

# Development of Instructional Media for Shooting Technique (Cinemat) using a Mobile Learning in Vocational High School

Rivandy Kifcy Somba<sup>1</sup>, Olivia Kembuan<sup>1</sup> and Kristofel Santa<sup>2</sup>

<sup>1</sup>Department of Informatics, Universitas Negeri Manado, Kampus UNIMA, Tondano, Indonesia

<sup>2</sup>Department of Informatics, Universitas Negeri Manado, Tondano, Indonesia

**Keywords:** Instructional Media, Mobile Learning, Android

**Abstract:** This research aimed to design Android-based production photoshoots technique instructional media (CINEMATO) and to study this application effectiveness for vocational high school students. We were used Multimedia System Development Life Cycle (MDLC) to developing this Android-based instructional media, which consist of 6 (six) phases: the analysis phase, the design phase, implementation phase, the testing phase, the evaluation phase, the and publishing phase. This media learning was developed using Adobe Flash Professional CS 6, Adobe Photoshop, and Blender. The application reviewed by the material expert, the teacher of this subject, and the students. The results showed that this instructional media application was practical, valid, and easy to use.

## 1 INTRODUCTION

The essential feature of Technical and Vocational Education and Training is its objectives to supply quality of vocational students successfully prepare them for the real world of work. Vocational education requires practical approaches and learning media that focuses more on the skills produced.

Learning material is the kind of materials used by teachers or instructors in helping them do the teaching and learning process in the class. The learning materials can be in the form of writing (i.e. handout, book, student worksheet, module, brochure and leaflet), audio (i.e. radio, cassette, audio compact disc), visual (i.e. picture and model), audio-visual (i.e. video, film, video compact disc) and multimedia (i.e. interactive compact disc, computer-based, internet). There are several reasons regarding the use of the media, including the lesson will attract more students, the students will more easily understand the lesson material, the teaching method will be more varied, and the students will do more learning activities.

Nowadays, there are some challenges and opportunities presented to media educators by the advent of digital technologies. Media learning has started to expand on mobile devices. The mobile

device can be used as instructional media; the students can learn anytime and anywhere with a new application (Squire, 2009). Mayer (1997) provides some insight learning in instructional multimedia, and he also acknowledges that technology is advancing faster than knowledge of how people learn from technology (Mayer, 1997).

Generally, the learning process informal education institutions are still conventional, as applied some of Vocational High School in Indonesia. This phenomenon discovered during observation and an interview with one of the subject teachers who also serves as the Teacher of Multimedia class at SMKN 5 Manado. Interviews and observation conducted at SMKN 5 Manado showed that during the teaching and learning process, subject teachers are faced with barriers to delivering the lessons due to the lack of tools media as an aid. The teachers solely rely on textbooks and power-point application, which cause less interaction between the teachers and the students.

We aimed to design Android-based production photoshoots technique instructional media (CINEMATO) and to study this application effectiveness for vocational high school students. This media learning was developed using Adobe Flash Professional CS 6, Adobe Photoshop, and

Blender. The application reviewed by the material expert, the teacher of this subject, and the students.

The results showed that this instructional media application was practical, valid, and easy to use for the students of the 12th multimedia class with the Moving Picture Shooting technique subject.

## 2 RESEARCH METHODOLOGY

### 2.1 Place and Time

This research was conducted in August 2019 on the students of the 12th multimedia class of SMK N 5 Manado, North Sulawesi, Indonesia. The subject limited to Moving Picture Shooting technique.

### 2.2 System Development Model

We were used Multimedia System Development Life Cycle (MDLC) to developing this Android-based instructional media, which consist of 6 (six) phases: the analysis phase, the design phase, implementation phase, testing phase, evaluation phase, and publishing phase. This media was developed using Adobe Flash Professional CS 6, Adobe Photoshop, and Blender.

