ASSISTING THE INTEGRATION OF TECHNOLOGY AND ITS EFFECT ON STUDENTS' ATTITUDES IN DISTANCE LEARNING

Dewi Suriyani Djamdjuri[1*], Iil Hilyatul Kamilah[2]
Universitas Ibn Khaldun Bogor, Indonesia
*email: dewi.suriyani@uika-bogor.ac.id

Info Artikel

Abstract

Teaching and learning process can be easily conducted due to technological developments. The development and application of information technology is also beneficial for the world of education. The purpose of this study is to assist in the integration of technology and its influence on students' attitudes in distance learning during the Covid 19 pandemic. The method of conducting this report is qualitatively descriptive study and the implementation of the service is carried out with two stages, that is the first is mentoring and the second is data retrieval through interviews and questionnaires addressed to students. The results of the implementation of this assessment show that there are many technological concerns about student attitudes, and technology can affect students' attitudes positively or negatively. Among the positive influences of technology on students are that it can increase creativity in using technology, feel more curious about technology and can affect the attitude of cooperation in student self-development. As for the negative impact that affects students, students find it quite difficult to understand the material provided by the teacher. The results of the assistances showed that the positive impact was more dominant than the negative impact experienced by students.

Abstrak

Proses belajar mengajar dapat dengan mudah dilakukan karena perkembangan teknologi. Perkembangan dan penerapan teknologi informasi juga bermanfaat bagi dunia pendidikan, dalam kaitannya dengan peningkatan kualitas pendidikan nasional Indonesia. Teknologi diciptakan tentunya dengan beberapa manfaat, antara lainnya adalah siswa dan guru dapat saling terhubung melalui chat, voice, video, dan kelas virtual. Tujuan pengabdian ini adalah untuk melakukan pendampingan terhadap pengintegrasian teknologi dan pengaruhnya terhadap sikap siswa dalam pembelajaran jarak jauh yang selama pandemi Covid 19 dilaksanakan. Metode penelitian pada pengabdian ini adalah diskriptif kualitatif dan pelaksanaan pengabdian dilakukan dengan dua cara yaitu yang pertama adalah pendampingan dan yang kedua adalah pengambilan data melalui wawancara dan angket yang ditujukan kepada siswa. Hasil pelaksanaan pengabdian ini menunjukkan terdapat banyak pengaruh teknologi terhadap sikap siswa, dan teknologi dapat mempengaruhi sikap siswa secara positif atau negatif. Di antara pengaruh positif teknologi terhadap siswa yaitu dapat meningkatkan kreatifitas dalam menggunakan teknologi, lebih merasa ingin tahu mengenai teknologi dan dapat mempengaruhi sikap kerjasama dalam pengembangan diri siswa. Adapun dampak negatif yang mempengaruhi siswa yaitu siswa merasa cukup kesulitan dalam memahami materi yang diberikan guru. Namun hasil pengabdian menunjukkan bahwa dampak positif lebih dominan daripada dampak negatif yang dialami siswa.

INTRODUCTION

Education is a very important aspect in every country both for the country itself and for individuals or people in that country. Education is the gate of knowledge for everyone. Therefore, with government regulations regarding distance learning during the Covid 19 pandemic, integration technology plays a significant role in it, because education must continue even if it is not completed in advance in schools as usual. One of the integrations of information technology into the world of Android-based application education is Zoom, G meet and other google workspaces (Davies, 2014).

In this modern era, the teaching and learning process can be easily done due to technological developments. Many teachers use technology in their teaching and learning process. They have started using Microsoft PowerPoint and projectors instead of whiteboards to explain learning materials. Even in some institutions they rarely use tools such as whiteboards and other teaching tools and they prefer to use high technology for the teaching and learning process because nowadays the use of technologies such as power point projectors etc. is easier to use, but with the integration of technology in the teaching and learning process. Moreover, google workspace technology makes it easier for teachers to provide materials to students in distance learning during the Covid-19 pandemic. Hilton, 2019 argues that the use of Information and Communication Technology (ICT) has been proven to facilitate the teaching and learning process in general.

The development and application of information technology is also beneficial for the world of education, in relation to improving the quality of Indonesian national education. According to Howard & Mozejko there are three eras in integrating technology in education, namely the pre-digital era (1890 - 1970s) where there was an integration of audio and television technology (broadcast type), the era of personal computers (1970 - present) where self-learning systems and digital games, and the Internet era (1990 - present) with new forms of networking and learning abilities including tagging and annotation of content, geographic location, bio-sensory capture, and data source collection. While each era of technological integration brings with it new ways to connect and learn innovatively (Howa   rd & Mozejko, 2015).

