

## **E-Learning Development for Indonesian Traditional Music**

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### **Abstract**

*This research is motivated due to low interest of Indonesian people for learning of traditional music. So in this study I tried to design e-learning for learning of traditional music. E-learning is designed to make it easier for members to access learning materials anywhere and anytime. Learning materials are provided concerning theories in music, the history of traditional musical instruments, as well as equipped with a virtual musical instrument as a medium for member practices. The e-learning is one of Indonesia's culture introduction media to the outside world, particularly in the field of traditional music instruments. The development of e-learning using the object-oriented programming.*

**Keywords:** *E-learning, traditional music, analysis, design*

### **1. Introduction**

In today's traditional music is less desirable by young people, which is in a big city, a little bit of teaching resources and also hard to find it. This is also reinforced by the number of institutions that provide traditional music education smaller than the modern instruments. This will have an impact on the less optimal learning method for people who study the music itself. From looking at the existing problems in the formulation above, then we look for proposed solutions of the system that will be created.

Today, the education world has been using information systems to support teaching and learning activities using the internet, either as a supporter or as an infrastructure facility of a major educational institution. It can be called the E-Learning. E-Learning can be implemented not only for formal education, but also for non-formal education, such as in the study of music. So the material can be taught more easily to understand and delivered in a way that is more interesting. In learning music, each person can adopt it through music education / music schools such as university (formal learning). This can be done by taking approximately 2-3 years of learning to learn music theory and its application.

The presence of E-Learning traditional music can be studied by a lot of learners, with a free choice of traditional musical instrument which has been provided by the system, members can learn a musical instrument that is available on the E-learning and its members are also not need to pay to be able to learn the traditional music. With the support of virtual music, members can freely express play the instrument, so there is no limit for the creativity of the members. Members are able to learn anywhere and anytime, so there is flexibility of time and place.

Formal learning is typically apply many methods in order for learners including recording artists, songwriters, music teacher, composer of advertising music, session player, music director (recording, theater, *etc.*), big band leader, music copyist, music writer, and so on. Then for informal learning as learning in the course or learning music performed alone, usually referred as self-taught learning. Self-taught learning can be done in various ways,

such as learning through internet, mimicking from the other people play musical instruments or learn from a book.

There are weaknesses in their music learning methods. In music education, its problems such as long periods of time for learning, the expensive of cost, time is not flexible and less able to practice more and also about the time of consultation with a qualified instructor. On learning in the course, one of its problems, students must pay course fees to learn one kind of instrument. In the self-taught learning, usually people can only learn a musical instrument in practice, and tend to ignore the theory that it can't do compose music and they are not familiar with semibreve (whole note) as the basis for learning a musical instrument.

Aside from the above discussion, in today's music studied tends towards modern music such as classic piano, jazz guitar, violin and so on, so that the traditional music and musical instruments are becoming obsolete [1]. As in music class rarely provide traditional music education program itself.

Thus, the authors would like to implement the application of E-Learning Traditional Music which will be used as a learning information system to provide a more interactive and interesting. For the currently there are three (3) types traditional musical instrument of Indonesia. So that everyone can learn traditional music, both in theory and practice at an affordable price and no need to pay for accommodation or transport to acquire learning.

E-learning traditional music provides convenience in terms of flexibility of place and time. In addition, each person can decide for themselves how far they are willing to learn about their own traditional musical instruments with their individual learning plans and with the advent of e-Learning traditional music can be a means to defend and preserve the art and culture of Indonesia that begins to fade and introduce traditional music and the music instrument to all citizens of Indonesia and foreign countries.

And from a study in 2000 conducted by Forrester Group to 40 large companies showed that most workers (over 68%) refused to participate in training / courses which use the concept of e-Learning. When the e-Learning was required of participants and 30% refused to participate in the course [2]. Meanwhile, other studies indicate that of the people who signed up to participate in e-Learning, 50-80% never finish it until the end [3]. Based on the literature, failure of e-Learning is mainly caused by failures in the requirements analysis implies that the developer did not manage to capture what the actual needs of users (user needs). The results from the needs analysis process (requirements analysis) translated to be a feature that should be included in the e-Learning systems.

The term of e-Learning contains a very broad sense, so many experts who elaborate on the definition of e-Learning from different perspectives. One definition is quite acceptable by many parties, for example from Darin E. Hartley [4] which states: e-Learning is a type of learning which allows teaching materials delivered to students using the medium of the Internet, Intranet or other computer network media. The development of digital technology, internet and multimedia are very fast, the web has become a global force, interactive, dynamic, as well as being a medium of learning and teaching. The Internet provides an opportunity to develop a learning-on-demand and learner-centered instruction and training.

