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Implementation of Communication Information Technology in Distance Learning At Islamic Elementary School Insan Rabbani Tembilahan

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Abstrak
Penelitian ini dilakukan untuk mengetahui bagaimana pendidik mengimplementasi teknologi imformasi komunikasi dalam pengajaran jarak jauh dan factor apa saja yang mempengaruhinya di Sekolah Dasar Islam Terpadu Insan Rabbani Tembilahan.penelitian ini merupakan penelitian kualitatif. Responden penelitian berjumlah 3 orang guru di Sekolah Dasar Islam Terpadu Insan Rabbani Tembilahan. Teknik pengambilan sampel menggunakan teknik perposive. Data ini diperoleh melalui observasi, interview, serta dokumentasi.. Hasil penelitian menunjukan bahwa implementasi teknologi imformasi dan komunikasi oleh guru dalam pembelajran jarak jauh di Sekolah Dasar Islam Terpadu Insan Rabbani Tembilahan dikategirikan baik dengan persentase enam puluh persen dan terletak di interval enam puluh satu persen sampa dengan delapan puluh persen. Factor yang mempengaruhinya ada factor ekternal (lingkungan, dan masyarakat), factor internal (guru, siswa, dan teknologi).

Kata kunci: Teknologi Informasi dan Komunikasi, Pengajar, belajar Jarak Jauh

Abstract
This research was conducted to find out how educators implement communication information technology in distance teaching and what factors influence it at the Insan Rabbani Tembilahan Integrated Islamic Elementary School. This research s a qualitative study. There were 3 teachers in the Integrated Islamic Elementary School Insan Rabbani Tembilahan as respondents. The sampling technique uses a purposive technique. This data was obtained through observation, interviews, and documentation. The results of the study show that the implementation of information and communication technology by teachers in distance learning at the Integrated Islamic Elementary School Insan Rabbani Tembilahan is categorized as good with a percentage of sixty percent and located in intervals of sixty-one percent to eighty percent. Factors that influence it are external factors (environment and society), and internal factors (teachers, students, and technology).

Keywords: Technology information and communication, Teacher, distance learning.

INTRODUCTION

Today, all components of education have to move to the atmosphere by complying with government regulations. The policies taken by the government are aimed to make the learning process run in sequence. One of the government policies was issued on August 7, 2020. It is regarding the guidelines for the learning implementation in 2020/2021 year during the COVID-19 pandemic, in point 1 b which reads: every unit education which is in ORANGE and RED areas based on the data from National Coronavirus. They may not conduct face-to-face learning processes at school. and it should carry out Learning From Home (BDR) " (Kemendikbud, 2020). Distance learning is tied to the existence of information and communication technology because the implications of its advancement will allow people to learn without caring about distance and time. It is called distance learning (Darmawan, 2013). Besides that, this learning experience gives the speed factor for getting information, and also multimedia facilities can help many teachers build make interesting learning atmosphere, visual, and interactive. Technology development makes learning activities are happened by utilizing information and communication technology (Sa'ud, 2015). Utilizing learning technology offers many facilities in distance studying as the teachers used it for enriching knowledge and teaching ability, the learning process can run more dynamically and flexibly, overcoming the limitations of teaching materials, and also giving contribution and enrichment of teaching materials (Darmawan, 2012).

According to the Head Education and Culture Information and Communication Technology Center (Pustekkom) Education Culture Ministry (Kemendiknas), said only 40 percent of total teachers can use information and communication technology (ICT) in Indonesia. Sixty percent of teachers still do not have enough skills in the digital era (Sanusi, 2019). Specifically, there are three main reasons why teachers still stutter about science and technology. First, the competence of Indonesian teachers is very low in studying Technology and many teachers cannot use technology well (Technology stuttering), 30 percent of the Indonesian teacher are over 45 years and retire old. Two, educational technology content is still minimal. Third, in the regions, they need sufficient facilities and infrastructures (Astini, 2019). In implementing distance learning, the teachers face several challenges or problems such as, the students do not have good devices for supporting the learning process, networking difficulties, many students get difficulties in independent learning, the parents do not understand their children's materials, the parents also get difficulties for accompanying their children in studying, the difficulties in growing students' learning motivation and controlling the children learning development (Utomo et al., 2021).

