

PRINCIPLES OF INSTRUCTIONAL VIDEO USED IN TEACHER'S VIDEO BASED LEARNING TO TEACH ENGLISH

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Abstract:

This objective of this research was to figure out the principles of instructional video applied by the teacher to present the English material English and to explain the relevance of provided material in the video to the principles of instructional video. To answer the research questions, qualitative research design was used. The data were teaching materials as the content of the video which represented the principles of English teaching material used in video based learning. The finding of the research showed that the teacher applied 3 principles of instructional design, the theory used was from Carliner's (2000). There were 3 principles used physical design, cognitive design and affective design. The content of the video covering physical design, cognitive design and affective design were relevantly used based on the principles of instructional videos. In conclusion, based on the analysis of the identified data, the video was relevantly design presenting the principles of instructional video based on Carlinger's theory.

Keywords: *Teaching Media, Video based Learning, Principles of Instructional Video*

A. INTRODUCTION

In the learning process, there are some aspects that determine and support students' learning success. One of which is the use of learning media. Learning media is a connecting tool between teachers and students that can be used for learning purposes, so that it can trigger students' attention, interests, thoughts, and feelings in learning activities to achieve learning goals (Daryanto, 2010). Hence, learning media serves as a tool that will facilitate the learning process. The use of learning media is one alternative in the process of developing learning to be better and emphasizes the importance of learning media as a tool to stimulate the learning process (Samsudin as cited in Wardani et al., 2014).

The use of teaching media in the teaching and learning process can produce attractiveness, so that it can motivate students to enjoy learning more and will provide better learning outcomes (Mardikaningrum et al., 2017). The use of media in teaching will greatly help the effectiveness of

the learning process and the delivery of messages and lesson content at this time. Therefore, teachers need assistive media, namely learning media.

Meanwhile, technological developments have affected learning in the classroom. One of the technological developments that affect learning is video-based learning. Therefore, video is an option to be selected learning media. Video-based learning emphasizes teaching material delivery using video. Interactive video-based learning has a good impact on increasing students' knowledge. It is a medium means to increase students' knowledge, which is considered easy for students to understand.

Using video is an effective and essential medium to teach English (Cepon as cited in Kamelia, 2019). One of the commonly used techniques to enhance the learning experience in the classroom is the use of videos that depict real-world scenarios. Video is seen as an effective method for presenting material to students with different learning styles. A video engages the visual learner with the pictures and their movements, while the auditory student can listen carefully to the narration to gain an understanding of the topic. Videos can help demonstrate very complex concepts and ideas in a short amount of time, sparking meaningful discussion and analysis.

The use of video learning must also pay attention to the principles in the use of video. The importance of exploring and identifying the principles of effective video-based learning in this context is to help students achieve the desired learning outcomes. Therefore, there is a growing need to develop research-based principles for designing instructional videos to support learning (De Koning as cited in Ou et al., 2019)

(Kamelia, 2019), in her research, was to stand its objectives and saw sees video as one of the effective media that can make students more enjoyed process teaching and learning. It was found that the use of video as teaching media could give a relaxing situation for students in learning English. It also could make students more active and easy to understand the material since the video contain pictures and audio that causes students to see the material directly. Besides, (Nadeak, 2020) found her study which was to improve student learning to output by using Video based learning. The result showed that the use video learning media is beneficial in improving the students learning outcome.

Teaching material is a set of materials that are systematically arranged to be used in the learning process. According to (Hamdani as cited in Nasrul, 2018)), teaching material are all forms of material systematically arranged to help teachers or instructors implement the learning process, thereby creating an environment or atmosphere for students to learn. Materials also have a role in education, namely providing assistance in various aspects, such as supporting learning needs, concretizing abstract concepts, facilitating remembering, saving time, focusing on goals and helping with focus (Avci as cited in (Akkaya & Kapidere, 2021). With the role of developing systematic learning materials, it is expected to be able to create learning by delivering material well, especially with material development through learning media in the form of videos.

Videos can be in various teaching and teaching arrangements in class, as a way to present content, start discussions, to provide illustration of certain topics and content, self-learning and evaluation. When the teacher brings video material to their English classrooms, students can directly obtain cultural background information and emotional attitudes about learning material.

Therefore, they can understand language learning. When viewing video material, students can put themselves in an atmosphere made by video material and understand the language used by characters (Bajrami as cited in (Kamelia, 2019)).