Furthermore Khan [5], defines e-learning: "e-Learning can be Viewed as an innovative approach for delivering well-designed, learner-centered, interactive, and facilitated learning environment to anyone, anyplace, anytime by utilizing the attributes and resources of various digital technologies along with other forms of learning materials suited for open, flexible and learning distributed environment".

## 2. Method

The method used in this paper is qualitative method. Data collection for e-learning development was conducted to gather input and output documents that flows of e-learning activities, with direct data collection techniques that consist of: (1) interviews, conducted by a question and answer directly to the interested parties in this study. (2) Observation, the authors observe that the learning process is in one of the music groups in Jakarta, to be a reference, which will be described in, namely Mahagenta.

## 3. Design of E-learning Application

As a result the process of analysis and design of information systems E-Learning Traditional Music, the authors formulate the proposed activities. The proposed activities will be presented starting with the analysis of the running system, analysis, and design, as well as the implementation plan that can be used as a foundation to develop information systems in E-Learning Traditional Music.

E-learning has been developed with the domain name swaradwipa.org. Swaradwipa.org name comes from the Java language, namely SWARA and DWIPA. Swara means sound, and dwipa means the country and org that reflects an organization that swaradwipa as non-commercial website. E-learning provided by swaradwipa.org to equip the learning process of music that has been there along, such as through formal education (universities, music schools) and informal education (music lessons, and others).

There are several actors involved in the overall activity of the e-learning information system of traditional music are:

- Learner, any person who has registered for the following study provided swaradwipa.org
- Admin, the author, as the manager of the overall activities of the e-learning.
- Instructor is the people who are involved in music and traditional music, which in cooperation with swaradwipa.org to engage in discussion forums.

The three types of e-learning activities are absorb, do, and connect [6]. Absorb activities are the ones closest to pure information. Absorb activities usually consist of information and the actions learners take to extract and comprehend knowledge from that information. In absorb activities, the learner may be physically passive yet mentally active—actively perceiving, processing, consolidating, considering, and judging the information. In absorb activities, it is the content (really the designer or teacher or writer of it) that is in control. The learner absorbs some of the knowledge offered by the content.

While Absorb activities provide information, Do activities transform that information into knowledge and skills. In Do activities, learners discover, analyze, verify, combine, organize, discuss, evaluate, refine, elaborate, and apply knowledge. E-learning technologies continue to expand, enabling more innovative ways to interact with learners. And then the connect activities help the learners close the gap between learning and the rest of their lives. In the table below describes the activities of e-learning with features developed in this swaradwipa application.

**Table 1. E-learning Application Features**

<b>E-learning Activities</b>	<b>E-Learning Features</b>	<b>Actors</b>
Absorb	- Access Teaching Material (Presentation)	Learners
Do	- Access and do Virtual Music (simulation) - Do the test (online)	Learners
Connect	- Discussion via forum	Learners and instructors

There is the roles and function required in the implementation of e-learning application:

**Table 2. Role and Function E-Learning System**

<b>System</b>	<b>Name of Role</b>	<b>Actions</b>
Backend	Admin	- Filling the material
Backend	Instructor	- Designing learning - Responding to a question from the learner - Evaluating test - Giving feedback - Evaluating the learning process
Frontend	Learner	- Following learning - Do the simulation - Discussion via forum - Sending the answer related to the test - Following the evaluation process

Scenario view for this e-learning application modeled using UML Use Case diagram. Use case diagrams are used to model the functionality of the e-learning system that describes the interaction between the systems with the users of application. In Figure 1, the model of E-learning system divided into two system boundary that represents the portal of the e-learning: front end application and back end application.

