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The Process of Making Animated Videos on Chemical Theory and Colloid Systems Using the CapCut Application

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Abstract: In the current era of information technology, the learning process has begun to implement interesting innovations. The learning process is not only through direct or face-to-face communication with the lecture method that creates a feeling bored and fed upon students. The Covid-19 pandemic that occurred in 2020 changed the entire order of human life, starting from the economic, social, religious to the education system. During the Covid-19 pandemic, some of the teachers at school were not ready to carry out the learning process through interactive media such as learning videos to support the learning process from home. The purpose of this research is to find out how to make learning animated videos using CapCut. The method used is the method of literature regarding the making of an animated video for learning chemistry on colloidal system material using the CapCut application. The results of this study are in the form of animated videos learning chemistry colloid system material using the capcut application to facilitate students and educators in the teaching and learning process.

Keywords: Application capcut; Colloid system; Video learning animation

Introduction

The learning process is a process of interaction between the teacher and students that occurs in two directions through active communication between the two (Syahroni et al., 2020). Effective communication in carrying out the learning process is direct or face-to-face communication. What are the signs of effective communication? According to Tubbs et al. (2009) explains that at least it causes five things, namely understanding, pleasure, influence on attitudes, better relationships and actions. Thus the direct communication carried out by the teacher in the learning process can at least be measured from these five things, namely first, it contains an understanding that can be carefully accepted by students. Second, cause pleasure, third can affect attitudes and behavior students in a better direction. Fourth, creating better relationships between teachers and students both inside and outside school, and the fifth is the actions or responses that are taken, either intellectually or action in their daily social environment. According to Magdalena et al. (2023) learning is defined as an effort to teach students. In addition, learning is also always required to follow the development of Science and Technology (IPTEK) so that it is able to present a class atmosphere that is in accordance with the needs of the times and in accordance with the character of the students (Amilyana et al., 2021). The development of Science and Technology (IPTEK) has implications for each generation in various fields of knowledge, so that this generation will be educated according to the development of science and technology (Iswadi et al., 2023; Kulkov et al., 2023; Rasa et al., 2022; Stolpe et al., 2024; Szymkowiak et al., 2021).

One of the materials studied in chemistry lessons in SMA and MA is colloids. Based on the content standards included in the basic competencies of the 2013 Curriculum syllabus, it is stated that colloidal material taught in high school consists of two basic competencies which include basic competency 3.15, namely analyzing

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the role of colloids in life based on their properties nature, and basic competence 4.15. Proposed an idea to modify colloid production based on the experience of making several types of colloids. Basic competence 3.15. discusses three sub-materials, namely: (1) the colloid system (conducting experiments on the classification of mixtures in solution, colloids, and suspensions); (2) the properties of colloids (conducting experiments on the properties of colloids, namely the Tyndall effect, Brownian motion, coagulation, adsorption, electrophoresis, and dialysis); and (3) types of colloids (conducting experiments on types of colloids based on dispersed substance and dispersion medium). Basic competency 4.15 discusses the manufacture of colloids (conducting experiments on the process of making colloids by means of condensation and dispersion) and the role of colloids in health. The daily bread of the industry. Meanwhile, until now most students still consider chemistry very difficult. The main reason is that most of what is learned in chemistry is something abstract. Difficulties in understanding chemical materials cause students to dislike chemistry subjects (Annisa et al., 2025; Hartanto et al., 2024; Muhab et al., 2024; Yovanie, 2024).

Learning colloid material in SMA and MA tends not to involve mathematical calculations like other chemistry subjects, for example stoichiometry, chemical equilibrium, solution chemistry, and thermochemistry. Examples of phenomena related to colloids are car headlights on a foggy night and sunlight shining through the leaves of trees on a foggy morning. These two phenomena indicate the effect of light refraction by colloidal particles which is commonly called the Tyndall effect. Nowadays, technological developments are very rapid, such as interactive learning media using interactive learning videos. The demands of teachers as professional teaching staff in improving the intellectual and skills of students require teachers to utilize and use effective learning media in building a conducive learning atmosphere and being able to increase student motivation and willingness to learn, so that predetermined learning objectives are achieved. Learning media has a very big influence on the senses and can increase understanding. People who just listen are not at the same level of understanding compared to those who just see or those who see and hear (Doyan et al., 2020; Febrina et al., 2024).

