

Implementation of *e*-Learning Modules in Viola Instrument Course-*Indria* Level Practical Learning

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Abstract— The development of *e*-learning is a form of quality improvement undertaken to achieve effective learning. The Music Department, as one of the study programs at Universitas Negeri Surabaya, has two types of courses, namely theory and practice. The purpose of this study is to develop *e*-learning learning to facilitate students to practice independently. *Indria* Level Strings Instrument Course, suitable to be transformed in *e*-learning, because this is a course that requires intense learning time. According to its characteristics, this course requires concrete examples of playing, so students understand precisely through video shows. Students are facilitated to recall material, students can access anywhere. Through *e*-learning learning, student competencies deepen, the quality of learning becomes effective. This research uses the Research and Development method. The product is in the form of a learning module for the *Indria* Level Viola Instrument course to improve the quality of learning of music students. The product trial was conducted at the Music Department, Universitas Negeri Surabaya, with purposive sampling. Data analysis of the product validity results is arranged in a Likert Scale questionnaire. Every statement describing the aspect of product validity testing is in accordance with the criteria of the Indonesian National Education Standards Agency. The development of this module shows significant results in learning. Shown in the effectiveness of the *e*-learning module test results at a percentage of up to 90%, students are able to process and implement every material and video contained in the *e*-learning module. Referring to Bloom's taxonomy, the *Indria* Level Viola Instrument *e*-learning course's able to reach the Psychomotor P5 (Skilled Movement) domain. This achievement shows that the *e*-learning module facilitates students to practice independently.

Keywords—*e*-learning, viola, effective learning.

I. INTRODUCTION

Effective learning has meaning as effective learning. Learning development program in the form of *e*-learning is one form of quality improvement that can be done to achieve quality in more effective learning. *E*-Learning is an imminent and equally resourceful improvement of new times. It has made the edification structure more interactive and engaging as compared to the traditional education system [5]. The quality of learning in question must cover a comprehensive scope, starting from deepening theoretical cognitive aspects, skilled psychomotor aspects, to efficient management of learning time. *E*-learning strategies covering the different

educational sectors have recently been published. The Department for Education and Skills (DfES) strategy, 'Harnessing Technology: Transforming Learning and Children's Services' provides a joined up approach across schools, colleges, universities, and adult and community learning organizations [4]. Nursalim defines learning as a stage of change in the behavior of individuals that are relatively sedentary as a result of experiences and interactions with environments that involve cognitive. He also emphasizes the term learning as a business or activity that aims to make changes in a person, including changes in behavior, attitudes, habits, science, skills, and so on [7].

E-learning has begun to be implemented at the educational levels (elementary school, junior high school, senior high school, up to tertiary level). One of the tertiary institutions that has begun to optimize *e*-learning learning is Surabaya State University. Music Art Study Program, an art study program at Surabaya State University that has a distinctive scientific character. In the field of music, there are several competencies that are expected to be possessed by students, including: (1) attitude competencies in art appreciation, (2) knowledge competencies implemented in art theory and concept materials, and (3) competencies implemented in expressions and student creations in creating art. The courses in the Art of Music Study Program are grouped into two, namely art theory and art practice. For theoretical courses the average load is 2 (two) SKS, while the practical courses, especially instruments consisting of: Vocals, Piano, Guitar, Friction (violin, viola, cello, contrabass), Blow (wood and metal), and Percussion has a burden of more than 2 credits. It aims to equip students in the form of qualified capital / skills to become professional music practitioners in accordance with the specialization of their musical instruments. The practice subjects of this instrument are tiered subjects which have six levels, namely: (1) the Indigenous Level, (2) the Pre-Youth Level, (3) the Youth Level, (4) the Pre-Middle Level, (5) the Intermediate Level, (6) Main Level.