Based on the writers' observation at Islamic Elementary School Insan Rabbani Tembilahan, there are various problems correlated with the utilization of distance learning, such as the computer equipment is not sufficient, the internet quotas cost are high, the teachers having limited knowledge about the technology and distance learning, training and developing are minimal, and communicating between the teachers and the students are limited. One of the ways to solve the problems is by mastering and improving learning technology and information. Hidayat offers, there is a big effect among developments of technology and information communication on students' interest in reading in the reading room. It refers that the more encouragement technology information communication, the learners' reading interest is higher (Hidayat, 2017). So, mastering the development of information and communication technology will get a positive effect on students. The research aim was to describe and know how to implement communication information

technology related to WhatsApp, google classroom, and Zoom at Islamic Elementary School Insan Rabbani Tembilahan.

Technology Information and Communication

Information and communication technology is covering many aspects correlated to computers and communication machines and some techniques such as catching, collecting, storing, managing, transmitting, and explaining more information (Munir, 2012). So, information and communication technology includes hardware and software, for capturing, manipulating, storing, and collecting data. There are three important purposes of learning and knowing the technology information and communication as follows: cognitive aspect (knowing, introducing, or understanding the technology information and communication itself. So, it can improve students' scientific thinking skills and preparing to education, job, and role in the public in the future. Affective aspect (be active, creative, appreciative, and independent to utilize it. Additing, it can also appreciate copyrighted works in the area of communication information technology). Psychomotor aspect (can use technology in the learning proses or daily life. Besides that, it can build students' skills and interest in the technology).

Technology is developing very rapidly, so the education world is developing as well. One of the impacts of technology development is distance learning. The position of technology information and communication in distance learning is so logical because the teachers and the students learn in a different places. So, it needs Information and Communication Technology-based learning to support distance learning (Prawidilaga, 2013). There are five important criteria to apply technology information and communication in supporting distance learning, they are as follows: first, every learning source can be accessed using technology. Second, technology applications must present the similarity of virtual learning conditions with traditional (face-to-face) learning environments. Third, the learning application must present an effective learning system and use a learning management system (LSM). Fourth, all users should facilitate without being limited to the experience. Fifth, it should facilitate interaction between teachers and students (Latip, 2020).

The implementation of studying technology can carry out successfully by carrying and handling external and internal factors as follows: external factors (environment and public), and internal factors (the teachers, the students, and the technology) (Sa'ud, 2015). Using technology information and communication gives some advantages like quick, consistent, appropriate, trust, increase productivity, and building creativity (Munir, 2012). Besides that, the implementation of technology information and communication needs a platform like a learning management system in the form of video or conference. The popular learning management systems in distance learning are the Zoom application, Goggle classroom application, Google Meet application, Visco Webex application, and Whatsapp group as one of alternatives in distancing learning (Latip, 2020).

The implementation of technology information and communication has to have five criteria in supporting distance learning:

a. Communication information technology provides learning sources access and it should be suitable to the student's interests, student's cognitive capacities, clear and simple, and the students are easy to access the learning sources.
b. Learning technology implements the same condition between online learning conditions with real learning environments (studying in class). For getting it, educators should consider: the education servants must make enthusiastic and trust the learning

environment, give feedback at the right time, giving a chance to the students in getting emotionally involved in virtual learning.

c. The implementation of information and communication technology has to have a learning system and management effectively. It should consider some things: the structure of the learning management system and learning process should be the same, the learning management system provides automated services that give facilitate the learning process, this system will protect teaching and learning data, and the learning management system should be easy to use.
d. The implementation of communication information technology should facilitate users and don`t give limitations on users' backgrounds in using learning technology. Things should consider: technology components and labels have to be universal so the users are easy to know and understand, and it has a clear and simple guidebook or tutorial.
e. The implementation of learning technology facilitates teachers' and students' interaction. It should be considered: there is support from the teachers and other people, and there is good and effective feedback from the teachers to the students.

Based on the explanation above, five things should be considered in implementing distance learning technology, they are: learning sources are easy to access, presenting a similar environment between virtual learning and usual learning, having effective learning system and management, giving users facilitation, giving users a place to interact each other.

