

# Digital Divide and Digital Literacy During the Covid-19 Pandemic

Tetta Riyani Valentia

Universitas Indonesia, Depok, Indonesia

Email: [tetta.riyani11@ui.ac.id](mailto:tetta.riyani11@ui.ac.id)

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## Abstract

The Covid-19 pandemic has had a huge impact on the lives of people, where technology plays an important role in people's daily lives, including the education sector. This is also reinforced by the rampant digital revolution (4.0) and triggers countries to prepare human resources that can compete in the global scope. This situation requires ICT skills that need to be possessed by every level of society. However, the development of ICT in Indonesia is still uneven and has resulted in a digital divide. Technology has been included in primary needs, and it is reflected in the education sector. This study aims to provide a comprehensive picture of the gap and digital literacy in online learning during pandemic. This study used a qualitative descriptive method where data were collected through literature study. The result of this study indicates that in general Indonesia has a diverse digital divide, ranging from ownership of access, the usage of ICT, to the quality of using ICT. This is inseparable from the differences in the geographical and socio-demographic conditions of the Indonesian. All efforts that have been planned and implemented are increasingly understood to be carried out properly, acceleration of digital literacy is the main key in dealing with the digital divide, especially in terms of education.

**Keywords:** Communication, Digital divide; digital literacy; ICT; online learning.

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## 1. INTRODUCTION

The Covid-19 pandemic has indirectly forced people to 'change'; changing behavior, changing the way things are done, changing the use of technology and so on. The pandemic has hit all countries around the world and has an impact on all sectors, including the education sector. The challenges in the education sector is also increased by the era of the fourth revolution (industrial revolution 4.0) or what is commonly referred as the era of the digital revolution. This happens because teaching materials and activities have been affected by technological advances. Some experts describe this as "the world is flat", a situation where the world has no boundaries, either national boundaries or time zone boundaries due to the rapid development of technology (Afandi et al., 2016). One of these technological developments is Information and Communication Technology (ICT), a technology that is growing so rapidly and greatly affects the lives of people around the world. ICT is an inseparable part of human life (Hadiyat, 2014). ICT makes people enter the age of information which makes information a fairly basic need for humans. ICT has also changed how people communicate.

The results of a research conducted by WeAreSocial Global Digital Report 2022 reveal that Indonesia is a country with 73.7% of its total population using the internet (WeAreSocial, 2022). This was also conveyed by the General Chairperson of the Indonesian Internet Service Providers Association (APJII), Muhammad Arif on the 26th anniversary of APJII on May 15, 2022 and said that, "Indonesia has enormous digital economic potential along with the growth of internet users from year to year. Now the number of people using the internet in Indonesia is more than 200 million people. It was noted that as many as 204 million Indonesians who accessed the internet until February 2022, grew 1% from the previous year (WeAreSocial, 2022). The data also states that the average use of the internet in Indonesia in one day is 8 hours 36 minutes or it can be said that more than 1/3 of the day is spent by Indonesian people surfing the internet. Of course, this is also inseparable from world developments that tend to change not only because of the 4.0 revolution era but also because of the pandemic which has caused activity in internet use to increase significantly.

The Covid-19 pandemic has a major impact on many sectors around the world, including the education sector. The government finally issued a call to jointly fight Covid-19 by maintaining physical distance, limiting activities outside the house, and maximizing remote activities with digital technologies (Carducci et al., 2020). During the period of physical distancing, digital technology has become increasingly important to facilitate interaction between people in many sectors, especially the education sector which is one of the most affected sectors. This is supported by the issuance of several Indonesian government policies in the education sector. Through the Ministry of Education and Culture, the government has forbidden a face-to-face (conventional) learning and schooling activities and ordered to do online learning activities instead (Surat Edaran Kemendikbud Dikti No. 1 Tahun 2020). According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), governments in most countries around the world are temporarily closing educational institutions to stop the spread of Covid-19, which affects about 91% of the world's student population. There are 10 points that are mentioned, one of them is the recommendation to implement online learning (Yandwiputra, 2020).

Online learning through the use of digital technology is not only due to the Covid-19 pandemic that has hit the world, but also because of the industrial revolution 4.0, technology has become a basic human need (Shaleha, n.d., 2020). Online learning has become a demand in the world of education in recent years (He et al., n.d., 2014). Learning in the Industrial Revolution 4.0 era requires online learning (Pangondian et al., n.d., 2019).