B. REVIEW OF LITERATURE

Teaching Media

Learning media is a tool can be used to teaching purposes between students and a teacher. Consequently, the students will be interested and making their thoughts, and feelings in learning activities to achieve learning goals (Daryanto, 2010). Hence, learning media serves as a tool that will facilitate the learning process. The use of learning media is one alternative in the process of developing learning to be better and emphasizes the importance of learning media as a tool to stimulate the learning process (Samsudin as cited in Wardani et al., 2014)

The use of teaching media in the teaching and learning process can produce attractiveness, so that it can motivate students to enjoy learning more and will provide better learning outcomes (Mardikaningrum et al., 2017). The use of media in teaching will greatly help the effectiveness of the learning process and the delivery of messages and lesson content at this time. Therefore, teachers need assistive media, namely learning media.

Principle of Instructional Video

The Instructional Design of lecture video are divided in three-parts. Here are (Carliner, 2000) approach:

a. Physical Design

Physical design is a design that has sophistication in the ability to find information from teaching materials. Based on the sophistication of physical design, the quality of learning can be strongly influenced by video accessibility, technical quality, and time (Swarts, 2012). The physical design of instructional videos is also determined by the length of the video, the speed of the action, and the speed of the narration. This part of the physical design strategy focuses on:

1). Length of the video

The duration of the video should be 5 – 7 minutes (Kim, 2014). It means that the video can be said effective video since it lasts between those minutes. This effectiveness refers to the level of students' concentration. When the video takes more than 7 minutes, it will cause students' boredom or they will have less attention.

2). Speed of the action

Here, there are categories which became the value of speed of the action. They are text and animation.

a. Text

Text is the earliest and simplest element in teaching material of any video. Which is based on the words, sentences and paragraphs or anything written or displayed on the video.

There are three types of text, namely:

1). *Static Text Fields*

It refers to any extent text which it appears in the video it does not change. The text that cannot be changed is in writing or all forms of writing that appear in one slide or one scene in the video and do not change or do not move positions and there is also no animation. This text appears along with the slide or scene and disappears and moves along with the scene.

2). *Dynamic Text Fields*

It refers to any extent text which it appears in the video it can change. The text that can be changed is in writing or all forms of writing that appear on one slide or a scene in a video that changes or moves positions and there is also animation.

3). *Input Text Fields*

It refers to any text which appear at the same time when the teacher explain or at the teacher read, sound the text. Text that only appears when the teacher speaks or when explaining the material, if the teacher is not explaining the material then the text will not appear in the teaching.

b. Animation

Animation is literally to bring life or move for the content of teaching material. In general, animating an object has the meaning of moving an object to make it come alive. (Ferdinandes as cited in Arka, 2009)

Animation Types:

1). *Cell Animation*

Cell animation is a form of animation that has a separate part between the object and the background, so that it can move independently of each other. The object of cell animation is an image that is drawn by hand (hand draw-animation)

2). *Frame Animation*

Frame animation is the simple form of animation. For example, when we make pictures of different movements on a video, then we watch the video quickly, the image will appear to move.

3). *Sprite Animation*

In sprite animation, the image is moved against a still background. A sprite is a part of an animation that moves independently, such as a flying bird, a rotating planet, a bouncing ball, or a rotating logo.

4). *Path Animation*

Path animation is an animation of an object moving along a defined curve with a trajectory. For example, in making animated trains, airplanes. In most path animations, there is also a looping effect that makes the path movement occur continuously.

5). *Spline Animation*

A spline is a movement that not only follows a straight line but can also take the form of a curve.

6). *Vector Animation*

A vector is a line drawing that has an end, a direction, and a length. An example of an arrow that shows the direction to an image in the video.

7). *Character Animation*

Character animation is usually found in cartoons. All the parts in cartoons always move together. Software commonly used is Maya Unlimited. Examples of cartoons made with Maya Unlimited are Toy Story and Monster Inc. (Anton as cited in Arka, 2009)

3). Speed of the narration

Narration is an expression that conveys something or information contained in the video teaching material to the students. The narration is delivered by the teacher. Usually lasts about 150 words per minute (wpm) (Benz as cited in Edmiston, 1986)

b. Cognitive Design

Cognitive Design is the teacher's ability to understand students' questions in teaching materials. Cognitive design determines the level of understanding of the video to students, whether students will be able to adopt and apply the content learned (Swarts, 2012). Cognitive Design is the part of design that deals with presentation quality. Questions such as complete content or accurately presented, should be taken into account when considering cognitive video design. This part of the cognitive design strategy focuses on:

1). Quality the content of video

Quality the content of video is about completeness and pertinence (Swarts, 2012)

a. Completeness

The video must display teaching materials that cover all topics

b. Pertinence

The video edited only for the purpose of including relevant about learning, title, text type as information about teaching material

