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## **IMPROVING THE QUALITY OF INFORMATION AND COMMUNICATION TECHNOLOGY DURING THE COVID-19 PANDEMIC**

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### **ABSTRACT**

The purpose of this research is to find out how people use information and communication technology as a medium to continue activities that cannot be done face-to-face and technology that can be used for medical activities during the COVID-19 pandemic. This research method is presented in a qualitative descriptive manner. The author uses observation data collection techniques. The results obtained from this study are that people use information and communication technology for Work From Home, School From Home activities, and information interests for medical purposes. It is concluded that the public only uses information and communication technology to continue carrying out activities because of the facilities and features of information and communication technology which have advantages and convenience for use by various groups of people. Many people take for granted modern information and communication technology that was not even accessible a few decades ago. These innovations in information and communication technology, which have long been considered trivial, unimportant, during times of calm have now become indispensable in dealing with the COVID-19 pandemic. There are now a variety of digital technologies that can be used to augment and enhance work, learning, and public health strategies. During the COVID-19 pandemic, technology plays an important role in keeping community activities functioning during the Large-Scale Social Restrictions (PSBB).

Keywords: **Information Technology, Communication, Pandemic, Covid-19**



## **INTRODUCTION.**

Indonesia's conditions, especially during the time of the Coronavirus (COVID-19) have become worse than critical economic, strategic, and political problems occurring throughout the world. where the outbreak has impacted all industries, including the use of information and communication technology.

The social distancing guidelines proposed by respective governments and health departments to the public have resulted in the closure of schools and businesses and left the public confused by the unprecedented level of change.

Habits that have become something like Learning online and working from home (WFH) are a way to mediate the problem for some people, but others may not be so lucky.

The rapid development of information technology in the current era of globalization can no longer avoid its influence on the world of education. Global demands require the world of education to always and constantly adapt 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.

The level of technology integration or infusion at school/campus before this pandemic can be explored in terms of whether digital technologies have been introduced, integrated, or incorporated into educational policies and practices. This includes teacher readiness, Internet infrastructure, level of access to laptops, online tools, resources, and assessments, and level of integration into everyday teaching and learning practices.

For some, such as beginners (individuals with limited WFH experience), this may be the most intense period of professional life that can be a step of unprecedented change. All of a sudden, there has been a worldwide change which means that all are required to engage with e-learning and online activities to carry out WFH-based tasks.



With the use of multiple virtual methods, technical problems can certainly occur but can be managed properly when the user has become more familiar with the virtual interface. The main challenge of the WFH or School From Home (SFH) platform lies in the willingness of users to embrace this technology. 2020 should be the start of an exciting decade in medicine and science, with the development of several digital technologies that can be applied to address clinical problems and serious illnesses. It is enhanced by blockchain technology, databases reconnected with cryptographic protocols and distributed computer networks across different organizations, integrating peer-to-peer networks to ensure that data is copied across multiple physical locations, with modified algorithms to ensure data is secured but traceable.

### **LITERATURE REVIEW.**

The Corona Virus (COVID-19) has hit a large number of countries and is turning out to be worse than a critical economic, strategic and political problem happening all over the world. The coronavirus outbreak has and still has an impact on all industries, including the use of information and communication technology. The social distancing guidelines proposed by respective governments and health departments to the public have resulted in the closure of schools and businesses and left the public confused by the unprecedented level of change. Learning online and working from home (WFH) is a way to mediate the problem for some people, but others may not be so lucky.

The rapid development of information technology in the current era of globalization can no longer avoid its influence on the world of education. Global demands require the world of education to always and constantly adapt 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. Level of technology integration or infusion at school/campus before this pandemic can be explored in terms of whether digital technologies have been introduced, integrated, or incorporated into educational policies and practices. This includes teacher readiness, Internet infrastructure, level of access to laptops, online tools, resources, and assessments, and level of integration into everyday teaching and learning practices.

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embrace this technology. 2020 should be the start of an exciting decade in medicine and science, with the development of several digital technologies that can be applied to address clinical problems and serious illnesses. These digital technologies include the internet of things (IoT) with next-generation telecommunications networks (eg, 5G); Big Data analytics; artificial intelligence (AI) that uses deep learning ; and blockchain technology. These technologies are highly interrelated: the proliferation of IoT (for example, use of devices and instruments) in hospitals and clinics facilitates the creation of highly interconnected digital ecosystems, enabling real-time data collection at scale, which can then be used by AI and deep learning systems to understand health care trends, model risk associations and predict outcomes. It is enhanced by blockchain technology, databases reconnected with cryptographic protocols and distributed computer networks across different organizations, integrating peer-to-peer networks to ensure that data is copied across multiple physical locations, with modified algorithms to ensure data is secured but traceable.