The integration of technology in education is to use technology as an educational tool in the classroom where some argue that it uses technology as part of a new teaching strategy (Sezer, 2013). Much of the teacher's attitude towards the integration of technology into the classroom tends to be based on a 'tool' approach. Teachers use technology to prepare teaching materials and

to assess student performance. Technology as a complementary tool of education and emphasizes that technology has a media role that still requires learning strategies, teaching approaches, and pedagogical philosophies (Aimee, Lawrence , & Rural , 2011).

Technology was created of course with several benefits, according to Allahi & Sanayei in (Talebiana, Mohammadi, & Rezvanfar, 2014). Among the benefits are that students and teachers can connect with each other through WhatsApp chat, voice, video, and virtual classes (Djamdjuri & Kamilah, 2020). A simple Internet video or audio link can allow language users to exchange information and ideas, discuss issues and engage in authentic conversations and exchanges. A student can visit important cultural links or they can communicate with native speakers through chats, forums, emails, skype messengers, etc., by practicing important skills of speaking and writing fluently (Dedja, 2015).

The difference between face-to-face learning as usual in the world of education and distance learning carried out using integration technology during the Covid-19 pandemic must affect changes in many things, one of which is the attitude of students and teachers in the use of technology certainly has differences with face-to-face learning in general. At the UNESCO conference (2011a: 4) there was a consensus on the benefits to education through the proper use of the development of Informal Technology. The fundamental issue is whether teachers know how to use technology effectively in their teaching. How technology is used will depend on the subject being taught, the learning objectives and the nature of the student. Technology offers a fast-evolving and engaging learning environment, blurring the boundaries between formal and informal education and inviting teachers to develop new ways of teaching and enable students to learn (Kuo, 2008).

The existence of government regulations to implement distance learning makes this application very often used during the Covid-19 pandemic. Nowadays application technology is starting to attract the attention of many parties, especially in colleges and schools and has opened up new horizons in the teaching and learning process (Ghavifekr & Rosdy, 2015). The rapid development of information technology in the current era of globalization is inevitable its influence on the world of Education (Komalasari, 2020).. The global era requires the world of education to always and always adjust technological developments to efforts in improving the quality of education, especially adjusting the use of information and communication technology for the world of education, especially in the learning process (Djamdjuri, Suseno,

Tajuddin, Lustyantie, & Chaeruman, 2021). Therefore, this study intends to explore how integration technology affects students' attitudes during distance learning that is taking place due to the Covid-19 pandemic.

Technology was created of course with several benefits, according to Allahi & Sanayei in (Talebiana, Mohammadi, & Rezvanfar, 2014). Another benefit is that students and teachers can connect with each other via chat, voice, video, and virtual classes assuming that a simple Internet video or audio link can allow language users to exchange information and ideas, discuss issues and engage in authentic conversations and exchanges. A student can visit important cultural links or they can communicate with native speakers through chats, forums, emails, skype messengers, etc., by practicing important skills of speaking and writing smoothly, means that technology makes students and teachers easily to perform teaching and learning activities online or distance learning (Dedja, 2015). Especially in this pandemic era, this situation has changed most of our lives. One of the changes in life is that people cannot do face-to-face activities. Including learning activities cannot be performed face-to-face so technology is very useful in this situation. However, this condition may change the character or attitude of teachers and students.

Students sometimes access incorrect information on the internet that is not scientifically confirmed and therefore does not support tobe referred. By using ICT students can search and read learning materials on the internet. However, not everything on the internet is true. Therefore, students should be more careful in finding materials for learning. In addition, ICT also makes it difficult for teachers to provide feedback and knowledge to students (Abu, 2014). According to James in (Talebiana, Mohammadi, & Rezvanfar, 2014) that technology may complicates the assessment especially of some types of feedback and knowledge of students. As explained earlier, ICT can indeed connect teachers and students anywhere and anytime, as well as improved relationships between students (Putri & Ariani, 2022). In the midst of the outbreak of Covid 19 cases in the world, daily activities as much as possible are carried out at home or maintaining distance and avoiding crowds, including schools or other teaching and learning activities are also carried out online with the Circular Letter of the Ministry of Education and Culture Number 3 of 2020 concerning the prevention and handling of coronavirus disease (Covid-19) requires educational institutions to enforce online learning (Saleh, 2020). The outbreak of the Covid-19 pandemic has made it difficult for all of us and trying to find a way that is in accordance with distance learning methods or PJJ in network or online systems. However, this forced to make the wheels of

innovation become faster. It can be recognized that online learning can make us difficult but can make us more open.

