

## Research Article

# Learning Video Production Process as a Support for Student Online Learning Materials

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**Abstract.**

This paper examines the process of producing learning videos as a support for student online learning materials. Video is a tool to support student learning materials, especially in the era of the pandemic and industry 4.0, but on the other hand, video can also be a boring tool in learning because the content that is made is not creative and makes students bored. This study uses a qualitative method with a case study approach with the aim of understanding the condition of a context by directing it to the description. Researchers gathered information through in-depth interviews with studio managers and editors as well as the supporting team at CeLOE Telkom University. In addition, researchers also made observations in the production and post-production studios at CeLOE Telkom University. This research uses purposive. The results show that a good pre-production stage is done by converting slide material into a script adapted from making Radio and Television scripts, while production is done by applying greenscreen techniques, and post-production is done by combining PowerPoint and Adobe Premiere Pro software.

**Keywords:** video production, video learning, online learning

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## 1. Introduction

To improve the quality of education, breakthroughs are needed including curriculum development, learning innovation, and fulfillment of educational facilities and infrastructure. In foreign countries, the tendency to use blended learning has increased in recent years. For illustrate, a study revealed that reflection on a virtual reality classroom film using video technology provided aligned with the overall to those of reflection on a traditional classroom video [1]. This review demonstrates that, despite the fact that traditional teaching methods and video technology are used in conjunction Video technology methods provide flexible teaching options for today's student population, making them ideal for creating the most positive learning environments. [2]. Meanwhile, in the United States, it has been projected that by 2014 more than 80% of all students in



higher education are taking at least one online course according to Maarop & Embi in [3]. Furthermore, based on a survey conducted by Hilliard in [3] that Blended Learning has achieved growth of 46% per year worldwide. In Indonesia, ICT-based learning has also been promoted for more than a decade. One form of learning with Blended Learning is to use learning videos. In general, three types of learning media are known, namely visual media, audio media, and audiovisual media. With audiovisual media, students can see substantial activities based on what is contained in the media [4].

There is a lack of student satisfaction in receiving material through learning videos due to the monotonous video content. Students hope that lecturers will be more creative in making videos [5]. Through video is also one method of teaching through technology that can create the most positive learning environment [6]. Video is highly accessible to users and provides guidance at their fingertips because it can be accessed through a variety of channels, including mobile devices [7]. As a result, teachers and lecturers must utilize video media effectively and in concert to maximize learning. Video is also a powerful tool that has been widely used in research and practice for teacher education and professional development. Innovating recording technology has contributed to this success over the past 25 years [8]. Students can improve their interpersonal skills and achieve abilities in the cognitive, affective, and psychomotor domains [9].

Based on some of the data discussed, it is stated that how great the need for learning media is, one of which is using video media to meet the needs of a shift in learning models towards Blended Learning. For this reason, teachers need understanding and knowledge to know the process of producing learning videos as a tool to support learning innovation in the blended learning era.

Based on this background, the authors also conducted research entitled Video Production Process as a Support for Online Learning Materials so that lecturers can produce learning videos in accordance with good and correct production principles with good quality and creativity.

## 1.1. Literature Review

The results of consulting with communication experts, videos are felt to be easy to use other multimedia sources [10]. Video is a form of multimedia that conveys information via the two channels aural and visual [11]. Meanwhile according to Daryanto (2016:80), anything that enables the combination of auditory signals and moving images for educational purposes is considered learning video media. Pre-production (planning),

production, and post-production are the fundamentally three stages that must be completed in the production of a video, whether it be on a huge or small scale (editing) [10].

## 1.2. Pre-Production

The pre-production stage is the planning stage before the implementation of the video production process. Based on Daram [12], this stage is often underestimated. Manuscripts and storyboards usually contain sketches that illustrate the storyline [13]. The pre-production stage has the most impact on the creation of the resulting video [14]. At this stage, the team coordinates with the teaching team to complete the pre-production process [15].

## 1.3. Production

After the preparations made in the pre-production stage, This stage is marked by a deadline and unforeseen circumstances [16]. At this stage, it starts with recording a video with a storyboard and script that has been designed in pre-production [13]. At this stage all planning after pre-production begins to run. This stage is the most time-consuming stage [17]. To put it another way, the production process involves the act of filming actors delivering lines, sometimes known as shooting.