Distance Learning

Distance learning during this pandemic can be carried out using a platform, either in the form of a learning management system or in the form of a video conference. Learning management systems include Zoom applications, Google Classroom, Google Meet, Visco Webex, and Whatsapp groups, one of the alternatives for implementing distance learning. Therefore, distance learning refers to teachers and students learning in different places. The implementation of distance learning must be suitable to the students' characters, learning purposes, and learning process. Distance learning has to overcome the problems of equal opportunity, quality improvement, relevancy, and efficiency in the education field like space, place, and time. Therefore, the distance learning purpose is to give education a chance to the public who cannot take conventional learning through face-to-face learning (Abuhammad, 2020).

Distance learning should pay attention to some principles as follows: having clear purposes, relevant to the student's needs, education quality, effective and efficient program, equitable and expansion of learning chance, independence, cohesiveness, and continuity. Besides that, the characteristics of distance learning are: first, the program should be suitable for the education grade, types, and character. Second, there is no direct meeting or face-to-face between the teachers and the students. Third, the teachers and the students are separated. Forth, it is having educational institutions. Fifth, the learning sources are arranged by the educational institution. Sixth, the learning materials explain through learning media like computers and the internet or using E-learning. Seventh, the interaction between the teachers and the students happens through electronic learning media. Eight, the teacher is a facilitator (Schneider, S. L., & Council, M. L., 2021).

Besides principles and characteristics of distance learning, the users also need to follow the distance learning guidance as follows: first, having coordinate with the headmaster. Second, curriculum review, following the government's suggestion, consider the resources of the teachers and the students. Third, having learning profiles. Fourth, status, and

current need. Fifth, is family support. Sixth, teachers' self-assessment. Seventh, teachers' support. Eight, need adjustment of learning sources, teachers, strategies, and materials. Ninth, arranging the learning process. Tenth, giving support and feedback to the students, and the last is assessment.

METHOD

Design

This research is a qualitative approach that uses a descriptive method. The researcher wants to describe and know the facts and interpret "the implementation of communication information technology in distance learning at Islamic Elementary School Insan Rabbani Tembilahan". Qualitative research is a research process and comprehension based on a social phenomenon and human problems (Creswell, 2008). In this research, the writers make complex illustrations, looking at the average of specific reports from respondents' views and doing research on the current situation (Darmadi, 2014). Besides that, the descriptive method refers to describing and explaining the object's situation based on the situation and condition of the research done (Ibrahim, 2015).

The research instrument is the researcher itself. So, the researcher's status is as a researcher by the research subjects or informants. The research finding is not found through statistical procedures or another counting form. Research data is present in Word form. Sentences, paragraphs, and documents, and are not in numbers form. Research objects do not get special treatment or manipulation by the researcher so, the data findings are still in pure condition as one of the characteristics of qualitative research. The major activity in this research is to describe intensively and in detail symptoms and social phenomena researched in the implementation of communication information technology in distance education and gotten through qualitative. So, it needs data about implementation technology information and technology, distance learning. Knowing and mastering technology information and communication is very important and useful for teachers and students, especially for those who do learning from home. It is not easy because it needs sufficient computer equipment, internet quotas, knowledge, training, and good communication. After knowing and mastering the ways of using technology information and communication in distance learning the teachers and the students have to have skills about how to use them and what influence factors in implementing it.

Knowing technology implementation way in distance education by using observation and interviews. Descriptive analysis is needed to know the way of implementing communication information technology in distance education. The percentage used to know to categorize education technology in distance learning. Knowledge and understanding about the way of using technical information and communication in distance education are very important to the stakeholders. This research analyzed the implementation of technology information and communication in distance learning. The research subject is three high-grade teachers in Sekolah Dasar Islam Insan Rabbani Tembilahan because the teaching and learning process do by online (daring) and low-grade classes use offline teaching and learning processes (luring). The research population is three high-grade teachers and also the research informant. The data collection uses observation, interviews, and documentation. The data analyzing technique use triangulation, as shown in Figure 1.

