

# How much does distance learning affect social life and psychology of growing adolescent

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## ARTICLE INFO

## ABSTRACT

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Distance learning is one of the most important innovations in the education field. It provides flexibility when considering time and place in education while enhancing the efficiency of gathering knowledge. While distance learning improves the quality of education, distance learning diminishes the interaction between students and teachers or among students themselves. The lack of interaction that occurs in distance learning affects adolescent's social life and psychology. In this research, we would like to study all the impacts that are going to affect students, especially in their social life and psychology. In this research, the method used is a document study or document analysis. The purpose of this research is to observe and analyze the impact of distance learning to improve distance learning in the future not only in educational but also in social and psychological side. With this research, we find that students that use distance learning without any interaction with the others tend to induce an antisocial behavior which leads to loneliness and suicidal thought.

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## 1. Introduction

With the significant rate of growth technology in this millennial era, technology will take over the conventional way, eventually, from a simple labor task, information, communication, and education [1]. Even though technology only focused on the economics and social field to improve countries at first, in the last two decades, technology has been improving education in many ways. The improvement of education technology was affected by the already improved information and communication that has been around for a longer time. It is known that education is one of the most important aspects to enhance the quality of developing countries [2]. One of the innovations of technology in the education field is distance learning [3], [4].

Distance learning is considered as an essential strategy to improve the quality of education, where it also provides advocating for peer-to-peer collaboration. Additionally, distance learning also provides a greater sense of responsibility for learning to the teachers [4]. Distance learning provides flexibility when considering time and place in education. Distance learning also enhances the efficiency of gathering knowledge through the ease of access to vast information provided on the Internet. Distance learning is also considered as a cost-effective method where there is no need for teachers and students to travel to school building [5]. Distance learning also can be a solution to the bullying that occasionally occurs in the conventional school, where according to Suicide and Suicide Attempts in Adolescents [6] and National Center for Educational Statistics [7], one out of every five (20,8%) students report being bullied.

Aside from the advantages and benefits of distance learning mentioned above, distance learning also has its disadvantages. While distance learning improves education quality, distance learning also diminished the interaction between not only teachers and students, but also among students themselves [5]. Not only has that, but the presence of the instructor also affected the way students learn. Instructor in learning activities is essential on some things like "degree of feeling, perception, and reaction of being connected." While students can get all of these from face-to-face courses, distance learning limits them all, especially when the courses are in the asynchronous sessions[8]. With the small amount of interaction between students and teachers, or among students themselves in distance learning, it will affect the character development of students eventually. The character development of students is affected by these changes in the environment is their psychology and social skill, where adolescents around those ages need friends to develop their character.

In this paper, we will try to analyze the impacts of distance learning both in a good and bad way. Through the result that we get from analyzing data of the impact from distance learning, we hope that we can make a better future for distance learning without decreasing its quality, whether on the education side or social side and psychology side.

## 2. Literature Overview

### 2.1. Distance Learning Brief History

With the domination of technology and technological advancements, especially in terms of science and computer, the distance between Information Technology and Communication Technologies has been reduced largely. Thus, the enhancement in education has improved a lot using the technology that enabled the system of education. Distance learning is one of the improvements in education that's used to increase the quality of education [2]. Distance learning unites two main areas, learning, and technology. Learning is a process to achieve knowledge and technology, is a tool or improvement to help teachers and students in the learning process. Even though the term "e-learning" was introduced by White [10] as "learning via electronics sources, such as television, computer, video-disk, Teletext, video-text.". The distance learning system was conceptualized first from 1960. Distance learning was first introduced to focus more on the student in the concept of Computer-Assisted Instruction as a means of problem-solving. In 1997, distance learning turned its meaning into "an interactive distance learning" [10].

However, nowadays, distance learning is referred to internet-based learning ecosystem that uses technology such as smartphones, laptops, tablets, and computers or through the world wide web with the help of the Internet to connect among the students and their teachers [11]. The Internet has become one of the essential ways to make resources available, especially in terms of research and learning for both teachers and students. Some researchers also defined distance learning as an evolutionary way to make benefit of the workforce with the knowledge and skills. Also, distance learning is an interactive, repetitious, self-paced, and customizable system in learning [5]. Distance learning also provides an alternative way to learn and enables students to access course information without any geographical or time restrictions. It also provides interactivity between students and instructors to promote a more efficient and effective way of learning traditionally [12].