Zoom apps, google meet, G form, E-mail, and some other google workspace features are also integration technologies that are often used in distance learning between teachers and students. With these online learning rules, students and teachers can communicate at any time. Technology is able to make learning fully online while still socializing with classmates, learning while studying and participating in ongoing subject-specific discussions (Putri & Ariani, 2022). Using application integrity technology, students and teachers can access learning through video conferencing, documents, digital, and more (Sezer, 2013). That way teaching and learning activities continue to run well, online meeting or online learning can be accessed anywhere and at a predetermined time together.

During this pandemic, teachers also got a new task, namely designing an online learning plan. Because it can be ascertained that the teaching and learning process carried out will be very different from face-to-face learning. Not only teachers but students are also definitely having difficulties (Putri & Ariani, 2022). Various obstacles also arise in the application of online learning. Learning over the internet becomes a difficult thing to do in certain areas with inadequate networks (Octawirawan, 2020). Students must be more disciplined in learning to manage time so as not to be lazy to take classes using integrated technology from home.

METHODOLOGY

The reporting method used in this study is qualitative descriptive. Descriptive study is a technique that explains the meaning of the data that has been collected by providing aspects of the situation being studied so as to obtain comprehensive data about the actual state (Akhmad, 2015). The location of the service is located in one of the State Junior High Schools in Bogor, West Java, Indonesia. The stages of service implementation were carried out with two stages, namely assisting the implementation of service and data retrieval. The first stage was mentoring, carried out for four months, namely August to December 2021. The second stage, data collection on students' responses, was carried out through: (1) Questionnaire. The authors distributed a questionnaire to get primary data on research results with students at one of the State Junior High Schools in Bogor. It aimed to explore information about how influential integration technology in education has on students' attitudes. (2) Interview.

With this interview process, the authors conducted an indirect interview by using Google Form to facilitate online data collection.

FINDING AND DISCUSSION

1. Results of Service Implementation

a.	Teaching Online. In terms of teaching there were a number of subjects that we focus on, namely Mathematics which was handled by two people from our team. English was handled by two people from our team. Indonesian by two people from our team. Sundanese language that was be handled by one person. I and my colleagues conducted English lessons on Wednesdays for 8th graders and Thursdays for 7th graders. In the implementation of teaching run smoothly even though the students were still learning online.

Figure 1. Teaching Online

b.	Technology Adaptation Assistance. In the help of technology, we focused on making learning videos that were tailored to the demands of teachers at a Bogor State Junior High School. This activity was flexible that wa custom-made to the teacher's time. In this activity, two people from our group taught how to make learning videos using mobile phones and laptops.

Figure 2. Technological Adaptation

c.	School Administration Assistance. We made improvements in the manufacture of letters, which include incoming letters and other letter needs. This was adjusted to the request of the deputy head to tidy up the administration. Two of our teams assisted the administration in dealing with administrative issues at the State Junior High School in Bogor. We recorded students' study accounts. This activity had not been completely resolved because there were

so many students who attend the State Junior High School. We divided the assignments, some of us recorded students' accounts and then some help teachers to do teaching and learning activities through Google classroom.

Figure 3. School Administration

From the presented description of the implementation we noticed that Zoom apps, Google Meet, G-Form, E-mail, and a few more Google workplace features are all integration technologies that are frequently utilized in teacher-student distant learning. Students and teachers can communicate at any moment using these online learning guidelines. Learning fully online while still chatting with classmates, learning while studying, and participating in continuous subject-specific discussions are all possible thanks to technological advancements (Putri & Ariani, 2022). Students and teachers can access learning through video conferencing, documents, digital, and other methods using application integrity technology (Sezer, 2013). As a result, teaching and learning activities can continue to function smoothly, and online meetings or online learning can be accessible from anywhere at any time. Students, as well as teachers, are experiencing difficulties (Putri & Ariani, 2022). In the implementation of online learning, a number of challenges occur. In some places with poor internet connections, learning over the internet becomes challenging (Octawirawan, 2020).

2. The Influence of Technology Integration in Learning on Students Attitudes
Based on questionnaires interviewing students about the impact of technology on students' attitudes, the authors got the following results. Questionnaires and interviews as a way of collecting data that researchers do is the final stage of this devotion. In the first stage, researchers asked five questions in the form of questionnaires related to the use of digital platforms in learning during the Covid-19 pandemic. The question is adapted from among others:(Adawiyah, 2011)
a. With the Circular Letter of the Ministry of Education and Culture Number 3 of 2020 concerning the prevention and handling of coronavirus (Covid-19) disease, it requires educational institutions to enforce online learning. With the

government regulation, it is also likely to change the routine of students. For example, when starting lessons, students' delay in participating in PJJ. Therefore, the author gives students questions about the discipline of students following PJJ, namely:

1) I am often late to attend the online class when it conducted through zoom or google meet.