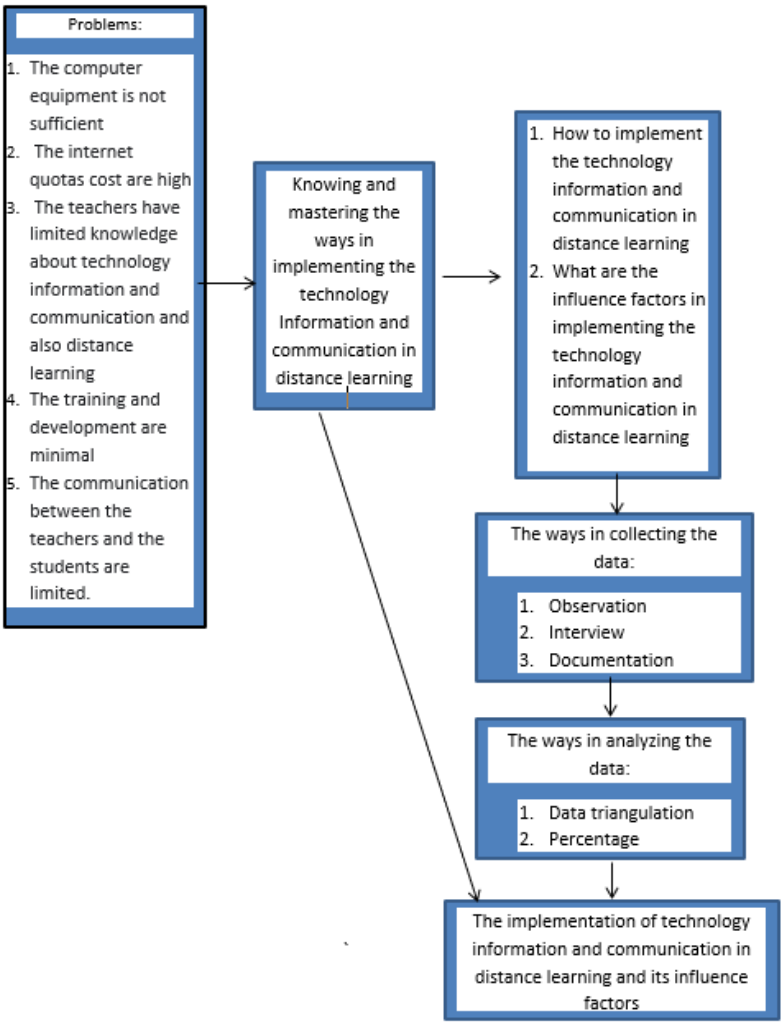

Figure 1. Research framework

FINDING

The implementation of communication information technology in distance learning at Islamic Elementary School Insan Rabbani Tembilahan has been implemented maximally and categorized as good with a percentage is 63% because it is a 61%-80% interval. It can be seen based in Table 1. Based on the recapitulation data above, it is found that the alternative answer "yes" is 96, and the alternative answer "no" is 57. To get the percentage of observation result recapitulation above use the percentage Formula 1:

$$P=F/N \times 100\% \quad (1)$$

Where,
P= Percentage
F=Answer alternative frequencies numbers
N= the number of all answer alternative frequencies

Table 1 shows the way to determine the F value is by giving a score to the observation answer. For the answer "YES" get a score of 1, and for the answer "NO" get a score of 0. So, the way to determine an F score is:

YES score= 96x1= 96
NO score= 57x0= 0

Table 1. Observation data

Item	Observation Aspect	"Yes"	%	"No"	%	∑ (Answers)
1.1	The teacher believes that the learning contents facilitate the students' interest in completing the learning.	9	100%	0	0%	9
1.2	The teacher believes that the learning contents are suitable to the student's cognitive skill	9	100%	0	0%	9
1.3	The teachers' structures the learning content/ the learning contents must be simple and clear	9	100%	0	0%	9
1.4	The teachers believe that the learning contents are designed as well and suitable to the visual condition.	8	89%	1	11%	9
1.5	The teacher believes that the layout of learning sources is clear. It is easy for the students to access and find out them.	9	100%	0	0%	9
2.1	The teachers have to build an enthusiastic and trusting learning environment by encouraging the students to be active and it feels in the studying process.	6	67%	3	33%	9
2.2	Educators have to give appropriate responses to students' needs at the right time.	9	100%	0	0%	9
2.3	The teachers give chance to the students to involve emotionally in virtual learning and create performance and competition between the students.	6	67%	3	33%	9
3.1	3.1 The teachers believe that the learning management system structure and learning process are aligned	0	0%	9	100%	9

(continued)