Viola Instrument Course is suitable to be transformed in *e*-learning format, because this course is a practice course that requires intense learning time. Facilitation of lecturers in face-to-face lectures is maximized to deliver techniques directly to students, as well as brainstorming or discussion sessions about techniques and concepts of playing music. Meanwhile, to practice techniques and the ability to play the repertoire, each student needs a

minimum of 3-4 days, even more. This course is the subject of the practice of the main expertise of music art study programs. In addition, in this course, contextual elements of learning materials are also given, namely by showing students how to tuning-up instruments, care, and also the position of playing stringed instruments in detail. In accordance with its characteristics, Viola Instrument courses really need concrete examples of games, so students can understand precisely and precisely through the video presented. In addition, through learning videos, students have the facility to recall the material lecturers convey, students can access anywhere and anytime, easily. Teachers do not have to be the main learning sources for the students. Students are able to obtain knowledge from any learning sources, such as printed media or technology-based media which are appropriate to the learning objectives [6]. Successful e-Learning systems have to address how individuals might want to learn. So, e-Learning designs need to support personalization [8]. Through e-learning learning, students' knowledge and skills become more complex and in-depth, the quality of learning also becomes effective.

II. METHOD

This research uses qualitative and quantitative approaches to the Research and Development method. This method is designed to develop a new product and / or improve existing products with steps that can be accounted for [10]. In this research, the product developed in the study is an e-learning learning model in the Viola Instrument practice course with a focus on viola friction instruments to improve the quality of learning of music art students. The product trial was conducted at the Music Department, Universitas Negeri Surabaya, with purposive sampling. Data analysis of the product validity results is arranged in a Likert Scale questionnaire. Every statement describing the aspect of product validity testing is in accordance with the criteria of the Indonesian National Education Standards Agency

The researchers applied to 3 students who took the Viola Instrument course, preferably the class of students who are programming the study subjects viola instrument as a trial sample. The implementation of the trial was adjusted to the Music Department.

III. RESULTS AND DISCUSSION

Onwuegbuzie and Johnson [3], state that the validation process for mixed methods (quantitative and qualitative) in research development is called the legitimacy. The process of legitimacy of data validity is carried out by several parties who have competent competence in the field of e-learning and also in the field of music. There are several components that become the main points in the process of testing the validity of the e-learning Instrument Viola Instrument module, including:

A. Component Eligibility Content

- The material used in the e-learning module of Viola instruments includes a basic understanding of viola, preliminary practice material for the running, as well as etude or repertoire song material complete with accompaniment music.

- The material in the module can be applied independently by students (student-centered).
- Reference material used in the e-learning module Viola Instruments can be applied to date.

B. Presentation Eligibility Component

- The title displayed in the Viola Instrument e-learning module is in accordance with the overall song material concept.
- The material is presented in a coherent, gradual manner, and can direct students' understanding into the process of learning the material of the Viola music instrument in stages.
- Module e-learning Viola instruments are presented in full, starting from the introduction, table of contents, appropriate text size and standards.

C. Language Feasibility Components

- The grammar used is easily understood by students.
- The grammar used is in accordance with the General Guidelines for Indonesian Spelling (PUEBI).
- Systematic preparation of e-learning module Viola instruments in accordance with the rules of writing learning material modules for Higher Education level.

D. Components of eligibility in graphics

- The readability aspect (the size and type of letters used can be read easily).
- Module visual quality (regarding image sharpness and audio clarity in the learning video).

The product effectiveness test of the e-learning module Viola Instrument was conducted in two meeting phases. The instruments used in the effectiveness test include the following:

1) *Structured Interviews with Music Practitioners, Lecturers of Music Art Study Programs, and Students.* This instrument is used to obtain information about responses from music practitioners, music art study program lecturers, and also students about the preparation of the Viola Instrument e-learning module and their responses during the learning process using the module.

2) *Student Activity Observation Sheet During the Learning Process.* Student Activity Observation Sheet is used in obtaining information about the stages of learning undertaken by students during the Viola learning process by using the Viola Instrument e-learning module. This sheet is filled out by a Music Art study program lecturer whose job is to observe and assess during the implementation of Viola learning by using the Viola Instrument e-learning module.