## 1.4. Post-Production

At this stage, the process of merging several parts of the film or video into one unit is carried out [18]. This stage also includes several activities such as reviewing, adding animation, adjusting colors, adding background music, and final editing [13]. This stage will make a video into a complete and livelier storyline [19];[20].

## 2. Research Method

The purpose of this study, which employs a case study methodology and a qualitative method, is to describe a context in order to comprehend its state.. Researchers who conduct case studies generally have a qualitative data collection method. Researchers explored information by in-depth interviews with Studio Managers and Editors and the

Support Team at CeLOE Telkom University. Researchers also made observations in the CeLOE Telkom University production and post-production studio. Purposive sampling was used in this study to select data sources based on specific criteria, where informants were considered to know the information the researcher wanted best.

### 3. Result And Discussion

Center of e-Learning and Open Education (CeLOE) is an online learning platform provided by Telkom University in facing industry 4.0. CeLOE has a number of supporting facilities such as a production recording studio to produce interactive learning videos and a post production room to enhance the standard of instructional video output. The outcomes of the instructional videos are distributed to Telkom University's LMS (Learning Management System) platform, besides that, they are also distributed to various external digital platforms such as U-demy and ICE.

#### 3.1. Pre-Production

In this stage, the lecturer for the course converts teaching materials into scripts using scriptwriting techniques for radio or television scripts. Therefore, the script must be presented as storytelling, as if telling the other person.

The structure in script writing consists of an opening, namely the introduction of the name of the course, the title of the video material, and mentioning the sequence of the video. The second structure is the content or starting to enter into the discussion material. Finally, the third structure, namely closing, summarizes the material at a glance, says thank you, and reminds you to meet in the following video. The script results are then poured into a simple storyboard form comprising two columns.

#### 3.2. Production

The production stage is where three important things need to be considered, namely, lighting, sound, and drawing. The script that has been made is entered into software called Mirroscrip Pro which will display writing in the mirror on the teleprompter.

Inside the studio, two crew members are ready to run video production. One crew acts as a Studio Manager who records all production activities with a particular form. One more team acts as Cameraman (Camera Person) who works as a camera officer.

In the studio, a background with a green screen is used, and the lighting must be even. Five pieces of lighting are used and placed according to their function so that the light on the greenscreen is spread evenly, making it easier for the editing process. And talents become brighter and easier on the eyes during recording. Next is the Image layout. In this image layout, It is essential to pay close attention to the capacity of the camera lens to capture light. To adjust the light captured by the lens, the frame rate is 25p; the shutter must be 50 or more (revised); if the frame rate is 50p, the shutter must be 100 and above (adjusted). The standard frame rate to produce learning content is 1080/25p FX; the aim is to keep the output video quality high but with a standard size (not significant). Next is the sound system. Audio is an important part of making something.. The mic used in the CeLOE studio is of the condenser type (sensitive). The audio produced from this studio is mono and is converted to stereo in the post-production stage.

### 3.3. Post-Production

The post-production stage is the last stage of making learning videos. The crew in charge of post-production are video editors. The editors we recommend are editors who are proficient in operating the Adobe Premiere Pro editing software. The results from the pre-production and production stages will be combined at this stage. The editor will use sequences in the AVHCD 720 25 formats; this format was chosen because it has been adapted to the camera and produces high-resolution videos but not large file sizes. When editing a video, all assets and material animations made in PowerPoint and Adobe After Effects as the opening bumper and background music will later be included in the editing timeline in Adobe Premiere. After the video is rendered, a Quality Check (QC) will be carried out. This process is critical in post-production because QC is needed to produce quality videos. After the QC passes, the video can be used as lecture material.

## 4. Conclusion

To produce good learning videos with good creativity, a production process is needed that is by the correct production rules, namely through pre-production, production, and post-production, which are the three stages, and requires an understanding of how crucial a competent crew is in a university to help produce quality learning videos. Furthermore, this research can be developed towards learning production by

utilizing virtual reality technology in the metaverse era so that lecturers can constantly be updated in understanding technology to support the online learning process.

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