Saya sering telambat mengikuti pembelajaran jika melalui zoom atau g meet
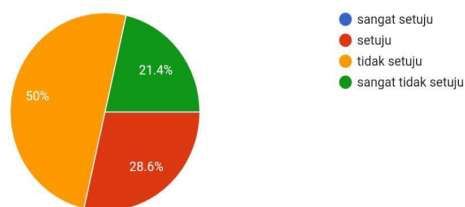
14 responses

Chart 1. Students' Attendance

The results of the first questionnaire from 14 respondents 50% did not agree that they were late to attend, 28.6% of students strongly disagreed if they were late to attend and 21.4% agreed with this it can be concluded that the majority of students were never late to attend online class that use google meet and zoom application technology. On the other hand, 28.6 % were agree with the statement, it means that few students realized that they often coming late.

2) By learning using remote google classroom technology I am more diligent in doing tasks.

Dengan pembelajaran menggunakan teknologi g classroom jarak jauh saya lebih rajin mengerjakan tugas.
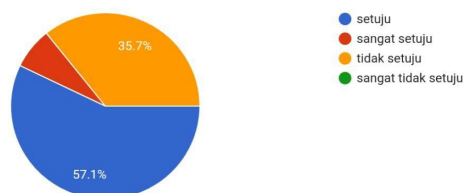
14 responses

Chart 2. Timeliness of Students Collecting Assignments

In terms of diligent attitude of student attitude in collecting the tasks, it can be seen from the diagram above that in this case technology is quite influential on students' ambitions in terms of being responsible for the given task because of the 14 students 57.1% of students agree if the existence of technology in

learning has motivated them in terms of responsibility for the task. 35.7% is a number that shows fewer students disagree with the above statement.

Here are the results of questionnaires about the influence of students working together to exchange information to increase student creativity and motivation.

3)   I am motivated to work together in kindness (cooperate) to improve understanding and creativity.

saya termotivasi untuk bekerja sama dalam kebaikan untuk meningkatkan pemahaman/ kreatifitas

14 responses

- ● sangat setuju
- ● setuju
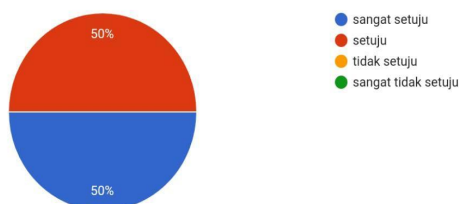- ● tidak setuju
- ● sangat tidak setuju

Chart 3. Motivation of Students to Work Together

With the use of technology students are able to work together in the good way to increase their own understanding of creativity. It is evidenced by a questionnaire survey with the results of 50% of students agreeing and 50% of other students strongly agree and no respondents who disagree and strongly disagree.

4)   I am motivated to learn more technology so that I am able to follow learning. By using technology, it becomes easier.

- ● setuju
- ● sangat setuju
- ● tidak setuju
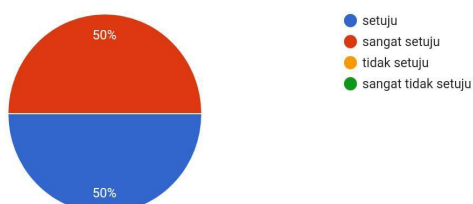- ● sangat tidak setuju

Chart 4. Motivation of Students in Learning

From the results of the data above, it is very visible that the influence of the use of technology on student attitudes is very influential in terms of motivating. With the use of technology in learning is very motivating to learn more about technology to help students when learning takes place or make it easier for students to follow the learning this is evidenced by the data above that 50% of

14 students agree and 50% of students strongly agree with the statement above. This means that no student denies the above question by answering disagree or strongly disagrees.

5)   I am motivated to leave the things that are not beneficial to me.

Saya termotivasi untuk meninggalkan hal – hal yang tidak bermanfaat bagi diri saya
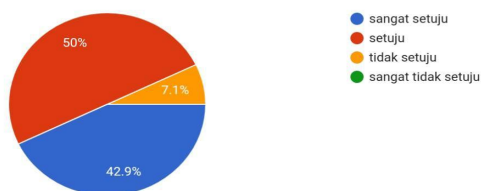
14 responses

- sangat setuju
- setuju
- tidak setuju
- sangat tidak setuju

Chart 5. Student Motivation to Leave Things Unhelpful

With the above results it can be seen that the use of technology in learning can motivate students to make it easier to access lessons and leave things that are not beneficial to them. This is evidenced by the survey above of 14 respondents 50% answered agreed and 42.9% strongly agreed so that only 7.1% of students disagreed with the above idea.