However, changing learning methods from conventional to online is certainly not an easy and simple job (Atsani, 2020). Almost all parties find various problems themselves, both in terms of skills, knowledge, habits, infrastructure, technology, time, costs, and so on. Because online learning is a new thing, not only for teachers and students, but also for the parents. Many families in Indonesia are not familiar with doing school at home, especially for the productivity of parents who are usually busy with their work outside the house. No exception in remote villages where the population of school age is very dense, it becomes completely confused, because the information technology infrastructure is very limited (Hanifah Salsabila et al., 2020). Online learning has several advantages, challenges and obstacles. Some of the obstacles and problems that occur are that there are still many people who complain about access to connections and internet infrastructure that are not evenly distributed throughout Indonesia. In addition, there is also the problem of ownership of gadgets or devices. Not all students have families with well-established economies to buy electronic devices. These problems arise due to several factors that influence them, such as socio-demographic factors and so on. The existence of factors inherent in each individual can cause a problem in the form of a digital divide or digital divide (Putri, n.d., 2018).

The digital divide can be seen from the education sector in Indonesia. It was recorded in a report from the Network Readiness Index (NRI) in 2019, Indonesia was ranked 76th out of a total of 121 countries, where the biggest weaknesses were digital participation, internet networks, and ICT-related policies. Still in the 2019 NRI report, content skills in Indonesia are ranked 93 out of 121 countries. Content skills refer to the ability to find and process information and to design or create a specific product. It is closely related to digital participation and education, and the use of ICT devices (laptops, tablets, smartphones) is generally used mainly for communication functions. The use of ICT tools for learning according to data from The Ministry of Communication and Information Technology (2017) is still less than 50%. According to other data from Save the Children (2020), only 10% use online learning channels for students, and 70% still use television to obtain learning materials. Currently, 25% of educators use online learning channels. Of course, this learning participation rate is very low and does not meet the expectations of the government's online learning strategy at the start of the pandemic.

To reduce the digital divide, including internet access for all people in Indonesia, the Indonesian government through the Ministry of Communication and Information is accelerating internet access in Indonesia and preparing digital human resources who have digital skills, and also have an understanding of digital literacy. One of the actions in an effort to bridge the digital divide can be done by increasing contact opportunities with ICT and strengthening personal competence in the application of ICT. The same thing was also expressed by the Head of Government Affairs & Public Policy of Google Indonesia, Putri Alam during the Digital Literacy Webinar (2020) explaining that to reduce the digital divide, digital literacy is needed. There are seven elements of digital literacy (JISC, 2017) which on this occasion will focus on the elements of ICT literacy or ICT literacy.

The things above are what underlie me to provide an overview and explore further about the gap and digital literacy in the application of online learning methods during the Covid-19 pandemic. However, with the limitations of the researcher, the scope of this research is deemed necessary to have some limitations. In the scope of the research object, online learning is not limited to age or education level, this is done in order to get a holistic and comprehensive picture of the gap and digital literacy in the online learning method.

## 2. RESEARCH METHOD

This study uses a qualitative approach and is presented descriptively. This study does not draw specific conclusions based on the statistical calculations obtained, but only explains or draws general conclusions. Qualitative research involves making inclusive and complex diagrams that can be expressed in words, reporting detailed views of informants, and applying them in the natural environment, or is a research process that aims to understand social phenomena by making descriptions of social phenomena (Walidin & Tabrani, 2015). Inclusive and complex that can be expressed in words, report detailed views of informants, and act in a natural environment. Qualitative research methods are post-positivity research used by researchers to study objects under natural conditions (actual, unregulated, or experimental conditions) where the researcher is the key instrument (Sugiyono, 2019). The purpose of qualitative research is to understand individual views, seek to find and explain the process, and explore in-depth information about the subject or limited research setting (Putra (2009). Qualitative research has a descriptive nature and tends to use an inductive approach analysis, so that the process and meaning based on the perspective of the subject are more highlighted in qualitative research.