Animated learning video is a cartoon animation video that is filled with subject matter and can be used as a learning medium teachings because of its interesting and suitable nature used as teaching material. Animation is a medium for changing something, from an imagination, idea, concept, visual, to finally having an impact on the world is not just a barrier in the world of animation. The right media and in accordance with the material being taught will also be very effective in fostering student interest in participating in the teaching and learning process optimally, so that students will more easily understand the material, thus student achievement will continue to increase (Harahap et al., 2020). Thus the effort made is to make teaching videos through the capcut application. The capcut application has advantages including being easy to use, has various features, has a green screen feature, and the capcut application uses Indonesian. The capcut application has features that can be utilized and easy to use, such as a menu for pausing recordings, voice and video recordings, features for setting frame rates and bitrates, countdown timers, displaying text and logos, selecting time lapse, as well as storage so that this application can be used to make videos learning. Therefore this study intends to make an animated video of learning chemistry in colloid material using the capcut application to make it easier for students and teachers in the teaching and learning process.

Method

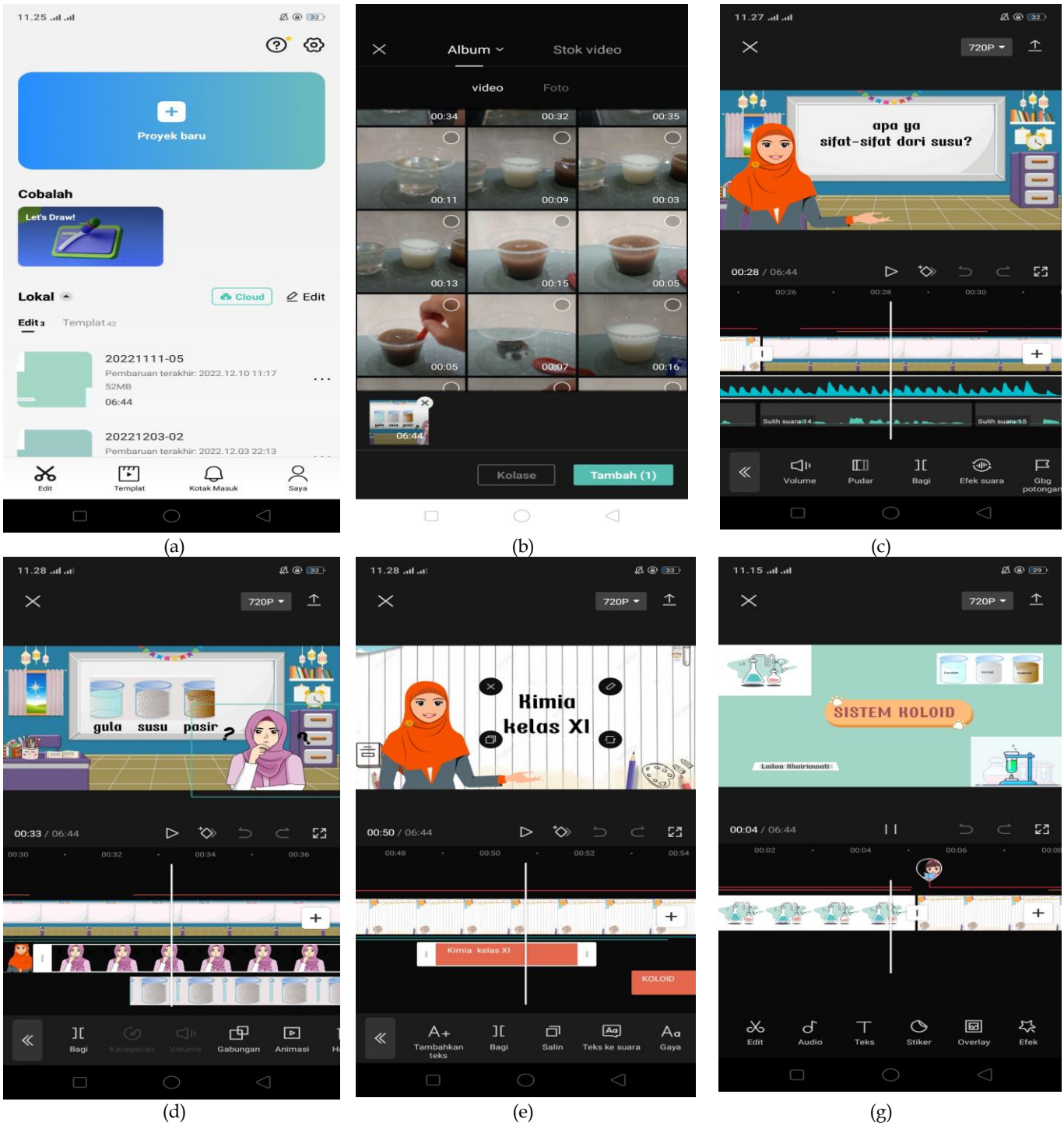
The research method was conducted by studying the literature and methods for creating educational videos using the CapCut application. The data collection technique used by the author in this study was a literature review, which involved searching for data related to the discussion in the research title. In this study, relevant data was collected through various means, including literature review and internet searches.