### 2.2. Type of Distance Learning

There are various ways to classify types of distance learning. Generally, distance learning can be divided into two types: "synchronous" and "asynchronous.". Synchronous distance-learning requires students and lecturers to be online at the same time to do the learning activity. While asynchronous distance-learning provides more flexibility in learning activity for both students and teachers [5].

### 2.3. Advantages of Distance Learning

According to Raba [5], distance learning can make objectives be accomplished in the shortest time with the least effort for both the students and teachers. That way, both students and teachers can develop their skills in the meantime.

Distance Learning can also be a good solution towards bullying that mostly occurs on school faculty. Bullying is an aggressive behavior, intentional acts carried by a group or individual repeatedly and overtime against helpless victims. Bullying is not always in a physical form (e.g., hitting, kicking, damaging victim's property), but also in verbal attacks and relational/social aggression (e.g., social

exclusion, fake rumor spreading) up to the most recent forms of attack that occurs through the Internet, cyberbullying. Bullying sometimes involves an imbalance of power (e.g., physical power or popularity)[13]. According to suicide and suicide attempts in adolescents [6], bullying is one of the most significant factors in suicide ideation and behavior. It is stated that 23,7% of girls and 15,6% of boys were bullied on school property where traditional learning occurs. The data even shows that 8,7% of girls and 5,4% of boys did not go to school one day in the past 30 days because they feel unsafe at school.

According to Sadeghi [14], distance learning saves significant amount of money, where the fee of a distance education degree costs less than the regular one. Distance learning also provides flexibility to learn, where in traditional school students were asked to follow the curriculum. Sadeghi also states that the flexibility of distance learning provides the chance of students to earn while learning.

#### **2.4. Disadvantage of Distance Learning**

However, distance learning has its disadvantages despite having so many advantages. Distance learning as an alternative way to traditional school makes the learners, as well as students, have less interaction or relation. Distance learning might also be less active when it comes to clarification, offering explanations, and interpretations where it usually is much more comfortable in traditional face to face encounters between students and instructors [5], [15]. On the education side, distance learning does not provide any control of any immoral activities like cheating on a test. Distance learning also enables students to do piracy or plagiarism as well as copy and paste. Some field in scientific that requires practical activities like pharmacy in medical science cannot be optimized using distance learning. Last but not the least, communication skills in distance learning might have a negative effect where though distance learning might have excellent academic knowledge, they may not possess any skill to deliver their acquired knowledge [5].

According to Sadeghi [14], distance learning has higher chances of distraction. With no one around students who can help to remind about assignments, the chances of getting distracted are more likely higher. Job markets and employers also tend to choose a degree from a regular college over an online degree. So, it could be quite dangerous for students who rely only on online degree. Cacault [16] states that distance learning such as livestreaming-based learning only enhances students who have high-ability in their exam grades but lowers the exam grades of students who have low-ability

### **3. Method**

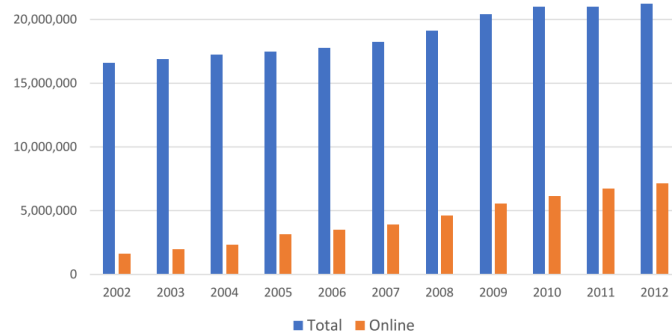
In this research, the method used is a document study or document analysis. Document analysis is a systematic procedure for reviewing or evaluating documents - both material (computer-based and internet transmitted) print and electronic. Document analysis was done by taking data from documents related to the research conducted. In this case, the research conducted is related to distance learning and its influence on the community. Then the data is analysed and continued with abstract formation, literature review, problem identification, proposed solutions, and making conclusions [9].