The descriptive research method is a method of examining the status of a group of people, an object, a condition, a system of thought, or a class of events in the present with the aim of making a systematic, factual and accurate description, picture, or painting. (Nazir, 2014). Accurate information about the facts, properties and relationships between the phenomena under investigation. A descriptive research method is research conducted to determine the value of independent variables, either one or more variables without making comparisons or connecting with other variables (Sugiyono, 2019). The descriptive method is a method used to describe or analyze a research result but is not used to make broader conclusions. In terms of understanding, this research wants to know more about the state of the gap and digital literacy itself in online learning during the Covid-19 pandemic without any influence or relationship on other variables.

Study of literature is used as a data collection technique that can be interpreted as a series of activities related to library data collection methods, reading and recording and processing research materials (Zed, 2003). Literature studies can also study various reference books as well as the results of previous similar studies that are useful for obtaining a theoretical basis on the problem to be studied. Broadly speaking, this technique is used to obtain the basics and opinions in writing which is done by searching, reading, studying various literatures including the results of studies, previous research, notes, and other related sources. Documentation techniques or documentary studies are also used in collecting data in this study, which is a data collection technique by collecting and analyzing documents, whether written, pictures, or electronically (Sukmadinata, 2009). Another expert added that the technique of collecting documentation data is to find and that collect data in the form of notes, transcripts, books, newspapers, magazines, minutes, report cards, agendas and so on (Arikunto, 2006).

## 3. RESULT AND DISCUSSION

According to Article 1 Paragraph 15 of the 2003 Law of Ministry of Education and Culture Republic of Indonesia, Distance or Remote Learning is an education system in which students utilize diverse learning resources through communication technology, information, and other media. Online learning is an application of the internet in accessing material, interacting with lessons, teachers, and other students, in the teaching and learning process (Ally, n.d., 2008). In implementing learning, education units can choose an approach (online, offline, or a combination of both) depending on the characteristics and availability and readiness of each (Asmuni, 2020). In real practice in the field in order to break the chain of transmission of Covid-19, it was recorded that starting March 16, 2020, the government issued a policy for schools to apply online student learning methods. This is stated in a circular issued on March 24, 2020 by the Minister of Education and

Culture Number 4 of 2020 concerning the Implementation of Education Policies in the Emergency Period for the Spread of Covid-19. In a learning process, normally there will be interaction between teachers and students and there will be reciprocity between teachers and students in a conducive and educative classroom situation. Due to the Covid-19 pandemic, the teaching and learning process can be carried out with various media that can allow teachers and students not to have to face to face directly in carrying out the learning process (Wardani & Ayriza, 2021).

The online learning system is a learning process that does not carry out face-to-face meetings between teachers and students, but uses the internet technology (Widiyono, 2020). Online learning is a knowledge transfer experience using video, audio, images, text communication, and software supported by the internet network. (Basilaia & Kvavadze, 2020) Online learning system (network) is a learning system that does not have direct contact between teachers and students, but is implemented online via the internet. At the implementation level, online learning requires the support of mobile devices such as smartphones, laptops, computers, and tablets, which are used to access information anytime and anywhere (Gikas & Grant, 2013). Online learning media usually uses an application or web that is connected to the internet which can bring together virtual (video) more than five people at the same time and can interact initially. WhatsApp, Zoom, and Google Classroom have become the most widely used platforms for online learning during the pandemic (Faizah et al., 2021; Khaleyra et al., 2021). WhatsApp is more popular because teachers and students are more familiar and are already familiar with its features. Almost everyone from various backgrounds and ages has a WhatsApp account to communicate with. WhatsApp in the learning process is also known to help achieve learning goals (Zulkanain et al., 2020) and enhance the learning experience (Madge et al., 2019). Zoom is one of the most popular learning platforms today because it is easy to use and has multiple functions (Kohnke & Moorhouse, 2022) so it is considered the most effective way to support online learning during a pandemic (Basilaia & Kvavadze, 2020). Online learning and ordinary learning have several significant differences, online learning requires more accuracy and foresight of students in receiving and processing information presented online (Putria et al., 2020).

