

## Learning Model on Social Science Education Assisted by YouTube Channel in Digital Era

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**Abstract.** This study aims to develop and test the effectiveness of the YouTube Channel application-assisted learning model in improving the understanding of Open University Elementary School Teacher Education Study Programme students of Basic Social Studies Concepts. This research uses the Borg & Gall model which involves ten stages, ranging from initial research to product dissemination. Data were collected through questionnaires and interviews with students and lecturers. The results showed that the YouTube Channel-assisted learning model significantly improved students' understanding. The experimental group that used the learning video showed a higher increase in comprehension scores than the control group. The average score increase in the experimental group reached 25 points, while the control group only experienced an increase of 11 points. This research concludes that YouTube Channel-based learning is an effective media to improve students' understanding of Basic Concepts of Social Studies material. In addition, this study also identified positive responses from students regarding the use of learning videos, which are considered more interesting and easier to understand abstract concepts. It is recommended that this learning model be implemented more widely at the Open University and developed for other courses.

**Keywords:** YouTube Channel, YouTube, Basic Social Studies Concepts, Universitas Terbuka

### 1 Introduction

The development of science and technology has increasingly encouraged renewal efforts and the utilization of technological results in the learning process[1][2]. Efforts to reform and utilize technology are also being made in higher education in countries such as Egypt and Japan[3] [4]. The process of technology utilization is important in learning activities in higher education. It is intended to motivate student learning and ensure that the learning process takes place in accordance with expectations[5]. The sustainability of learning with technology integration must also be in line with innovative learning design. According to Zulfikhar et al. [6] Learning design is the whole process of analyzing learning needs and objectives and developing teaching techniques and materials to meet those needs. It includes the development of lesson packages,

teaching and learning activities, testing, revision, and evaluation of learning outcomes[7]. In addition, within learning design there is instructional learning design which deals with the art and science of creating instructional environments and materials that will take learners from a state of being unable to complete certain tasks to a state of being able to complete those tasks[8]. Instructional Design is based on theoretical and practical research in the areas of cognition, educational psychology, and problem solving [8][9].

On the other hand, learning design is also inseparable from theoretical and practical research in the areas of observation, educational psychology, and problem solving. Therefore, Richey et al. [10] explains that there are several characteristics of learning design, namely: (1) student-centered; (2) goal-oriented; (3) focused on real-world performance; (4) focused on results through reliable and legitimate means; and (5) attempted in one unit. Thus, the learning design process requires planning to analyze needs and identify goals to be achieved. Meanwhile, the development step is an instructional development activity to produce initial products that are implemented through field trials. Learning design development is done through various ways such as the use of the Borg and Gall model [11]. Therefore, there are various steps that can be taken to develop learning design. The study of Lacey and Wall [12] shows that the development of video-based learning design can encourage student engagement in the learning process.

The Industrial Revolution 4.0 era has brought significant changes in various sectors, including the education sector[13]. In this era, information and communication technology (ICT) plays an important role in accelerating, simplifying and improving the quality of learning. One form of technology that is increasingly popular is video-based media, particularly the YouTube platform[14]. The use of YouTube as a learning media is an innovative solution that can improve conventional teaching methods, especially in an effort to improve student understanding of lecture material that is considered difficult and boring [15]. In Indonesia, one of the universities that implement technology and distance education is *Universitas Terbuka*[16]. The distance learning system provides opportunities for students to get quality higher education opportunities. Therefore, it is necessary to develop distance learning designs to be able to continue to adapt to the industrial revolution 4.0.

Learning design development must also be supported so that students can learn independently. Some previous studies assess learning media that are integrated with technology and easy to understand can be through YouTube [17][18]. Therefore, this research seeks to develop and test the effectiveness of the YouTube Channel application-assisted learning model in improving student understanding. This is because YouTube is a form of social media used to share videos. Thus, the use of YouTube can make it easier for students to understand the material visually.

## 2 Method

This research uses the Research and Development (R&D) method adapted from Borg and Gall[11] . This method involves several systematic stages to develop a learning model.

