound Cloud, etc. Hence, the information published in these medias will be of benefit to the public. Moreover, the instructor can evaluate the project by observing the media feedback.

2) Condition in utilizing teaching package

2.1 For the instructor, the goal is to assure the student's ability in notating Thai music with western notation system by using *Sibilius 7* as well as obtaining research and presentation skill individually in studying the biography of Thai music master and presenting the study outcome through PowerPoint presentation. Instructor will be giving advice throughout the process and open the forum for in-class critique. The other condition is to assign a group project to create group dynamics in composing 3 pieces of Thai music, each within the duration of 3-minutes and containing the melodic characteristic of Thai musical identity. Instructor will teach students to operate the GarageBand application, along with transforming their music for the upload process. More importantly, the rehearsal of the pieces has to be ensured for recording readiness. The evaluation will be done as a final step after the recording process is completed. Hence, grading is made for both individual and group project evaluation.

2.2 For students, the individual and group projects are required to be fulfilled at the productive level, including achieving potential and an understanding in operating music programs including *Sibelius*, Microsoft PowerPoint and GarageBand effectively. Moreover, student must be able to integrate computer technology and Thai Music knowledge for the purpose of preservation and general public utilization.



IV. Report of the Project Progress

Instructor assigned students to setup a Facebook group under the name “Ethnic Music 58” (*don-trii phao-pan 58*). In the individual assignment project, in which students conducted their research on a Thai music master’s life and work, students have uploaded information through Facebook and shared with the public. Through this assignment, 12 students have presented their individual works on the following topics:

1. Prince Narisara Nuvadtivongs
2. Prince Paribatra
3. Prince Benbadhanabongse
4. Phraya Prasarn Suriyasap
5. Phra Praditpairau
6. Luang Praditpairau
7. Kru Choy Soonthornvatin
8. Jangwang Tua Patayakosol
9. Kru Montri Tramot
10. Kru Chalerm Buatang
11. Kru Prasit Thavorn
12. Kru Boonyong Ketkong

After finishing their individual projects, students continued with their group project by composing 3 pieces of Thai music of 3-minutes each. The melody is interpolated with Thai musical characteristic under the guidance of the course instructor. The music composed must possess the identity of Thai Music under the instructor’s supervision. As a result of the group project, 3 Thai music compositions were created: 1) Aksara, 2) Vijitrotjana, and 3) Maan-mek. The composition “Maan-mek” is performed with Pii-part mai nuam (soft mallet) ensemble, “Aksara” is performed with mixed strings ensemble with Kim, and “Vijitrotjana” is performed with mixed string ensemble with Saw-sam-sai.

Before the recording, students have submitted their compositions to the instructor and rehearsed the pieces 2 times a week. The recording was made on May 23, 2015 at the recording studio of the western music department, Faculty of Humanities, Ban Somdej Chaopraya Rachabhat University, with Sompas Sookchana (Collage of Muusic), an expert of Thai music recording, serving as a project recording engineer.

Recording Studio

The recording had been done under 8 Mixed-sound Tracks which equivalent to the number of musical instruments used in all 3 ensembles of the project and is suitable for the GarageBand application.

The recording of 3 songs; *Aksara*, *Vijitrotjana*, and *Maan-mek*



Students were all well prepared through effective rehearsals and advising. As a consequence, the recording process took only 3 hours. It reveals students high enthusiasm and effective team work organization. The recording files were then transferred to Garage Band program.



V. Outcomes of the Development of Innovative Teaching Project

- 1) Initiating the development in innovative teaching and learning from the Project-based assignment.
- 2) Creating a student-centered assessment and evaluation.
- 3) Developing the education system involved with integration and work-based operation.
- 4) Developing students learning competency in 5 areas according to the curriculum standardization.
- 5) Initiating student's awareness towards social need and community service
- 6) Promoting the institution's (Silpakorn University) notability since it is the first institution encouraging Thai music students to implement their Thai music knowledge by using the GarageBand application for general public benefit. Hence, it also provides more opportunities to the Thai music area in expanding to other creative projects.