Online learning can be done synchronously and asynchronously (Muhajir & Afrianto, 2020). Synchronously meaning the teaching and learning process occurs between teachers and students who study online at the same time, but do not have to rely on physical locations to participate online. Synchronous online learning is usually done through video conferencing such as the Zoom app or streaming learning. In online learning, asynchronous learning means that learning can be done even though it is not there at the same time. Teachers can usually send learning modules, notes, or videos to students for independent study, so students can study content at any time. Although there are two types of learning in online learning, the essence remains the same, namely learning is carried out remotely, students and educators are connected via the internet so that learning can take place.

The pandemic situation forced the education system in Indonesia to change its method from face-to-face to online in the middle of the school year. This transition is quite surprising for educators and students because of the lack of preparation for the implementation of online learning coupled with limited resources and in a very short time, so that distance learning has several positive and negative sides. The positive side generated by the implementation of online learning policies during this pandemic is learning that can be done remotely so that the educational needs of students can still be met without space and time limits and continue to apply social distancing to break the chain of the spread of Covid-19. (Salsabila, 2020) argues that the advantage of online learning is to build a new learning atmosphere, online learning will bring a new atmosphere for students, who usually learn in class. Several studies also report the advantages of online learning. Online learning can improve students' time management and improve communication skills and make the application of knowledge easier (Lahti et al., 2014; Sezer, 2016). From this online learning needs to be observed such as resulting in a lack of interaction between teachers and students and even between students themselves (Hadisi & Muna, 2015).

Some of the difficulties that occur in online learning are that it is difficult for children to focus on learning because the home atmosphere is not effective. It is also reported that attention disorders, lack of concentration & motivation, and challenges faced by students in online learning activities also trigger signs of anxiety and stress (Duraku & Hoxha, n.d., 2020). In addition, some education observers argue that in its implementation,

online learning has several obstacles, one of which is the lack of knowledge about technology for teachers and students. Many educators complain that the availability of technology is very limited and the lack of internet network in some areas. In addition, the next obstacle that may arise is that not all students already have a sense of responsibility to be able to learn independently. Some of them actually feel that an opportunity like this is a vacation for them. As a result, learning is neglected and learning materials are not well received. In line with that, (Nambiar, 2020) states that the distance learning process can reduce the quality of teaching and learning. This is because there can be a lot of distractions, lack of interest and motivation of students, as well as technical issues that can interfere with or hinder the course of learning activities.

Issues related to the digital divide do not only occur in developing countries, but have become a global phenomenon. The digital divide can weaken a country to compete globally because of the significant use of information and communication technology in winning the competition (Putra, 2009). Many experts and institutions define the digital divide. According to the OECD (2001) the definition of the digital divide is “the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard both to their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities. The digital divide reflects various differences among and within countries”. (Dijk, 2006) suggests that the digital divide is the gap between those who have and do not have access to computers and the internet. The digital divide shows the inequality of access and use of communication and information technology which can be seen from several factors such as differences in age, gender, geographical area and also workplace or livelihood (Putra 2009), and limited access, both in terms of interest, ownership, ability, as well as utilization (Putri, 2018). Research also shows that the most widely observed categories that also influence the digital divide on internet access are age, gender, and ethnicity.

Based on the above definitions, it can be concluded that the digital divide is defined as the gap between individuals, businesses, and homes in access to information and communication technology (ICT) and Internet use. The term digital divide originally referred to the gap in access to computers, but as the internet is growing rapidly and on a large scale in society, the term has shifted to the gap between computers and access to the internet (Dijk, 2006). The digital divide is a complex and multifaceted issue (Chang et al., 2016). The digital divide creates a gap between people who enjoy sufficient access to ICTs, and others who have no or little access to ICTs. The digital divide can be influenced by several things such as developed and developing countries, rural and urban areas, men and women, as well as competent and incompetent populations, (Hameed, 2007).

Meanwhile, according to (Ariyanti, 2013), the digital gap certainly does not just happen, some of the causes of the digital divide include infrastructure, lack of skills in human resources, lack of Indonesian language content, and lack of use of the internet itself. There are three main aspects that are interconnected and are the focus that needs to be considered in the digital divide, access/infrastructure, capabilities (skills and training), and information content (Camacho, 2005).