Table 1. (continued) Observation data

Item	Observation Aspect	"Yes"	%	"No"	%	∑ (Answers)
3.2	3.2 The teachers believe that the learning management system provides automatic services that will help educators and learners in studying activities.	0	0%	9	100%	9
3.3	3.3 The teachers believe that the learning management system will protect the school's data and its use	0	0%	9	100%	9
3.4	3.4 The teachers believe that the learning management system is designed properly to help the teachers and the students be easy in using it.	0	0%	9	100%	9
4.1	The teachers believe that the technology elements and labels used are general. It is easy to know and comprehend by all users, especially teachers, and the students	0	0%	9	100%	9
4.2	Availability of simple, clear, and concise guidebooks/tutorials from the teacher	9	100%	0	0%	9
5.1	Stakeholders give proper encouragement	5	56%	4	44%	9
5.2	Interacting atmosphere should comport with learning activities	9	100%	0	0%	9
5.3	Teachers believe that there is appropriate and effective feedback for students who are having difficulties	8	89%	1	11%	9

After that, the two results are added together. So, the F value is 96+0= 96. To determine the N value is Observation Value x Observations Number x Respondent x the Highest Score. So N is

N= 17x3x3x1= 153

To determine the percentage value, the writers use the formula:

P = F/Nx100%

= 96/153x100%

= 63%

Therefore, the implementation of communication information technology in distance education at Islamic Elementary School Insan Rabbani Tembilahan is categorized as "good" with a percentage is 63%, and it is in 61%-80% intervals (Riduwan, 2015). Human resources as operators lack knowledge and skill in utilizing technology, which will give a low significant effect on the technology information and communication implementation (Salsabila et al., 2020). Technology has a very important role in improving education quality, effectiveness, and efficiency to achieve educational goals easier (Andri, 2017), as shown in Table 2.

Table 2. Interview Data Reduction

No	Interview Transcript	Reduction Result
1.1	How do you ensure the learning contents facilitate students' interest in completing learning?	The teachers have to ensure what technological facilities and infrastructures students have and also adjust them to the education level.
1.2	How do you ensure the learning content is appropriate to the student's cognitive level?	The teachers have to pay attention to the students' characteristics, understanding level, skills, habits, and students' interest
1.3	How do you structure the content/learning content that is simple and clear?	To structure the content/learning content to be simple and clear, the teacher considers the available resources, facilities, and infrastructure.
1.4	How do you ensure the learning content is designed well based on the visual condition?	The teachers have to adjust the students' characteristics, supporting facilities and infrastructures, and teachers' abilities. For example: using PowerPoint to attract visual conditions at the elementary level.
1.5	How do you navigate learners are easy to access learning material or layout?	Communicating with students' parents because the students are still at the elementary level, so the role between the teachers and the parents play a big role.
2.1	How do you build an enthusiastic and trusting learning environment to make learners active in online learning?	Encouragement such as giving spirit, controlling the learning process, and learning media like PowerPoint. So, learners feel the learning environment itself.
2.2	How do you give feedback at the right time and suitable to the student's needs?	Providing feedback at the right time and suitable to the student's needs can be carried out by providing periodic reflection and continuous learning support.
2.3	How do you enable students' emotions in daring (online) learning so it demands performance and competition between the students?	By considering the students' psychological and psychosocial conditions. And for performance, as a teacher, we have to be able to stimulate students' activity such as by giving online questions and conducting quizzes, so the students are mutually competent.
3.1	How do you ensure that the learning management system structure and the learning process are aligned?	The school's effort is by using WhatsApp media because it is suitable with available resources so the teacher will be easy in structuring the learning management system and the teaching process in a line.

(continued)

Table 2. (continued) Interview Data Reduction

3.2	How do you ensure that the learning management system provides automated learning work?	The teachers must adjust to the resources, facilities, and infrastructures such as replacing the learning management system with WhatsApp media where the students' parents understand and have these information and communication technology facilities.
3.3	How do you ensure that the learning management system will protect education data?	By storing the data using computer media and hand-phone memos because there is no special learning management system yet.
3.4	How do you ensure that the Learning Management System is designed properly so the teachers and the students are easily using it?	Because there is no special Learning Management System designed and it is replaced with the role of WhatsApp. It is replaced because of the consideration of the use of energy, cost, resources, time, and the student's parent's understanding of WhatsApp. Using WhatsApp can certainly provide convenience for its use.
4.1	How do you ensure that technology elements are global and easy to know or understand?	It is better to use rules or curricula that have been regulated by the government.
4.2	Are there simple, clear, and concise guidebooks/tutorials from the teacher or school?	The teachers follow the directions from the government by curriculum rules and notified to the students' parents who will accompany their children to study from home.
5.1	Is there proper encouragement from the teachers and other parties or parents?	The teachers encourage them to learn by motivating them to learn and are assisted by the parents at home in assessing the students in learning from home.
5.2	How do you create a comfortable learning environment?	Teachers can use various media that attract the students to stimulate their curiosity, the teachers are also can utilize two-way communication to build the desired interaction.
5.3	How do you ensure that there is appropriate and effective feedback to the students who face difficulties?	By clarifying the tasks to find out students' learning weaknesses, and providing feedback to the students so result management will be as expected.