2). Accurate of the video

The accuracy of the video can be seen from the fact or execution errors in the teaching materials (Swarts, 2012). In videos, when the teacher explains a topic, the teacher must be thorough and careful. Must stay focused on the topic being explained.

c. Affective Design

Affective Design is the ability of teaching materials to provide a sense of comfort in the form of motivation implanted by video to provide information to listeners. With this affective design, teaching materials focus on the level of motivation instilled in students, whether what the teacher conveys can influence students with information, which means whether the content is sufficient to capture and attract students' attention (Swarts, 2012). This part of the affective design strategy focuses on:

a. The level of motivation in the video

The level of student motivation by presenting the information provided by the teacher in teaching material.

- b. The video can attract students' attention

The teacher explains the learning material clearly in the video.

Video Based Learning

Video-based learning (VBL) can be used to teach effectively and gain better learning outcome. Yousef (2014) contends that Video-based learning (VBL) is now recognized by Technology-Enhance Learning (TEL) researchers as powerful learning resource. However VBL has to encompass the teaching principles in order to give more impacts for the teaching and learning process. The principles here refers to Carliner's principles such as Physical Design, Cognitive Design and Affective Design. In this case, one of the learning of instructional video is video based learning. Carliner's (2000) explains that learning of instructional video is a framework for design methods that can determine the major characteristics of an instructional video.

C. METHOD

This research aimed at figuring out the principles of learning materials applied in the video and also to see how relevant the materials were presented to the principles based on Carliner's theory (2000). In line with this research aim, qualitative research design was carried out to this research. Creswell (2003: 74) defines that this qualitative research design provides essential description of research problem which the author investigates a concept or phenomenon. On the other word, since it applied qualitative methods, this research tried to answer the research questions by describing the facts of research results through data collection method.

Here, the research included the teacher's video to be analyzed. The video was video based learning which was produced by herself and used in teaching activities. This video was analyzed qualitatively under the research instrument.

Research Object

The object of this research was video <https://youtu.be/cqWZZqPdf5Q> created by the English teacher of MA Mambaul Ulum Corogo. This video was addressed by the teacher to teach the student of tenth year. The material taught through this video was recount text.

Research Instruments

To obtain the data, this research used observation method using observation checklist. The checklist consisted of indicators which were developed based on Carliner's theory about the principles of instructional video and relevant are the provided material to the principles of instructional video. The aim of this observation were to identify what principles of instructional video applied by teacher to present the English and to explaining relevant provided material to the principles of instructional video.

Data and Source of Data

The data of this research were teaching materials of recount text as the content of the video which represented the principles of English teaching material used in video based learning. And the source of data research was teacher's video based learning.

D. RESULTS AND DISCUSSIONS

Principles of Instructional Video Used

The analysis of this research covered the identification of principles of the instructional video used on the video made by the teacher and also to find out whether the video was relevant to the principles of instructional or not. In this research, the theory used was from Carliner's (2000). Then, it was identified that there were 3 principles used in the video; they were physical, cognitive, and affective design.

From the point of physical design, the video used components of physical design, covering the length of the video, speed of the action, and speed of the narration. The length of the video was seen from the video's duration while the speed of the action was presented in the form of text and animation. The text used the type of static text fields, dynamic text fields, and input text fields. Meanwhile, the animation was applied namely frame animation, sprite animation, and character animation.

In term of cognitive design, the video applied the principle of quality of the video which covered completeness and pertinence, and the accurate of the video. The other components which showed the used of affective design were the level of motivation in the video and the video can attract student's attention.

Related to the result of the analysis which showed the use of the 3 principles of instructional video based on Carliner's (2000), they are described in detail below:

1. Physical design

This part of the physical design focused on:

a. Length of the video

The video made by the teacher lasted for 6:04 minutes. Meanwhile, the criterion for the length of the effective instructional video should be between 5-7 minutes.

b. Speed of the action

Here, there were categories of text and animation;

1. Text

In the video, the physical designs that appeared in the video were static text fields, dynamic text fields, and input text fields.

1). Static Text Fields

For the static text, there were some static text appeared in the video. One of them is:



In the video, the sentence “English Grade X Recount Text” applied static text which meant that the sentence appeared along with the slide because this sentence and the background were not separated, they were one part. This sentence did not move and it was seen in a minute of 0:04.

Another static text was also found in different minute.



This writing appear from the minute from 2:09 – 2:32. Here the writing doesn't move, when the slide or scene changes, from 2:09 – 2:32 minutes it's finished, the text is also finished.