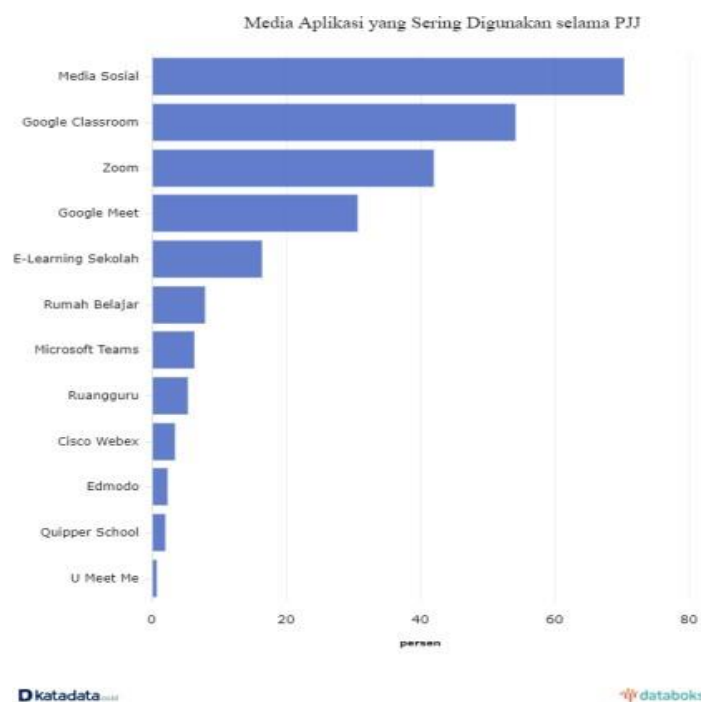
There are three types of digital divide (Molnar, 2003) the first one is access divide, this refers to the gap between those who have access to ICTs and those who do not. The second gap is the usage divide. This refers to differences in the use of ICT among people who have access to ICT. The next gap is the quality of use divide. It focuses on differences in the quality of ICT use among people who use ICT in their daily lives.

The digital divide can be divided into three levels. The first level or referred to as the first level digital divide is defined as the gap in physical access to the internet. This happens when an individual or a group of individuals do not get the internet due to the obstruction of access to the internet which is usually caused by geographical factors. (Chen, 2004) found that geographical location is one of the significant factors affecting people's access to internet use. People who live in rural areas will find it more difficult to access the internet than people who live in urban areas because of limitations on the internet network, electricity, and also electronic equipment. Then the second level or second level digital divide is based on differences in the purpose of using the internet and digital capabilities. This is influenced by the background of each individual such as educational background and work. Finally, the third level digital divide is the gap in terms of the ability to utilize or change digital resources, one of which is the internet, to obtain tangible benefits such as social and economic.

In relation to online learning methods, the digital divide that occurs in society tends to vary. This is undeniable, seen in the first phase of the digital divide that differences in access to ICT are still common in Indonesia. Indonesia's geographical condition is one of the biggest challenges and the main thing that causes ICT infrastructure to be uneven considering the area of Indonesia is around 7.9 million km<sup>2</sup> and is in the form of an archipelago with more than 13,000 islands. In addition, the topography of the Indonesian region is in the form of mountains and valleys so that rural locations are spread out which makes the construction of communication and information facilities quite difficult to obtain. As a result, as we know, ICT infrastructure in Indonesia is still concentrated in certain areas and this is what causes the first phase of the digital divide (access to ICT) is still often felt. The uneven telecommunication infrastructure throughout Indonesia is one of the obstacles faced by the development of ICT in the world of education (Prakoso & Januardy, 2005).

Communication experts claim that there are many benefits that people can get from using ICT, so that it becomes a problem if people are not touched by ICT which can be caused by socioeconomic level or lack of access and users. Inequality of access that occurs in the implementation of online learning in Indonesia ultimately results in the digital divide of students. In April 2020 there was research by INOVASI on 300 parents of elementary school students in 18 districts and cities in East Nusa Tenggara, West Nusa Tenggara, North Kalimantan, and East Java. The survey results show unequal access to learning media for children in rich and economically disadvantaged families. Only 28% of those surveyed said that 4,444 children learn to use online media. From a provincial perspective, the smaller the province, the lower the percentage of students receiving online learning (Muhajir & Afrianto, 2020).