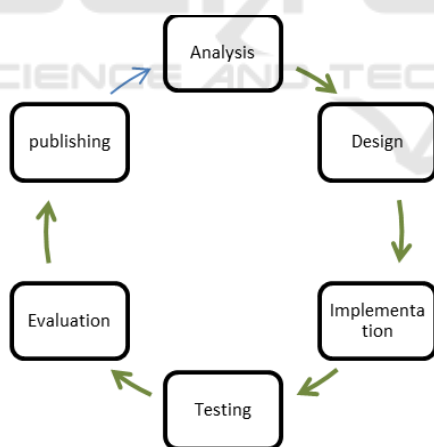


Figure 1: Multimedia System Development Life Cycle (MDLC)

#### 2.2.1 Concept

Research on the development of Android-based production photoshoots technique instructional media, starting with data collection and ending with the preparation of the document.

At this phase, the idea of the instructional media is explored and elaborated. The concept phase

is the foundation for all other phases of instructional design. During this phase, we must define the problem, identify the source of the problem, and determine possible solutions. The purpose of this phase is to examine the feasibility of this research. In this initiation phase, the requirements that are related to this media are specified as clearly as possible. It is essential that all parties that are involved in the project can collaborate during this phase, particularly the end-users who will directly use this application. The phase may include some research techniques such as requirements analysis, user analysis, and task analysis.

The result of this phase is the requirements of the various parties who are involved in the project. The requirements are developed and presented for the approval of the projects decision-makers. These results will be the inputs for the next phase, which is the Design phase. Once the list has been verified, the design phase can begin.

#### 2.2.2 Design

The list of requirements that are developed in the definition phase can be used to make design choices. In the design phase, one or more models are developed, with which the project result can be achieved. Depending on the main subject of the project, the products of the design phase can include a sitemap and storyboard.

In this phase, we concluded the contents that have to be included in this learning application. There are four menu learning materials, and one additional content as the total content in this instructional media. During the design stage, we take over the visual aspects of the project to determine how it looks and feels. Using the notes from the storyboard, we create graphics, design the navigation, and give direction regarding the correct shots.

We used the storyboard to describe the content on every page of this instructional media, as shown in Figure 2.

#### 2.2.3 Implementation

The Implementation phase refers to the actual development of the instruction, whether it's classroom-based, lab-based, or computer-based. The primary purpose of this phase is the effective and efficient delivery of media. This phase must support the students' mastery of objectives, and ensure the students' transfer of knowledge from the instructional setting to the job. During this phase, you will implement the instruction contents, all component that will be used in the instruction media,

and any supporting documentation. This must include hardware (e.g., simulation equipment) and software (e.g., computer-based instruction).

Research with the learning media to be tested against the multimedia class students XII level of Vocational High School and the subject is Photoshoot moving picture technique.

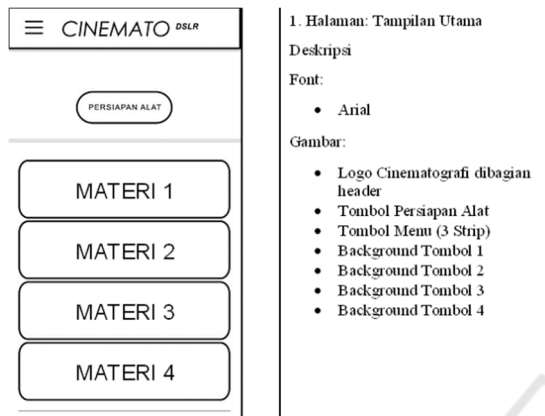


Figure 2: Example if Storyboard of CINEMATO (Content Menu)

### 2.2.4 Testing

This phase obtains some level of the testing process include: combining the media were previously listed on equipment that has been provided. Test whether the component that has been built according to the targeted users in learning production photoshoots technique. This phase is to fix errors in a multimedia component such as animation, video, and sound as well to obtain maximum results.

### 2.2.5 Evaluation

Evaluation phase measures the effectiveness and efficiency of the system. Evaluation should occur throughout the entire instructional design process - within phases, between phases, and after implementation.