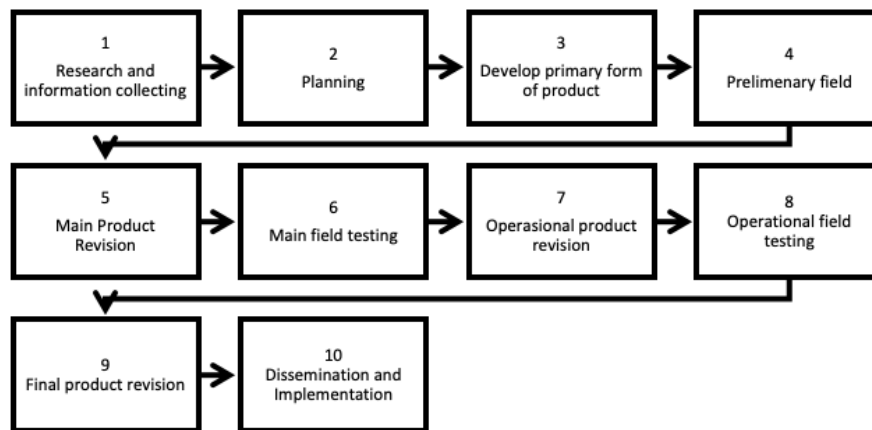


Fig.1. R&D Procedures

This research was conducted in several Universitas Terbuka Distance Learning Programmed Units (UPBJJ-UT), namely Serang, Bandung, Jakarta, and Bogor, at the Faculty of Teacher Training and Education, Elementary School Teacher Education Study Programmed. The selection of this location was based on the population of students who attended the Basic Concepts of Social Studies course at the Universitas Terbuka. This research was conducted from February to November 2024, with the research stages taking place according to the planned schedule. The focus of this research is to increase student understanding of the Basic Concepts of Social Studies course through the use of learning videos assisted by the YouTube Channel application. This study aims to measure the effectiveness of video-based learning models in helping students understand abstract Basic Social Studies Concepts material. The instrument used in this research is a cognitive test that measures the level of student understanding of the Basic Concepts of Social Studies material. This test was given during the pretest and posttest for both groups, with a level range of C2 (understanding). The scale used in the assessment is a dichotomous scale, where the correct answer is given a value of 1 and the wrong answer is given a value of 0. In addition to tests, researchers also conducted interviews to identify the results of feedback on the use of YouTube as a learning medium. This data analysis uses descriptive quantitative by looking at the average value of the results of classes that use YouTube-based learning models and without the use of YouTube.

### 3 Results and Discussions

#### 3.1 Results

Based on the findings of researchers in the process of collecting information through interviews with five lecturers and questionnaires distributed to 100 students at the Universitas Terbuka who attended the Basic Concepts of Social Studies course, it shows that 75% of students find it difficult to understand the basic concepts of social studies delivered through modules and traditional learning materials. Most students claimed that learning would be more effective if accompanied by visual media, such as videos. As many as 85% of students revealed that they often use YouTube as a medium for self-learning, although the videos available are generally not specific to the needs of the course. From the interviews with lecturers, information was obtained that YouTube as a learning media can be used to explain social studies concepts that are difficult for students to understand. Lecturers expect video content that is in line with the curriculum and desired competencies.

**Table 1.** Learning Video Content Planning.

Topics	Video Duration	Number of Video
History of Indonesia	15 minutes	3
Geography of Indonesia	12 minutes	2
Pancasila Economy	10 minutes	2
Social Culture of the Archipelago	18 minutes	3

Table 2 shows the results of the needs analysis stage. After the researchers analyzed the needs of students and lecturers related to the social science education learning model, the researchers developed the concept of learning videos assisted by YouTube Channel. This is based on the results of interviews with students who generally search for materials for self-study through YouTube. Thus, researchers conducted an analysis related to the learning video content that was adjusted to the syllabus of the basic concepts of social studies course. The videos were developed by involving multimedia experts and social studies lecturers to ensure that the material presented was accurate and in accordance with the curriculum. The videos were made with attractive visuals and clear narration. During the development process, researchers also conducted a small trial of 10 students to get feedback on the quality of the videos.

‘Actually, the videos developed are good, it’s just that the visualization of the concept is difficult for us to understand because it only uses text.’ (Student A, 2024)

‘I think the video developed is quite good, but there are still many visualizations in the form of text and it is difficult to understand because the font design used is not in accordance with the theme of the video.’ (Student B, 2024)

Based on the results of interviews conducted by researchers for feedback, then researchers made revisions to the videos developed in accordance with student responses. Furthermore, researchers conducted an initial field test to 20 students.

**Table 2.** Main Field Test Results.

Class Group	Pre-Test Average	Post Test Average	Average Improvement
Experiment	55	80	25
Control	57	68	11

The results of the main field test showed that the experimental group experienced a more significant increase in understanding than the control group, with an average increase of 25 points in the experimental group and 11 points in the control group. Table 2 shows that the learning video content developed can encourage students to understand material related to basic social studies concepts. However, in the experimental class group students provided input related to improving the visual quality and interactivity of the video. After revising the product, researchers conducted an operational field test with the following results.

**Table 3.** Operational Field Test Results

Class Group	Pre-Test Average	Post Test Average	Average Improvement
Experiment	54	78	24
Control	56	69	13

Table 3 shows that the results of the operational field test are not much different from the results of the main field test. This condition shows that YouTube channels can be an alternative for students to carry out the learning process independently. The findings of this study illustrate that although the Universitas Terbuka has provided e-modules, students still need other learning resources that can make them understand the basic concepts of social science. Given, the material of basic concepts of social studies generally contains theory. Elementary school teacher education students are prospective teachers who will later face elementary school students who are accustomed to using technology. Thus, the use of YouTube can train students to practice integrating technology in learning. In line with Reina et al. [19] YouTube offers various benefits to students, one of which complements the learning process at the university asynchronously. In other words, the Universitas Terbuka as a university that implements a distance learning system is required to continue to adapt to educational technology.

On the other hand, this research also illustrates that students who are prospective teachers are required to be able to master information and communication technology in addition to mastering learning materials that will be taught to students [20]. Thus, pedagogic competence is very important for a prospective teacher. Therefore, the utilization of YouTube in the learning process provides an additional source of reference for

students where the application of interactive videos can increase their interest in learning[21]. Nowadays, the process of learning and teaching activities is not only done face-to-face or traditionally, but can be done online. This condition occurs at the Universitas Terbuka. So, in the learning process, innovative and creative media is needed.

#### 4 Conclusions

The results of this study also concluded that the results of the main and operational field tests showed that the YouTube Channel-assisted learning model significantly improved PGSD students' understanding of the Basic Concepts of Social Studies material. The experimental group that received treatment in the form of YouTube video-assisted learning showed a higher increase in posttest results than the control group that only received conventional learning. This shows that YouTube-based media is effective in helping students understand abstract concepts in social studies. This study has limitations on trial users and was only conducted in one course. Future research is expected to develop learning videos based on the national curriculum to further improve the relevance of learning, it is recommended that the learning videos developed are adjusted to the national curriculum and applicable competency standards. Development of videos that are more contextual and specific to learning needs in Indonesia will increase the effectiveness of learning and the relevance of the material presented to students.

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