## **METHODS**

The author chose to use qualitative research methods to determine how to find, collect, process and analyze the data from the research. The research used is descriptive qualitative research. Descriptive qualitative research is in the form of research with a case study method or approach . Data collection techniques were carried out using observation.

### **3.1. Use of information and communication technology when working from home**

The concept of Work From Home (WFH) is a concept where employees of a company can do their work from anywhere, anytime. But with this pandemic forcing all companies to implement WFH policies for almost all of their employees. Some of the technologies that can be used where WFH is a virtual meeting communication technology such as the Zoom app or Google Hangouts.

Communication for intense coordination between employees can use the Whatsapp Group application media, chat applications, and video call facilities that can even be used by more than 1 person talking to facilitate communication about work because they are connected directly.

Enterprise use of the Slack app is very beneficial, as Slack offers many Internet Relay Chat (IRC)-style features, including persistent chat rooms (channels) organized by topic, private groups, and direct messages.

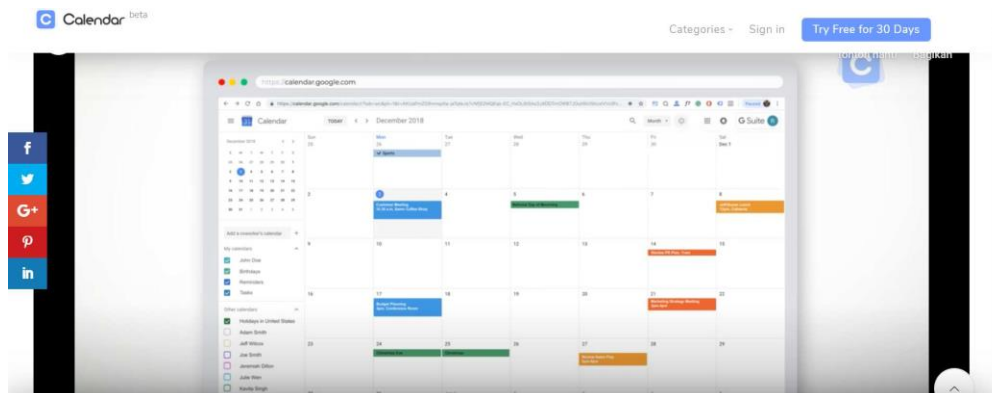


**Figure 1.** Zoom Meeting Activity

The advantages of using the Zoom app are

- (a) Unbuffered video calls, automatic adjustment,
- (b) Audio calls - perfect and recordable for future review,
- (c) Conference calls, can easily present 10+ parties without loss of quality,
- (d) Screen sharing, easy to use, can choose what window or monitor to share,
- (e) Scheduling, can easily schedule events and export to calendar then invite guests.

Schedule settings to always meet work targets can use Google Calendars to schedule meeting dates or set reminders via email.