6)   I am lazy to read the material when the teacher gives the material online.

Saya malas membaca materi ketika guru memberikan materi online.

14 responses

- sangat setuju
- setuju
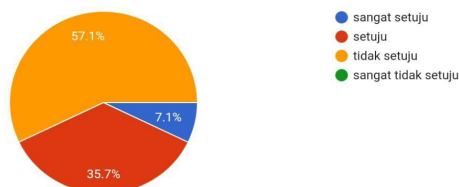- tidak setuju
- sangat tidak setuju

Chart 6. The Influence of Technology on Student Laziness

With this result it can be seen if with the use of technology enough influence on the attitude of students not to be lazy in reading or understanding the material because almost 57.1% of students answered disapproval and 35.7% agreed and 7.1% strongly disagreed. Various obstacles also arise in the application of online learning. Learning through the internet becomes difficult to do in certain areas with inadequate networks (Oktawirawan, 2020). With it the possibility of students having difficulty following learning will exist. Therefore, the author adapts the next questions:

7)   I have difficulty in understanding the material if learning is performed using technology.
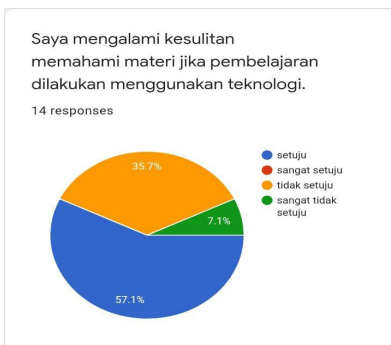

Chart 7. Difficulties of Students in Learning using Technology

In this case it can be seen that the presence of technology in learning is enough to hinder students' understanding because students have enough difficulty to understand. This can be seen from the diagram above 57.1% of students, more than half of students out of 14 students agree if technology makes them feel difficulty in understanding the subject matter and only 35.7% disagree.

8)   What technology/learning media do you like the most?

From the results of interviews with the media that students like, it can be seen in the chart 8 that from the 14 students, they showed that the media they like most is Google Classroom, followed by Zoom and G-meet. These three learning technology applications are at the top of the others.
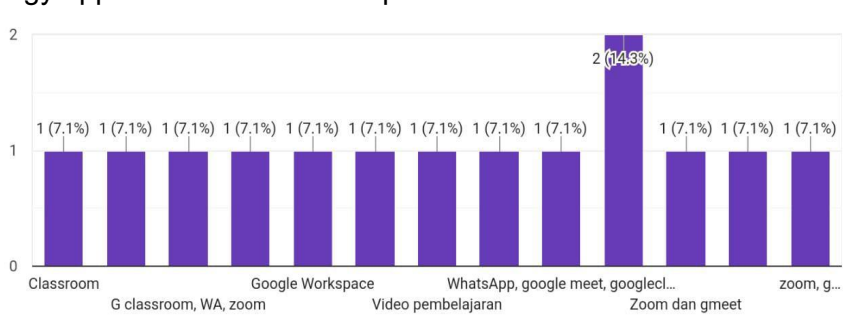

Chart 8. Students' Preference Media

From the findings we perceived that many parties are beginning to pay attention to application technology these days, particularly in colleges and schools, and it has opened up new vistas in the teaching and learning process (Ghavifekr & Rosdy, 2015). In the current era of globalization, the rapid development of information technology will inevitably have an impact on the world of education (Komalasari, 2020). In the global era, the world of education

must constantly accommodate technical changes to attempts to improve educational quality, particularly in the use of information and communication technology for the world of education, particularly in the learning process (Djamdjuri, Suseno, Tajuddin, Lustyantie, & Chaeruman, 2021).

CONCLUSION

We concluded from the data collected that technology has a significant impact on student perceptions. Technology has a beneficial or bad impact on pupils' views. In positive terms, students can use technology to increase student creativity, be more curious about technology, and influence students' attitudes of cooperation in self-development. Students can also find applications of technology to help learning by integrating technology into learning. In this case, based on the data above, the majority of students are happier or pefer applications such as Google Classroom, Zoom, and Google Meet. Furthermore, the authors discovered in this study that employing integrated technology in learning makes it difficult for pupils to absorb the material presented by the teacher. However, the influence of integration technology in learning on student attitudes is more impactful to positive things although there must be a negative side in the use of integration technology in learning towards student attitudes as had been described above.

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