Regarding the influence factors of implementation of technology information and communication at Islamic Elementary School Insan Rabbani Tembilahan, it is found that two factors influence the implementation of technology information and communication in distance learning, they are: external factors include environment and public, besides that is internal factors include the teachers, the students, technology, facilities, and infrastructures. Besides that, the role of technology information and communication is to create fast, accurate, regular, accountable, and trustworthy service. There are some influence factors to reach it, they are infrastructures, human resources, policy, finance, contents, and applications (Anshori, 2021).

DISCUSSION

In the pandemic Covid-19 era, the teaching and learning process has to do by online. Online learning needs communication information technology to support educational

activities that can run well, especially in distance learning. Therefore, the teachers and the students have to have skills in using technology in the learning process. Time is always changing, and time will also be digital so as a teacher and student, we suggest using technology. In this pandemic time, schools may not do traditional learning. A teacher should have a special skill in using technology because utilizing it will give a positive effect on students' achievement or outcome and also on education quality in Indonesia (Andriani et al., 2021).

Having skills in using technology is not an easy job particularly for teachers and students because it is a new thing for them. The teachers and the students need time to master the learning technology. According to Andriani, teachers' competence in using technology information and communication is still low because it cannot rich 50% of all the teachers, lack of time in interacting with the technology, lack of facilities and infrastructures, and limited teachers' skills in using the technology. Mastering learning technology can be done by self -aught or training step by step or continuously to get interesting learning activities and the students get more motivation and more comprehension in understanding the learning materials. The teachers can also take some courses or training to develop their skills in using learning technology. Besides that, the government needs to distribute facilities and infrastructures in supporting technology implementation in learners' activities and carry out routine training programs in the field of communication information technology (Nurhayati, 2016).

Study results present, implementing communication information technology at Islamic Elementary School Insan Rabbani Tembilahan is categorized as good with a percentage is 63%, and it is in 61%-80% intervals. It is also supported by research interviews with high-grade educators (fourth, fifth, and sixth-grade teachers). The interview data were analyzed using qualitative data analysis proposed by Miles and Hubermant which consists of three steps, they are data reduction, presentation, and conclusion. Based on the data reduction result, the researcher can conclude that technology information and communication have to provide access to learning sources on learning sources so the teachers have to make sure about: (a) what technological facilities and infrastructure students have as well as adjustments to the education level; (b) the learning contents are suitable with students' cognitive level, characteristics, understanding levels, skills and interest in learning; (c) structuring the content or the content is suitable with available resources, etc.

Besides that, the implementation of technology information and communication has to present the similarity of virtual learning conditions with a traditional learning environment to get this atmosphere, the teachers have to do as bellows: (a) the teachers give enthusiasm for learning to the students by providing learning media in the form of PowerPoint, Videos, or using Zoom Application so the virtual atmosphere can be expected (b) the teacher considers that the psychology and psychosocial of the students, and provides stimuli such as holding online quizzes in the zoom class so the students are emotionally involved.

The influence factors are external factors (environment, and public), and internal factors (teachers, students, and technology). Faisal said that the utilization of technology information and communication by the teacher in learning planning for science, social, and art subject is a very high category (Imam, 2015).

CONCLUSION

The implementation of communication information technology during distance education at Islamic Elementary School Insan Rabbani Tembilahan is categorized as good with a percentage is 63%, and it is in 61%-80% intervals. It is because implementing technology information and communication has provided access to learning sources on learning sources, presented closeness among online classes condition with the conventional (face-to-face) class environment, presented an efficient studying system, used the system to conduct class activities, facilitated the stakeholders to technology adoption, facilitated the interaction between the teachers and the students. The influence factors of the implementation of technology information and communication in distance learning are external and internal. They are: External factors (environment, and public), and internal factors (teachers, students, and technology). For future researchers, it needs more variables in getting better result research like using Google Classroom and Webex as a tool for technology information and communication in distance learning.

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