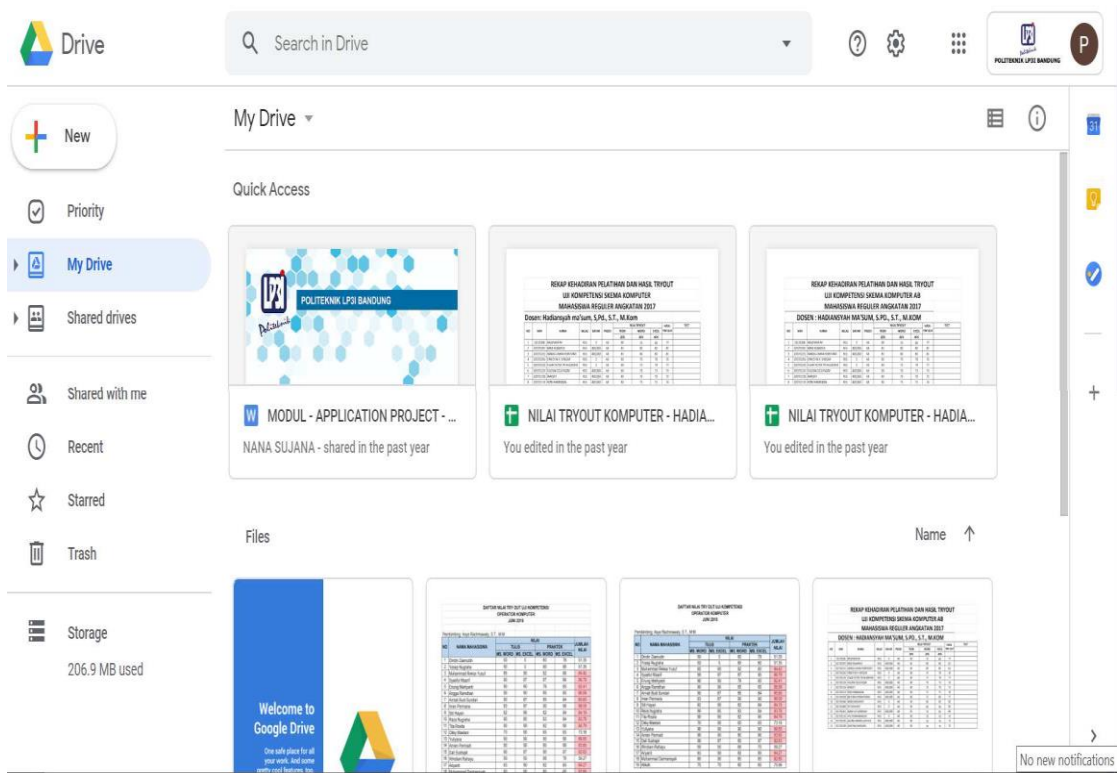
**Figures 2.** Schedule Time Meeting

### **3.2. Schedule Setting.**

The advantages of using the Google Calendar application are:

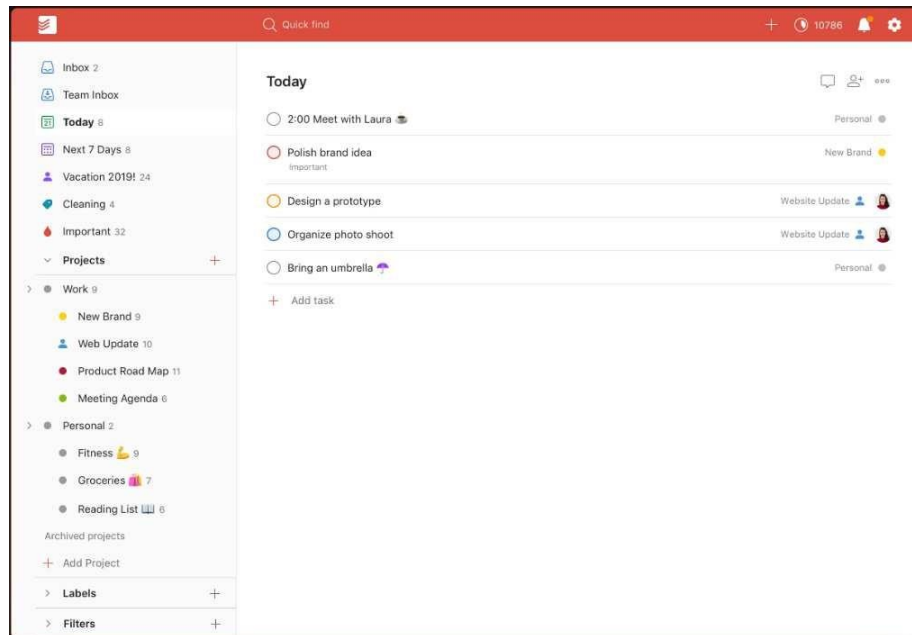
- (a) Google Calendar allows users to create and edit events. Events have a set start time and stop time, with an option for "All day events".
- (b) User can enable "Repeat" functionality with optional parameter for frequency.
- (c) Users can add colors to events to differentiate events from others.
- (d) Events can be viewed in various types of settings, including day, week, month, or schedule.
- (e) Locations can be added to facilitate understanding of the event venue.
- (f) Users may optionally set notifications, with options for type (email, mobile push notifications) and time.
- (g) Users may invite others to events; for other Google Calendar users, the event becomes visible on their calendar, and for non-Google Calendar users, the email will have the option to "Yes", "No", or "Maybe".
- (h) Privacy settings allow users to specify the level of public visibility of entire calendars or individual events. Although the default calendar to display the user's event time in time their locale, users can specify a different time zone for an event.
- (i) Users may enable or disable the visibility of custom calendars, including the Birthdays calendar, which automatically retrieves birth dates from the user's Google contacts and displays the dates on an annual basis, and the Holidays calendar, a country-specific calendar that displays occasion-specific dates.