The document analysis in this study aims to find out various kinds of cases and the impact of distance learning on social or psychological life. From the study results, the document will be analysed to make conclusions and conclusions. In addition, data searches for the use of e-learning in the community are also carried out. Each of these data will be used to find out the frequency of community interest in using distance learning. In addition, we analyse the relationship between the effects of distance learning, psychological and sociological.

In this study, we use several references obtained from various journals, scientific articles, and data science. The documents were obtained from the Google search engine, where we searched by typing in a number of keywords, such as distance learning, e-learning, the effect of learning, e-learning for children, the effect of distance learning on psychology and sociology, cyberbullying, social and psychological, advantages and disadvantages of distance learning. From those references, we used the references which have connection to the effect of distance learning and cited it in this paper for a literature review. Based on that analysis, we conclude a solution that can reduce the negative effect of distance learning.

#### 4. Results and Discussion

Between 2000 and 2012, the enrolment of distance learning increases from 8 to 32% and those who use the online distance learning fully went up from 2 to 6% (Fig.1) [17].



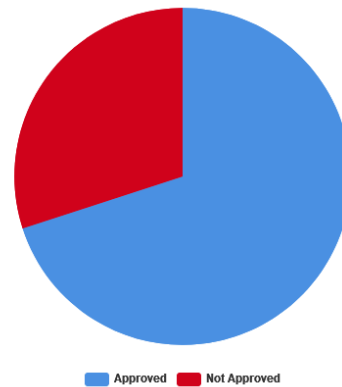
**Fig. 1.** Growth of distance learning in 2002-2012[17]

According to the eLearning Industry, approximately 77% of US corporations used online learning. While e-learning increases learning retention rates between 25% and 60%, retention rates of face to face training are much lower: 8% and 10%. Its development is proved by the growth of 900% between 2001 and 2017, according to eLearning Industry. eLearning Industry also stated that 42% of expansion income in US organizations. According to Statista, 43% of US college students found digital study technologies help do homework, while 81% of US college students agreed that digital learning technology was helping them improve their grades. According to one of the biggest e-learning websites, Kahoot! the total of monthly active users on Kahoot! are approximately 70 million. The users of Kahoot! are mostly workers around age 35-44 (25%) and 45-54(34) where they want game-based learning. There are three things that Kahoot! users want to change the way to learn, which are: more interactive learning, flexibility, more time allocated on training.

The lack of interaction in distance learning also tends to induce antisocial behavior in adolescents. It is known that distance learning lacks interaction between students and their instructors or among the students themselves. While it is true that problem such as ADHD, teenage pregnancy, substance abuse, and crime impose [18] or basic training in home where distance learning usually happens to develop antisocial behavior, e.g., poor parental discipline and monitoring [19], distance learning also decrease the chance of adolescents to develop their social-skill with the lack of communication skill [5]. Besides the lack of development in communication skill, humans are social creatures which need to interact with others. While distance learning provides a high quality of education, it also could put students, especially adolescents, to loneliness. Loneliness is one of the main factors that can lead to various psychiatric disorders and various physical disorders [20]. Being lonely is also one of the social factors that affect the risk of suicide. Those who have suicidal behavior could be prevented in many ways, like being at school, workplace, and community based on the intervention. The example of school-based prevention of suicidal behavior is The Good Behavior Game, where the teacher teaches the classroom intervention of suicidal behavior and SOS program, which gives students awareness about the relationship between mental disorders and suicide where teachers encourage students to seek appropriate help when feeling depressed [21].