2). Dynamic Text Fields

For the dynamic text there were some static text appears in the video. One of them:



In the video, words or sentences changed because the words and background appeared separately or not at the same time. Text moves at minute 0:07

In different minute dynamic text it is written:



This writing appeared from the minute from 1:37 – 2:05. Here the writing moved, when the slide or scene changes, from 2:09 – 2:32 minutes it's finished, the text was also finished.

3). Input Text Fields

For the input text there were some static text appeared in the video. One of them:



In the video, the teacher explained the teaching material by reading the text or explained the contents of the video. When the teacher reads and explained the video along with the appeared of text or sentences on each slide. Here the teacher explained the teaching material from 0:36 – 0:55 minutes.

2. Animation

In the video, the physical designs that appeared in the video were frame animation, sprite animation, and character animation.

1) Frame animation

For the frame animation there were some frame animation appears in the video.

One of them:

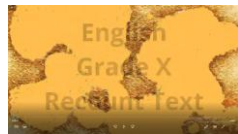


In the video there were various forms of frames. Frame was an image or movement that was at the edge of the video. In each slide or scene the shape of the frame was also different. Here the animation from 3:47 – 3:54 minutes.

2) Sprite animation

For the sprite animation there were some sprite animation appears in the video.

One of them:



In the video there was an animation that moved with the background. In the video there was animations where objects could fly and also moved objects.

Animation in the form of brown movement was moving object. Animation at 2:02 minute.

In different minute sprite animation it was written:



Animation of flying leaves was flying object. Here the animation from 3:47 – 3:54 minutes.

3) Character animation

For the character animation there were some character animation appeared in the video. One of them:



The video contained animation cartoon.

Here the animation from 1:37 – 2:05 minutes.

c. Speed of the narration

Narrative was an expression that conveyed something or information contained in the video of teaching materials to students. The narration was delivered by the teacher.

In the results of the study, the video was the teacher's explanation about 80 words in a minute.

2. Cognitive design

This part of the cognitive design strategy focuses on:

a. Quality of the content of video

In the video, quality the content of video have a 2 component:

1). Completeness

The video covers all related topics of teaching material. The video covers all topics about recount text. The video includes: definition, type, purpose/social function, structure, language feature. So, the video had covered all the sub topics about recount text.

2). Pertinence

The video explained the definition, type, purpose/social function, structure, language feature of the recount text.

b. Accurate of the video

The video presents thorough and detail relevant materials and shows no misleading of the explanation. The video presents the material in detail. Explanation of the material sequentially and not convoluted.

3. Affective Design

This part of the affective design has 2 component. There are:

a. The level of motivation in the video

The video provide clear understanding of the material to motivate students' learning. The video used attractive frame, clear teacher intonation, and the used of appropriate animations.

b. The video can attract students attention

The video included material in the form of text which was supported by an explanation from the teacher. So that it could make students understand more about the material.

Relevance of the Principles to the Video

This research analyzed the relevance of the principles to the video which was embedded in the learning objectives. Based on the analysis, it was found that there was close relation among the principles to the video.

Of the 3 principles of 17 indicators, there were 12 indicators that contain the principles of the video. This indicates that the video is relevant to the principle of instructional video. The 12 indicators applied in this video provide relevant videos. The 12 indicators are:

1. Physical design

This part of the physical design strategy focused on:

a. Length of the video

The video made by teacher 6:04 was accordance to the principles which mentioned that the effective video should have the duration between 5 – 7minutes. It means that the teacher’s video was relevant to the principle in term of the length of the video.

b. Speed of the action

Here, there were categories text and animation

1. Text

There are three types of text:

1). Static text fields

Some texts in video made by teacher moved along with the slide or scene of the video. The teacher used words/phrases/sentences which did not move and they followed the slides or video scenes. One of static texts was “*English Grade X Recount Text*”. This sentence firstly appeared in 0:04. This sentence had no movement which meant the sentence was static. It appeared and disappeared together with the slide or scene of the video. It means that this types of text was relevantly used to the principle in term of the speed of the action.

2). Dynamic Text Fields

Some texts in video made by teacher doesn’t moved along with the slide or scene of the video. The teacher used words/phrases/sentences which did not move and they followed the slides or video scenes. One of static texts was “*English Grade X Recount Text*”. This sentence firstly appeared in 0:04. This sentence had movement which meant the sentence was dynamic. It appeared and disappeared not together with the slide or scene of the video. It means that this types of text was relevantly used to the principle in term of the speed of the action.