Shared document storage in the company can use cloud-based storage, for example Google Drive which has the advantage of being able to store photos, stories, designs, pictures, recordings, videos, and others with the first 15 GB of free storage space with a Google Account.



Figures 3. Application Google Drive





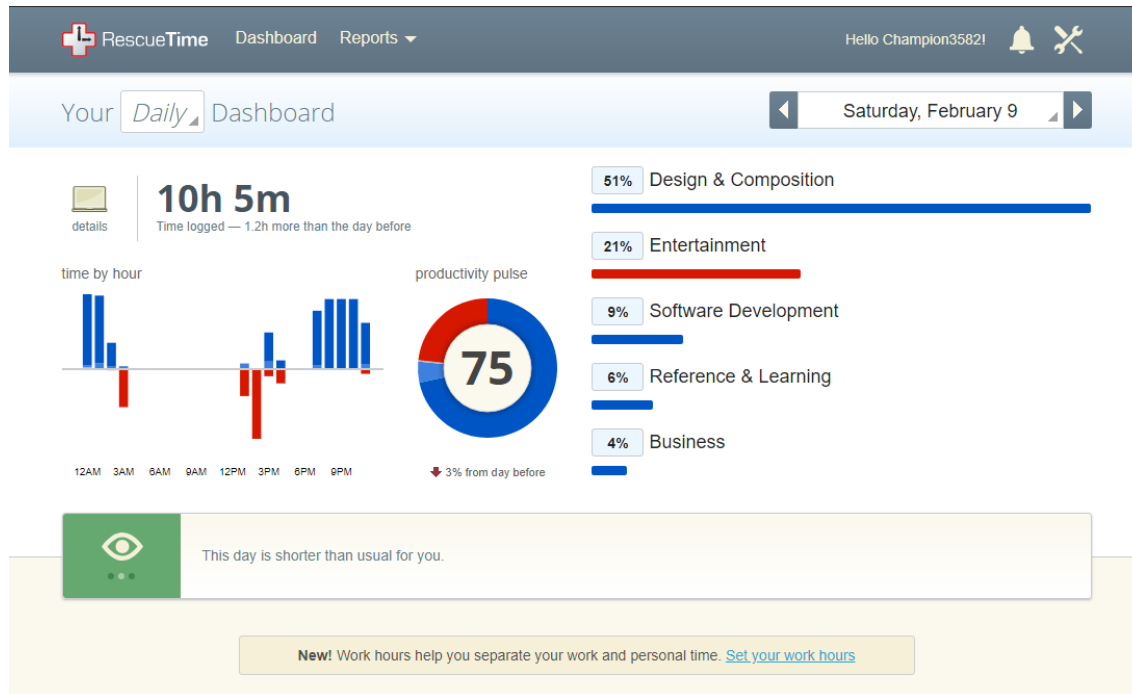
**Figures 4.** Application Todoist

in daily activities of employees to sort jobs according to their priorities and help manage time. The Todoist application can be used The advantages of using the Todoist application are:

- (a) deadline reminder with reminder and due date.
- (b) helps to build a habit of repeating due dates such as "every Monday".
- (c) Collaborate on projects by assigning tasks to others.
- (d) Prioritize tasks by priority level.



(e) track work progress with personalized productivity trends.



**Figures 5.** RescueTime

RescueTime is a distraction and time tracking software that provides the tools and data you need to be your most productive employee. The advantages of using the RescueTime app are

- (a) Intrusion blocking software.
- (b) Analysis and reporting tools: Automatic time tracking software to track time spent on sites and applications.
- (c) view employee progress in weekly email reports.
- (d) Work across platforms (desktop, mobile, browser).
- (e) Offline time tracking.
- (f) Daily highlights.
- (g) Specific working hours.
- (h) Unlimited historical data.

The use of online learning applications is a solution for schools that are starting to implement the School From Home system. As one of the edutech companies in Indonesia,



Quipper provides free online learning systems and materials for teachers and students. where teachers can take advantage of Quipper's LMS (learning management system) feature to send and manage materials learning, examinations, and student grades, enabling teachers to teach remotely.

## CONCLUSION.

Many people take for granted modern digital technology that was not even accessible a few decades ago. These technological innovations, which have long been flagged as trivial, unimportant, or even dangerous during times of calm have now become indispensable in the face of the COVID-19 pandemic. There are now a variety of digital technologies that can be used to augment and enhance work, learning, and public health strategies. During the COVID-19 pandemic, technology plays an important role in keeping community activities functioning during the Large-Scale Social Restrictions (PSBB).

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