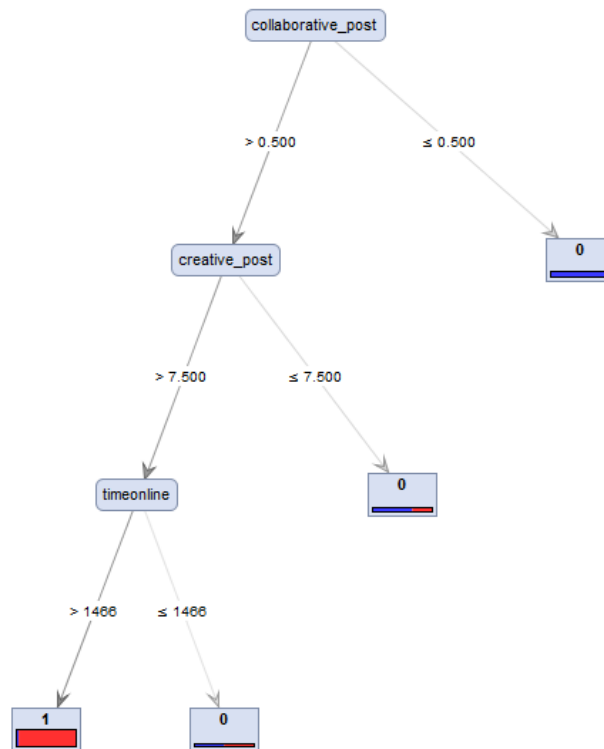
With data from “Understanding student's online behavior and their relations inside real class gradings”, we can conclude that students with more online time tend to be approved inside real class. As seen in Fig. 2, we can see that students who have more time-online tend to be approved in real class.

Pie Chart of Approved Students by Time-Online



**Fig. 2.** Online-time as a factor of being approved in real class

In Fig. 3, it is shown that students who do not have “collaborative post” are not approved in real class. We can also see that students who have time-online above 1466 tend to be approved in real class. Distance learning encourages students to be more creative and collaborative to be approved in real class gradings.



**Fig. 3.** Decision tree of being approved in real class on “Understanding student’s online behavior and their relations inside real class gradings”

Based on the results of the distance learning’s impact on adolescent, both advantages and disadvantages, we propose solutions that can improve distance learning in social, psychological, and educational side.

#### 4.1. Increasing the synchronous system on distance learning

Even though distance learning specializes in the flexibility of time and place, it is proved to affect the psychology and social life of adolescents. Additionally, synchronous system on distance learning can be a solution on the lack of interaction between adolescents and their teachers. It is also proved that the communication between adolescents and their teachers affects the quality of students’ performance.

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## 4.2. Increasing the interactivity of asynchronous system on distance learning

One of the biggest downsides of distance learning is the lack of interaction between students and their teachers and among students themselves. Asynchronous system on distance learning is one of the biggest factors when it comes to the lack of interaction. It is because in asynchronous system, students do not have to be on the same time and place to do learning activity. To reduce the lack of interaction in asynchronous system, we need to increase the interactivity. That way, students would feel like they are not learning from a robot and make learning activity less boring.

## 4.3. Creating group-based activities

Even though synchronous system can be an alternative way to fix the lack of interaction, a real-life interaction is still needed, especially on adolescents. A group-based activity can be a solution to improve social-life of adolescents. This group-based activity can be “ice-breaking” from learning through distance learning where students can interact with others. This group-based activity does not need to be focused on education.

## 4.4. Creating a plagiarism system

One of the biggest disadvantages in distance learning on educational side is the lack of control in students’ work. To improve distance learning, there must be a system that can check piracy and plagiarism. That way, teachers do not have to check the authenticity of students’ works all alone. Additionally, it will reduce the amount of cheating habit.

## 5. Conclusion

Distance learning is one of the best innovations in education with all the advantages that allows students and teachers to get huge information through the ease use of internet. Distance learning also provides flexibility when considering time and place in learning activity. However, distance learning diminishes the interaction between students and teachers and among students themselves. The lack of interaction may cause antisocial behavior where it could lead to suicidal-thought and suicidal-behavior from being lonely. There is no denying that distance learning already improved many aspects in educational field. However, to improve the lack of interaction in adolescents, distance learning needs to fix the current system, especially the asynchronous system. Distance learning needs to have more interactive way to do the learning activity. Synchronous system is one of the solutions that has been used. It is true that synchronous system decreases the flexibility on distance learning, but the users would feel less lonely. Another way to improve the lack of interaction on distance learning is a group-based activity in real life that could be held at least three times a week. The group-based activity does not need to be focused on education. This group-based activity can be used as an “ice-breaking” in distance learning to make adolescents feel less lonely and thus improves their social skills. As for educational problem in distance learning, there should be a new system to check the works of students. This system should be able to identify plagiarism and identify the authenticity of the students’ works. That way, distance learning can be a better while not making students lazier.

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