3). Input Text Fields

The teacher read aloud the text or explain the content of the video (teaching material)

Videos are made by the teacher by reading the text or explaining the content of the video (teaching materials). One of input texts was “*Recount Text is a text which retells events or experiences in the past*”. This sentence firstly appeared from 0:36 - 0:55 minutes. This sentence appears when the teacher explains. It means that this types of text was relevantly used to the principle in term of the speed of the action.

2. Animation

This video research cover 3 Component of animation:

1). Frame Animation

Some animations in video made by teacher use any form of frame which is move as the video place. The teacher used various forms of frames that are moved as a video place. One of frame animation was “*Generic Structure*” This sentence firstly appeared from 3:47 – 3:54 minutes. This sentence had frame animation which meant the animation was frame animation. It means that this types of animation was relevantly used to the principle in term of the speed of the action.

2). Sprite Animation

Some animation in the video made by the teacher used moves against the background, like flying or moving object. The teacher used various forms animations flying or moving object. One of sprite animation was "*English Grade X Recount Text*". This sentence firstly appeared from 2:02 minute. This sentence had sprite animation which meant the animation was sprite animation. It means that this types of animation was relevantly used to the principle in term of the speed of the action.

3). Character Animation

Some animation in video made by teacher used cartoon animation. The animation is in the form of a cartoon. The video was made by the teacher using animated cartoons. One of cartoon animation was "*Factual Recount is a types of recount text that tells a factual report. For examples: traffic accidents, natural disasters, etc*". This sentence appeared from 1:37 – 2:05 minutes. This sentence had cartoon animation which meant the animation was sprite animation. It means that this types of animation was relevantly used to the principle in term of speed of the action.

2. Cognitive Design

a. Quality the content of video

1. Completeness

The video was made by the teacher by covering all topics related to teaching materials. This criteria completed it means that this types of completeness was relevantly used to the principle in term of quality the content video.

2. Pertinence

The video made by the teacher includes information relevant to teaching materials. This criteria pertinence it means that this types of pertinence was relevantly used to the principle in term of quality the content video.

b. Accurate of the video

The video presented thorough and detail relevant materials and shows no misleading of the explanation. The video was made by the teacher by presenting relevant material thoroughly and in detail and not explaining what is misleading. This types accurate of the video it means that this was relevantly used to the principle in term of quality the content video.

3. Affective Design

a. The level of motivation in the video

The video provided clear understanding of the material to motivate students' learning. The video was made by the teacher by providing a clear understanding of the material to motivate student learning. This types the level of motivation in the video it means that this was relevantly used to the principle in term of affective design.

b. The video can attract students attention

The video attracts students' attention by a clear-understandable explanation. The video was made by the teacher to attract students' attention with easy-to-understand explanations. This type of video can attract students' attention; it means that this was relevantly used to the principle in terms of affective design.

E. DISCUSSION

Video is a learning media that is very helpful for teachers in teaching and students in learning. A good learning video is a learning video specially designed by the teacher taking into account the needs of students in learning. Therefore a teacher should pay attention to the principles in the learning video. So that the learning video becomes effective and efficient. Galbraith and Rodriguez (2018) which show that the use of video has a positive effect because of the effective and efficient learning video. With that, the video has an important role in providing the needs of students in learning. That is, the results support previous research which emphasizes that video is an effective tool for conveying material in learning activities.

Based on the findings of the research, it was found that the criteria of a good video, based on Carliner's theory, should involve three aspects. There were physical design, cognitive design and affective design. Of the three principles are all used in the video of the learning material. These principles have various components so that the video can be said to be an effective learning media in the form of video.

These principles have been applied in this learning media in the form of videos. In the use of these principles also have an impact or effect on students in the learning process by considering the needs of students in learning. Nagy (2018) is supported in his study when teachers make videos with the aim that students can influence positive attitudes about the use of videos on students and video learning media is not difficult to use. Video has an important role in learning media.

Video is an effective learning media to present material to students with different learning styles. In the use of learning videos, the principles of instructional design must also be considered. The importance of understanding and identifying the principles of effective video-based learning in this context to help students achieve the desired learning outcomes. Therefore, there is a growing need to develop research-based principles for designing instructional videos to support learning (De Koning, 2018).

F. CONCLUSION

The result of this research showed that the teacher applied the principles of instructional video in video learning media. The principles of instructional that appeared in the video were physical design, cognitive design, and affective design. Through the principles of instructional teachers made good videos. Teachers used principles of instructional to fulfill effective and efficient learning videos. With that, the teacher could provide a video, learning according to the needs of students in learning. In addition, Learning videos made by teachers include videos that were relevant to cover the principles of instructional videos. Therefore, the principles of

instructional are the principles of learning videos designed by teachers to meet the needs of effective and efficient learning videos.

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