Online learning is greatly affected by this first phase of the digital divide. It does not stop there, the digital divide in the implementation of online learning methods is also seen in the next stage, namely the purpose of using the internet or the usage divide. Preliminary data in this study has stated that the use of ICT for learning purposes is still below 50%. Another thing noted in the main reasons for using the internet is that 80.1% of Indonesians use the internet to find information, followed by looking for ideas and inspiration (72.9%), connecting and maintaining relationships with friends and family (68.2%), while the reason for using the internet for education and learning is only 44.1%, or when sorted from the largest to the smallest reason, it only ranks 11th. Still in the same report where the Indonesia Digital Report (WeAreSocial, 2022) states that of the total average time of 8 hours 36 minutes spent using the internet in one day, Indonesian people spend an average of 3 hours 17 minutes playing social media. It is quite surprising that data released from the Association for Indonesian Education and Teachers (P2GI) at the end of 2020 recorded that social media is an application media that is often used during online learning.



**Figure 1.** Media Applications that are often used during online learning  
 Source: Association for Indonesian Teachers and Education (P2GI)

Social media become one of the highest media application that is often used during online learning, and then followed by google classroom, zoom meeting, and google meet for the top 4. In addition to the purpose of using the internet, the ability to use ICT is also something that is observed in this secondstage of the digital divide. Not a few parents,especially the elderly, have difficultyoperating ICT in accompanying theirchildren to school or studying online. The lack of information or knowledge of technology is certainly a limitation in optimizing the use of ICT, for example in using the web or applications such as zoom or google meet, not to mention a specialdashboard that is prepared to upload assignments or exams.

In addition to the technological factor, it turns out that the education factor is also a major factor inbuilding the ICT capacity of the community.People with high levels of education have advantages in using the internet. (Dijk, 2006) added that the most influential factors on people's skills in using computers and the internet are age and education. Some of these statements are also reinforced by the results of research conducted by INOVASI (2020), students who have parents with high school and undergraduate educational backgrounds have greater access to usingonline learning media. Meanwhile, students with parents with an elementary school education have less access to teaching and learning activities using online media.

Meanwhile, at the digital divide, the nextstage is the ability to utilize or change digitalresources, one of those is the internet, toobtain tangible benefits such as social and economic. Quality of use divide or digital divide that focuses on differences in the quality of use of ICT in everyday life. The quality of use referred to here can be observed such as not only using ICT in helping our daily activities or activities, but also getting the benefits or reciprocal benefits that can be generated from the useof ICT. This can also be said with how to take advantage of industry 4.0, especiallyICT to get benefits such as socialnetworking that brings us 'level up' or also earn from the success of utilizing ICT and the digital world. The terms YouTuber, influencer, content creator, and so on are no stranger to those who are currently idols or even dreams for most young people for theirextraordinary achievements in a career inthis era of the digital revolution. In the world of education itself, quite a lot of things have given birth to new, more interesting ways of learning, new platforms or start-ups, and other things that use ICT.

Advances in internet information technologyhave created many sources of digital information (Kurnianingsih et al., 2017). Onthe other hand, the development of information technology is likened to two sides of the same coin, which of course has positive and negative impacts. Acquiring digital skills is inevitable (Anggraini et al., 2016). This raises the idea of how important digital literacy is. Digital literacy is one of the skills that must be possessed as a life skill in order to overcome the competitive trend of globalization and digitalization. In a developing country, literacy is the main foundation for social and economic growth (Kumar & Nanda, 2019).

Digital literacy is defined as the ability to understand and use information from various sophisticated informationtechnology sources (Nasrullah et al., 2017). Digital literacy is an attempt to find, use, and disseminate information effectively, in various forms of information from different sources when presented through computers, especially the internet. People who have digital literacy means that they can perform basic skills or the ability to use computers confidently, safely and effectively to helptheir work in everyday life. In line with this, Digital literacy is the ability to access, understand, reorganize, communicate, and evaluate information using cognitive,ethical, social and emotional skills(Restianty, 2018). Digital literacy is an effort to know, to search, to understand, to analyze, and to use digital technology.Based on some of the definitions above, it can be interpreted that digital literacy is an individual's ability to use digital technology and communication tools to access, manage,integrate, analyze, evaluate, build new knowledge, benefit from others, and participate effectively in the general public and personal ability to. Digital literacy is a process that relies on knowledge literacy,internet literacy, web literacy, and digital literacy. In that process, every step is an important step and everything has to be donetogether for digitization (Allen, 2016). Digital literacy is an integrated structure in the form of knowledge of information technology devices and the ability of individuals to use and utilize them. Digital literacy is recognized as having provided many opportunities for society and individuals in particular that can facilitatehuman life (Ayhan, 2019).