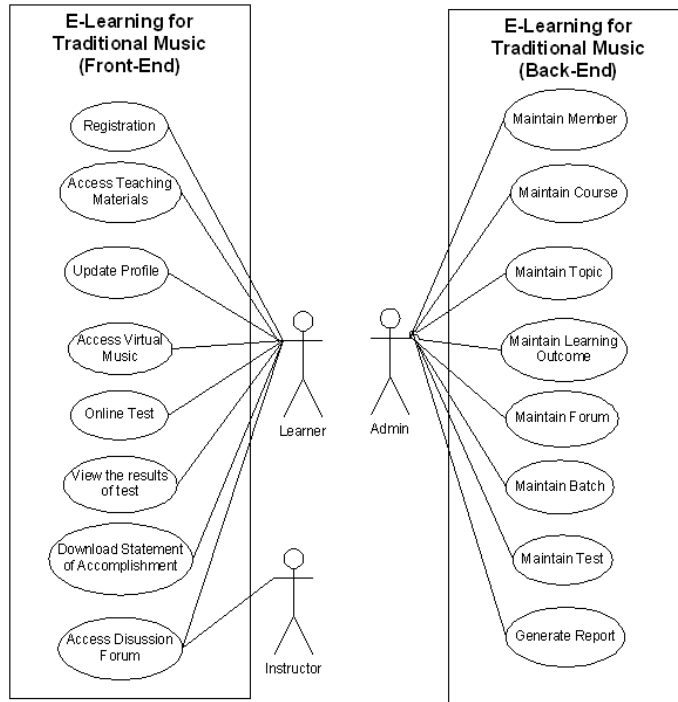


Figure 1. Use Case Diagram for e-learning Application

In the Figure 2 below illustrates the design of the database used in the development of e-learning.

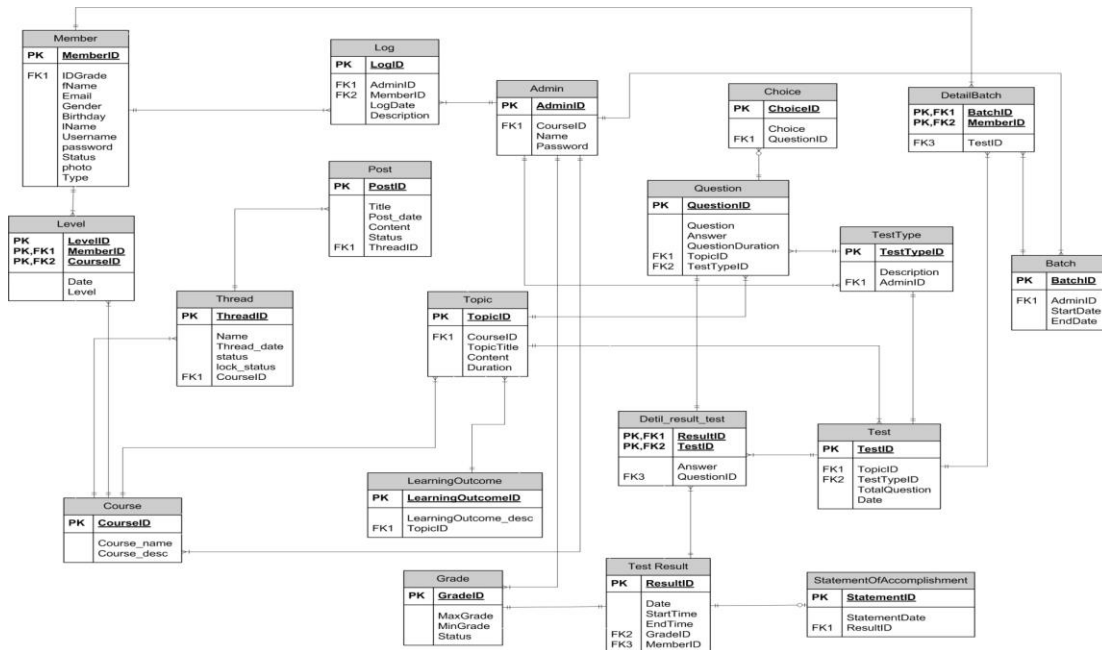


Figure 2. Entity Relationship Diagram for e-learning Application

In the Figure 3 to Figure 4 constitute examples of screen design e-learning traditional music:

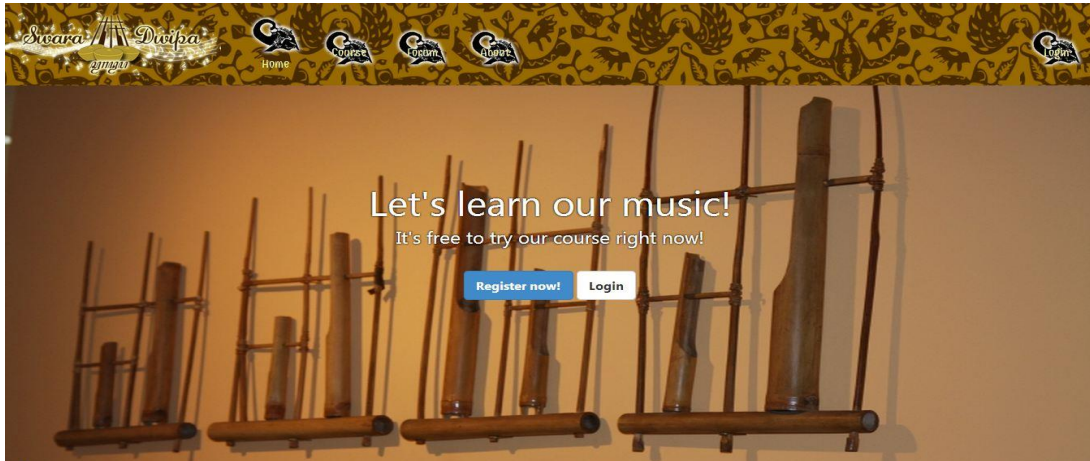


Figure 3. User Interface for Homepage

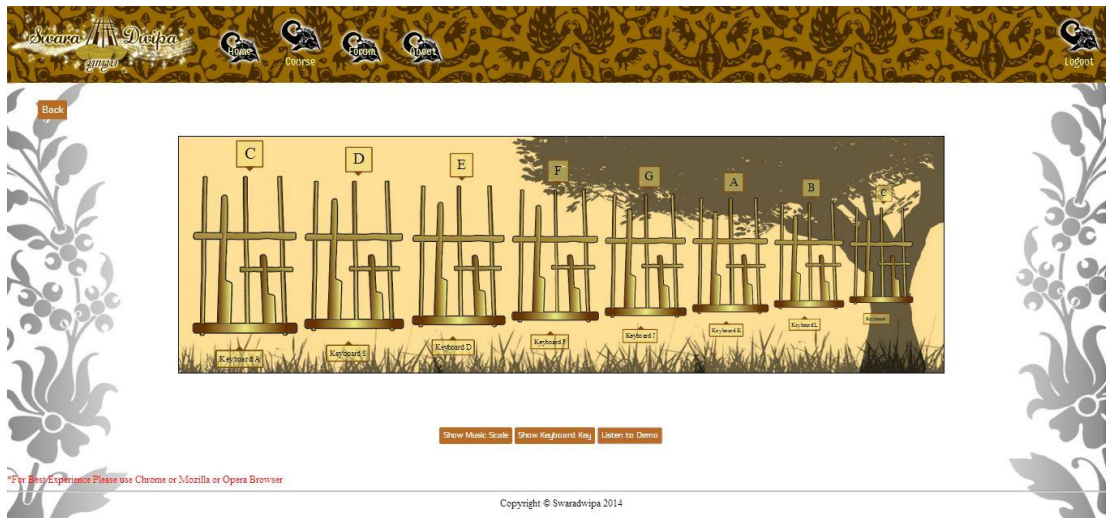


Figure 4. User Interface Virtual Music for Angklung

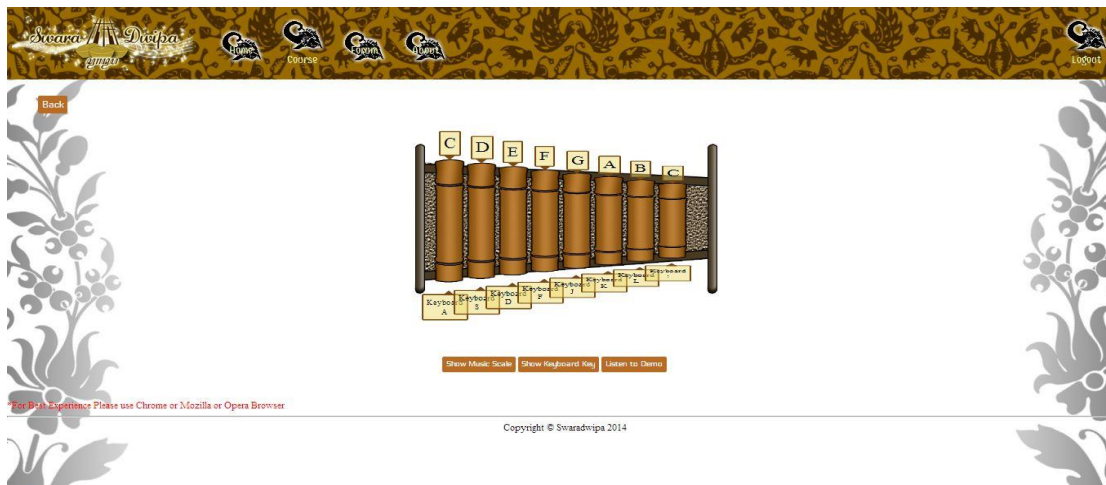


Figure 5. User Interface Virtual Music for Gambang

### 3. Conclusion

E-learning changes the learners experience as well as the instructors. E-learning system frequently requires hand-on activities, whether participating in online discussion. This introduces new issues and challenges for learners, including computer experience and confidence, technical problems, and time management. We hope the E-Learning Traditional Music can help to solve existing problems in Indonesia and also the range of the system is not only the young people of Indonesia, but also for all people in the world to preserve the Indonesia traditional music instruments.

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