### 2.2.6 Publishing

Documentation is done for some time now and in the future to facilitate treatment in the event of an error due to the instability of the device or because of other technical problems. The preparation of the report is the stage where all the reports and data that have been done during the study were made according to the format specified report.

## 3 RESULTS

### 3.1 System Development and Implementation

Main Menu display as the interactive multimedia-based learning, as shown in Figure 3. The Main Menu on this learning media contains materials which are compatible with the syllabus of the Moving Picture Shooting technique subject.

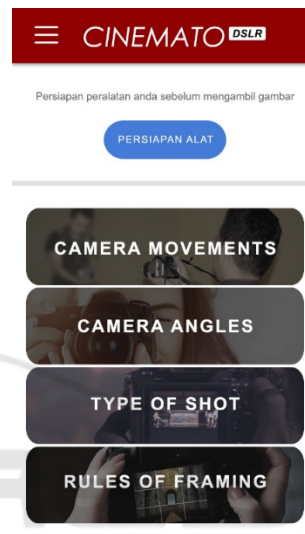


Figure 3: Main Menu

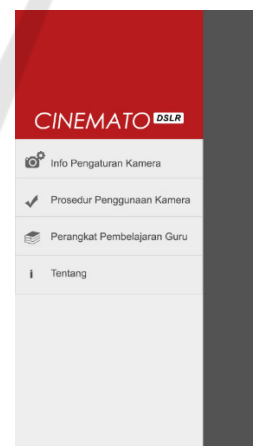


Figure 4: Side Menu

There are four menu learning materials (camera movements, camera angles, type of shot, and rules of framing), and one additional content (preparing tools) as the total content in this instructional media. Figure 4 is the side menu display.



Figure 5: Preparing Tools Menu

There are four sub-menu on the side menu in this application (camera setting info, camera-used procedures, Teacher Learning Tools, and About menu). Figure 5 showing the preparing tools menu that displays the tools needed in this learning subject. Figure 6 showing the Camera Angles Menu that has five sub-menu about any angles of camera that can be used in proto-shoot techniques.

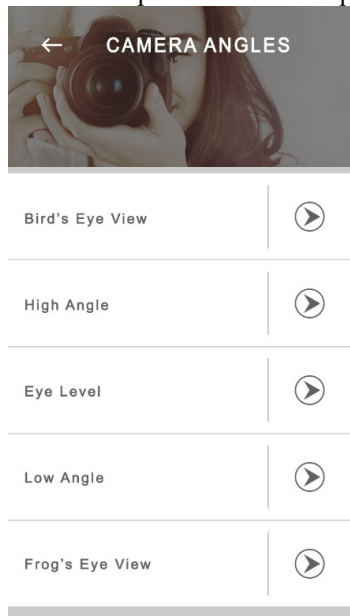


Figure 6: Camera Angles Menu

### 3.2 System Development and Implementation

After implementing this application to teacher and student of the multimedia class of SMKN 5 Manado, there are several evaluations done to grade the user satisfaction of this application. We are used the questioner with the possible responses are [1] Very Poor, [2] Poor, [3] Good, [4] Very Good. The evaluation of this media learning includes the evaluation of media aspect, the practical aspect, and the whole application interface such as colours composition, buttons, position, type of fonts, graphics, animation, and the learning activity. The class size is ten students. The evaluation result showed that this media learning positively affects students with an average score of 3.8075. All of the users were responding "good", or "very good".

The results showed that this instructional media application was practical, valid, and easy to use for the students of the 12th multimedia class with the Moving Picture Shooting technique subject.

## 4 CONCLUSIONS

Based on the results of research conducted, it was discovered that this media learning positively affects students with an average score of 3.8075, which falls into the category of good, practical, and easy to use. Therefore, teachers should use the tutorials for learning strategies to increased student involvement and activeness in the learning process.

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