Digital literacy has seven components (JISC,2017), the seven components including: (1) Information literacy is the ability to effectively find, evaluate, and use the information you need (Hasugian, 2008); (2) Digital knowledge is the ability to use information from digital media as a data reference. Participation of digital mediausers in academic activities. For example,research practice or completion of college assignments



(Stefany & Nurbani, 2017). (3) Learning skills are effective learning of various technologies with full functionality for formal and informal learning activities. (4) ICT literacy or known as information and communication technology literacy which focuses on ways to adopt, adapt and use digital devices and ICT-based media both in terms of applications and services; Career and identity management relates to ways of managing online identity. (6) Communication and collaboration are a form of active participation for learning and research through digital networks; and (7) Media literacy includes the ability to read critically and creatively in academic and professional communication in various media.

Based on the explanation and understanding of the seven elements of digital literacy above, elements that are seen as strongly related to education in online learning include elements of ICT literacy or ICT literacy. ICT literacy or ICT literacy is also known as technology literacy, where what is meant is being able to understand, adopt, adapt, to use digital devices or ICT-based media, such as computers or LCD projectors/power points that have been designed/developed in such a way that they can be used according to their understanding, especially if they are connected to the internet as a learning base (Budhirianto, 2016). In this era of digital revolution, awareness to be literate in information and communication technology is very important to have, not only limited to reducing the distance in the digital divide that exists in society, but also for everyday life. How many jobs today have changed and depend on digital or the internet, including in the world of education. Online learning is currently very dependent on the internet and ICT media. It has been previously investigated by (Zhang et al., 2004) that the use of the internet and multimedia technology can change the way knowledge is transmitted and can provide an alternative to traditional classroom learning. The use of mobile technology has made a significant contribution to educational institutions, including achieving distance learning goals (Korucu & Alkan, 2011). Reinforcing the previous findings related to the most frequently used media for distance learning is that online learning can also be done through social media such as Facebook and Instagram (Kumar & Nanda, 2019).

In Potter's conception, efforts to create digital-based community capabilities not only lead to the adoption of digital media, but also to the synergistic effect of daily activities that lead to increased productivity. This supports the policy of the Ministry of Communication and Information of the Republic of Indonesia as reported by Press Release No. 181/HM/KOMINFO/08/2018 on August 16, 2018. Industrial Revolution (Ministry of Communication and Information of the Republic of Indonesia, 2018). Not only referring to influencers, youtubers, and content creators, but in real practice in everyday life, people are expected to be able to prepare and equip themselves as human resources who have sufficient digital literacy to be able to use and utilize ICT to increase productivity and be able to compete. in the era of the industrial revolution 4.0.

#### 4. CONCLUSION

The digital divide is not a new thing, especially in the education sector. Long before entering the online learning method, the digital divide is still often felt in several regions in Indonesia. As an archipelagic country with such geographical, topographic, and even demographic conditions including socio-economic conditions, the three stages of the digital divide are still homework that must be solved together. As for the reality related to online learning methods, the digital divide is most pronounced in the first and second stages, where access to ICT as well as the ability and purpose of using ICT is still very visible and uneven in Indonesia. The education sector, which is an important sector in social life, really feels the impact of the gap that occurs at the two stages of the digital divide. It is undeniable that the various main factors above do have a considerable influence on the digital divide in Indonesia, especially education.

With digital literacy, especially the understanding of ICT literacy, it is considered to be one of the most possible efforts to be implemented and realized its importance by society in general. The industrial revolution 4.0 has indirectly forced individuals to want to synergize and be disrupted by conditions that are all digital and technological.

In addition to accelerating the development and leveling of ICT infrastructure in Indonesia, it is expected to be able to overcome the digital divide. Of course, having people who are technology literate and have digital literacy skills is the desire and hope of every nation and country.



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