In the process, the analysis of the results of the validity of the development products is arranged in the form of a scale questionnaire. The type of scale used is a Likert Scale. Riduwan suggests that the Likert scale is a scale used to measure the attitudes, opinions, and perceptions of a person or group of people about social events or symptoms [9]. In the research process, this social phenomenon has been specified in detail and specifically

by the researcher, hereinafter referred to as the research variable. Every answer or statement describing aspects of the validity test of product development, according to the Indonesian National Education Standards Agency (BSNP), will be linked to the form of statement or attitude support expressed in the following words:

- 1) Scale 1 = Very Poor / Very Poor / Very Disagree.
- 2) Scale 2 = Poor / Poor / Disagree.
- 3) Scale 3 = Fair / Moderate / Neutral.
- 4) Scale 4 = Good / Agree.
- 5) Scale 5 = Very Good / Very Agree.

This questionnaire was handed over to the validator team during the process of testing the quality validity of the Viola Instrument e-learning module. Examples of the application of a Likert scale (with checklist form) in the e-learning module quality validity test questionnaire Viola Instrument component Feasibility Content:

Table 1. ANALYSIS OF SCORE ON VALIDITY TEST OF COMPONENT FEASIBILITY OF CONTENT

NO.	Assesment Point	SCORE				
		5	4	3	2	1
		VG	G	F	P	VP
1.	The material used in the e-learning module The Viola Instrument includes a basic understanding of Viola, preliminary practice material for running, as well as etude or repertoire song material complete with accompaniment music.	√				
2.	The material in the module can be applied independently by students (student-centered).		√			
3.	Reference material used in the e-learning module Viola instruments can be applied to date.		√			

The formula for calculating the score used in the Likert Scale is by calculating the percentage of each item, based on the validation results from the validator team that has been determined. For example there are 3 validators to test the component Feasibility Content item 1 (Material used in the e-learning module The viola instrument already includes a basic understanding of viola, preliminary practice material for capturing, as well as etude or repertoire song material complete with accompaniment music), then an overview the score calculation:

Answering 5: 2 people; Answering 4: 1 person; Answering 3: 0; Answering 2: 0; and Answering 1: 0.

Calculate scores by:

The number of scores for 2 people answered 5: $2 \times 5 = 10$.

The number of scores for 1 person answered 4: $1 \times 4 = 4$.

The number of scores for 0 people answered 3: $0 \times 3 = 0$.

The number of scores for 0 people answered 2: $0 \times 2 = 0$.

The number of scores for 0 people answered 1: $0 \times 1 = 0$.

TOTAL: 14.

The ideal score for item number 1 (highest score) = 5×3 people = 15.

The lowest number of scores for item number 1 = 1×3 people = 3.

Explanation of Percentage Interpretation of Scores for Likert Scale [10]:

Figures 0% - 20% = Very Less.

Figures 21% - 40% = Less.

Figures 41% - 60% = Enough.

Figures 61% - 80% = Good.

Figures 81% - 100% = Very Good.

Based on item number 1 data obtained from a number of validators, the material aspects used in the e-learning module of Viola Instrument include basic understanding of viola, preliminary practice material for capturing, as well as etude or repertoire song material complete with accompaniment music has a percentage: $14/15 \times 100\% = 93.33\%$, classified as very good.

E-learning is a learning process carried out through a network. This means that e-learning enables the delivery of teaching materials to students using information and communication technology media in the form of computers and internet networks or intranets. With e-learning, learning can be done anytime, anywhere, through any path and at any speed of access. The learning process is efficient and effective. The characteristic of e-learning is that it does not depend on time and space (place). Learning can be carried out anytime and anywhere. With information technology, e-learning is able to provide teaching materials and store learning instructions that can be accessed anytime and from anywhere. E-learning does not require a room (place) as large as conventional classrooms. As such, this technology has shortened the distance between teachers and students [11].

Bates and Wulf (1996) say that e-learning learning also has the following advantages: 1) Improving learning interactions (enhance interactivity), 2) Facilitating learning interactions from anywhere and anytime (time and place flexibility), 3) Having a range that wider (potential to reach a global audience), 4) Facilitating the improvement and storage of learning materials (easy updating of contents as well as archivable capabilities). The application of the subject practice of swipe instruments in e-learning learning, providing wider access space with increasingly sophisticated internet networks, as well as providing refinement of practical material with audio and visual that greatly supports the way students learn in practical lectures [2].

