



# Literature Study: Control Devices for Distance Learning as a Learning Alternative in of Covid-19 Pandemic

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**Abstract.** Students who survived the distance learning process were less active and tended to do other things with their gadgets that learning was less than optimal. So we need an application that can control student gadgets so that students do not freely open applications outside learning that learning takes place optimally. This research is a literature study using a literature study that describes the use of control devices to conduct distance learning as an alternative to learning in the era of the covid-19 pandemic. The literature study uses various sources such as articles, journals, and other documents that are relevant to the discussion in this study. This study focuses on the use of control devices to control students' smartphones so that they are more focused during distance learning. The results obtained in the form of distance learning with a Control Device using AirDroid can be used as alternative learning as an alternative for face-to-face learning. So far there has been no use of the AirDroid application for the learning process, even though judging from the performance of this application it can be used as a Control Device to regulate and see what students are doing during this distance learning. By utilizing the AirDroid application, it is hoped that distance learning can take place smoothly and students will no longer be indifferent during learning.

**Keywords:** Distance Learning · Control Device · AirDroid

## 1 Introduction

In this global era, internet can also be integrated in the learning process. One of the learnings that can be done using the internet is distance learning. Distance Learning is a learning design that is offered as an alternative to carrying out the learning process without having to face to face in class. So that distance learning needs to be designed properly and carefully so that its use can make it easier for learners and lecturers [1]. Added to this, students during the distance learning are less active and tend to do other things with their gadgets so that learning is not optimal. The Covid-19 pandemic is also the reason distance learning needs to be done because of the situation that does not allow face-to-face learning.

Gadget in the form of a smartphone is one of the devices that are often used by students in the distance learning process because it is practical and easy to use. However, when

the learning process takes place, students do other things with their respective gadgets, such as opening social media applications or other things outside of learning. This makes the learning process carried out remotely less than optimal and students tend to underestimate it because they feel that the lecturer does not see it directly so that they are free to do whatever they want. Even though we can maximize the use of the internet in a more positive direction by managing it so that its use can be well directed and by following in with the learning process [2]. This underlies the need for a tool or media that can control their gadgets to focus on learning without opening other applications outside of learning.

A control device is a device to control a computer system, its use can be done remotely. An application that can control devices is AirDroid because it allows users to view and control smartphones directly [3]. AirDroid is also an application that has various features, one of which is to transmit data wirelessly using only a laptop [4]. So that its use can be done by controlling student gadgets so that they focus during the distance learning process. AirDroid allows users to be able to connect or access remotely with smartphone or laptop media.

The AirDroid application is used in research to perform early detection of breast cancer as an application to transmit data and the results obtained only last for 6 s [5]. This application is considered very useful in the distance learning process because the lecturer's work system can send data in the form of learning materials. Lecturers can also control student gadgets according to their needs in learning through laptops and carry out targeted and structured learning. It is hoped that with the application of control devices using the AirDroid application, distance learning can take place optimally and students' understanding by following per under the previously planned learning objectives.

## **2 Method**

This research is a literature study using a literature study that describes the existing phenomena. Especially related to the use of control devices for distance learning as an alternative to learning in the era of the covid-19 pandemic. Literature study was conducted through internet searches on the use of control devices for distance learning such as articles, journals, and other documents relevant to the discussion in this study between 2012–2021. The number of sources analyzed amounted to 11 sources (articles, journals, and other documents). The results are used to identify the effectiveness of the use of control devices for distance learning using the AirDroid application.

## **3 Finding and Discussion**

### **3.1 Distance Learning**

Distance learning is quite challenging to implement as it is highly contrasting to face-to-face learning. One of the most distinct aspects is that the students do not interact directly with lecturers [6]. Distance learning has its advantages and disadvantages. The advantage is that students are more flexible in learning and the place can be conditioned. However, the weakness is that students cannot socialize for real [7]. One of the principles in

distance learning is teaching as an interaction so that learning is interdependent between students in a networked learning environment [1].

Nur Khasanah in 2012 evaluated the implementation of a distance learning development pilot program at IAIN Walisongo towards online learning. The results obtained are the responses given by students who show enthusiasm in participating in online learning, but there are still students who are less active for several reasons. From the lecturer's side, they provide different learning models so that they are more varied and lecturers need more time because of online class preparation. Suboptimal infrastructure is also an obstacle in the implementation of distance learning [8].

Distance Learning needs to be done as an alternative to face-to-face learning, due to global demands and the COVID-19 pandemic that requires online learning. However, there are problems faced when distance learning takes place, namely students tend to underestimate the distance learning process because it is felt that the lecturer does not see it directly.

### 3.2 Control Device

Atmoko Nugroho in 2017 developed a distance learning model using the web. The results obtained are that web media can be used as a means of distance learning, and learners and lecturers can conduct teaching and learning processes without being limited by time and place [2].

Adib Rifqi Setiawan in 2020 made a science literacy activity sheet for distance learning with the topic of the 2019 coronavirus disease (COVID-19). In practice, it demonstrates that students' scientific literacy is not quite developed yet, although the students can respond to the scientific literacy work sheets during online learning [9].

Ahmad Cucus and Yuthsi Aprilinda in 2016 developed multimedia-based e-learning for the effectiveness of distance learning. The results of the study demonstrates that the use of e-learning media with multimedia content can improve learning outcomes, obtained from measurements in the control class and experimental class between Informatics Engineering Study Program students and Information Systems Study Program students there are significant differences influence in the model. Independent learning using e-learning based on multimedia content [10].

Saeful Bahri and Ade Sudrajat in 2015 developed a remote control system that is operated using an Android smartphone. This remote controller can control electrical equipment with a range such as an internet network and only needs to use a smartphone [11].

Therefore, when carrying out distance learning requires media or supporting tools used during learning. One of the tools or media that can be used is a control device, which is a device that can control, command, and manage a system. Distance learning using control devices is more effective and efficient because lecturers can control the devices used by students remotely.

### 3.3 AirDroid Application

Tubagus Ismail in 2014 researched interactive control systems and strategies to improve internal learning in the creative industry in West Java. The results obtained indicate that

there is a positive influence on the strategy process, namely the intended strategy and the strategies that emerge then the strategy process has an effect on internal learning [12]. One application that can control devices is AirDroid because this application allows users to view and control smartphones directly [3]. AirDroid is also an application that has various features, one of which is to transmit data wirelessly using only a laptop [4].

The AirDroid application can access remotely using a laptop to an Android smartphone via the internet, this application can manage Android smartphone devices remotely without holding the smartphone directly and controlled by a laptop. This is done so that students focus during distance learning.

### 3.4 Result

Based on the findings from the literature study, distance learning with Control Devices using the AirDroid application can be used as alternative learning as a substitute for face-to-face learning. So far there has been no use of the AirDroid application for the learning process, even though judging from the performance of this application it can be used as a Control Device to regulate and see what students are doing during this distance learning.

By utilizing the AirDroid application, it is hoped that distance learning can take place smoothly and students will no longer be indifferent during the learning process.

However, there are limitations of this study, namely there are not many references to the use of Control Devices, especially by utilizing the AirDroid application for the learning process.

Suggestions for further research are to apply the AirDroid application directly in the learning process so that the advantages and disadvantages of the AirDroid application can be found when used for Control Devices in distance learning.

## 4 Conclusion

Distance learning with Control Devices using the AirDroid application could be utilized as an alternative to face-to-face learning because this application could serve as a Control Device to regulate and see what students do during distance learning. By utilizing the AirDroid application, it is hoped that distance learning can take place smoothly and students will no longer be indifferent during learning.

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