Result and Discussion

Based on the research conducted, researchers found that videos created using the CapCut application are easy to use and offer a convenient alternative for creating instructional videos. The capcut application has advantages including being easy to use, has various features, has a green screen feature, and the capcut application uses Indonesian. The capcut application has features that can be utilized and easy to use, such as a menu for pausing recordings, voice and video recordings, features for setting frame rates and bitrates, countdown timers, displaying text and logos, selecting time lapse, as well as storage so that this application can be used to make videos learning.

According to Adnan (2020), to create an animated video learning about colloidal chemistry systems using CapCut, follow these steps: (a) Download and install the CapCut-Video Editor application. (b) Open the downloaded CapCut application. (c) Allow the CapCut application to access necessary features, such as access to the gallery and use of the microphone and camera. (d)

After logging in to the CapCut application homepage, select a new project to start editing the video. (e) Select the video you want to edit from your gallery. You will then be directed to the video editing tools. (f) Click audio to add your desired sound to the video. In the CapCut app, you can add more than two audio tracks to a video. (g) Click stickers to add your desired stickers. (h) To enter text, simply tap the text option. There are many fonts available. If you want to add effects to the video, simply select effects, and a selection of video effects will appear. (i) Once you're done editing, tap the save icon in the top right corner of the screen and wait for the video to finish.



(a) (b) (c)

(d) (e) (g)

Figure 1. (a) Home page of the capcut application; (b) Selection of videos colloid system material; (c) Voice addition explanation of colloidal matter; (d) Added stickers, emoji and pictures of colloidal matter; (e) Addition text discussing colloid material; and (f) Video storage on the phone in the upper right corner

When creating animated learning videos, researchers encountered obstacles that impacted the process, including time, network connectivity, internal phone memory, and consequential errors resulting from a full phone memory. However, creating learning videos can be overcome. With the CapCut app, teachers and students can more easily create learning videos and other engaging videos.

Conclusion

Based on the above research, it can be concluded that the development of Science and Technology has implications for each generation in various fields of science, so that the generation will be educated according to the development of science and technology. In making learning videos for colloidal chemistry using the easy-to-use CapCut application, in addition to the features in the CapCut application are diverse and interesting so that learning through video can facilitate students and teachers in the teaching and learning process.

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