This research is one form of research that applies the knowledge of the art of music in particular the practice of musical instruments by combining e-learning technology as a means of developing its methods. Output that will be generated after this research takes place are: 1) Accelerating the dissemination of concepts, procedures, theory, and practice of sensory level string instruments especially viola, 2) Increasing the understanding of participants learning e-learning especially students in the technique of stringed instrument playing, 3) Improving the skills of participants learning e-learning, especially students in conducting simulations of technical playing practice, intonation and interpretation of songs, 4) Measuring the level of awareness of participants learning

e-learning, especially students after participating in all learning.

Achievement targets will be produced in the form of module products that contain guidelines, viola playing theory, playing position, how to care and tuning-up, as well as practice materials for basic level violin stringed instruments, which are diplomaticized specifically in viola instrument courses. In addition, a series of videos containing viola playing techniques in sequence and detail, ranging from playing positions, fingering positions, bowing techniques, swipe techniques, to playing examples of repertoire at the basic level uploaded in vi-learning, as well as scientific publications on international proceedings indexed. In the long term, the objectives and results of this research are expected to produce e-learning learning that is innovative, practical and effective.

TABLE 2. SCORE OF ASSESMENT TEST OF E-LEARNING MODULE OF VIOLA PHASE I INSTRUMENT

NO.	Assesment Point	Score				
		5 VG	4 G	3 F	2 P	1 VP
1.	Every stage in learning activities can be carried out coherently		√			
2.	Students can use the Viola Instrument e-learning module.			√		
3.	Students can get to know and recall the basic concepts and techniques of playing viola while watching a learning video in the e-learning module.		√			
4.	When watching a learning video, students are able to understand and be able to apply the basic concepts and techniques of playing the Viola music instrument.			√		

First Trial Score Recapitulation (Highest Score Amount: 5 x 4 items = 20):

No item gets a Score of 5 : 5 x 0 = 0.
 There are 2 items that have a score of 4 : 4 x 2 = 8.
 There are 2 items that get a score of 3. : 3 x 2 = 6.
 No item gets a Score of 2 : 2 x 0 = 0.
 No item gets a Score of 1 : 1 x 0 = 0.
TOTAL: 14.

Percentage Results = $\frac{\text{Trial Score Results} \times 100\%}{\text{Highest Score Amount}}$
 = $14/20 \times 100\%$
 = 70% (Valid, Quality, Can be used with minor improvements).

TABLE 3. SCORE OF ASSESMENT TEST OF E-LEARNING MODULE OF VIOLA PHASE II INSTRUMENT

NO.	Assesment Point	Score				
		5 VG	4 G	3 F	2 P	1 VP
1.	Every stage in learning activities can be carried out coherently		√			
2.	Students can use the Viola Instrument e-learning module.		√			
3.	Students can get to know and recall the basic concepts and techniques of playing viola while watching a learning video in the e-learning module.	√				
4.	When watching a learning video, students are able to understand and be able to apply the basic concepts and techniques of playing the Viola music instrument.	√				

Summary of Second Trial Score (Highest Score Amount: 5 x 4 items = 20):

There are 2 items that get a score of 5 : 5 x 2 = 10.
 There are 2 items that have a score of 4 : 4 x 2 = 8.
 No item gets a score of 3 : 3 x 0 = 0.
 No item gets a Score of 2 : 2 x 0 = 0.
 No item gets a Score of 1 : 1 x 0 = 0.
TOTAL: 18.

Percentage Results = $\frac{\text{Trial Score Results} \times 100\%}{\text{Highest Score Amount}}$
 = $18/20 \times 100\%$
 = 90% (Very Good, Very Valid).

Regarding the percentage classification in the trial process of the Viola Instrument e-learning module, it can be described in the following table:

TABLE 4. CLASSIFICATION OF SCORE PERCENTAGE OF EFFECTIVENESS TEST OF VIOLA INSTRUMENT MODULE E-LEARNING MODULE

No	Criteria for Achieving	Validity Level Value
1.	76 % - 100 %	Very valid, very high quality, can be used without improvement.
2.	51 % - 75 %	Valid, quality, can be used with minor improvements.
3.	26 % - 50 %	Invalid, not qualified, cannot be used.
4.	1 % - 25 %	Very invalid, very not qualified, cannot be used.

The effectiveness of the use of e-learning modules Viola instruments also can be seen in this chart:

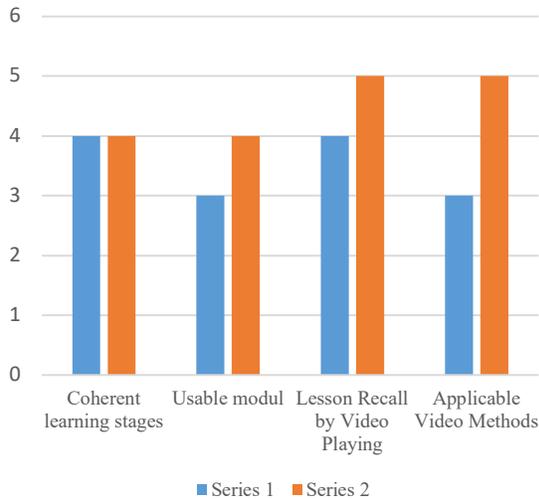


Fig. 1. Score of Assessment Test of e-Learning Module of Viola

The effectiveness of the use of e-learning modules Viola instruments can be measured from each activity carried out by students while using the module. Starting from reading the theoretical material and basic concepts of playing Viola music instruments, introducing Viola musical instruments and alto key music notations on Viola. Cognitively speaking, students are directed to get to know about Viola musical instruments in general and the alto key music notation reading system in simple beats (cognitive domain C1). After that, students are able to recall the position of the notation he has read on the alto key line staff independently (cognitive domain C1).

Not only knowing and remembering, students are also able to understand the implementation of the alto key music notation in an etude or repertoire (C2 cognitive domain). Thus, students can also independently apply the concept of alto key music notation into the form of a simple repertoire, where students can read the melody of a simple song listed on the Viola Instrument e-learning module. This means that the level of the cognitive domain of students increases to the application / application stage (cognitive domain C3).

In addition, the percentage of observations of student activities during the learning process of the Viola music instrument in the product trial process results are very good, very valid, which means that students are able to follow the stages in the learning module well so that the aim of increasing the cognitive domain of students through the use of e-learning Viola instruments can be optimized. Heading to the next student activity, namely trying to melody simple songs that have been read to be played on a Viola musical instrument. In this activity, what is developed in students is their psychomotor domain, which is at the Skilled Movements (P5) level - movements that require learning [1]. At the level of this psychomotor domain, students are able to apply the understanding of the concept of the alto key music notation into the form of real action, which is playing the song on a viola instrument with the correct fingering position, the right beats, and bowing according to instructions.

This is also shown from the percentage of observations of student activities in the learning process of Viola

musical instruments using the e-learning module Viola instruments in product trials that show a score of 90% (Very good, very valid), which means that the student's process of 'transferring' the melody he has read from the e-learning module Viola Instrument into the act of playing the Viola instrument, has been able to be done well by students. Thus, this means that the aim of increasing the psychomotor domain of students to the level of P5 (Skilled Movements) can be achieved.

Besides based on Bloom's taxonomy analysis along with the percentage of observations of student activities during the learning activities of Viola music instruments, the effectiveness of the use of e-learning modules Viola instruments can also be shown from the opinions of students and lecturers of Music Arts study programs, during and after the product trial process takes place. Based on the results of interviews with a number of Music Art study program lecturers, it was stated that the procurement of the e-learning module Viola Instrument was very beneficial for the process of increasing students' skills and skills, where the music playing skills were expected to be a solution for students to accelerate the ability to play Viola music instruments.

IV. CONCLUSION

The development of e-learning module for Viola Instrument course empirically is able to show significant results in the learning process of Viola music tools. This is shown in the results of the effectiveness of the e-learning learning module which shows a percentage of up to 90%, where students are able to process and implement every material and also the video contained in the e-learning learning module. Referring to Bloom's taxonomy stage, the e-learning module of the Viola Instrument course is also capable of reaching the Psychomotor P5 (Skilled Movement) domain. This achievement shows that the e-learning module can facilitate students to learn and practice independently.

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